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100000300935

PLATEN

Lore

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.

EERSTE DEEL.

17 fol. VII. Bevloeiingen.

Z. N. 17433.



'S-GRAVENHAGE, DE GEBROEDERS VAN CLEEF.

VII 6. 4a



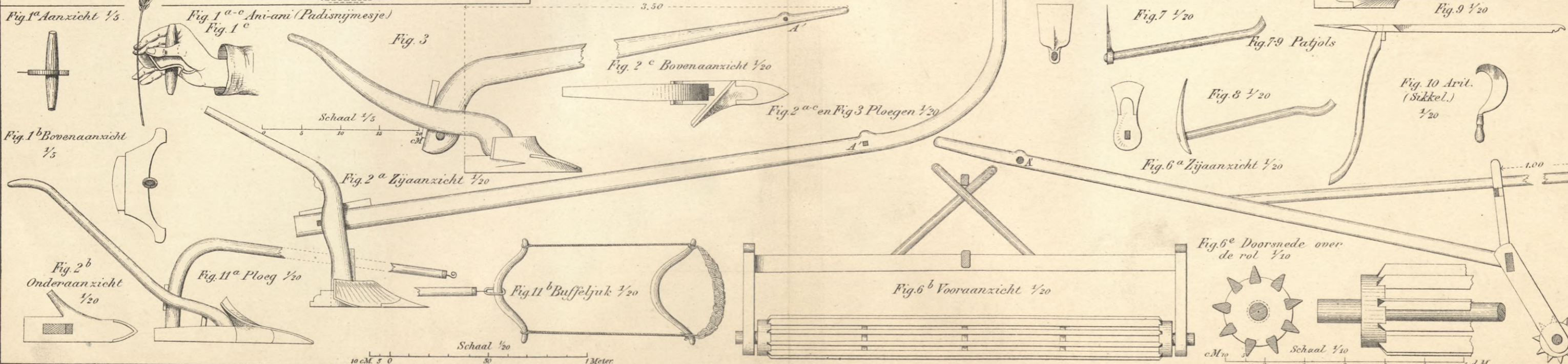
III 18242

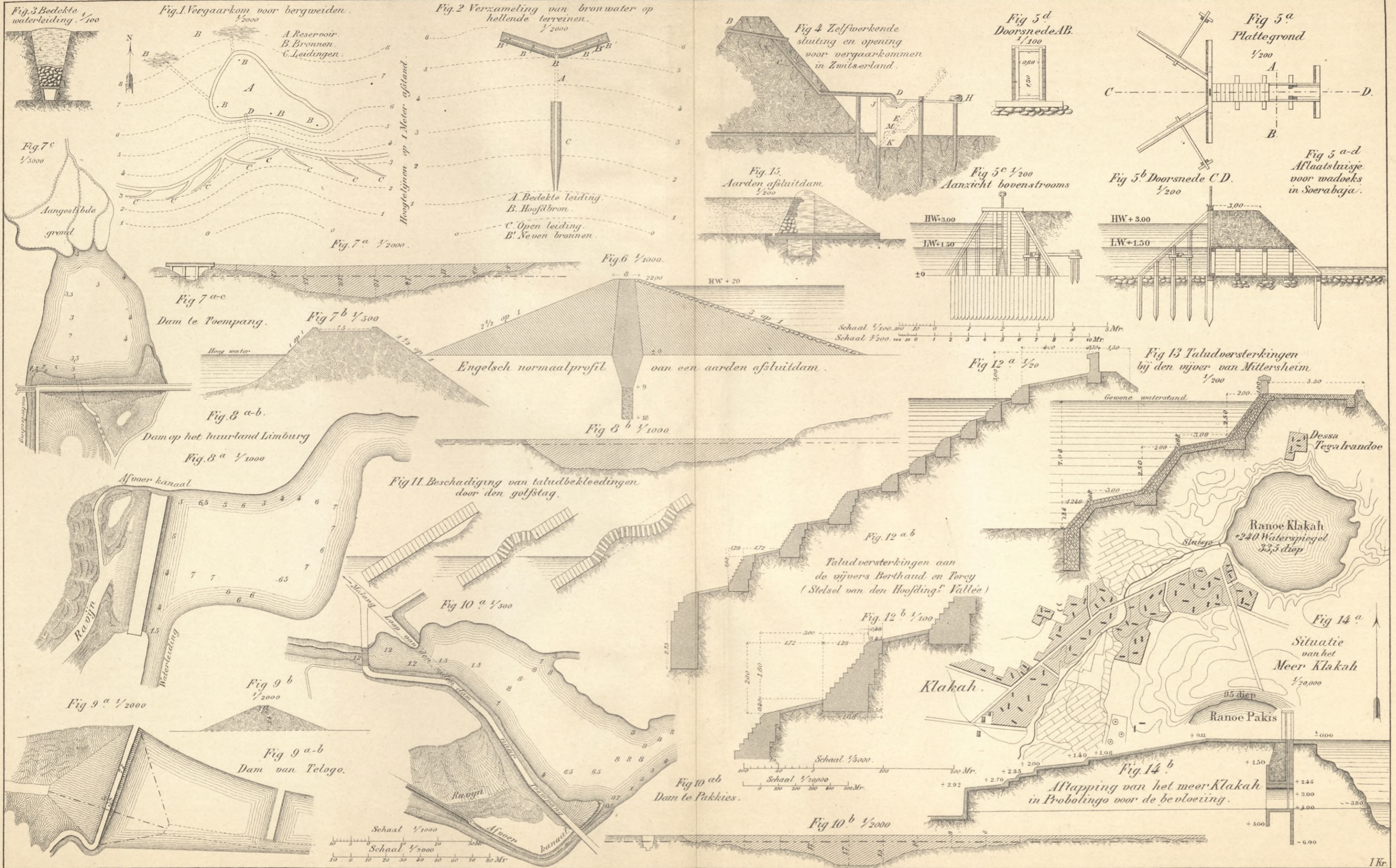
IV-300 965

Akc. Nr.

~~1050/52~~

BPK-0-277/2017





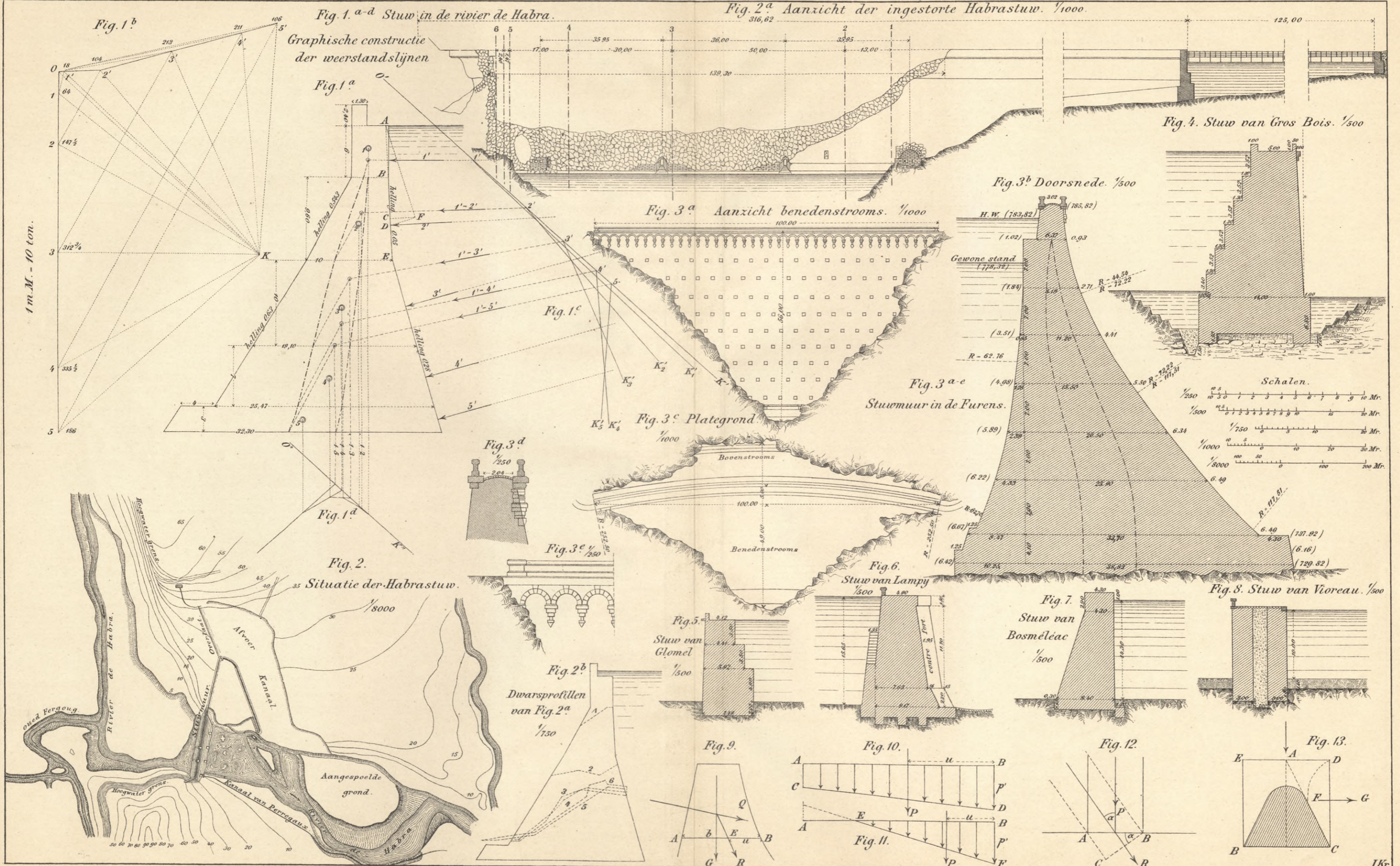


Fig. 1^{a-d} Stuwmuur van Almanxa

Fig. 1^a Doorsnede over de aftapping. 1/400

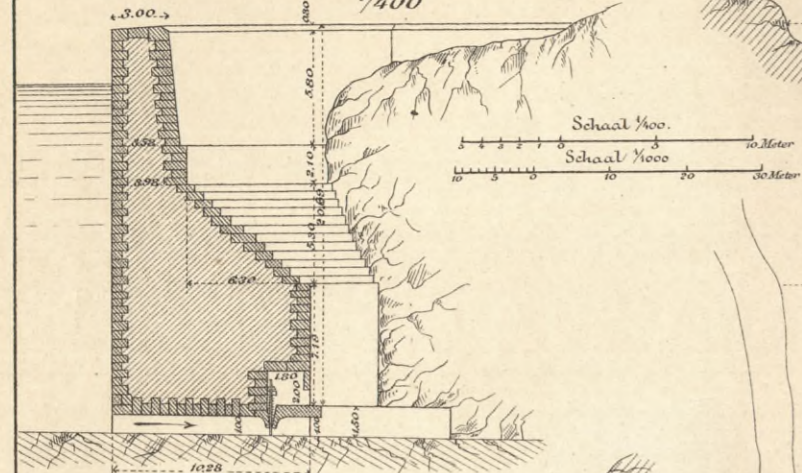


Fig. 1^b Aanzicht beneden. 1/1000

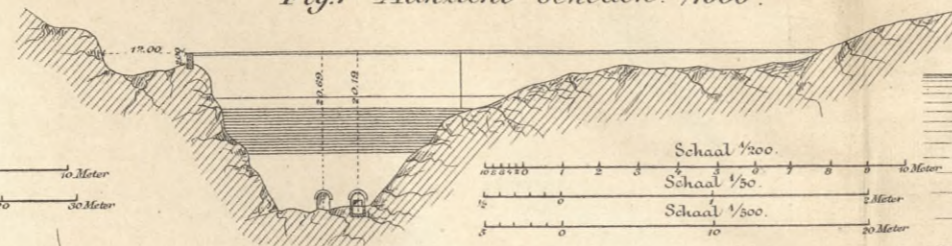


Fig. 1^c Platte grond 1/1000

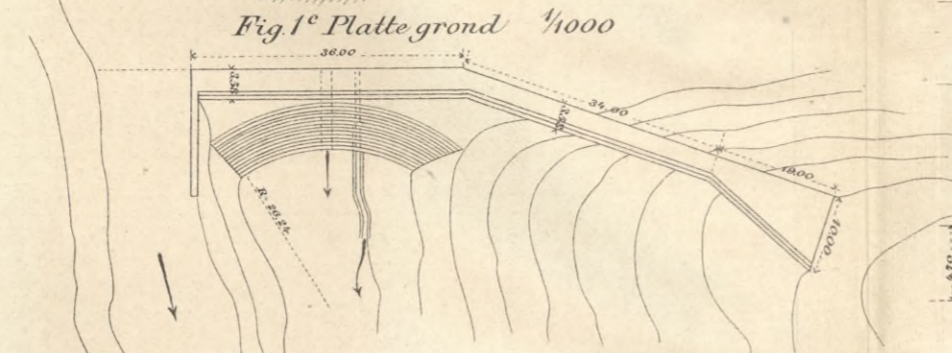


Fig. 3 Stuwmuur van de Val de Infierno. 1/500

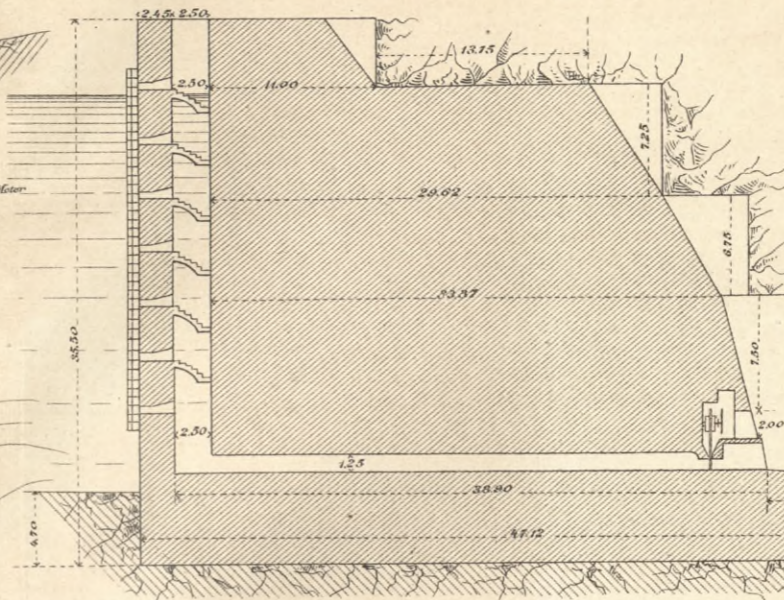


Fig. 4^{a-b} Stuwmuur van Elche

Fig. 4^a Doorsnede 1/500

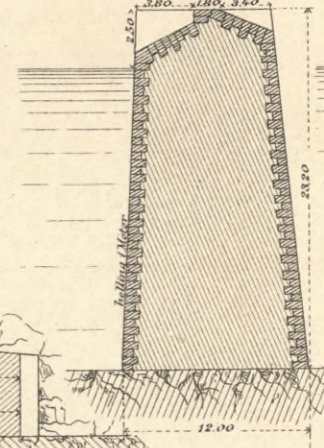


Fig. 4^b Doorsnede over het spuikanaal 1/500

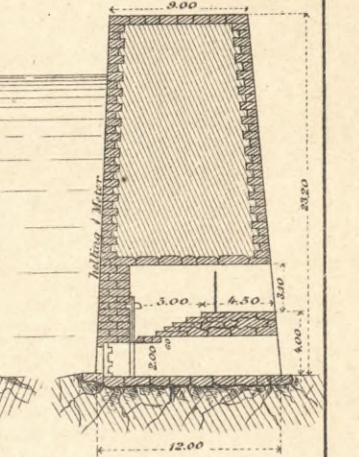


Fig. 1^d Aftapping en spuiopening. 1/200

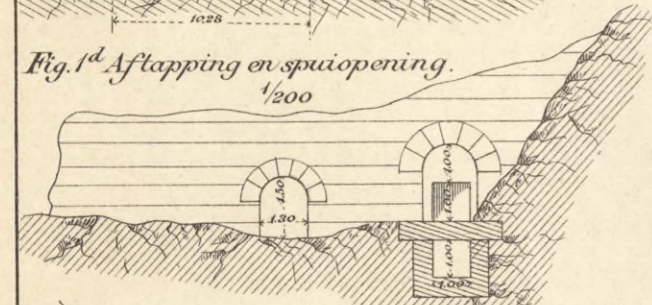


Fig. 2^{a-g} Stuwmuur van Alicante of Tibi

Fig. 2^a Doorsnede over het spuikanaal 1/500

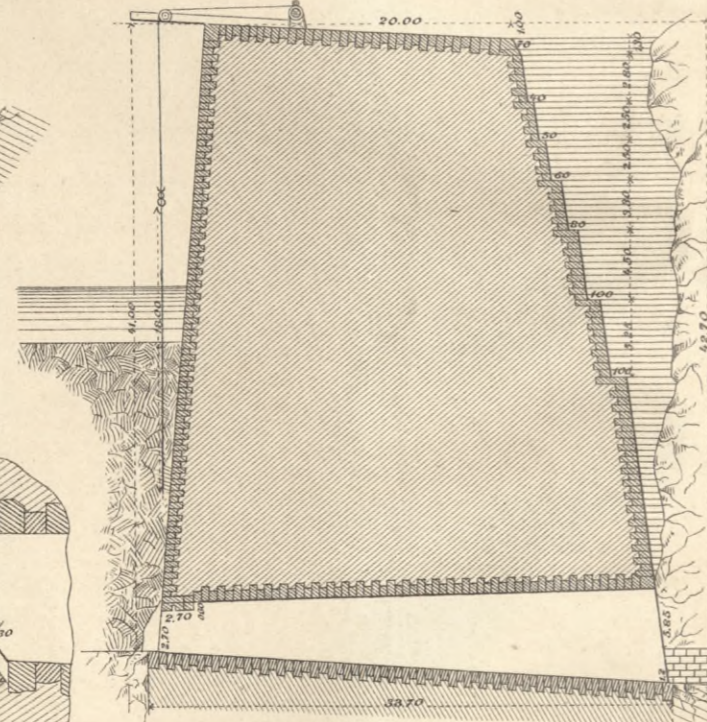
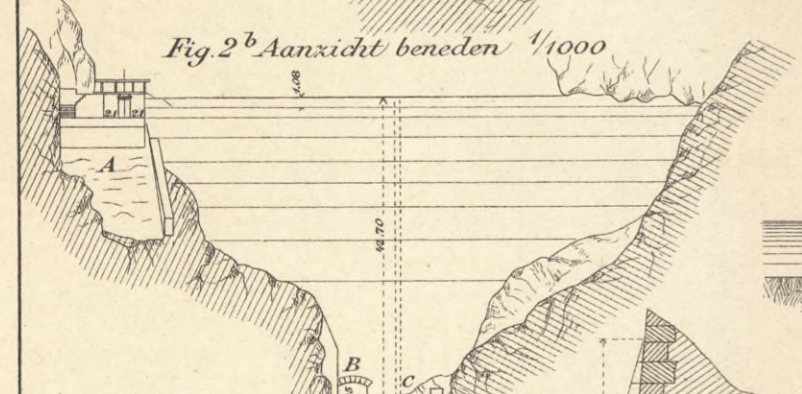


Fig. 2^b Aanzicht beneden 1/1000



A. Overlaat.
B. Spuikanaal.
C. Aftappingskanaal

Fig. 2^d

Houten versper-
ring in het spui-
kanaal 1/200

Fig. 2^c Platte grond 1/1000

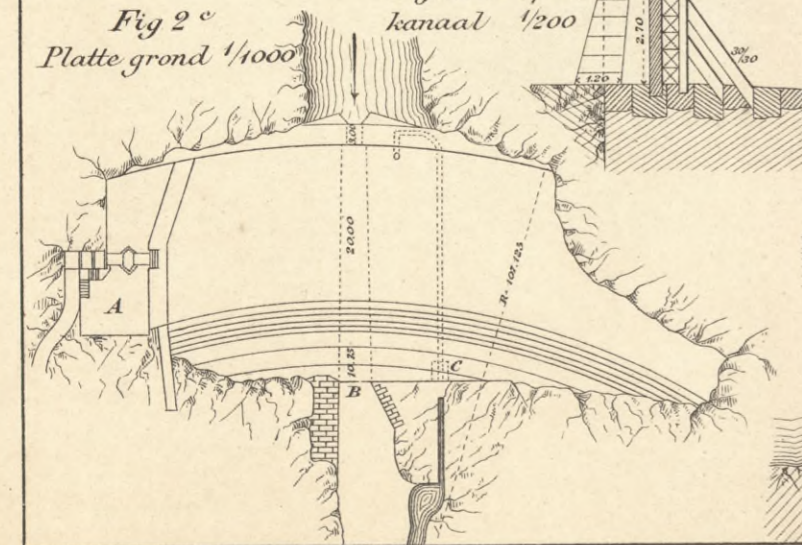


Fig. 2^f Schuif met windwerk. 1/50

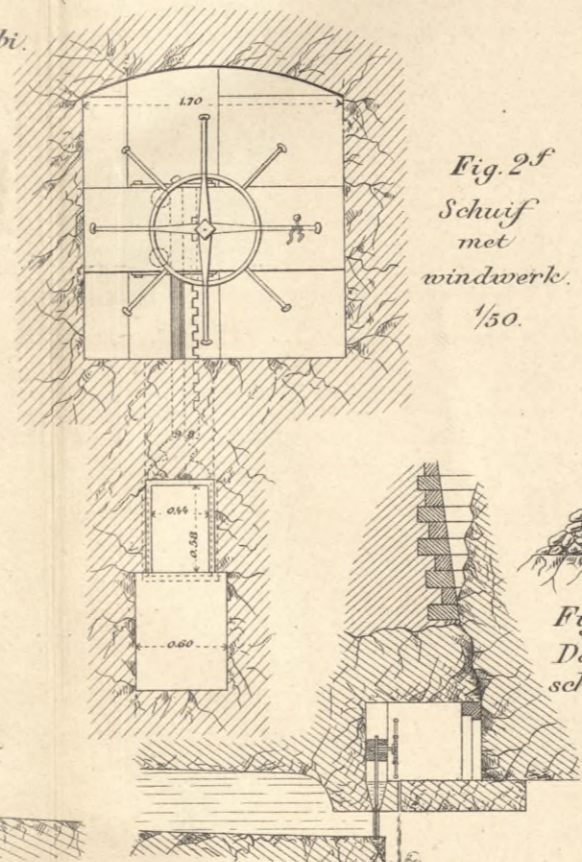


Fig. 2^g Doorsnede over schuif en windwerk 1/200

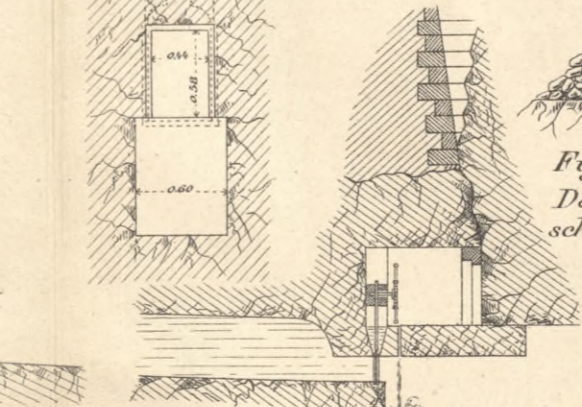


Fig. 6. Stuwmuur in de Rio Loxoya 1/500

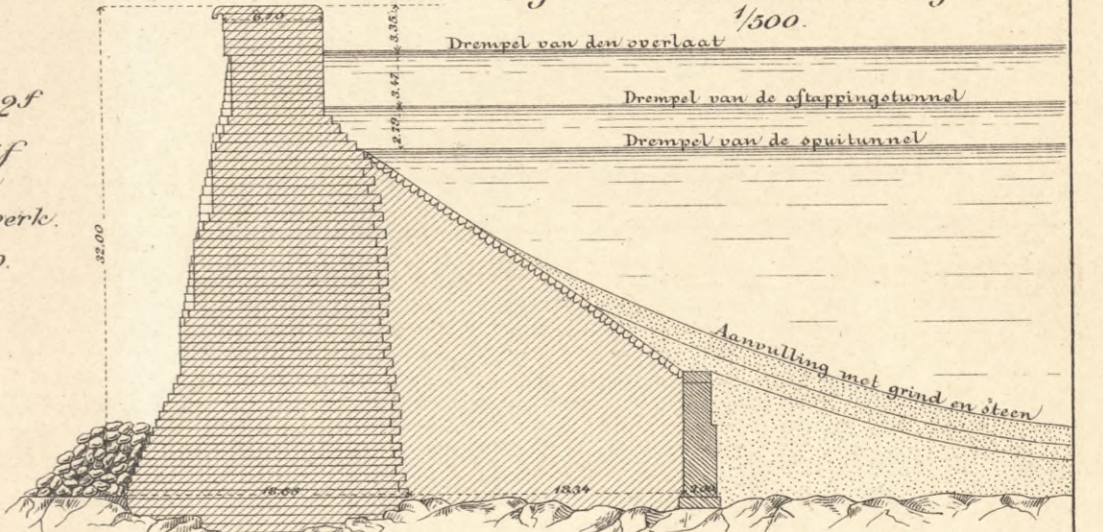


Fig. 5. Stuwmuur van Nyar. 1/500

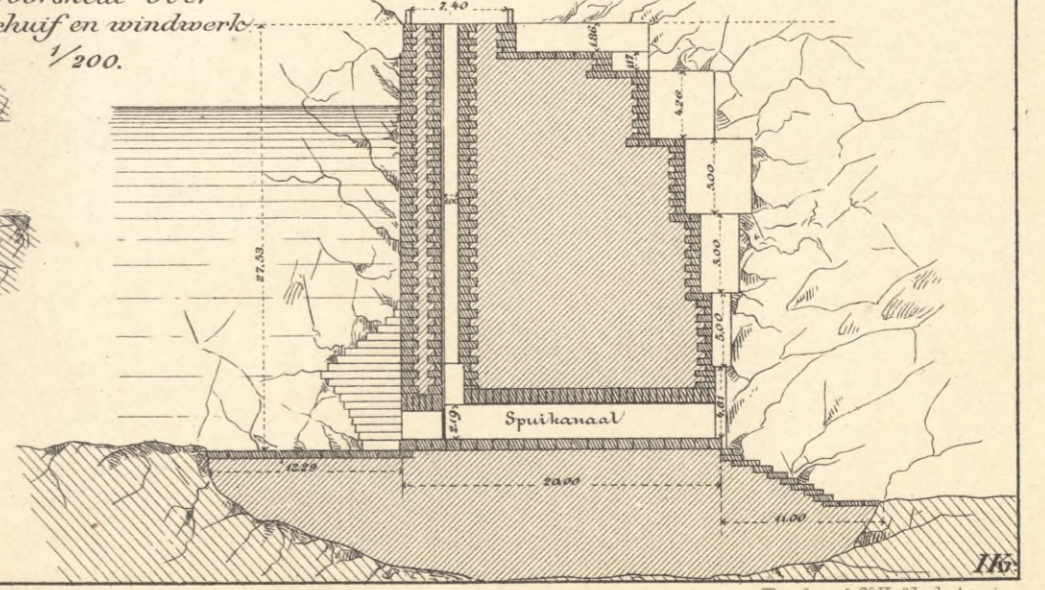


Fig. 2^e Horizontale doorsnede 1/500

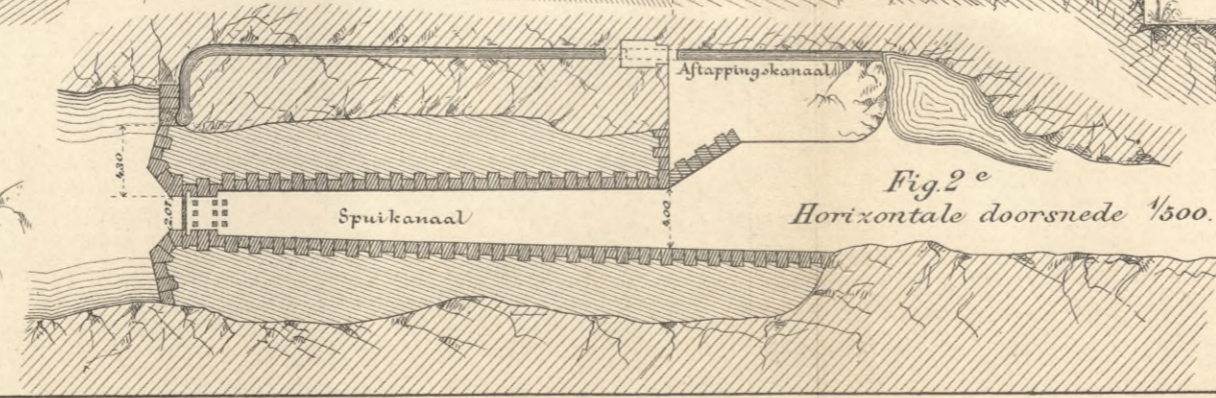


Fig. 2^{a-c} Stuwmuur van Verviers in de Gileppe.

Fig. 1^{a-e} Stuwmuur van St. Chamond in de Ban.

Fig. 6. Normaalprofiel volgens de voorschriften van Rankine. $\frac{1}{500}$

A. Overlaten.
B. Afvoerkanalen.

Fig. 2^a Situatie. $\frac{1}{10000}$.

Fig. 1^a Doorsnede. $\frac{1}{500}$.

Fig. 1^c Benedenaanzicht en doorsnede AB. $\frac{1}{2000}$.

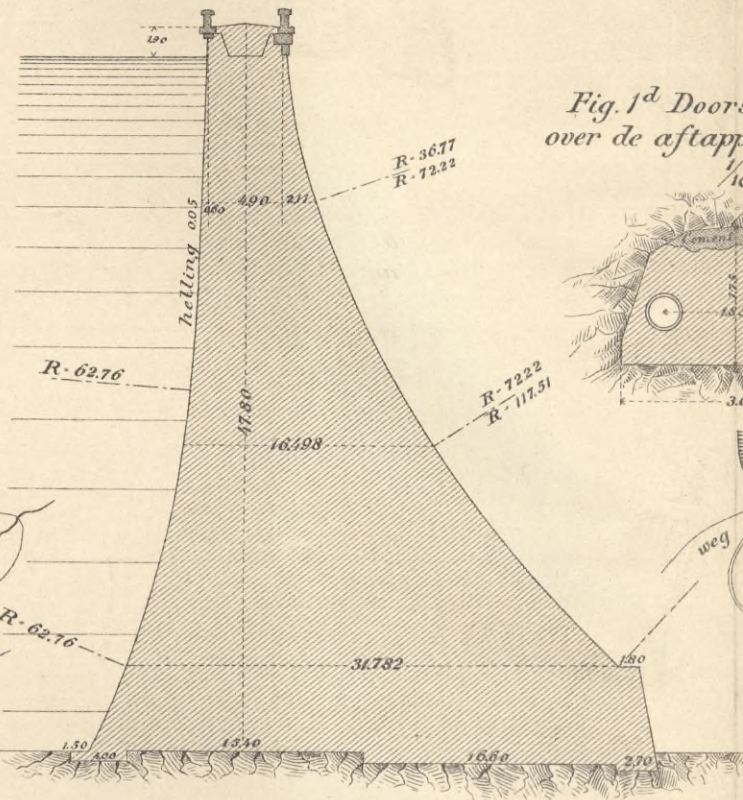
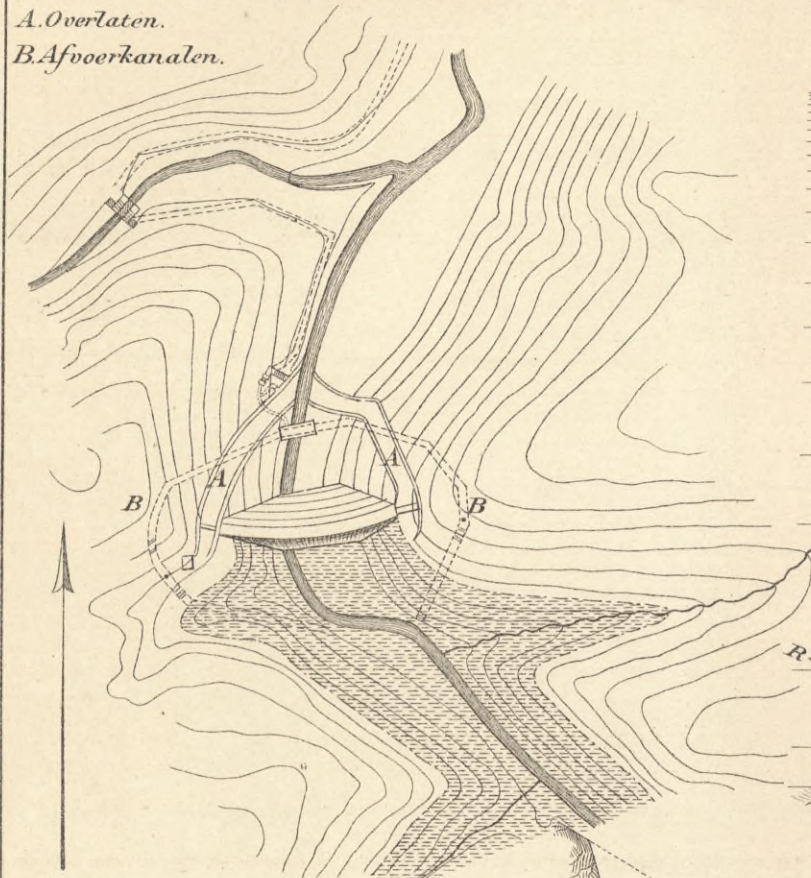


Fig. 1^d Doorsnede over de aftappingspijpen. $\frac{1}{100}$.

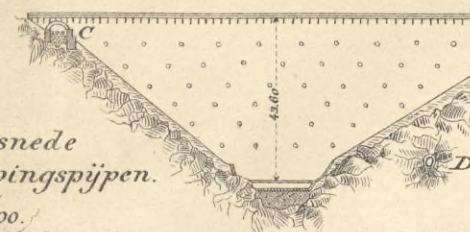
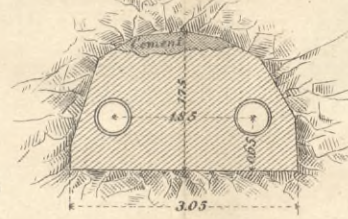


Fig. 1^b Plattegrond. $\frac{1}{2000}$.



C. Overlaat.
D. Aftapping.

Fig. 3. Stuwmuur van Ternay. $\frac{1}{500}$

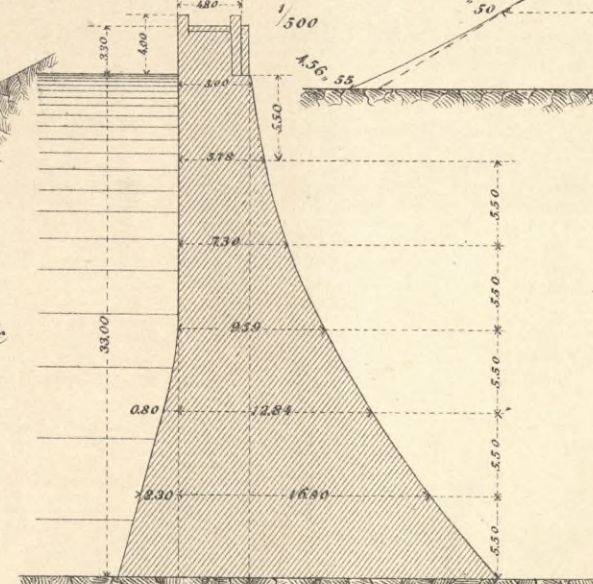


Fig. 4^b Plattegrond. $\frac{1}{1000}$.

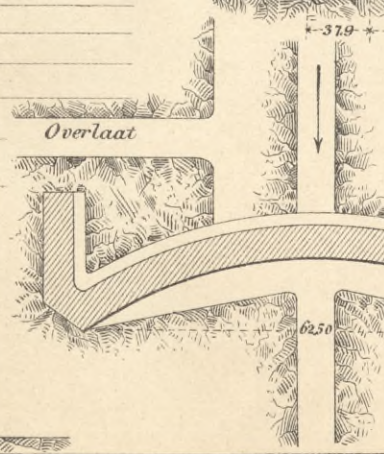


Fig. 4^{a-c} Stuwmuur der stad Aix in het dal van Tholonet.

Fig. 4^a Doorsnede $\frac{1}{500}$.

Fig. 4^c Aanzicht.

Fig. 2^b Doorsnede. $\frac{1}{500}$.

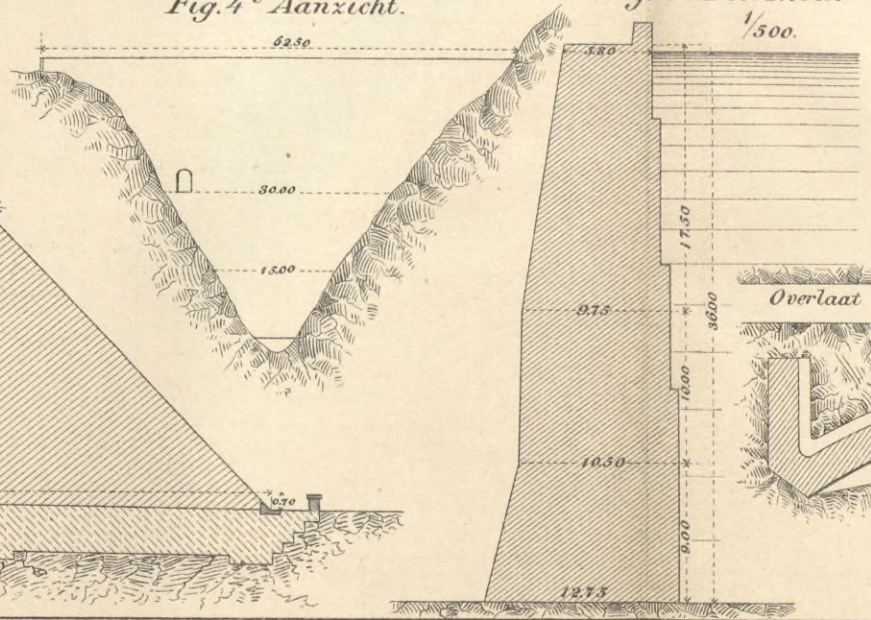
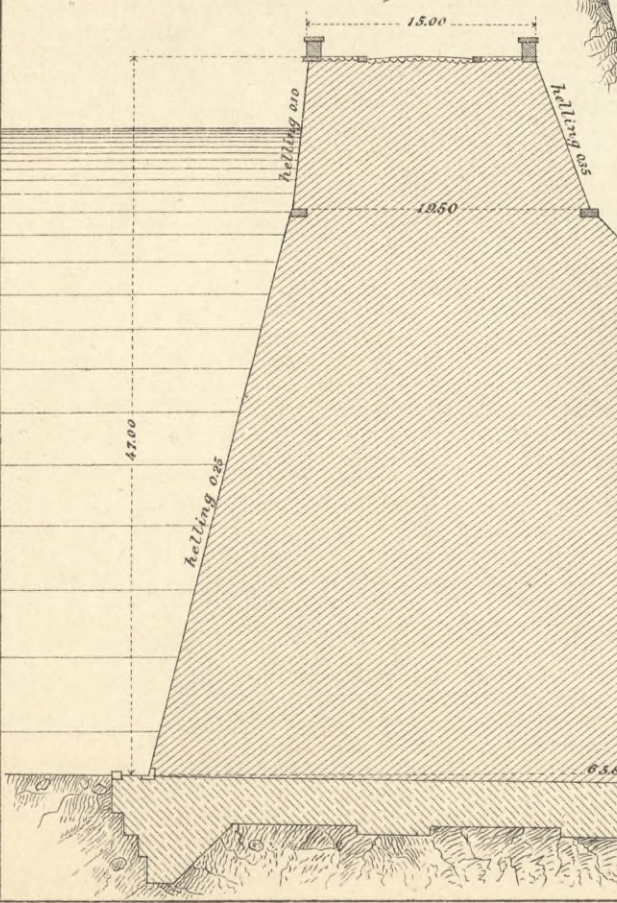
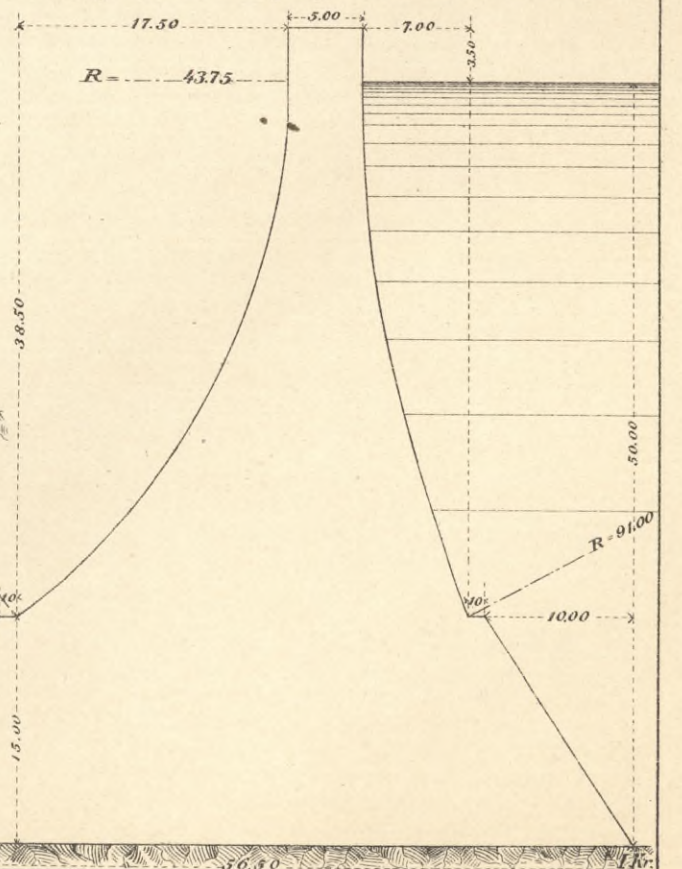


Fig. 5. Normaalprofiel van Krantz. $\frac{1}{500}$.



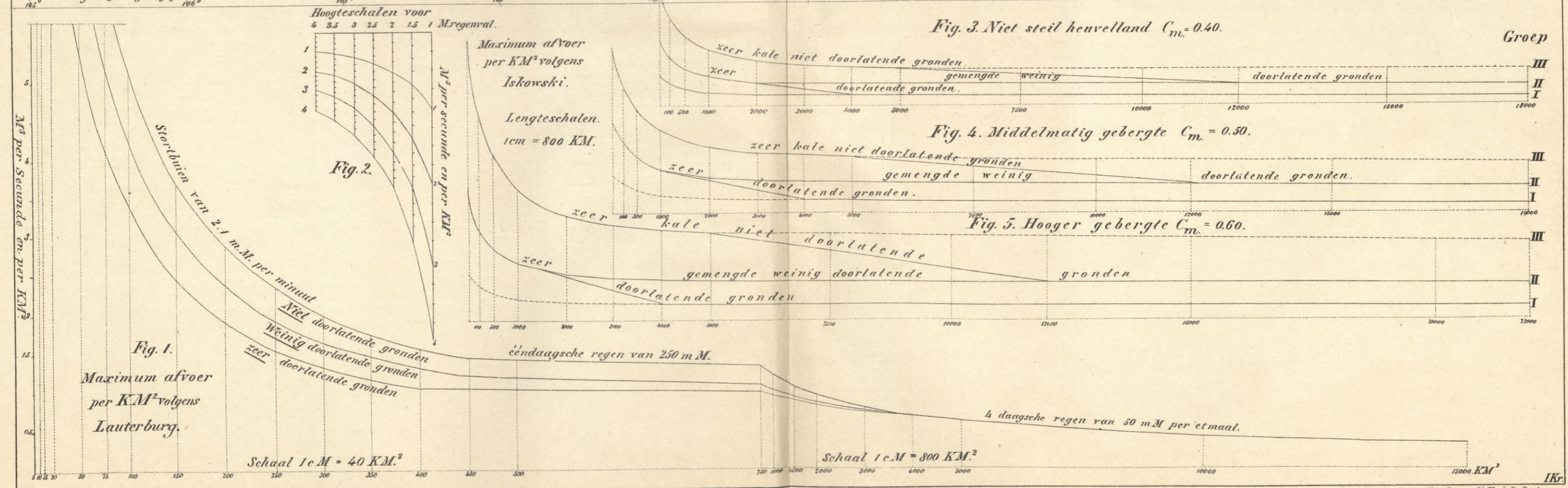


Fig. 1. Regenmeter van Hottinger en Comp. te Zurich.



Fig. 2. Regenmeter voor de officieele waarnemingen in Nederl. Indië.

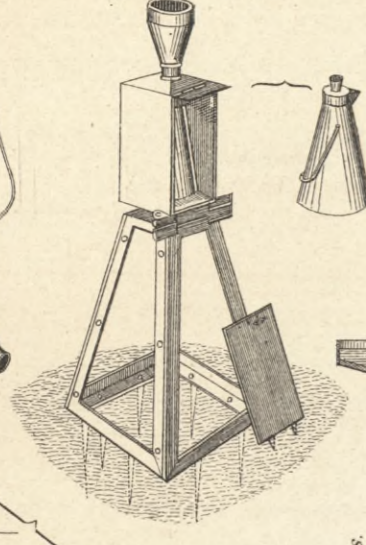


Fig. 9. Verdampingsmeter.

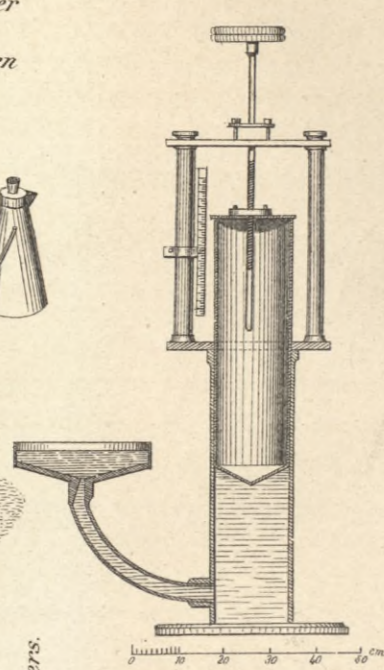


Fig. 10. Verdampingsmeter van Ebermayer.

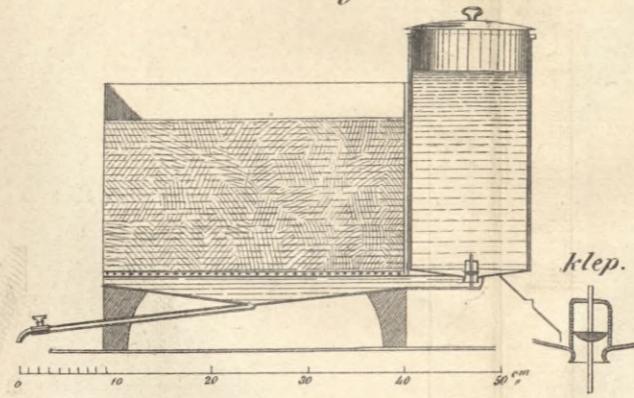
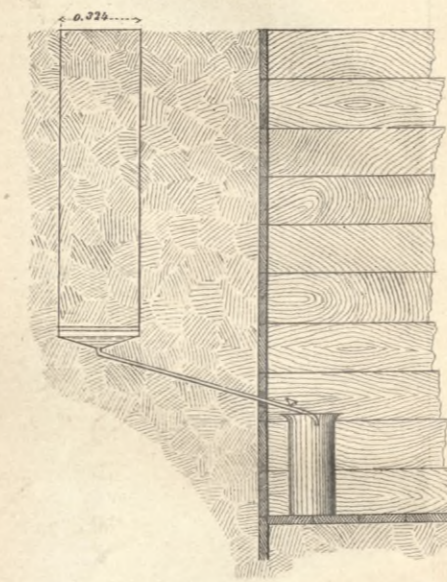


Fig. 11. Lysimeter.



M³ per seconde.

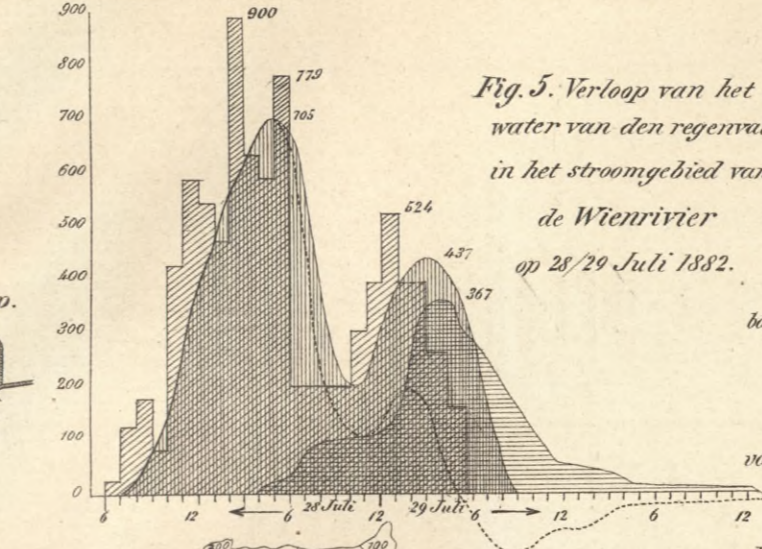
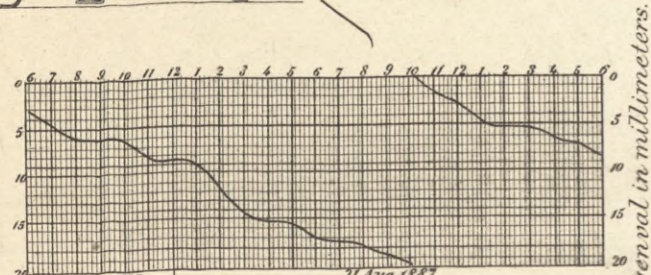
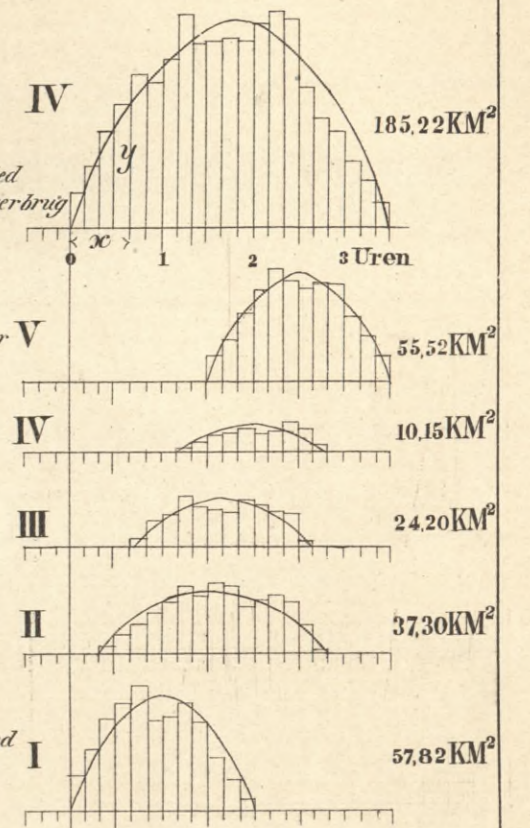


Fig. 5. Verloop van het hooge water van den regenval in het stroomgebied van de Wienrivier op 28/29 Juli 1882.

Fig. 6. Graphische voorstelling van den inhoud der strooken.



Regenval in millimeters.

Fig. 3.

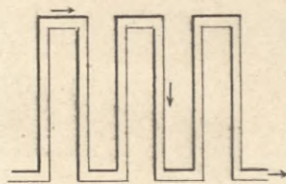


Fig. 7.

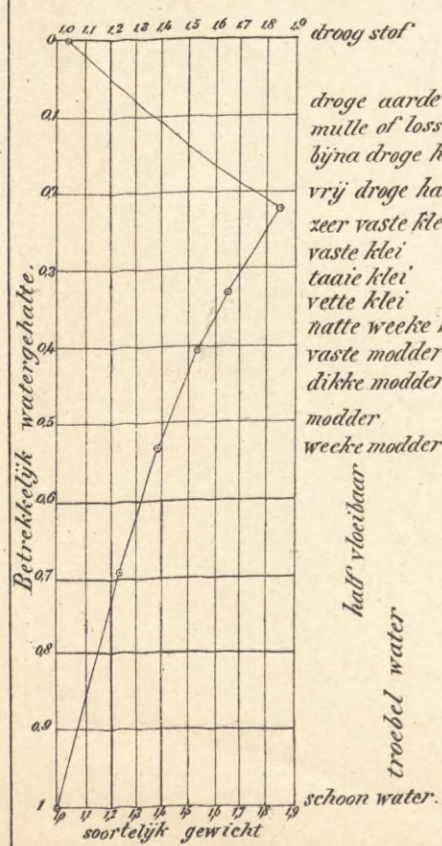


Fig. 8. Verdamping onder de verschillende invloeden.

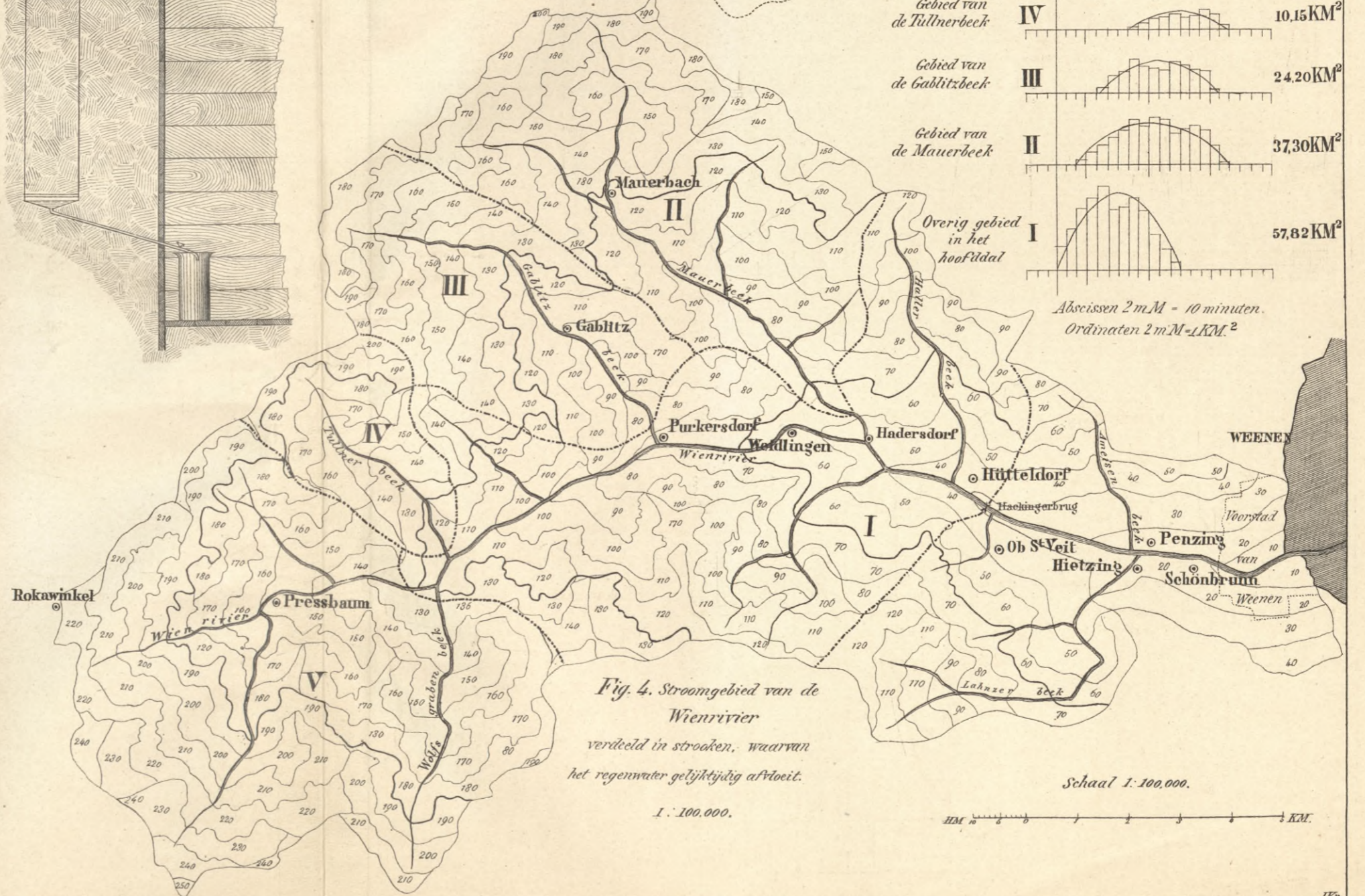
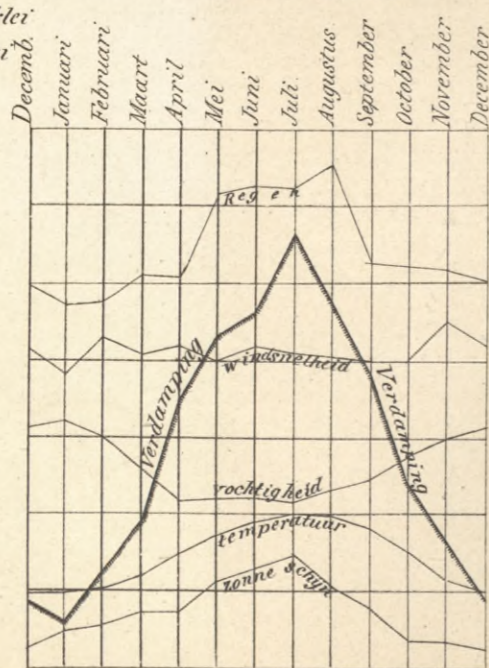
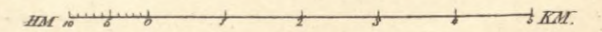


Fig. 4. Stroomgebied van de Wienrivier verdeeld in strooken, waarvan het regenwater gelijktijdig afvloeit.

1 : 100,000.

Schaal 1 : 100,000.



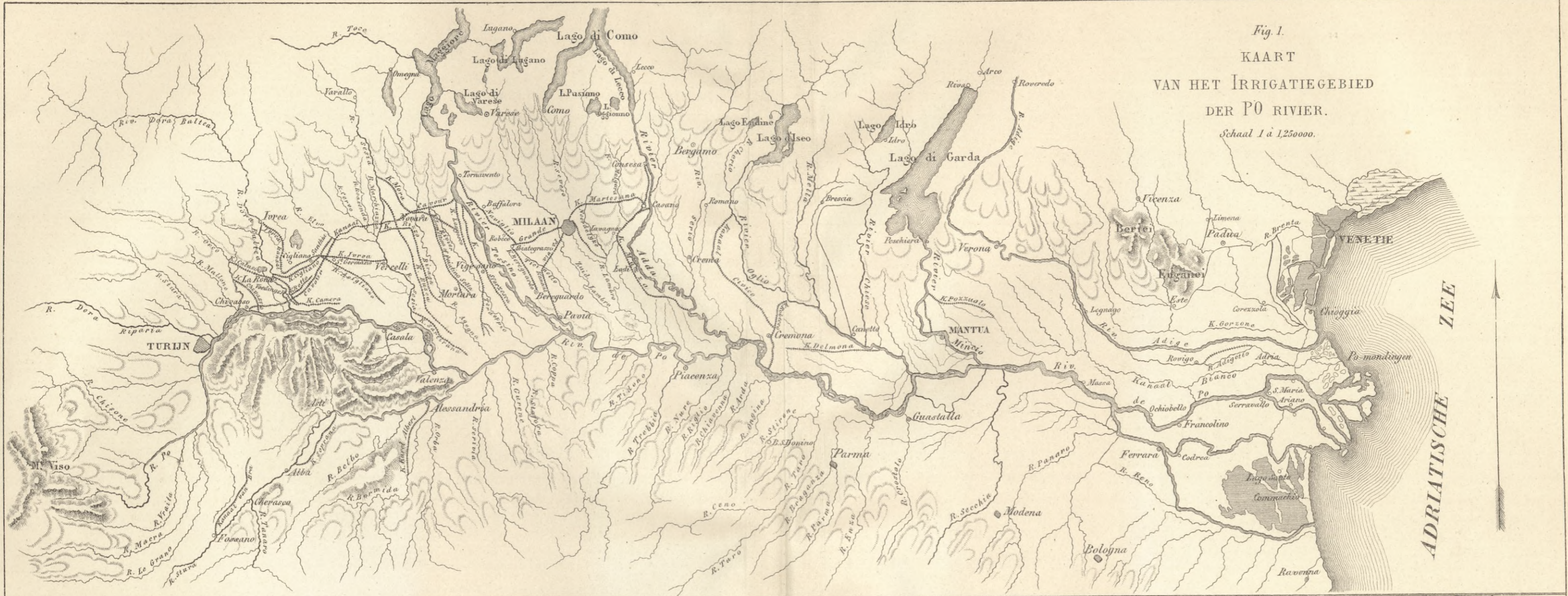


Fig. 1.
 KAART
 VAN HET IRRIGATIEGEBIED
 DER PO RIVIER.
 Schaal 1 à 1,250000.

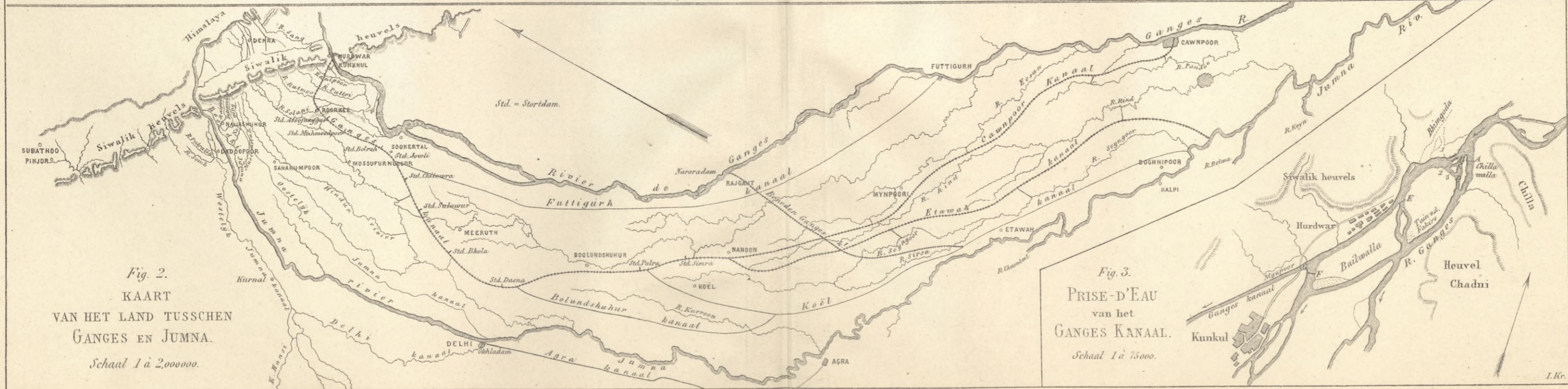
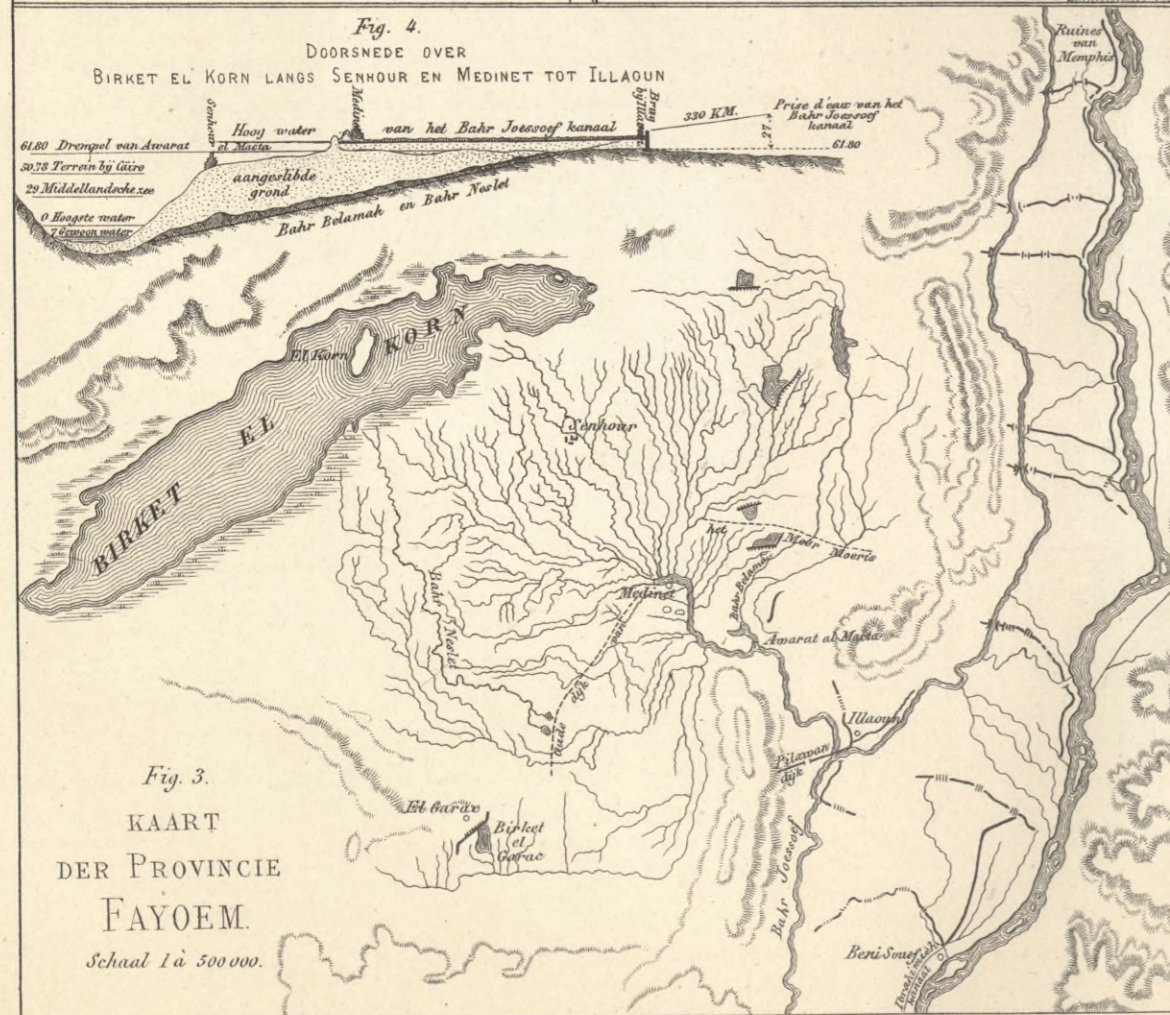
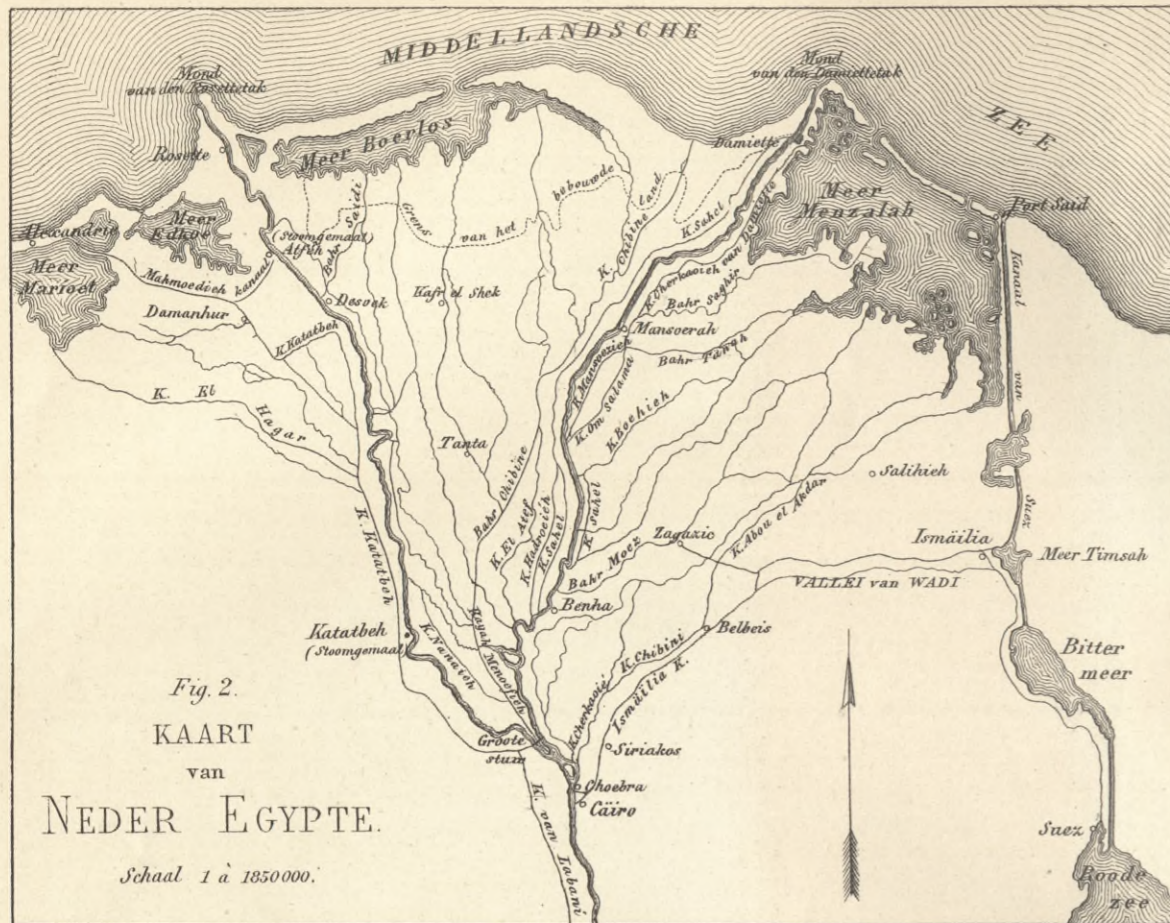


Fig. 2.
 KAART
 VAN HET LAND TUSSEN
 GANGES EN JUMNA.
 Schaal 1 à 2,00000.

Fig. 3.
 PRISE-D'EAU
 van het
 GANGES KANAAL.
 Schaal 1 à 15000.



- a Boven Coleroondam.
- b Inlaatsluizen van de Cauvery.
- c Aflaatstuis met 20 openingen.
- d Overlaat van 137 Meter.
- e Verdoelstuisen tusschen de Cauvery en de Vennaur.
- f Grand Anicut.
- g Congladdy overlaat (91.5 M).
- h Cutchimungalum overlaat.
- i Aflaatstuis met 12 openingen te Vaddavagoody.
- k Id met 6 openingen te Permacoil.
- l Verlaatsluis.
- m Sluis.
- n Beneden Coleroondam.
- o Dubbele sluis.

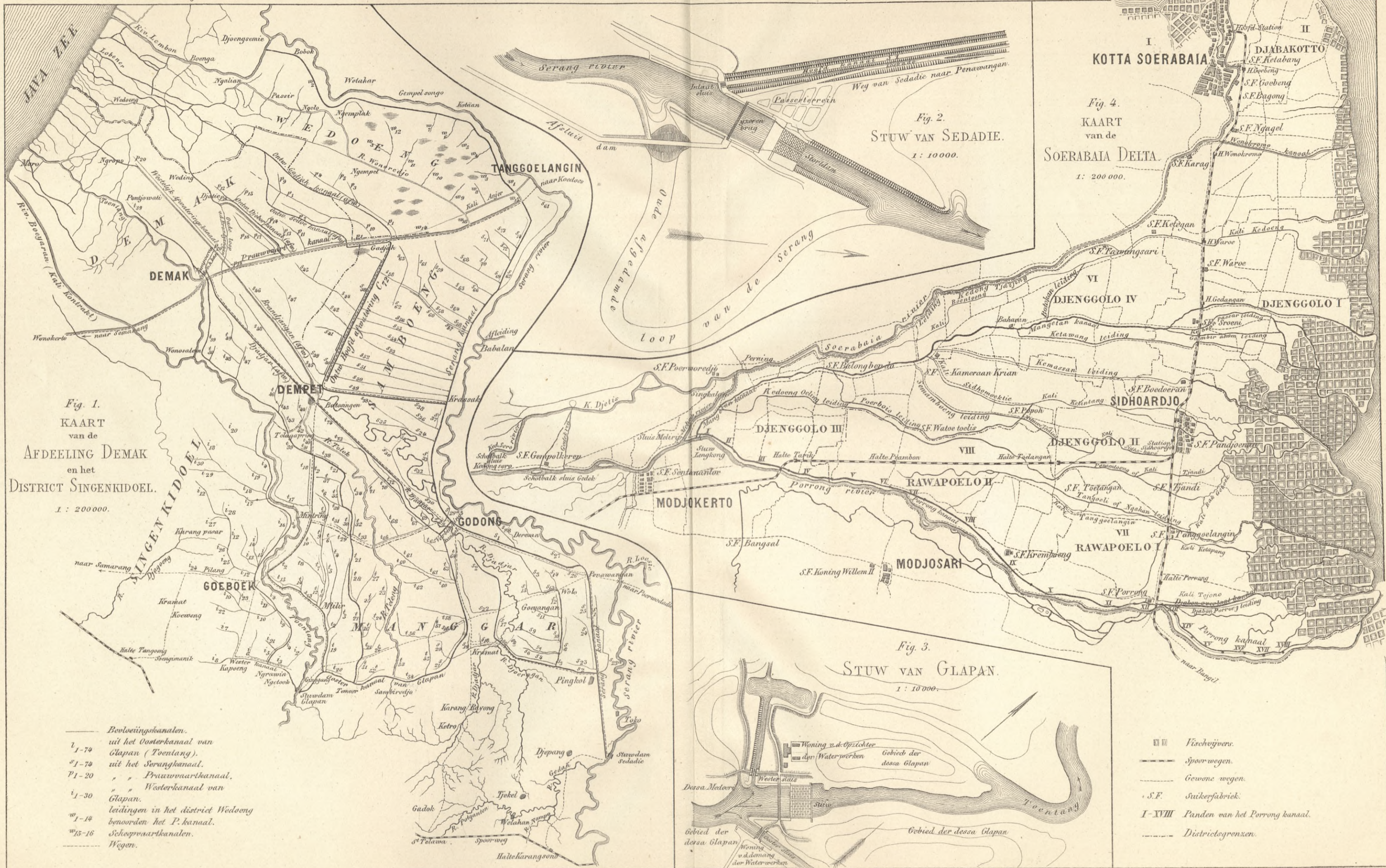


Fig. 1.
KAART
van de
AFDEELING DEMAK
en het
DISTRICT SINGENKIDOEL.
1 : 200000.

- Bevoelingskanalen.
- 1-74 uit het Oosterkanaal van Glapan (Toentang).
- 1-74 uit het Serangkanaal.
- P1-20 " " Praawaarkanaal.
- 1-30 " " Westerkanaal van Glapan.
- w1-14 leidingen in het district Wedong benoorden het P. kanaal.
- w15-16 Scheswaarkanaalen.
- Wegen.

Fig. 2.
STUW VAN SEDADIE.
1 : 10000.

Fig. 4.
KAART
van de
SOERABAIA DELTA.
1 : 200 000.

Fig. 3.
STUW VAN GLAPAN.
1 : 10 000.

- ■ ■ Vischvijvers.
- — — Spoorwegen.
- Gewone wegen.
- S.F. Suikerfabriek.
- I - XVIII Panden van het Porrong kanaal.
- Districtsgrenzen.



Fig. 1.
KAART
van de
GODAVERY EN KRISHNA DELTA.

Schaal van 0.00076 per KM.

Fig. 2.
BEVLOEIING UIT DE KALI KENING
RESIDENTIE REMBANG.

Overzichtskaart van het bevoelde terrein.

Schaal 1 à 50.000.

- Bestaande wegen.
- Hoofdleiding met KM afstanden.
- Secundaire aanvoering met id.
- Tertiaire aanvoering.
- Bestaande te verbeteren afvoering.
- Nieuwe te maken secundaire afvoering.
- Tertiaire afvoering.
- Volgnummers der kunstwerken.
- Bestaande waterloop.
- Vervallen waterloop.

De in de vakken geplaatste cijfers geven de oppervlakte in bouws aan die uit één secundaire leiding bevoeld worden.

Fig. 9.
Blokkaart van het dorp
BILIAPOOR.

Schaal 1 à 25000.

Fig. 10.
DISTRICT MIRIGPOOR.
Tranche kaart.

Schaal 1 : 21120.

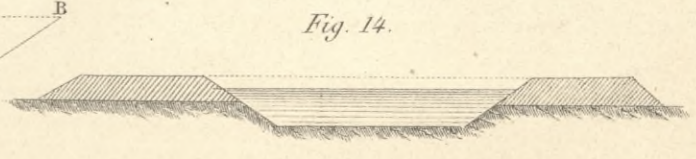
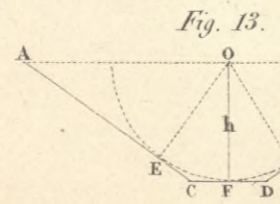
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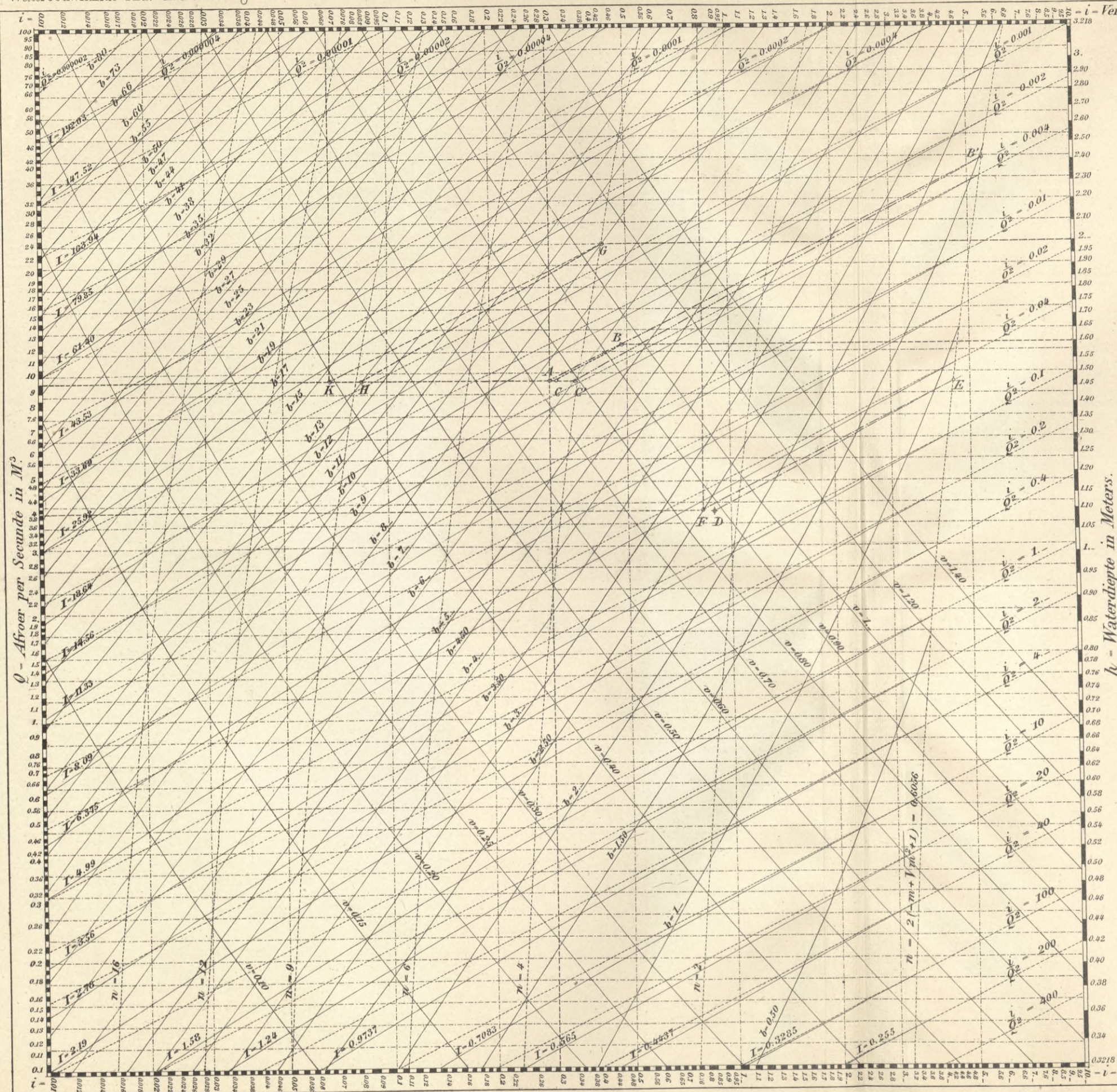
Fig. 11.
DISTRICT MIRIGPOOR
Irrigatie kaart.

1 : 21120.

Fig. 12.
Afgestort dwarsprofiel in de Doetamatileiding
300 Meter beneden de sluis.

1 à 400.





Graphische voorstelling van de afvoerformule van Darcy en Bazin. volgens de methode van den Ing.^r H.P. Mensinga.

Voor een trapeziumvormig profiel met aarden taluds van 1½ op 1. (m-1,5.)

b - Bodembreedte	} in Meters	$\frac{R^2 i}{v^2} = p(R+q)$
h - Waterdiepte		$p = 0.28 ; q = 1.25$
v - Snelheid per seconde	}	$Q = I \times v ; b = n \times h$
i - Verhang per K.M.		$I = (m+n)h^2 ; R = \frac{n+mv}{n+2\sqrt{m^2+1}} \times h$
R - Gemiddelde straal	}	$\frac{i}{Q^2} = pq \frac{(n+2\sqrt{m^2+1})^2}{(m+n)^4 \times h^6} + p \frac{n+2\sqrt{m^2+1}}{(m+n)^3 \times h^5}$
I - Inhoud dwarsprofiel in M ²		
Q - Afvoer per seconde in M ³		

Door de rechte $\frac{i}{Q^2}$ lijnen wordt de betrekking gegeven tusschen Q en i aan de eene, b en h aan de andere zijde.
De gebogen I lijnen leeren het verband tusschen Q, v en b, h .

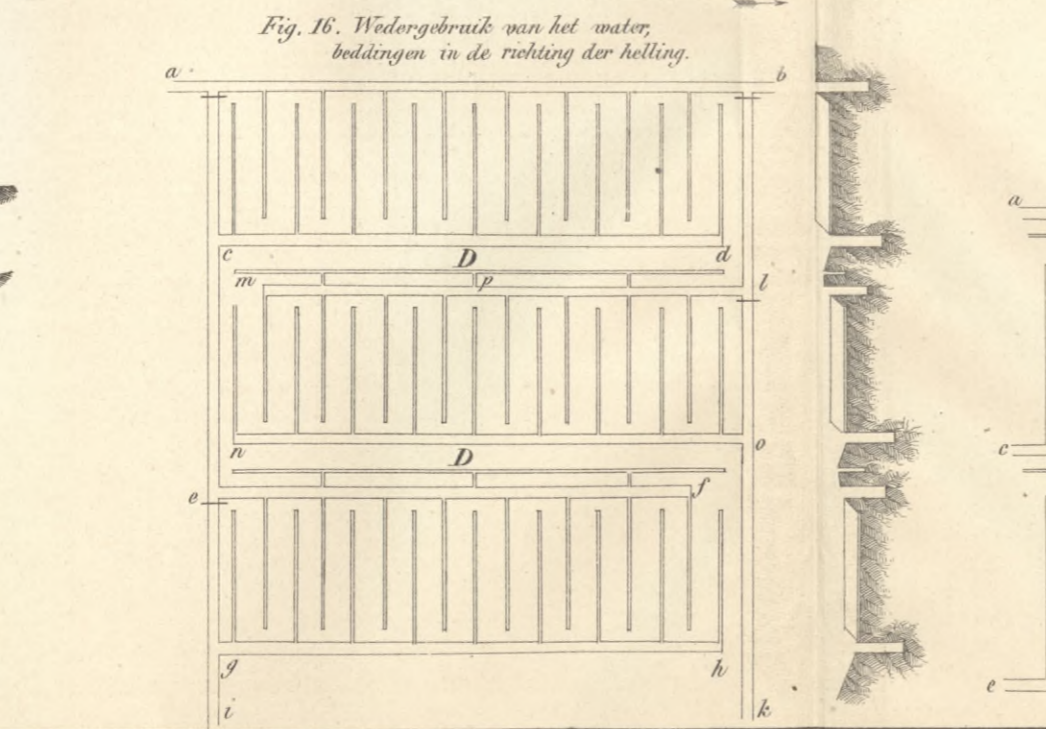
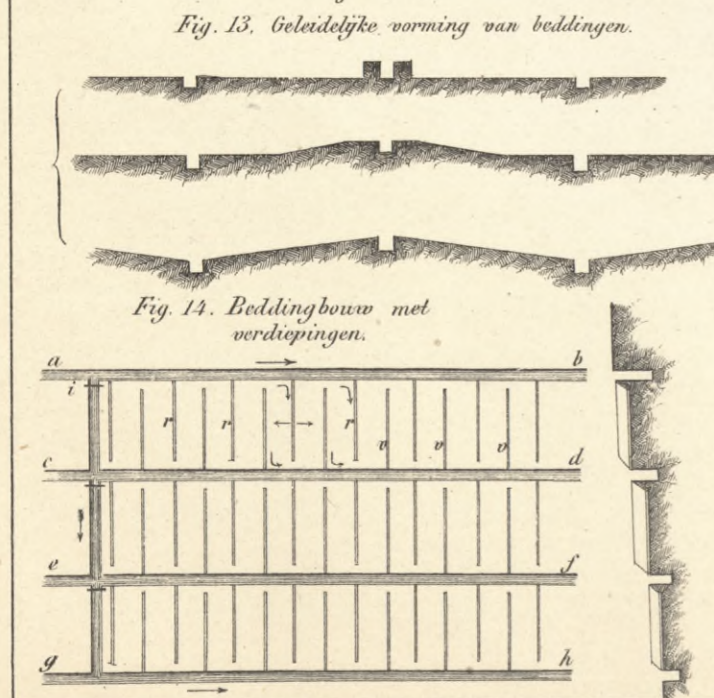
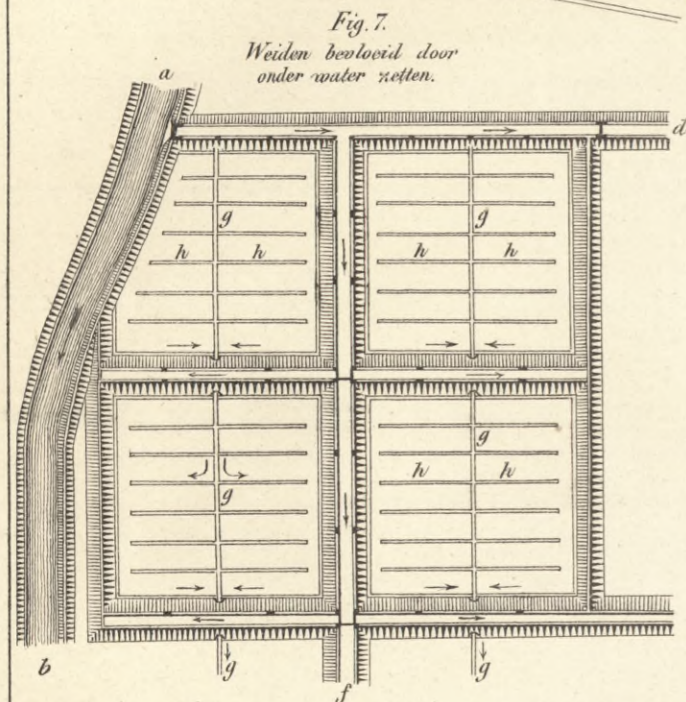
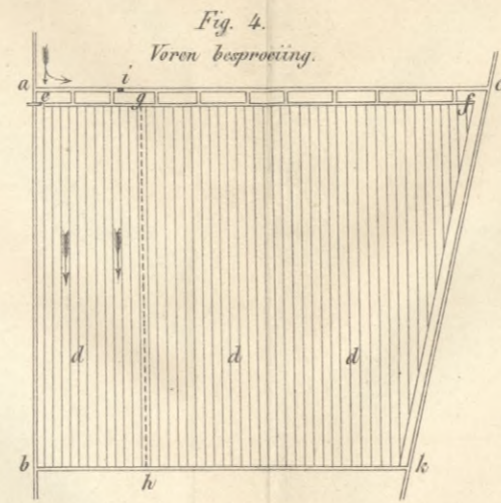
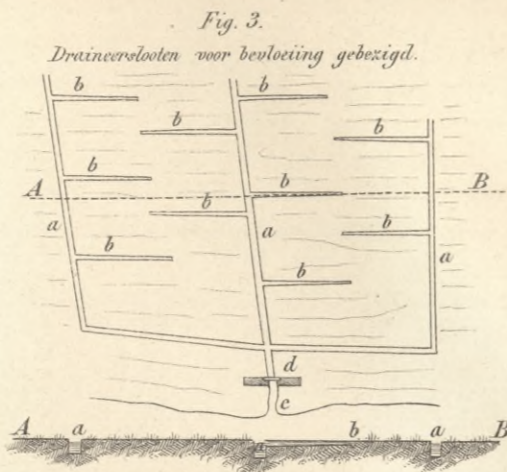
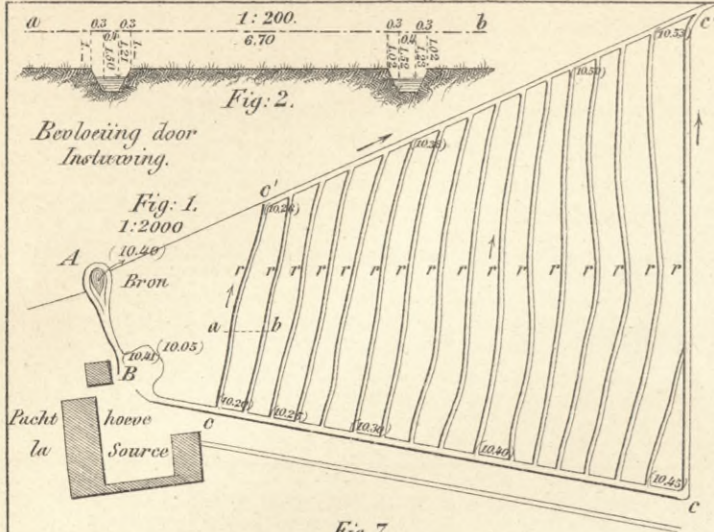
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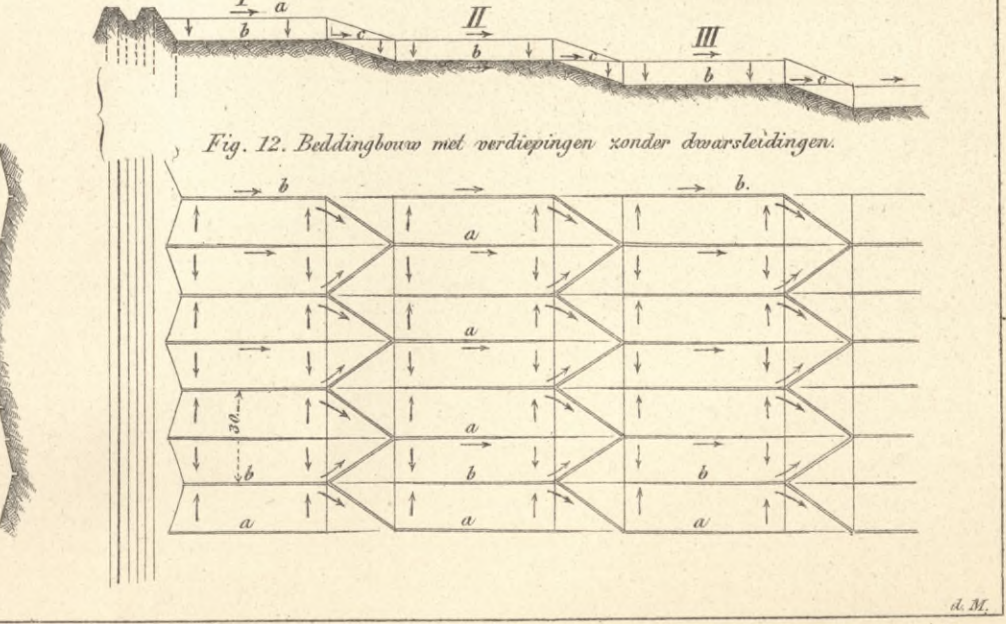
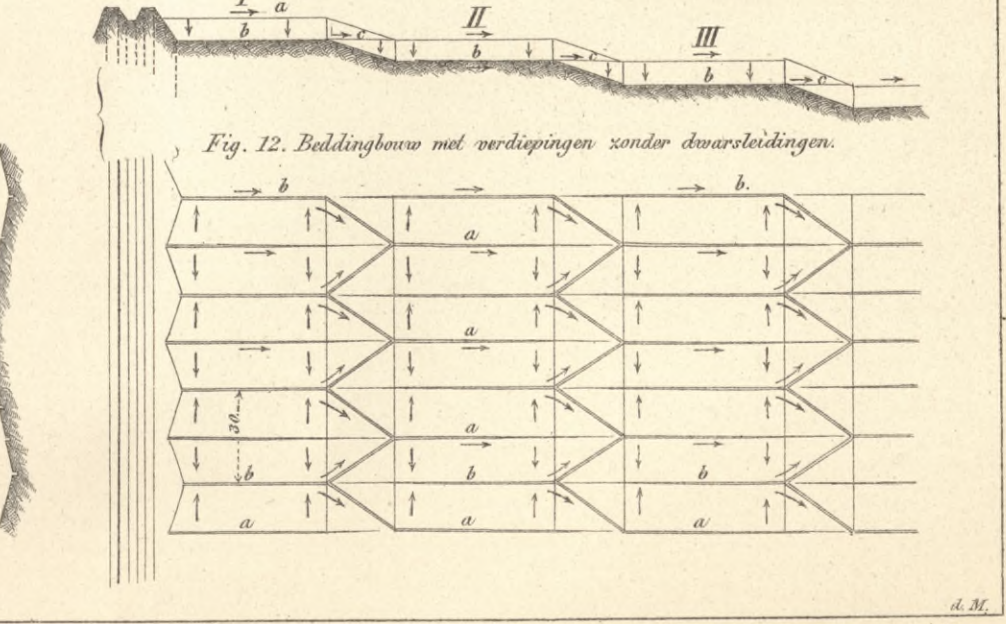
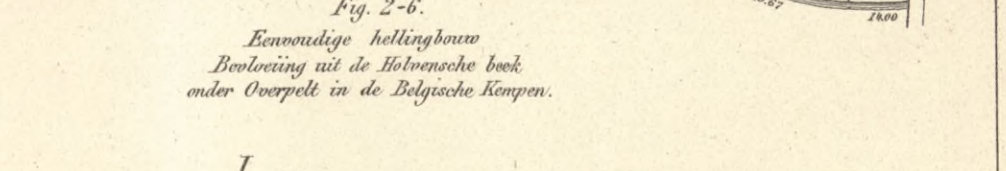
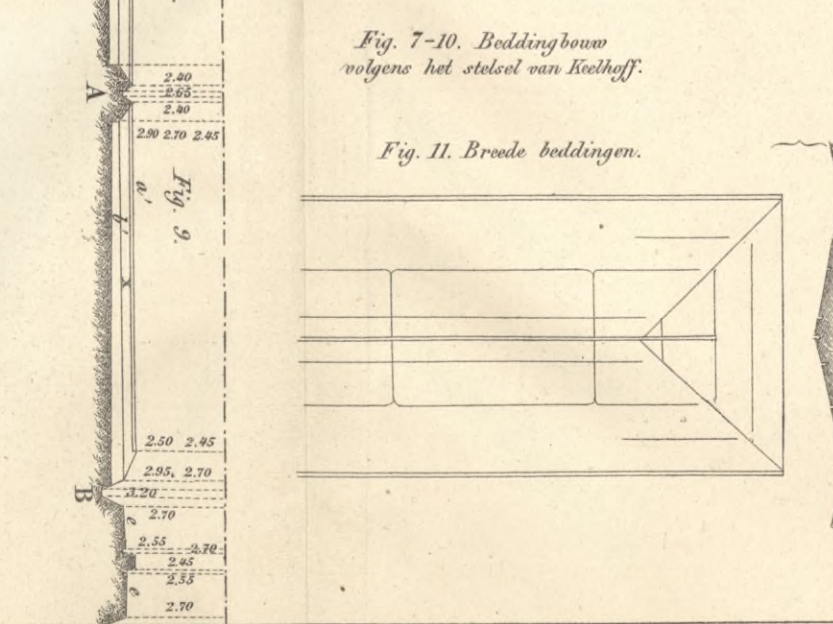
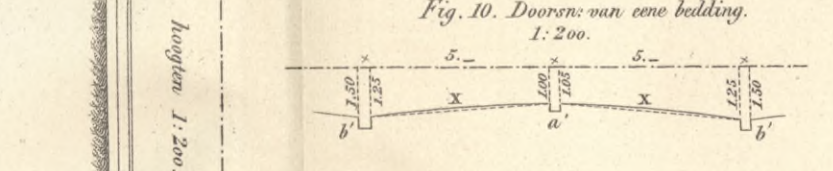
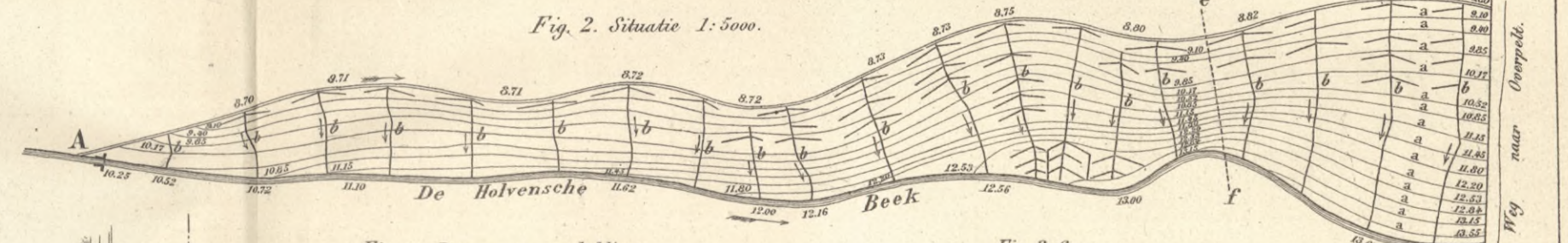
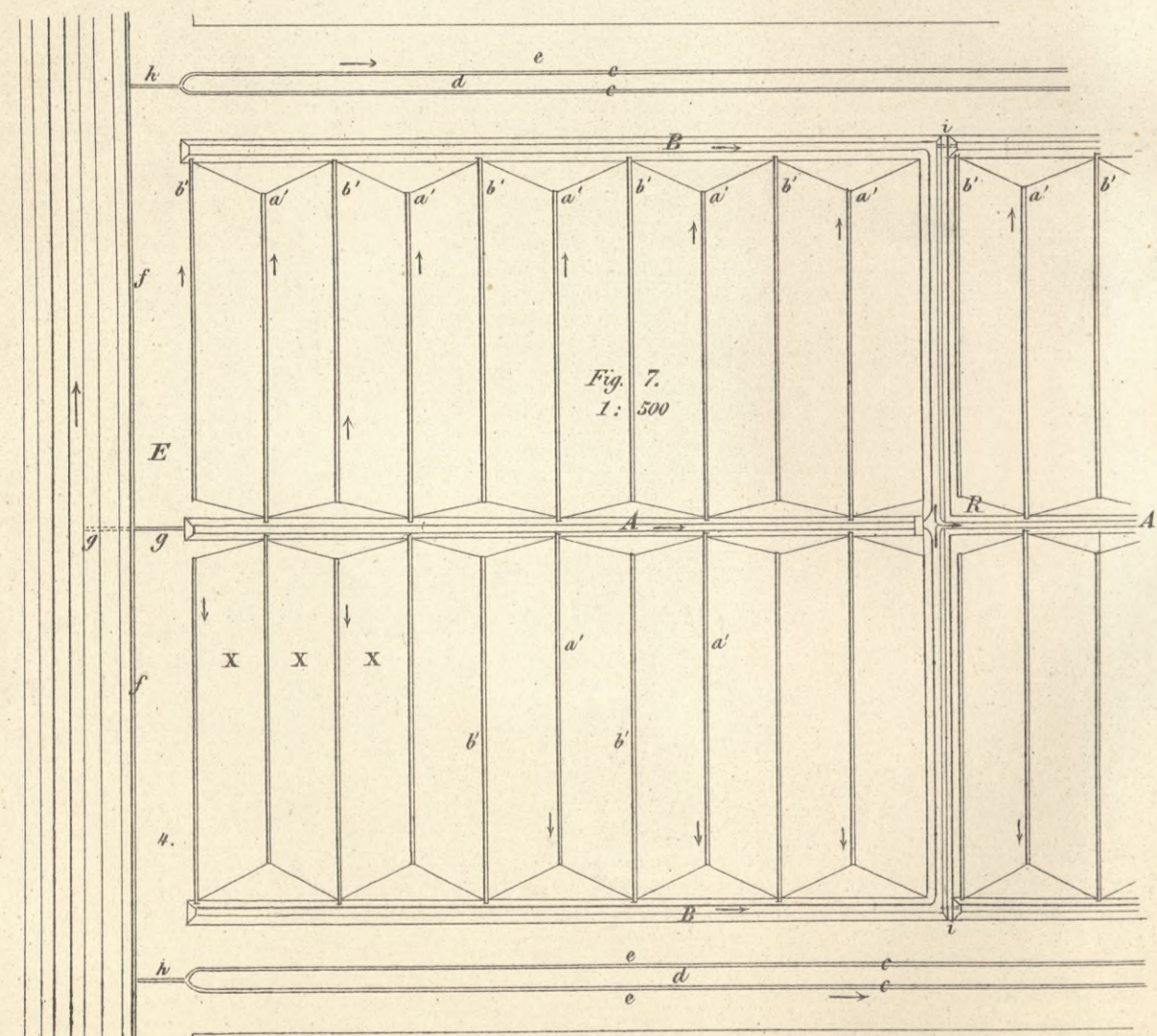
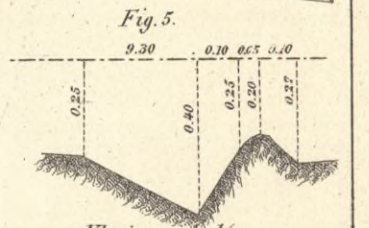
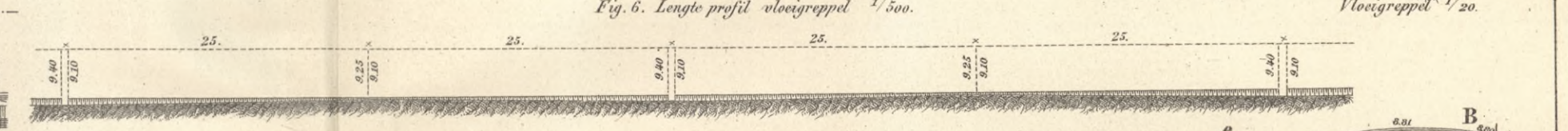
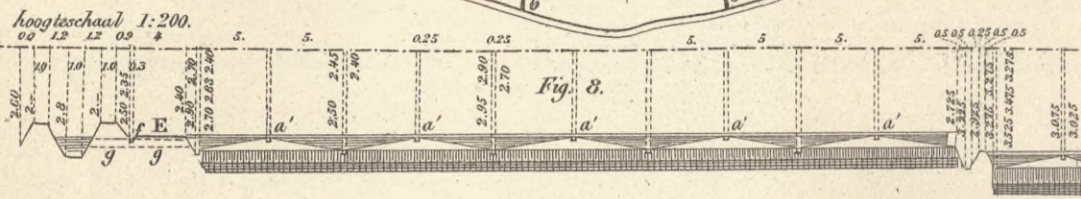
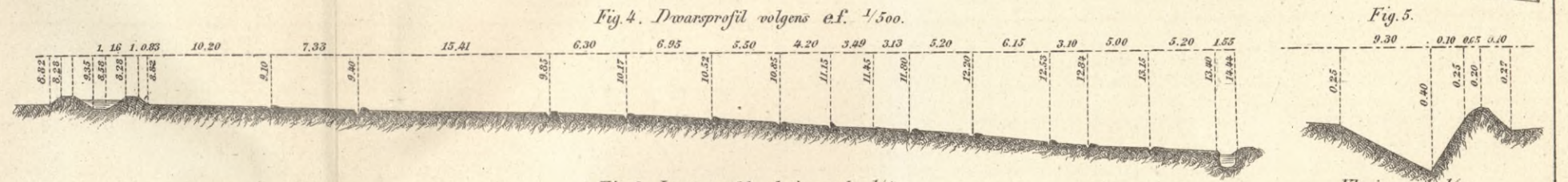
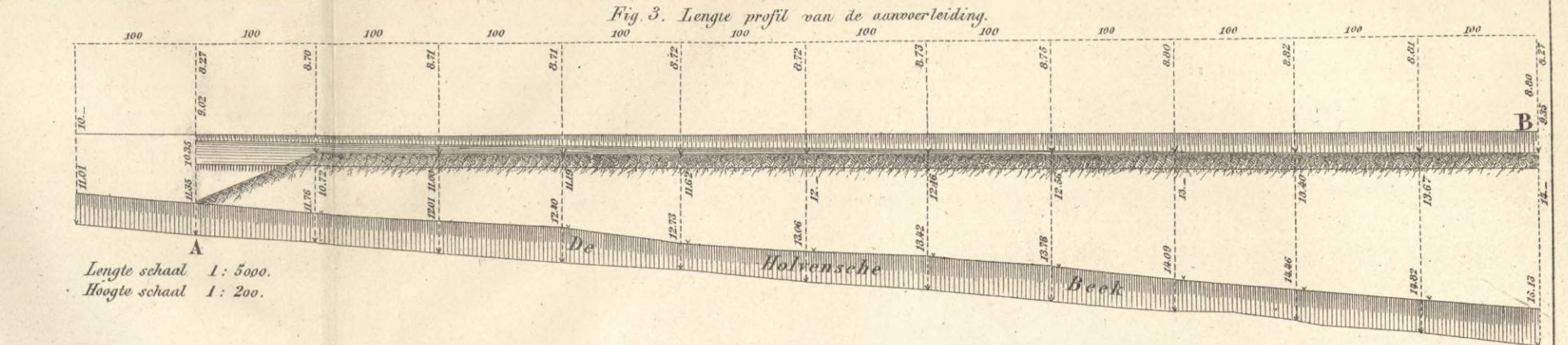
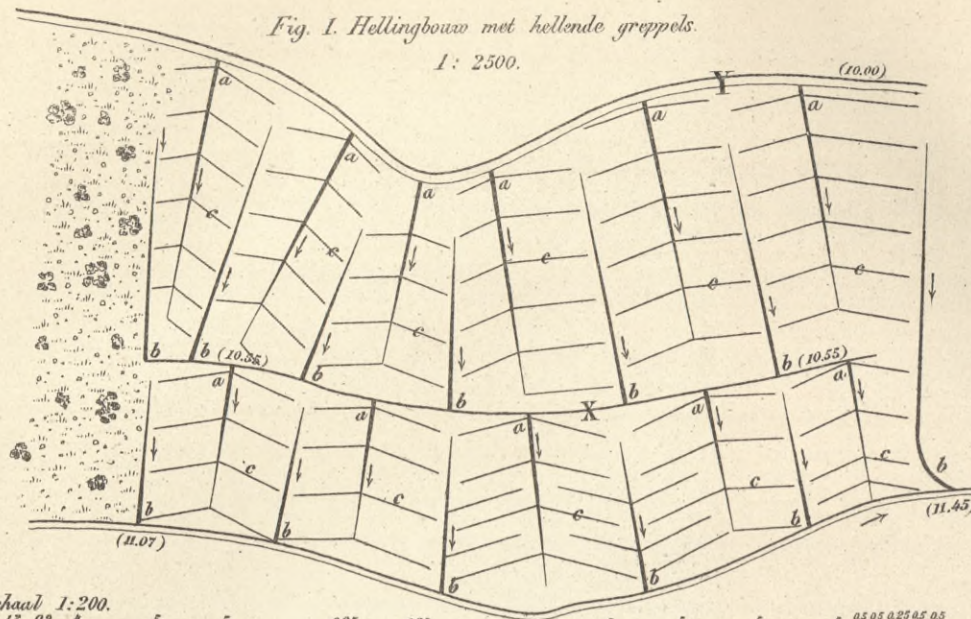
Gegeven $Q = 9.5, i = 0.3$ en $h = 1.60$.
De Q ordinaat 9.5 en de abscis 0.3 geven het punt A waardoor de $\frac{i}{Q^2}$ lijn AB is bepaald. Door deze te volgen tot op de h ordinaat $h = 1.60$ leest men in het punt B af $b = 5.60$. De door dit punt gaande I lijn BC geeft in het snijpunt C met de lijn $Q = 9.5$ de snelheid $v = 0.75$.

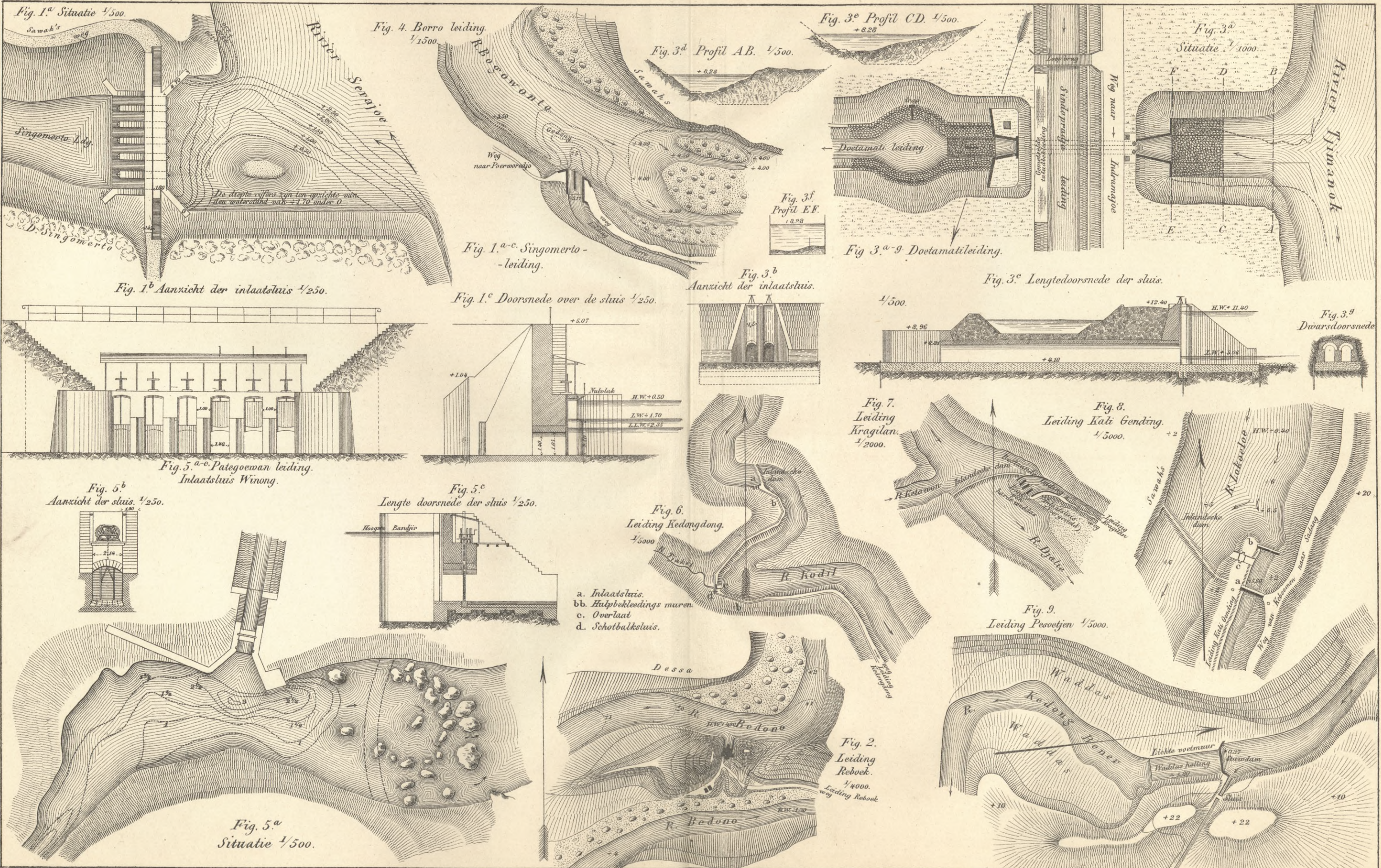
Het kleinst mogelijk profiel vindt men door de $\frac{i}{Q^2}$ lijn te volgen tot aan de lijn $n = 0.6056$ waar het punt B' geeft $h = 2.40, b = 1.45$. De door B' gebrachte I lijn geeft in C' voor de grootst mogelijke snelheid $v = 0.785$.

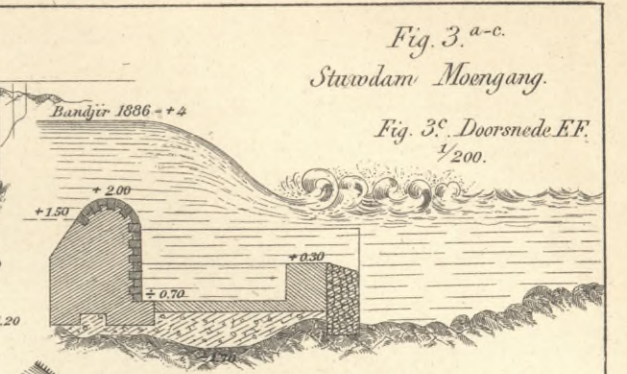
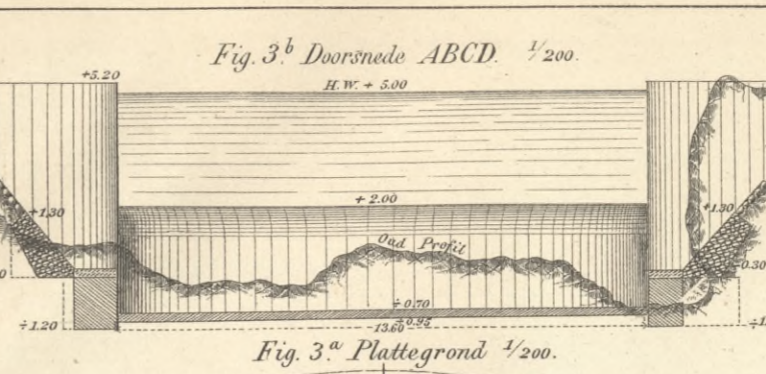
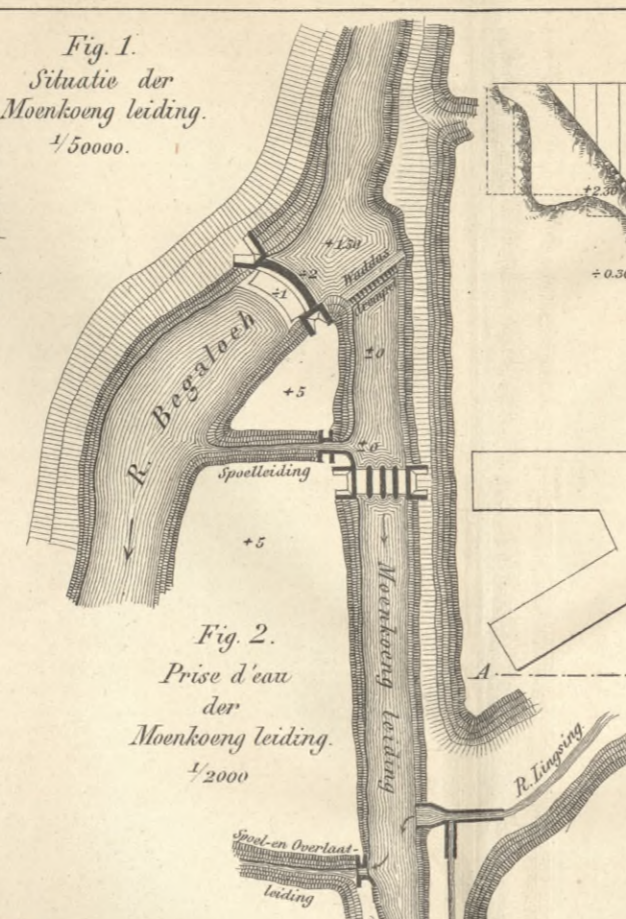
Gegeven $Q = 4$; gevraagd het kleinste verhang waarbij $v = 0.885$.
 $Q = 4, v = 0.885$ geeft D . Uit D de I lijn DE en uit E de $\frac{i}{Q^2}$ lijn EF geeft in F $i = 0.84$ en in E $b = 0.87, h = 1.46$.

Gegeven $Q = 9.5, i = 0.068, v = 0.43$.
 $Q = 9.5$ en $i = 0.068$ bepalen het punt K ; $Q = 9.5$ en $v = 0.43$ bepalen het punt H . De $\frac{i}{Q^2}$ lijn door K en de I lijn door H snijden elkander in G , uit welk punt men onmiddellijk kan aflezen $b = 8.00, h = 2.00$.

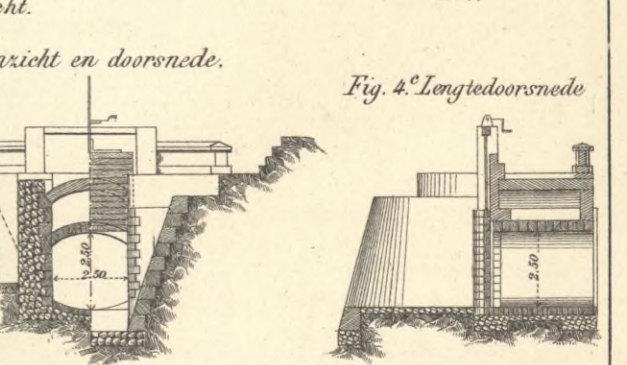
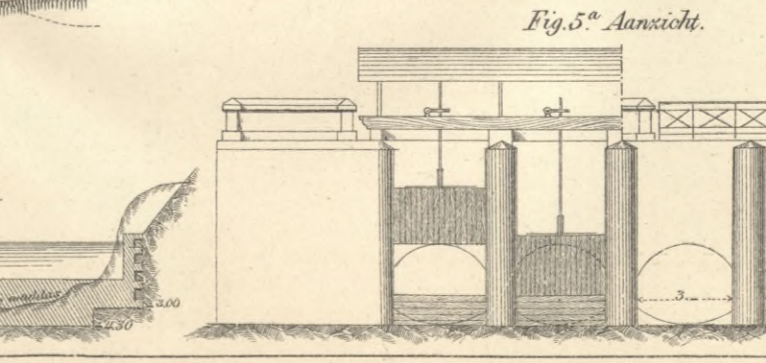
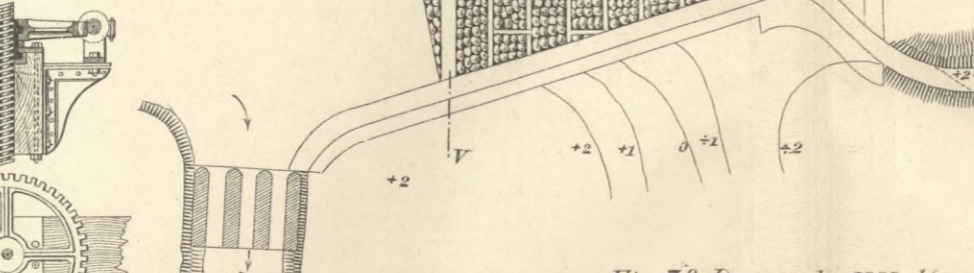
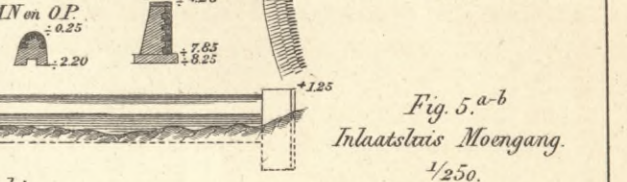
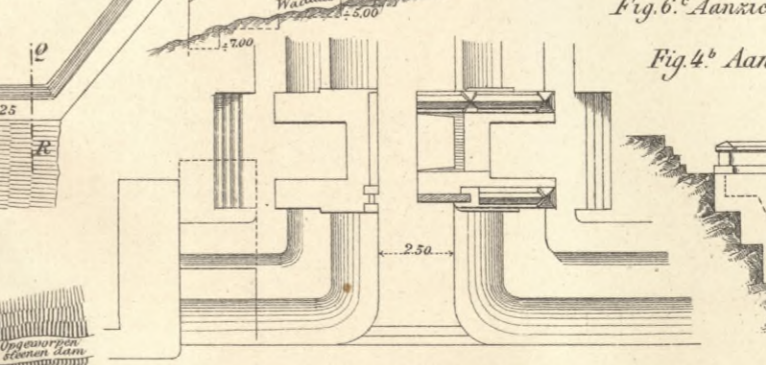
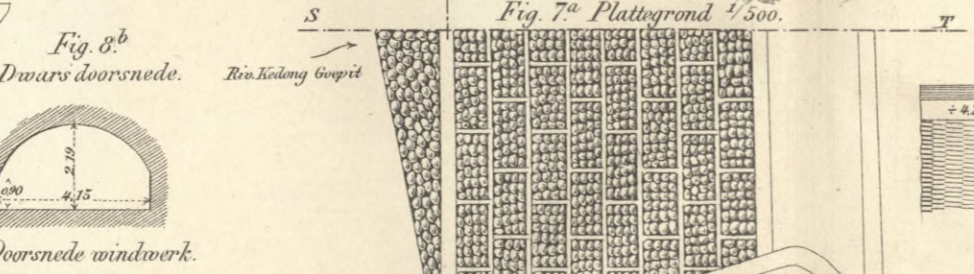
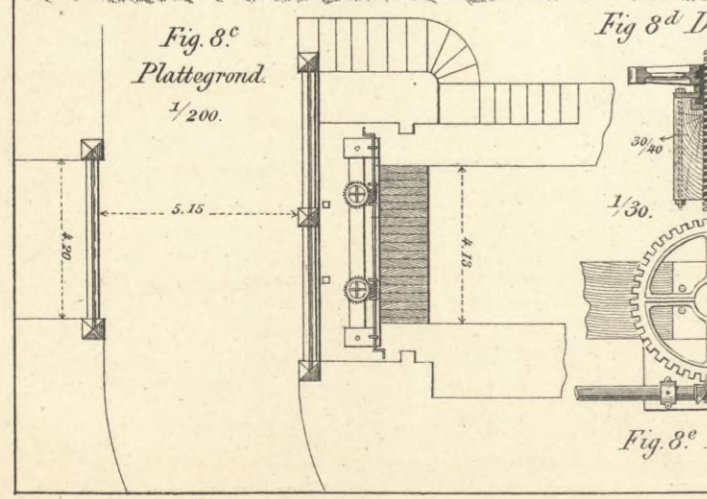
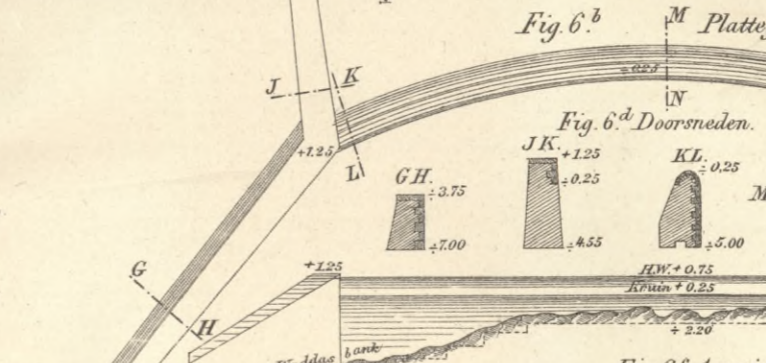
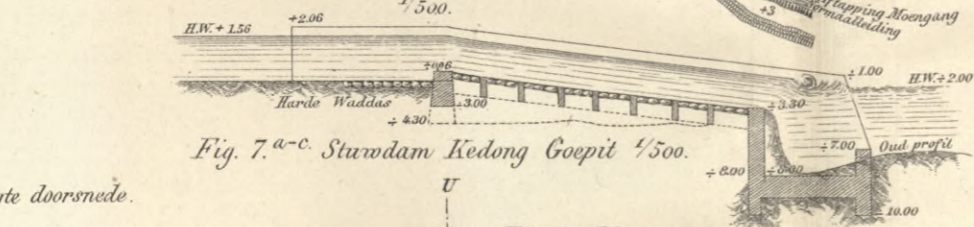
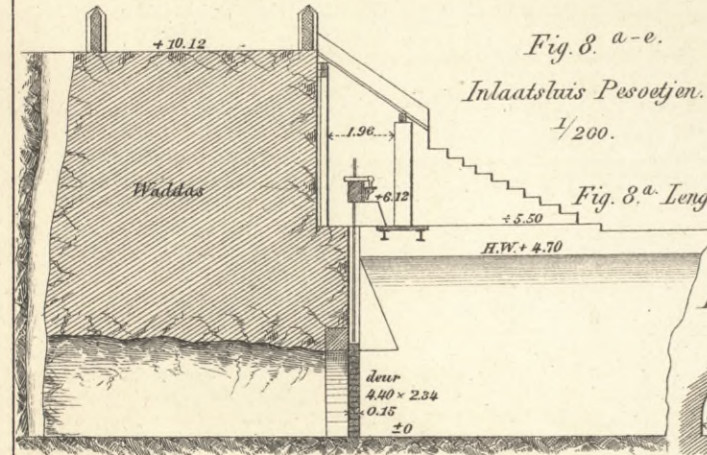
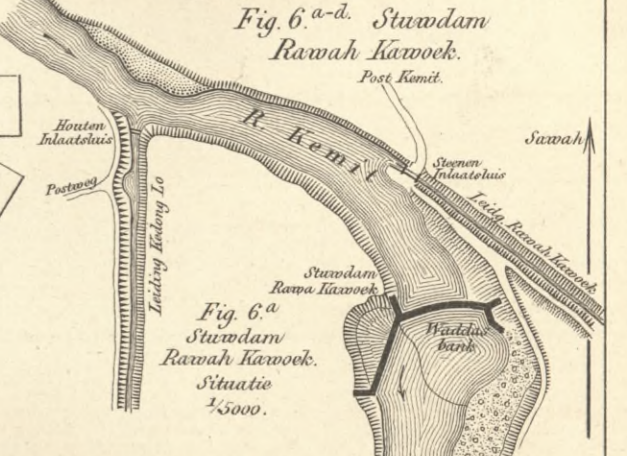
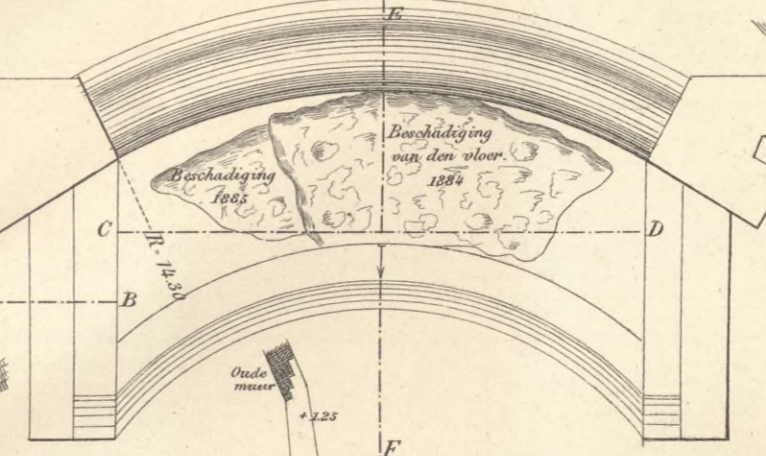
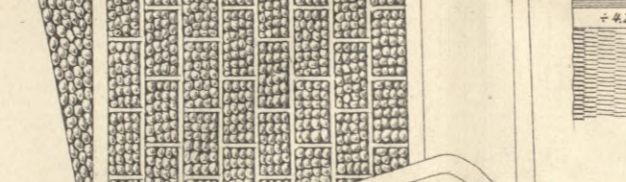
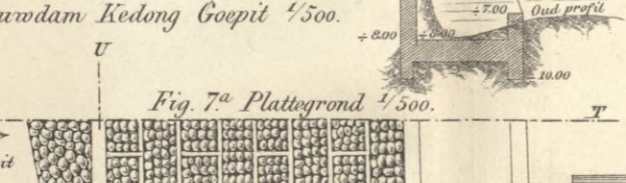
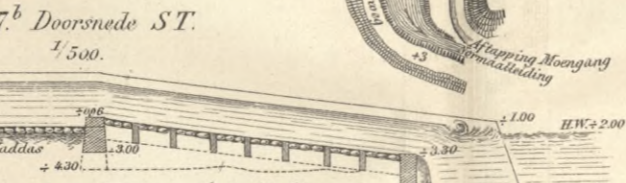


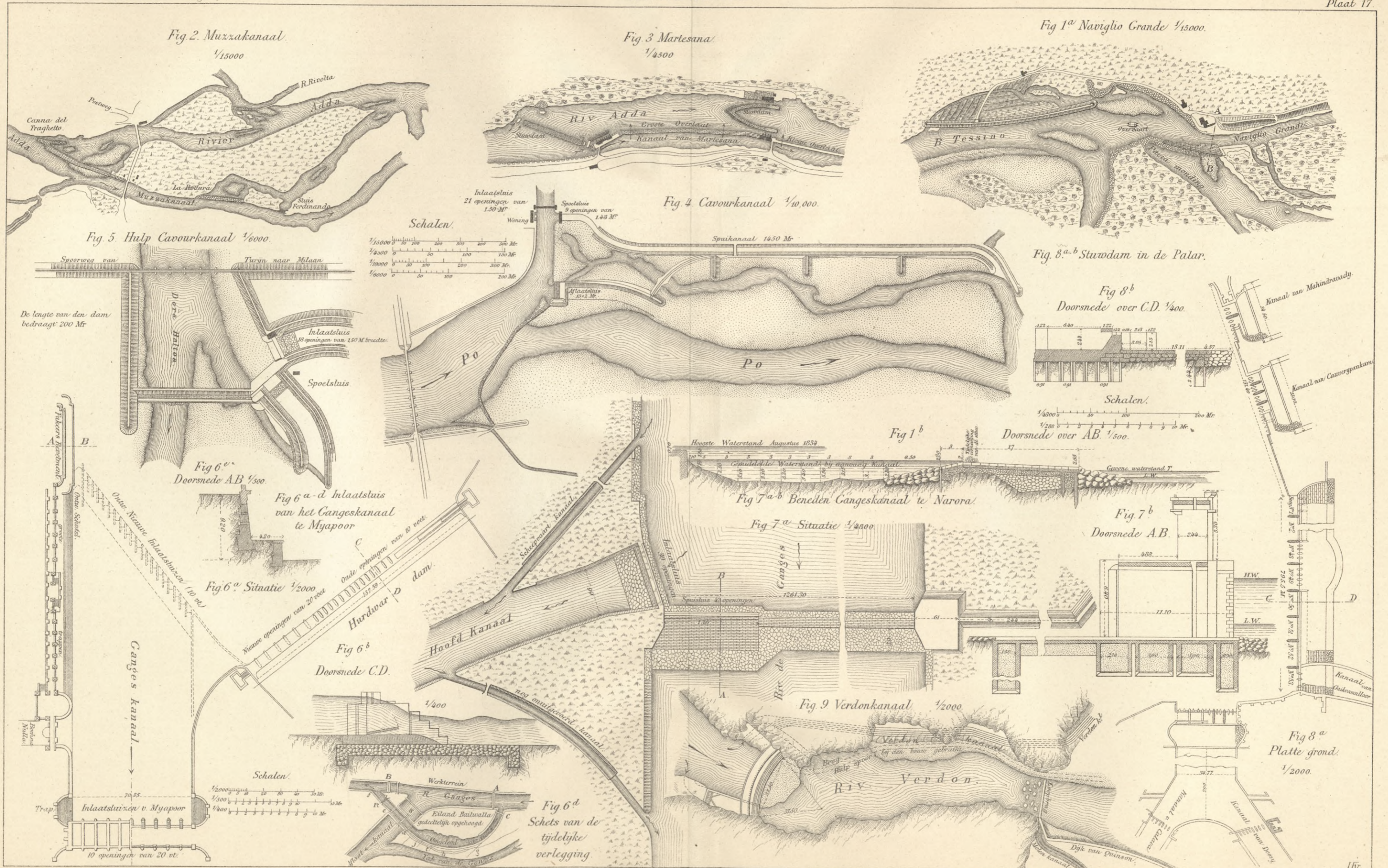


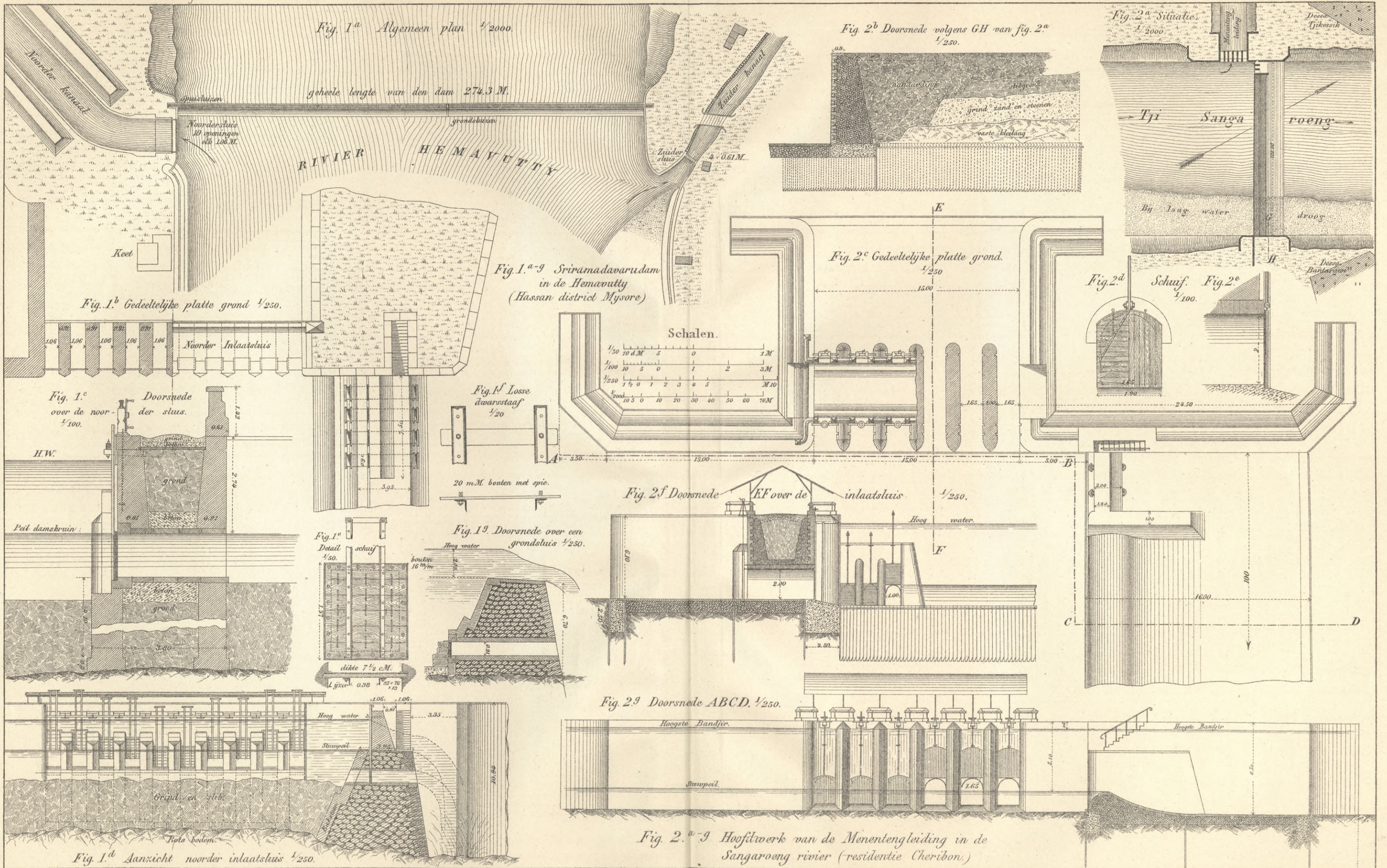


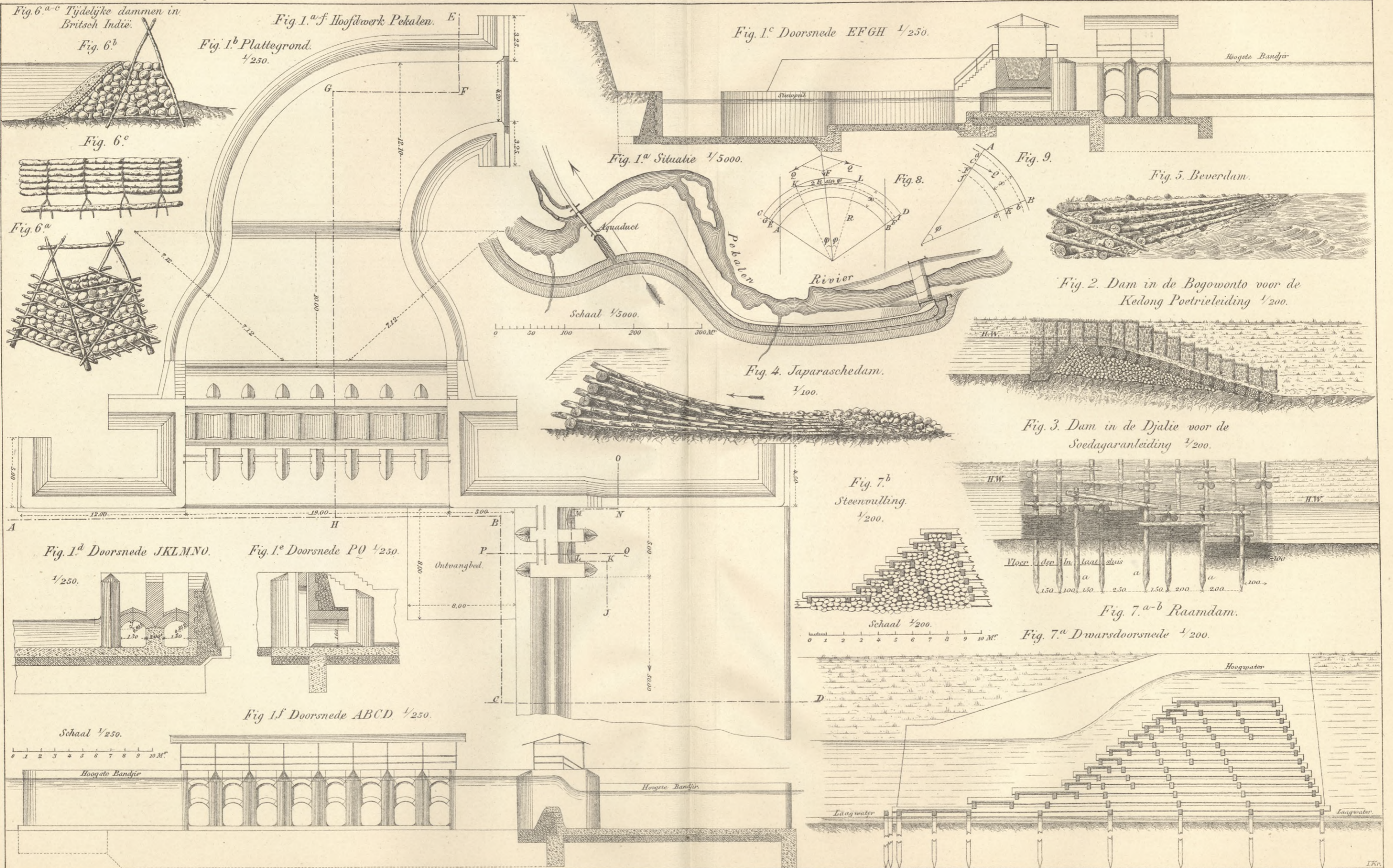


- 1. Stuwdam spoelstuis en inlaatstuis Moengang.
- 2. Stuwdam Lingsing.
- 3. Spoelstuis en overlaat Lingsing.
- 4. Grondsluiker Tooloeng.
- 5. Aquaduct in afstapping Boe.
- 6. Spoelstuis en overlaat.
- 7. Stuwdam Grantang.
- 8. Afstapping Pesoeiran.
- 9. Prandjie.
- 10. Spoelstuis en overlaat.
- 11. Brug kanaal Leter.
- 12. Afstapping Moengkoengvarie.
- 13. Brug Moengkoengvarie.
- 14. Afstapping Tanopo.
- 15. Spoelstuis en overlaat.
- 16. Afstapping Koewoeran.
- 17. Brug.
- 18. Gerdoe.
- 19. Afstapping.
- 20. Brug kanaal Katie poetih.

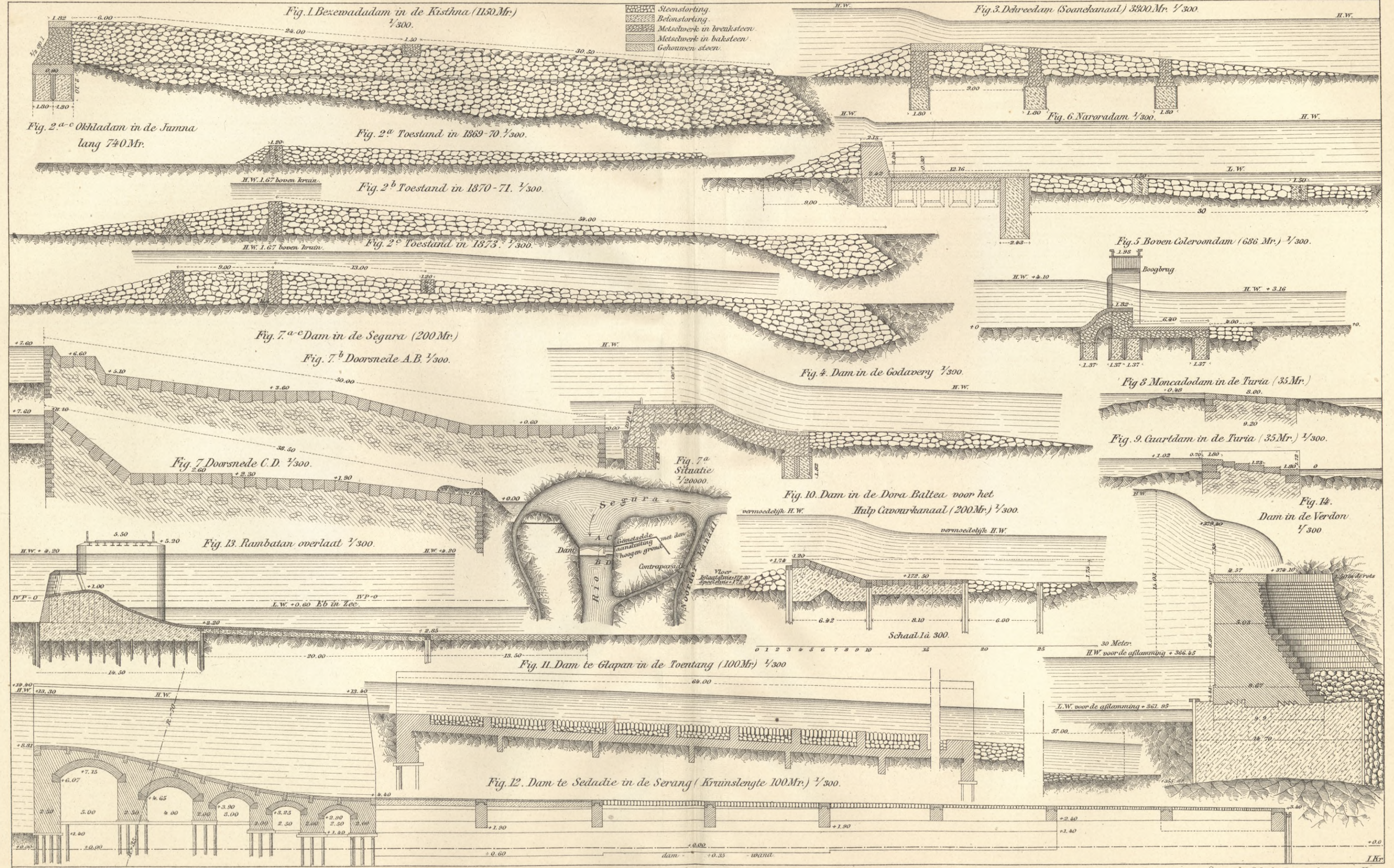


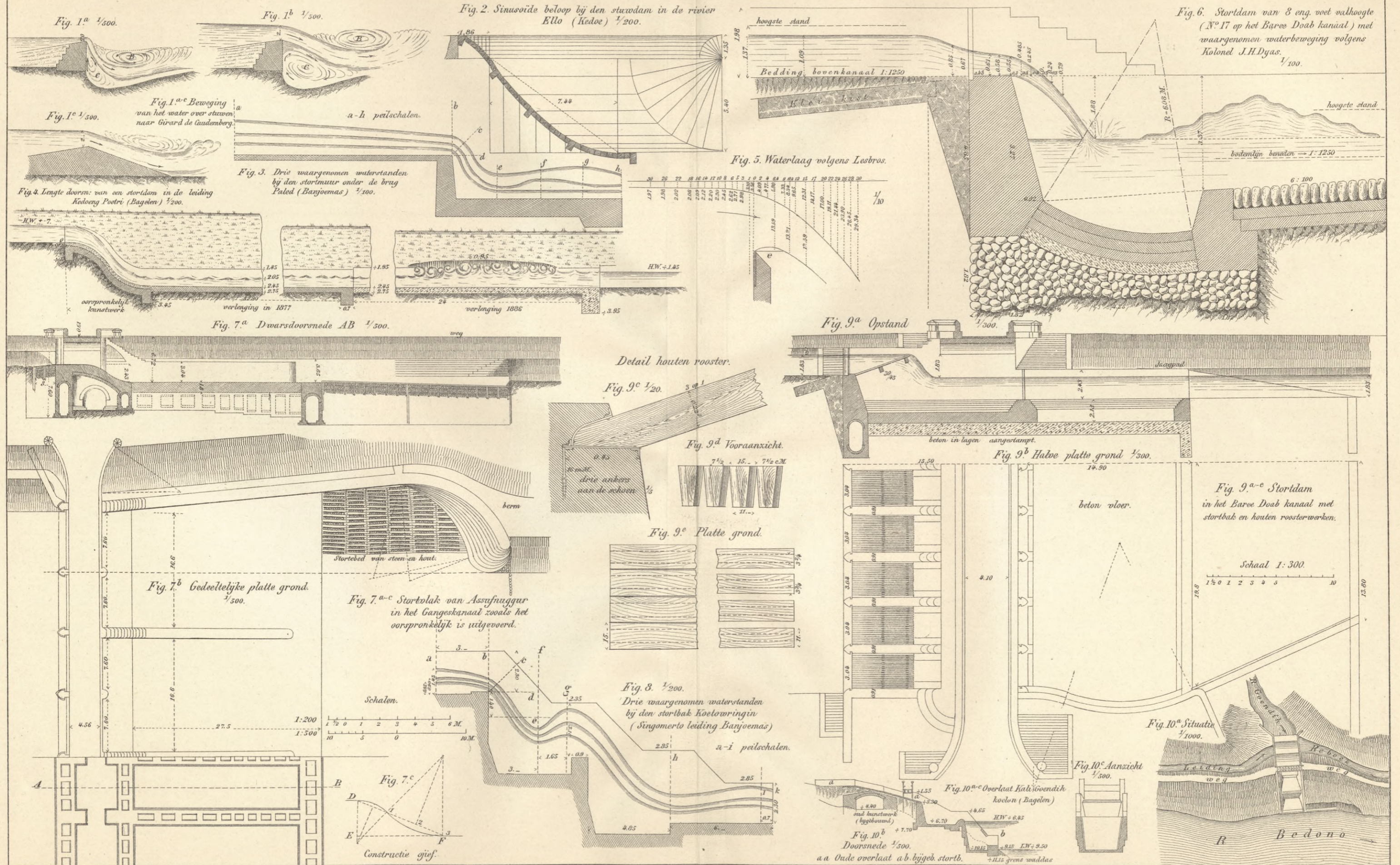


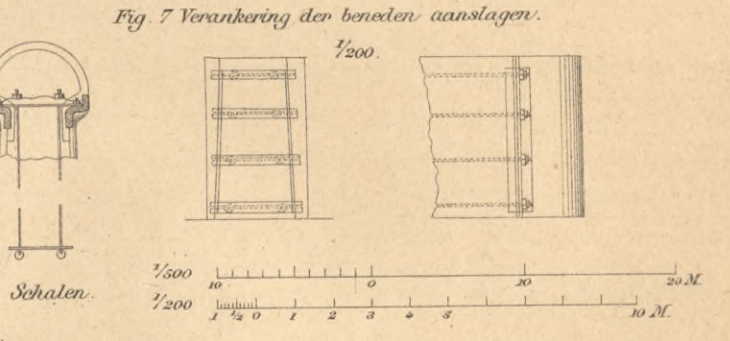
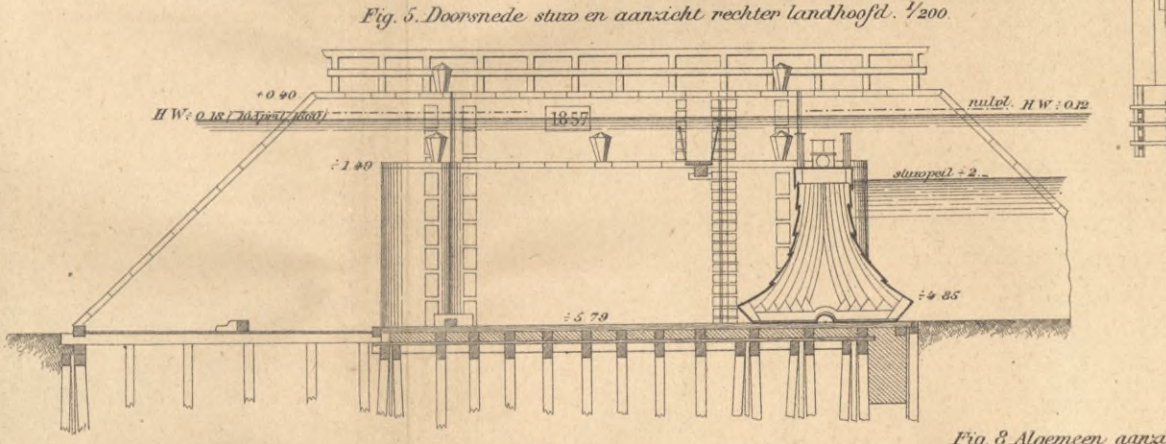
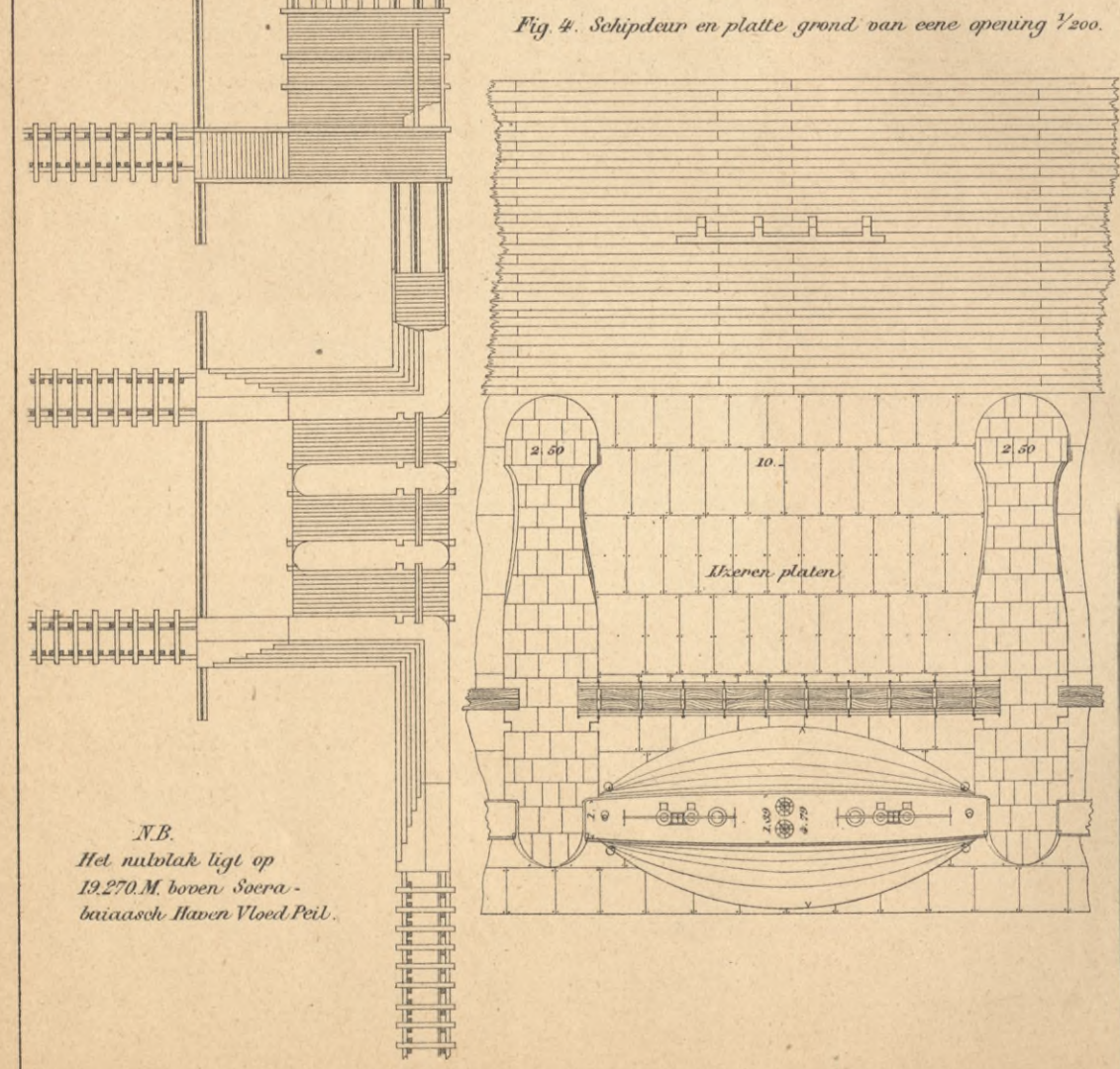
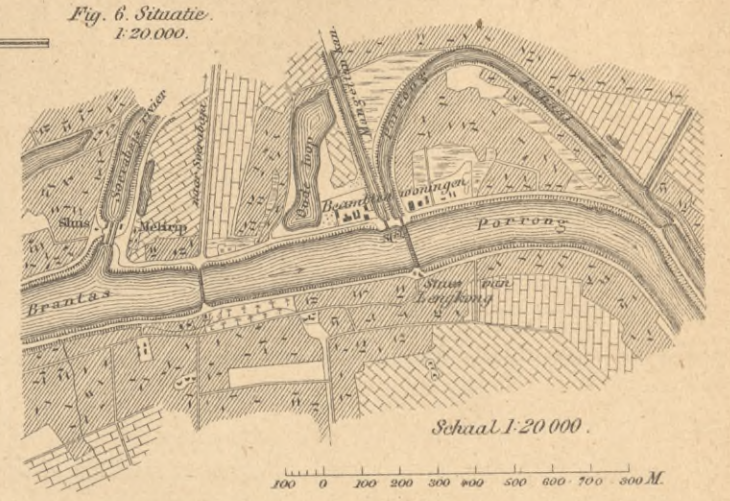
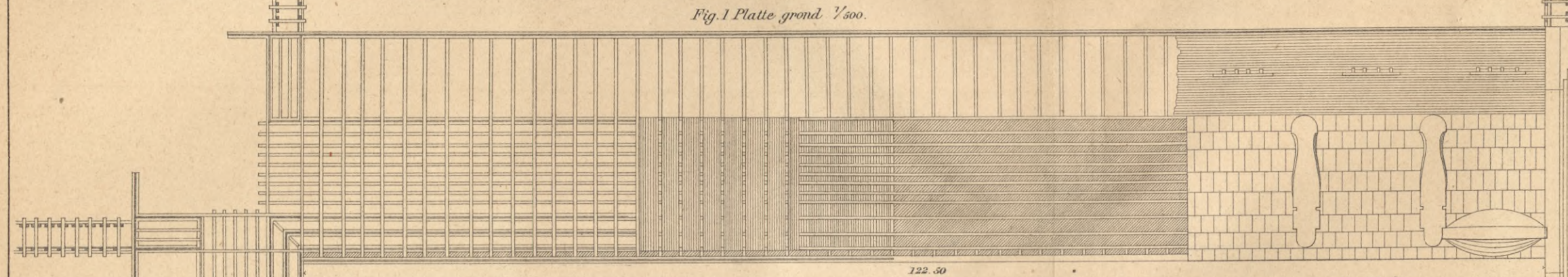
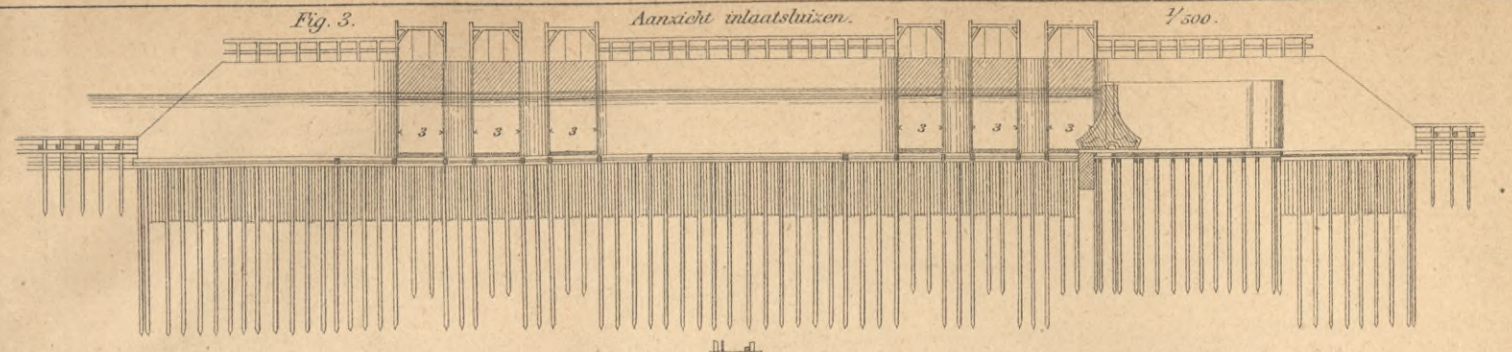
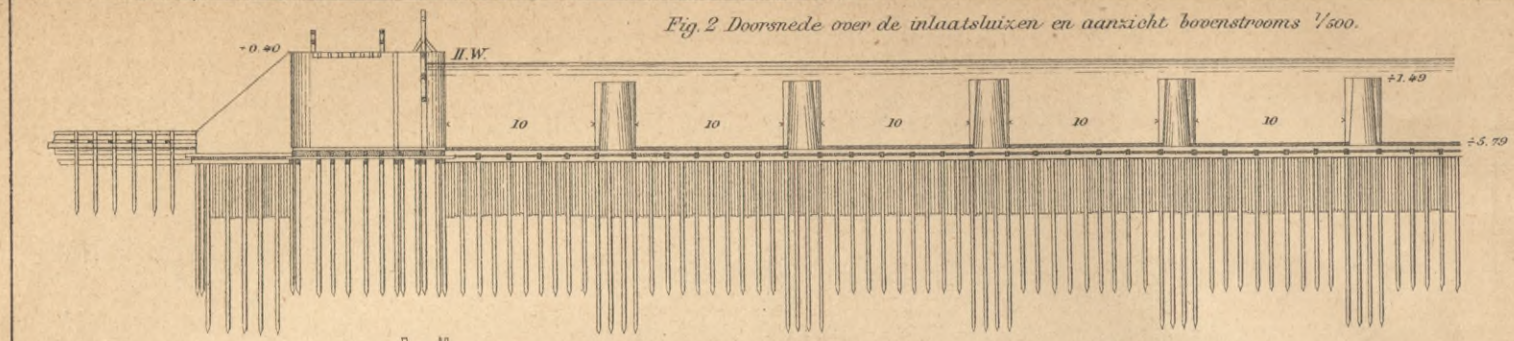




- Steenstorting.
- Betonstorting.
- Metselwerk in breuksteen.
- Metselwerk in baksteen.
- Gehouwen steen.







N.B.
Het niblak ligt op
19,270 M. boven Soera-
baiaasch Haven Vloed Peil.

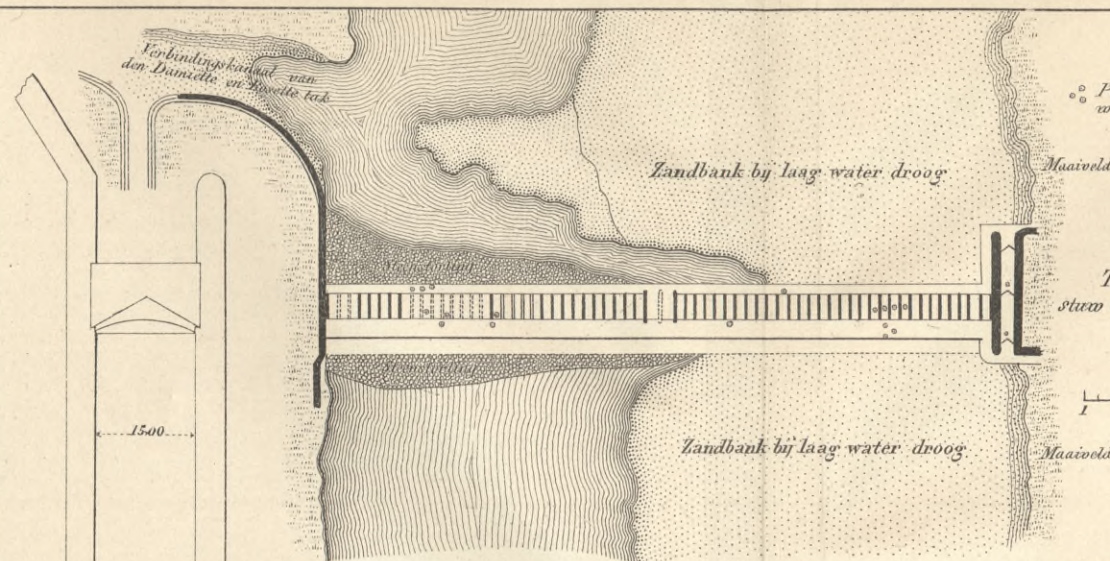
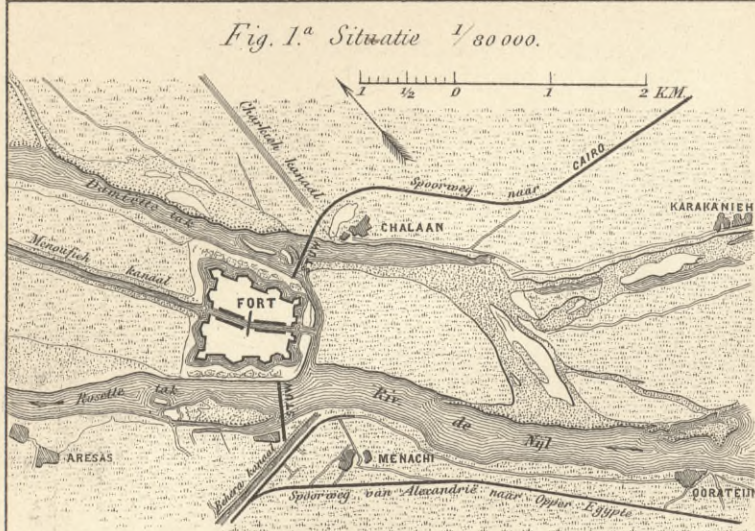
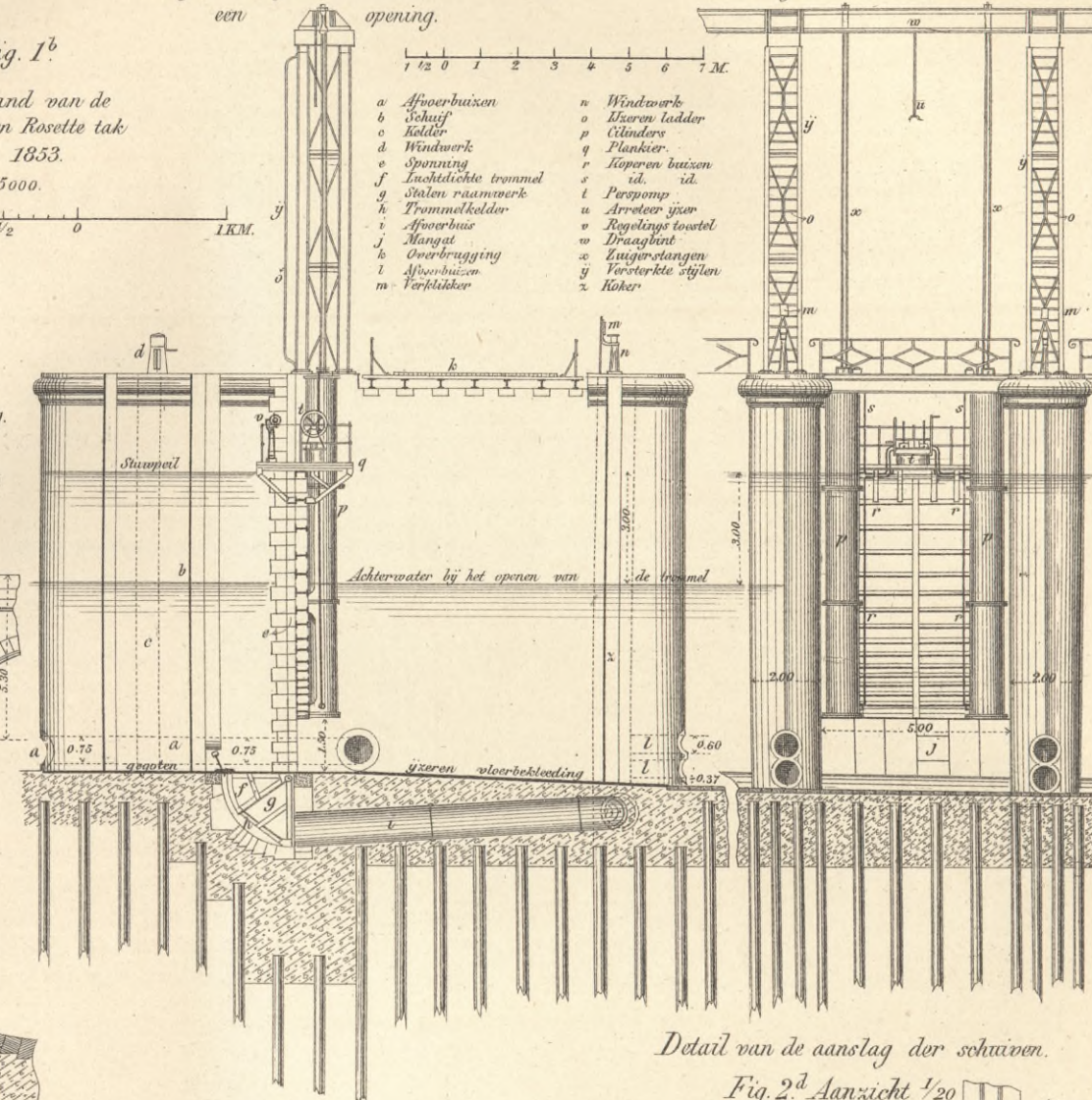


Fig. 2.ª-e Ontwerp van een beweegbare waterkeering met 8 Meter stuwhoogte 1/200.

Fig. 2.ª Lengtedoorsnede over een opening.

Fig. 2.ª Achteraanzicht.



- a Afvoerbuizen
- b Schuif
- c Kelder
- d Windwerk
- e Spinning
- f Inwendige trommel
- g Stalen raamwerk
- h Trommelkelder
- i Afvoerbus
- j Maaiveld
- k Overbrugging
- l Afvoerbuizen
- m Verkluisder
- n Windwerk
- o Blazen ladder
- p Kluisder
- q Plankier
- r Koppen buizen
- s id. id.
- t Perspomp
- u Arroteer ijzer
- v Ropstijg toewiel
- w Draaglant
- x Zuigerstangen
- y Versterkte stijlen
- z Koker

Fig. 1.ª-j Grootte Nijlsluw te Saidieh.

Fig. 1.ª Doornede over een opening met ijzeren deur 1/250.

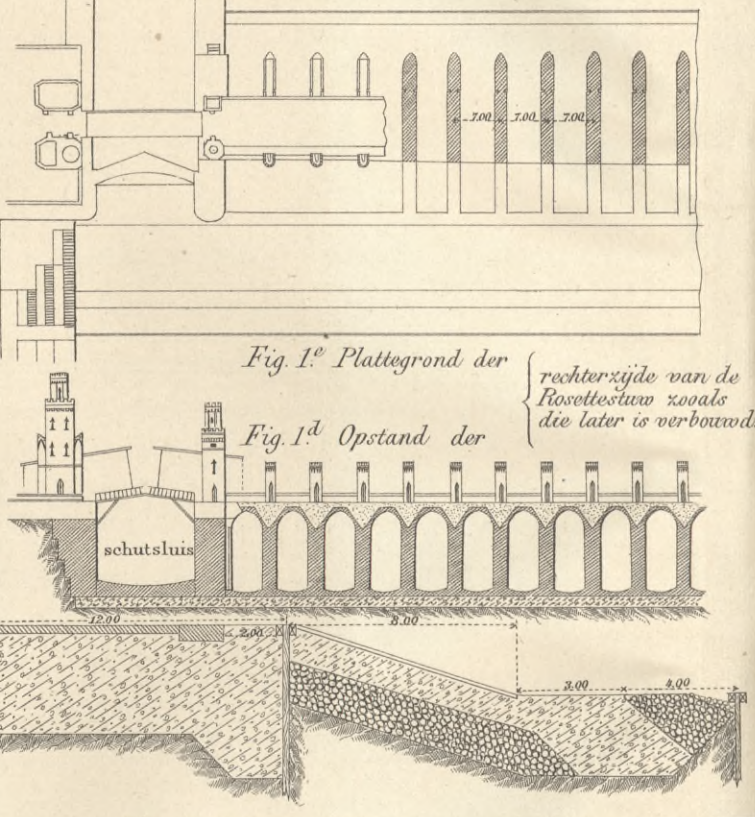
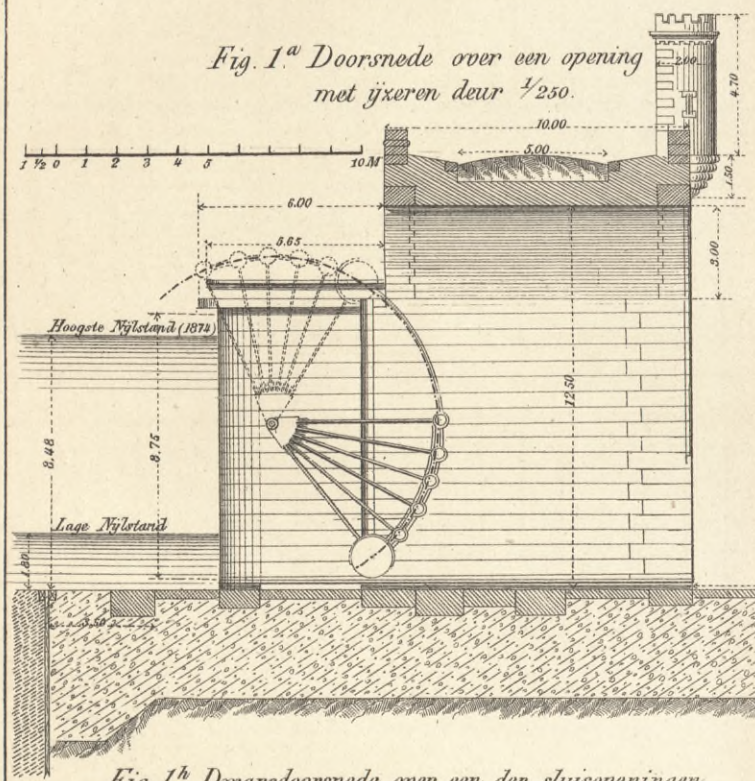


Fig. 1.ª Aanzicht van een opening 1/250.

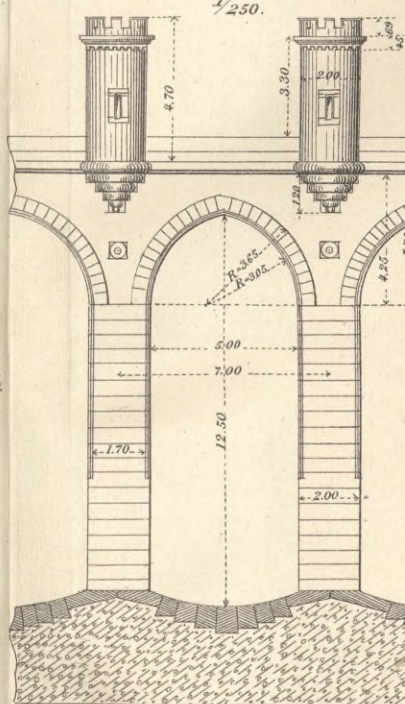


Fig. 2.ª Plattegrond.

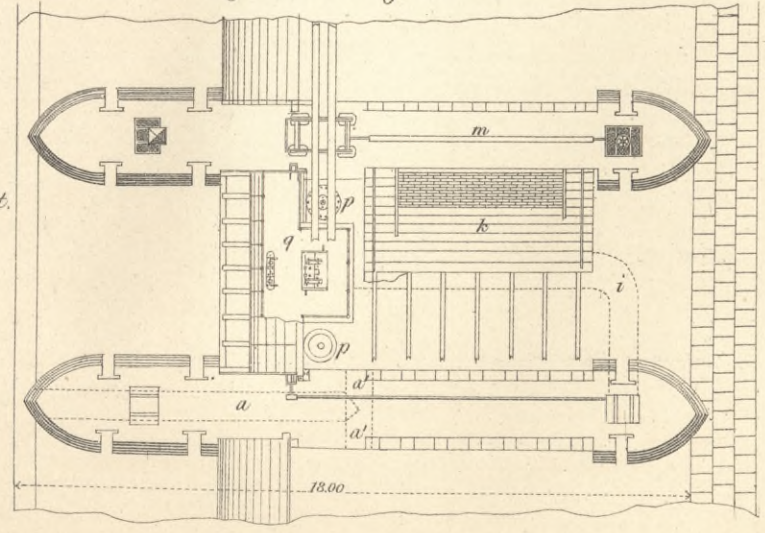


Fig. 2.ª Aanzicht 1/20

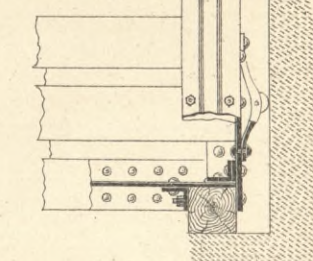


Fig. 2.ª Plan 1/20

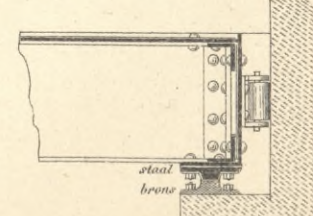


Fig. 1.ª Dwarsdoornede over een der sluisopeningen 1/250.

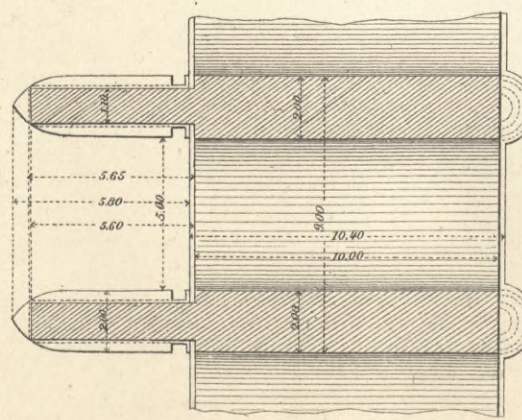


Fig. 1. a-9. Valschut met losse rollen bij het meer Erne.

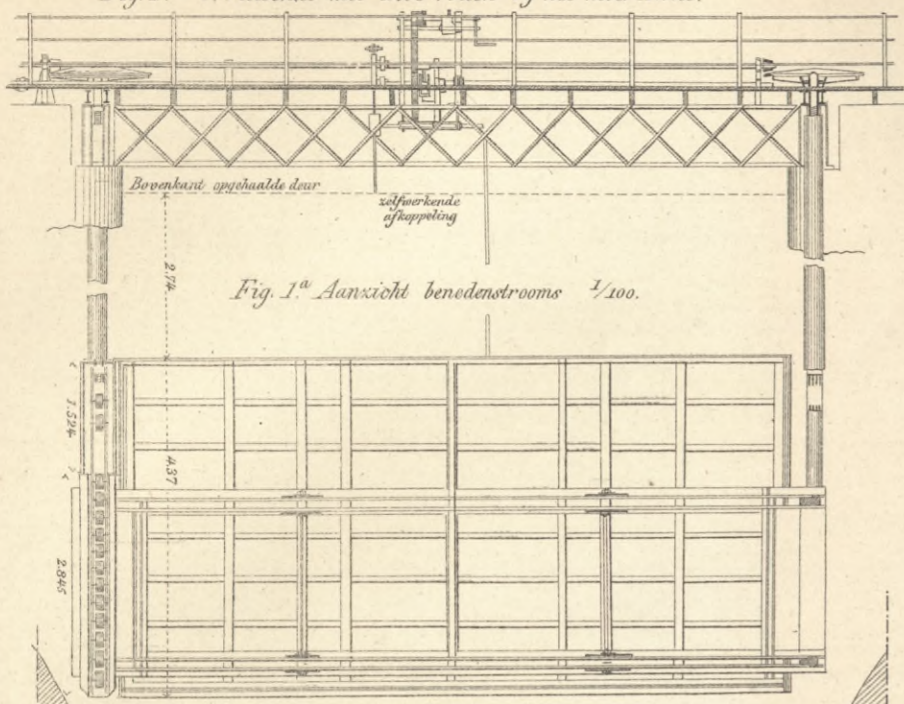


Fig. 1^a Aansicht benedenstrooms 1/100.

Fig. 1^b Platte grond van de deur 1/100.

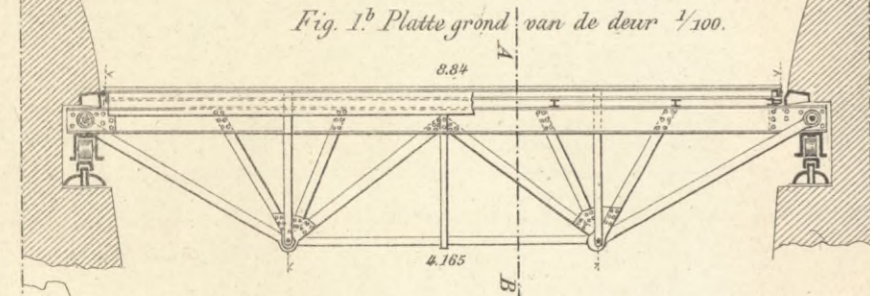


Fig. 1^c Platte grond van de brug met het windwerk 1/100.

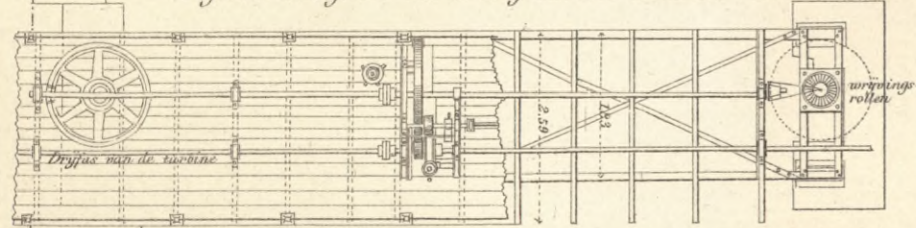


Fig. 1^e Doorsnede over een rol en de beweegbare geleiders 1/20.

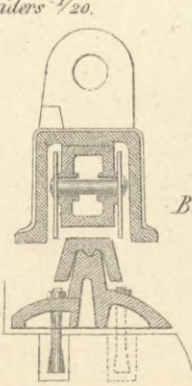


Fig. 1^f Waterdichte sluiting 1/20.



Fig. 1^g Bevestiging geleiders.



Fig. 5. Ophalen van schotplanken bij den Dudupurdam (West Jinnakanaal) 1/20.

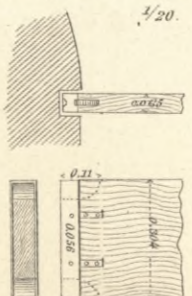


Fig. 4^c Inrichting voor het losmaken der kettingen. 120 a 180 lang.



Fig. 2. a-d Valschut met vaste rollen in de Dutton-sluizen op de Weaver.

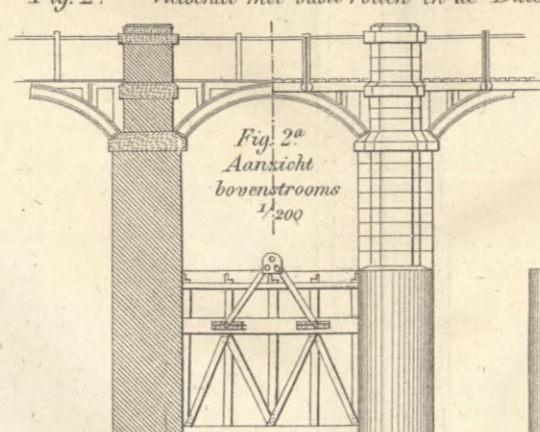


Fig. 1^d Doorsnede AB. 1/100.

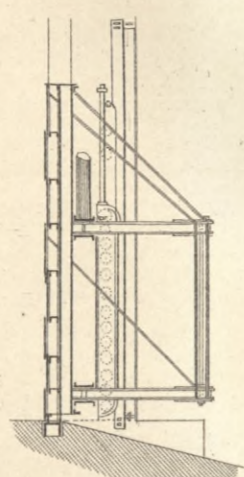


Fig. 2^c Platte grond 1/200.

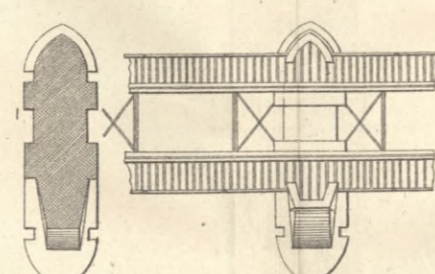


Fig. 2^b Doorsnede 1/200.

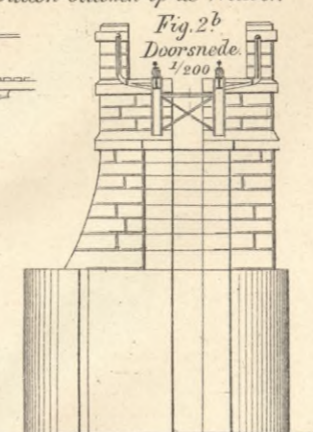


Fig. 2^d Detail van de rol 1/20.

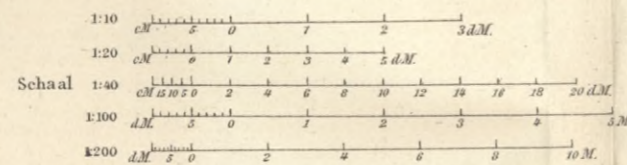
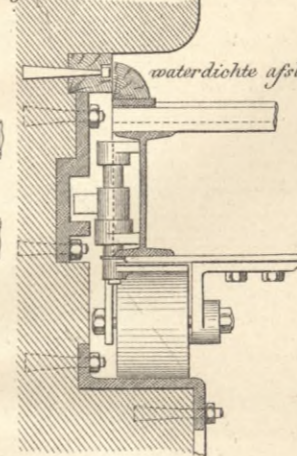


Fig. 4. a-c Valdeuren in den Dhunowri overlaat.

Fig. 4^a Doorsnede over de as 1/100.

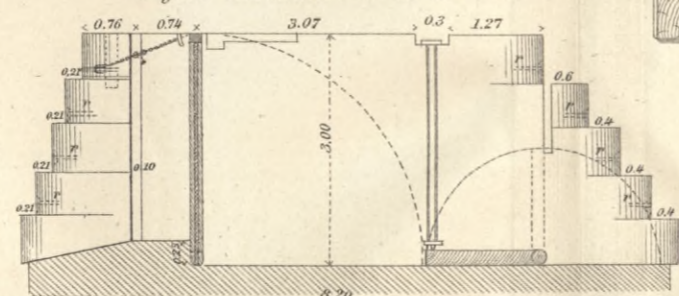


Fig. 4^b Platte grond van eene opening 1/100.

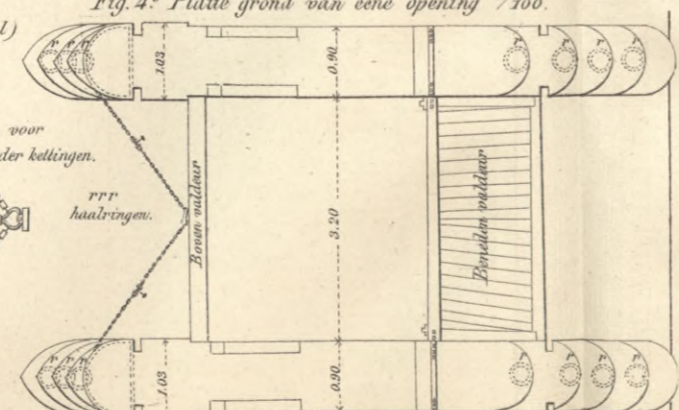


Fig. 3^a Doorsnede over eene opening 1/100.

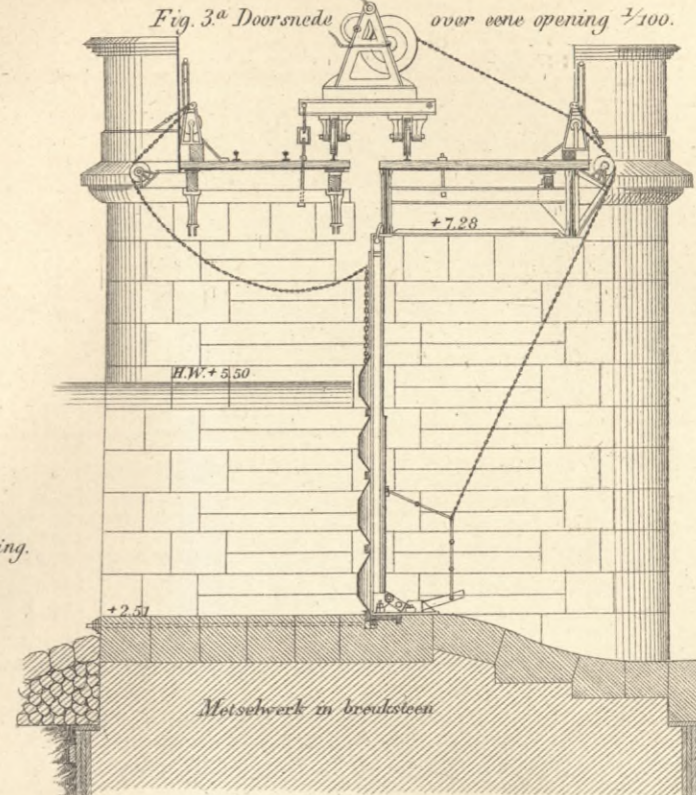


Fig. 3^b Opstand benedenstrooms 1/100.

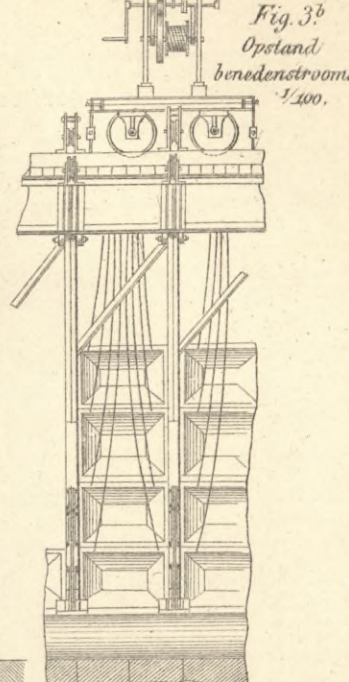


Fig. 3^c Doorsnede van een schuifbord 1/40.

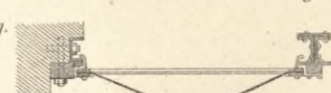


Fig. 3^d Voet van een beweegbaren stijl 1/40.

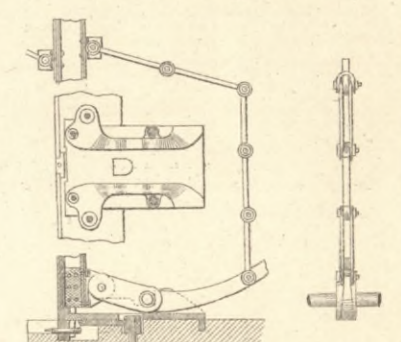
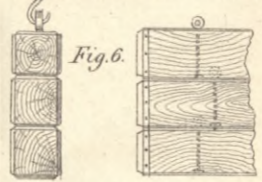


Fig. 3^{e-f} Beweegbare stuw te Pretzien nabij Maagdeburg.

Enkele haak.



Dubbele haak.

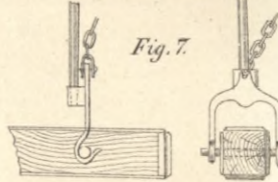


Fig. 3^e Draaipunt boven 1/40.

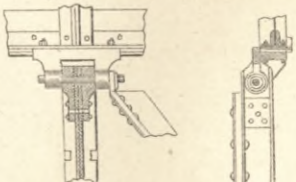


Fig. 3^f Algemeen aanzicht.

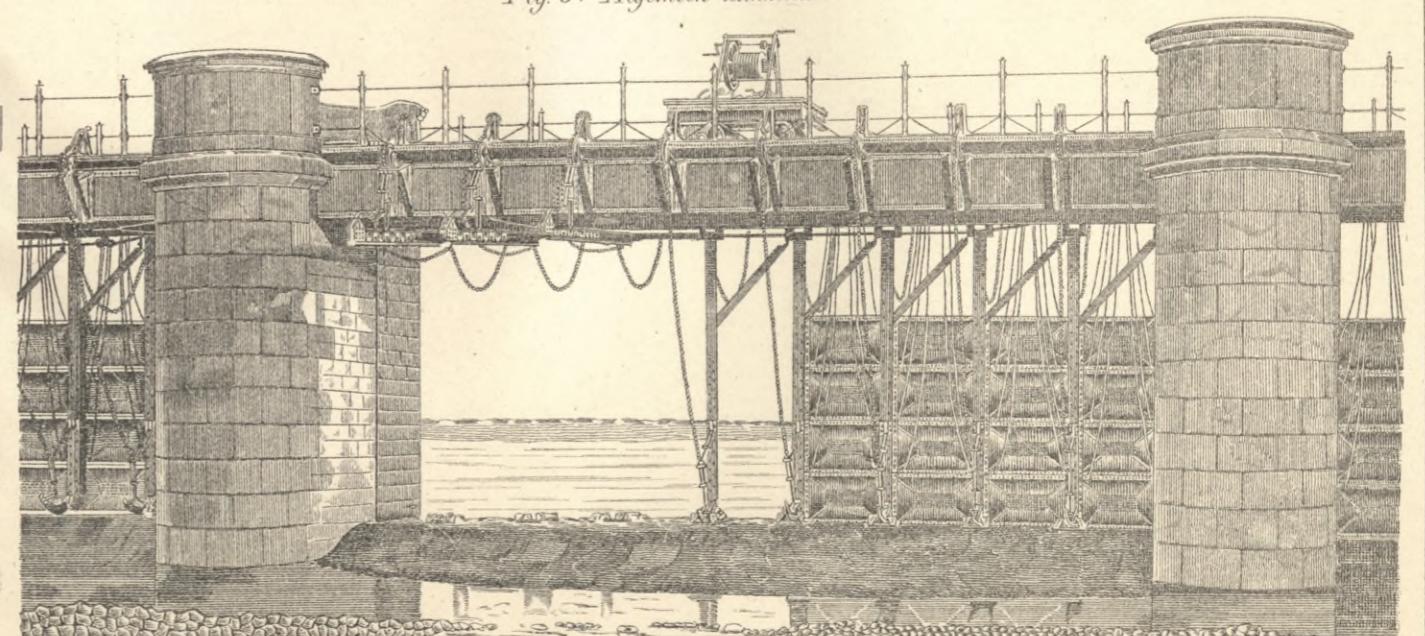


Fig. 1.^{a-f} Stuw in de Ocker bij Müden (Hannover)

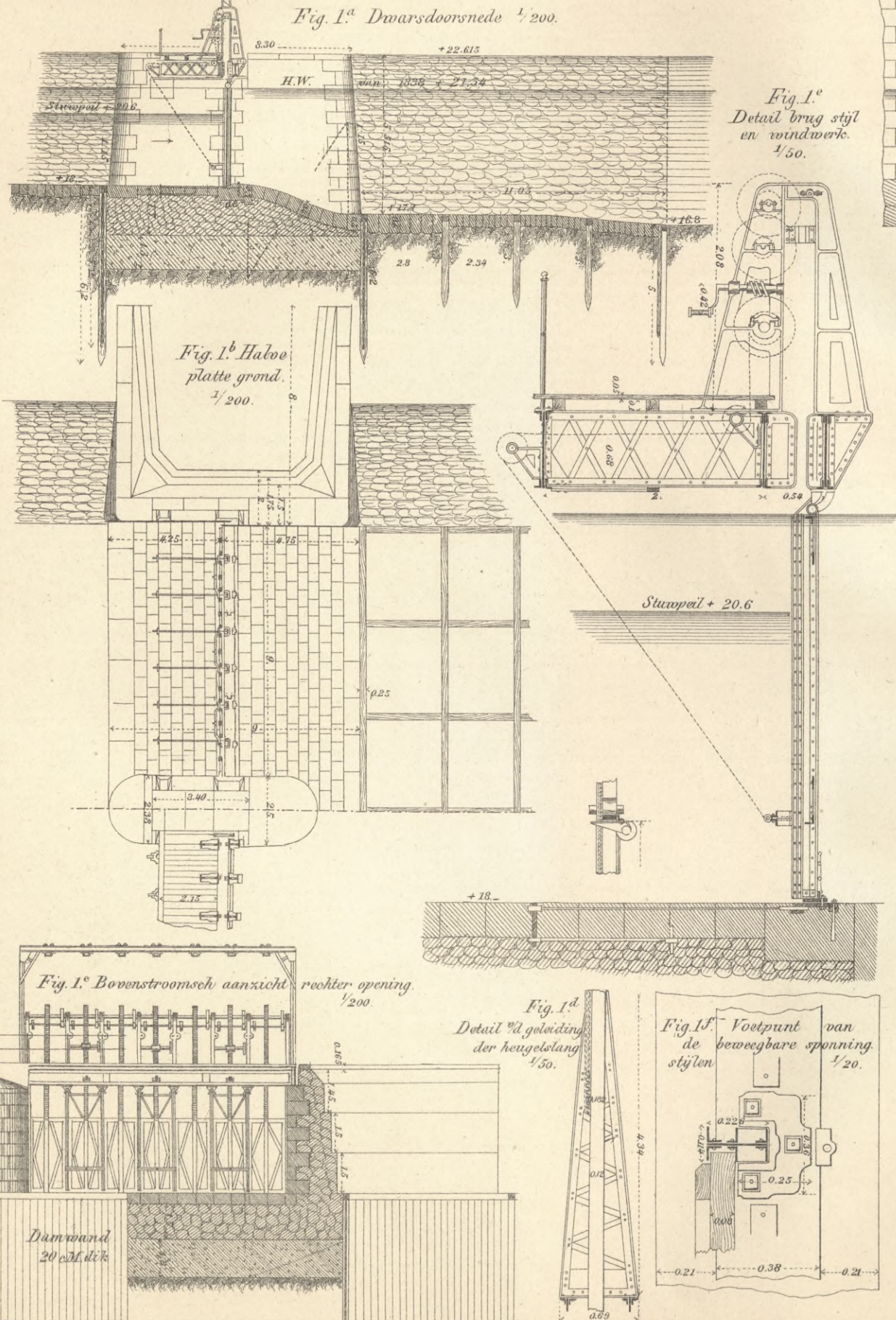


Fig. 2.^a Doorsnede 1/100.

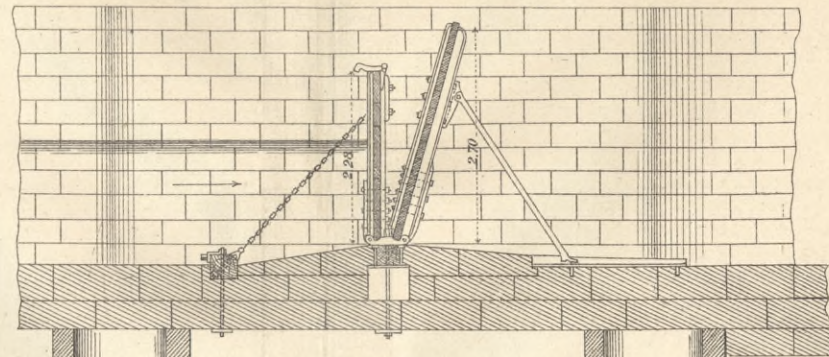


Fig. 2.^b Platte grond 1/100.

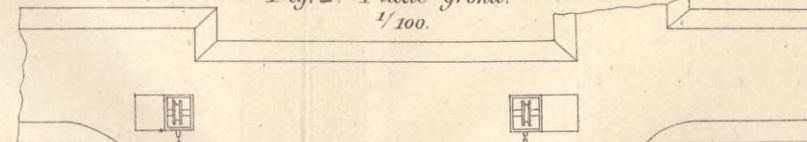


Fig. 2.^c Opstand 1/100.

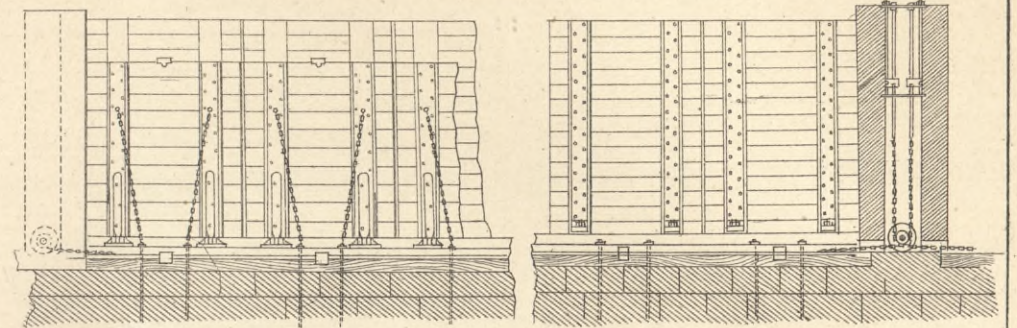


Fig. 2.^{a-c} Klepstuw in de spuiopeningen van den Mahanuddy dam.

Fig. 3.^c Bovendeur 1/100.



Fig. 3.^b Doorsnede bij opgerichte deuren 1/100.

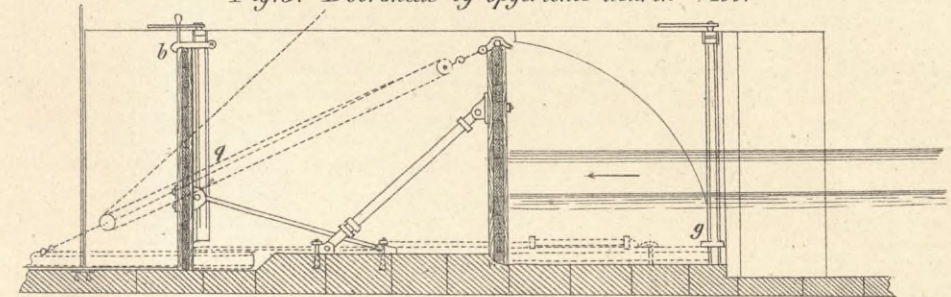


Fig. 3.^a Platte grond 1/100.

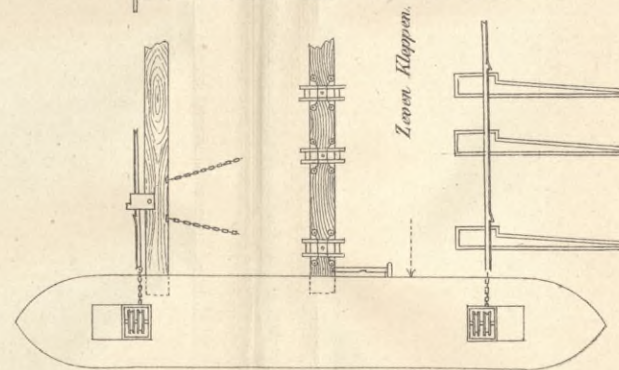
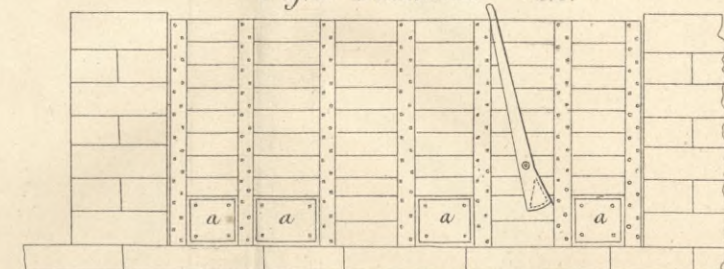


Fig. 3.^{a-e} Valdeur met remstangen volgens het stelsel van Fouracres.

Fig. 3.^d Benedendeur 1/100.



Schaal:

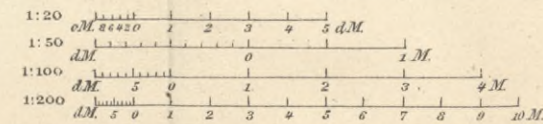
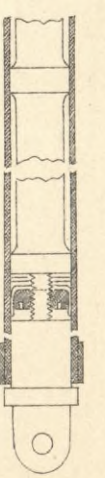
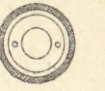
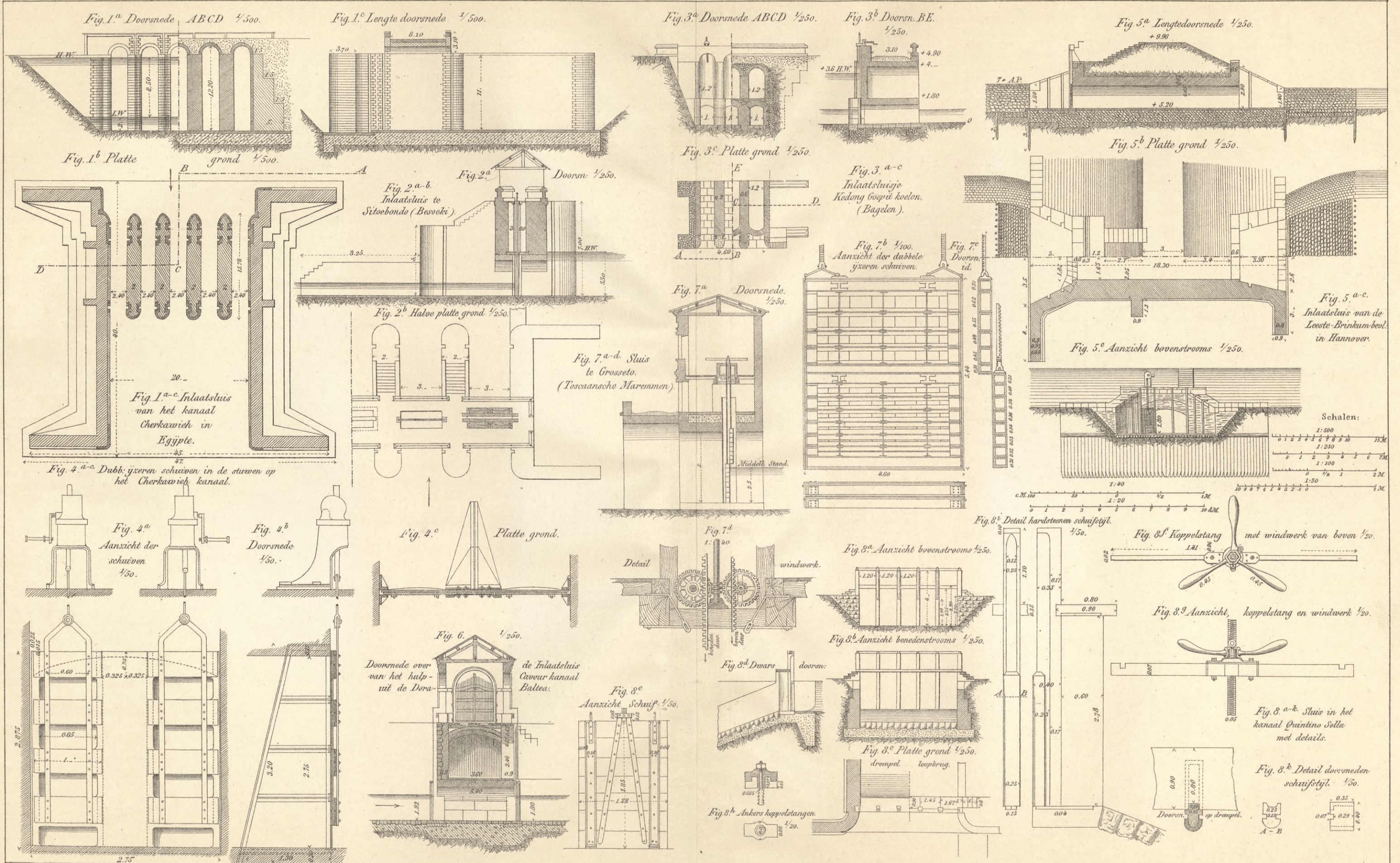
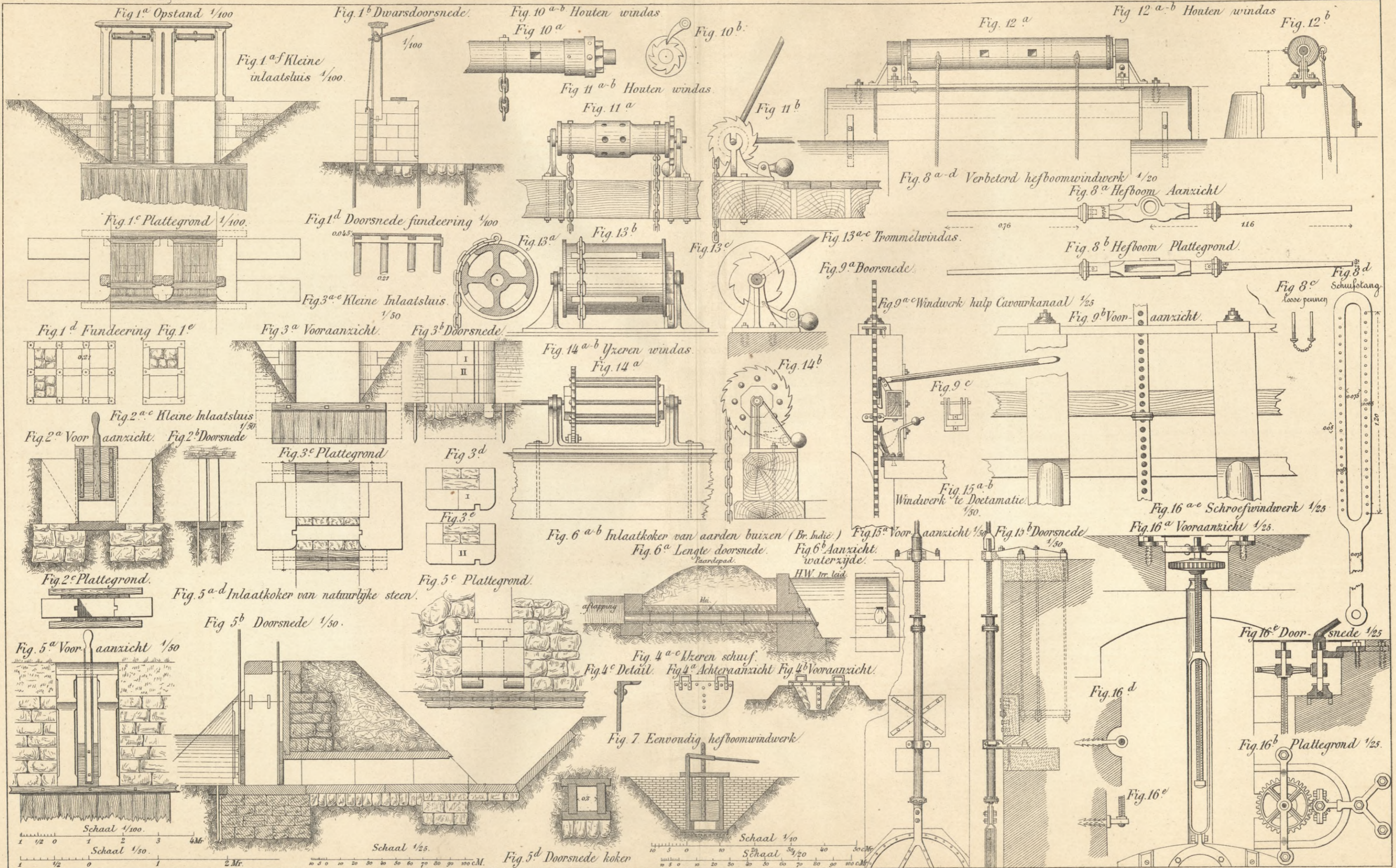
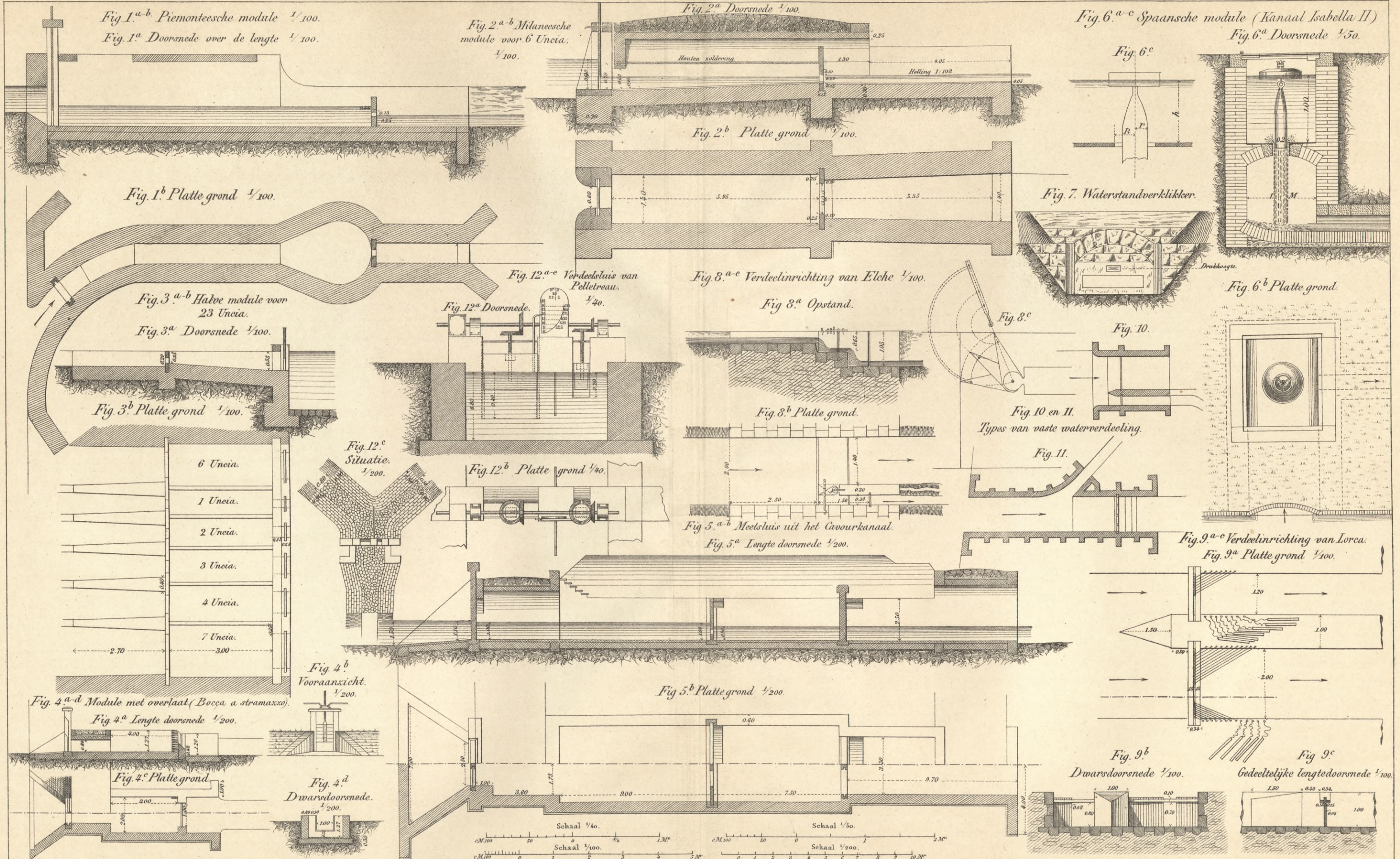


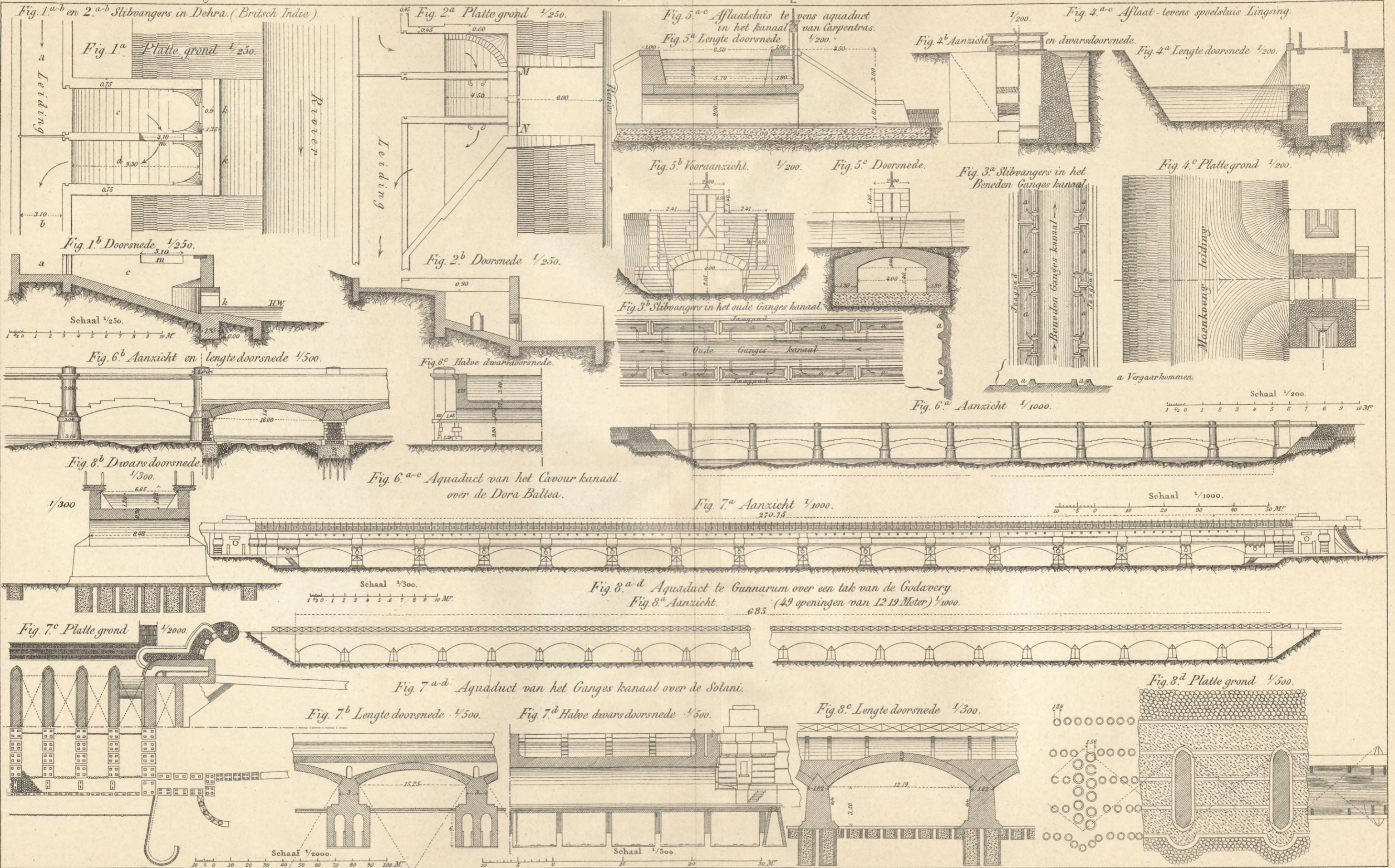
Fig. 3.^e Remstang 1/20.











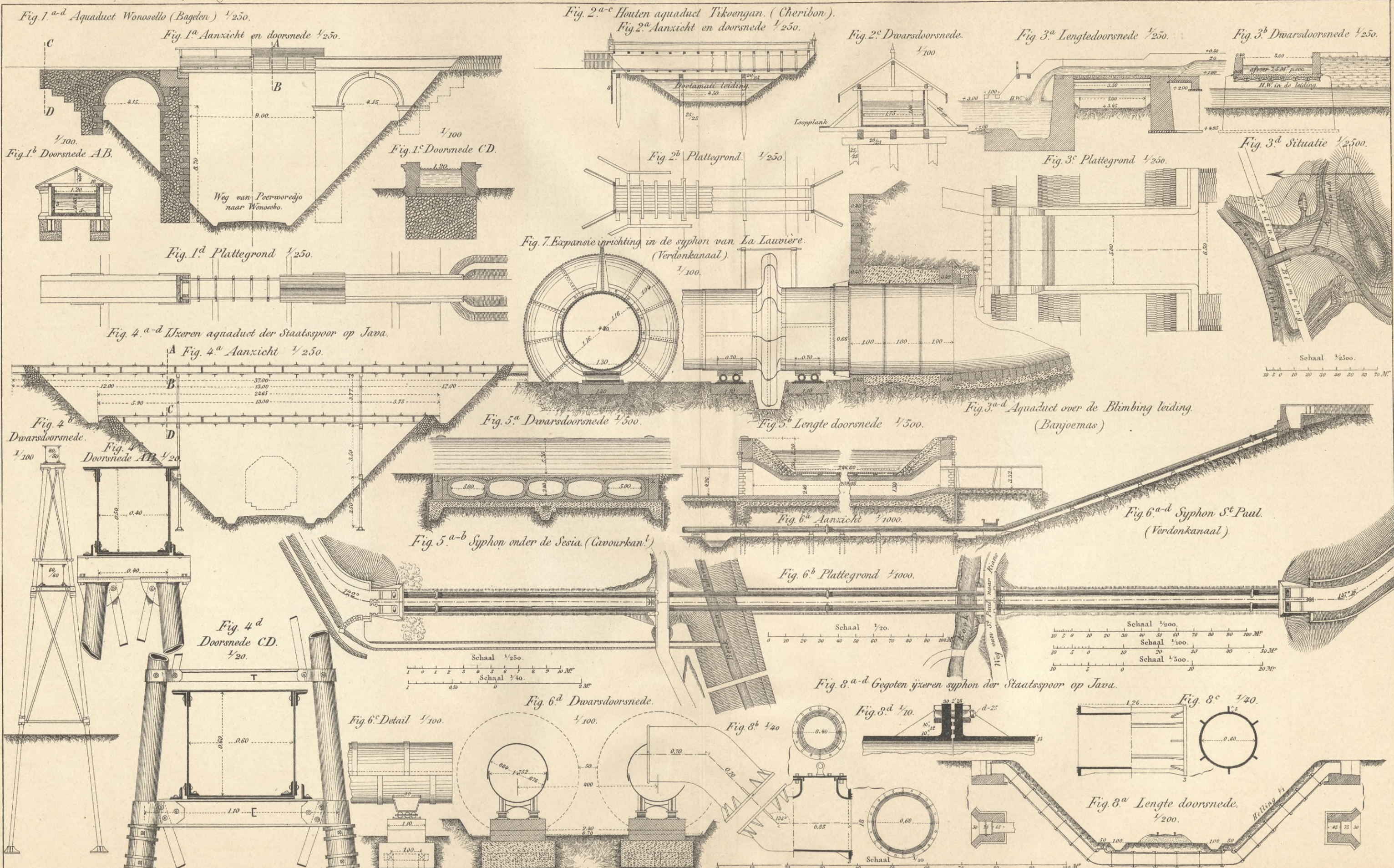


Fig. 1^{a-d} Tunnelprofillen van het Verdonkanaal.

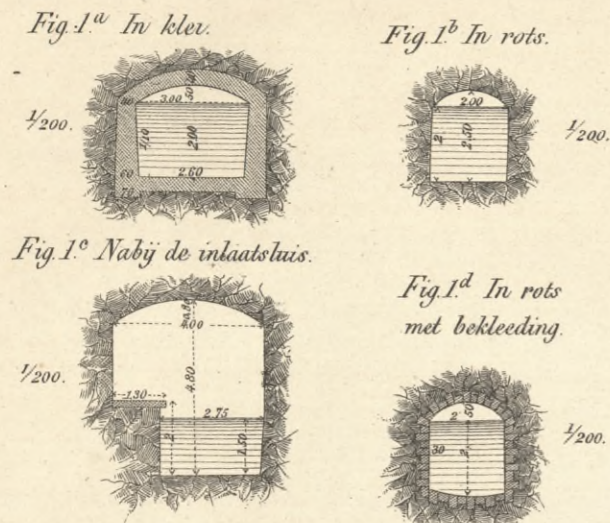


Fig. 4^a Lengte doorsnede.

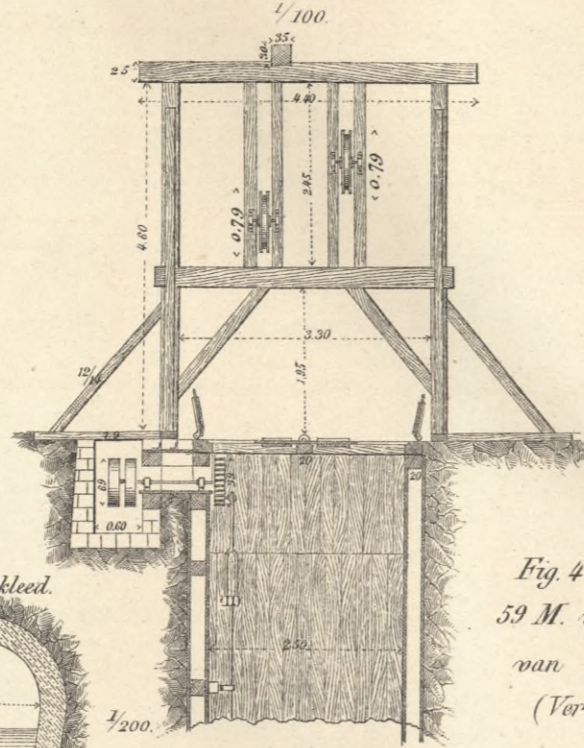


Fig. 4^b Verticale doorsnede.

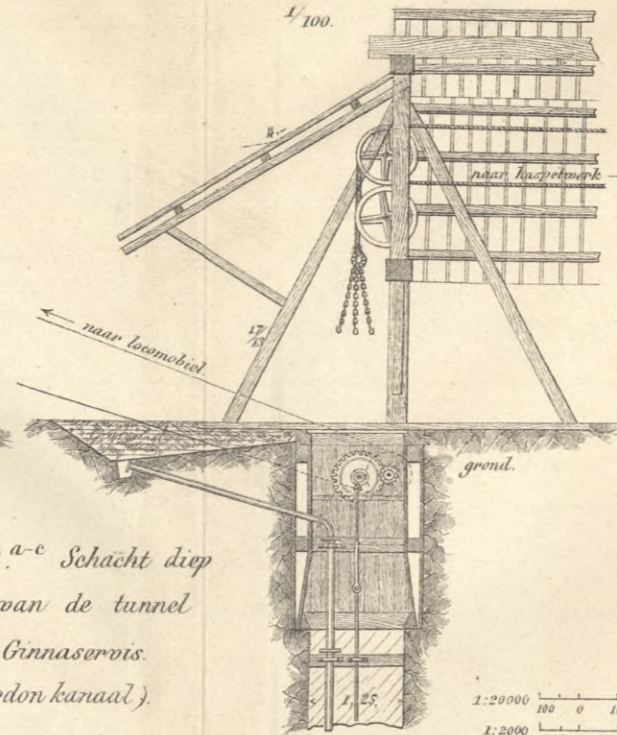


Fig. 4^{a-c} Schacht diep 59 M. van de tunnel van Ginnaservis. (Verdon kanaal).

Fig. 5. a-d Tunnel van inlaatsluis te Tjilangkap afd. Soekapoera. (Preanger R.)

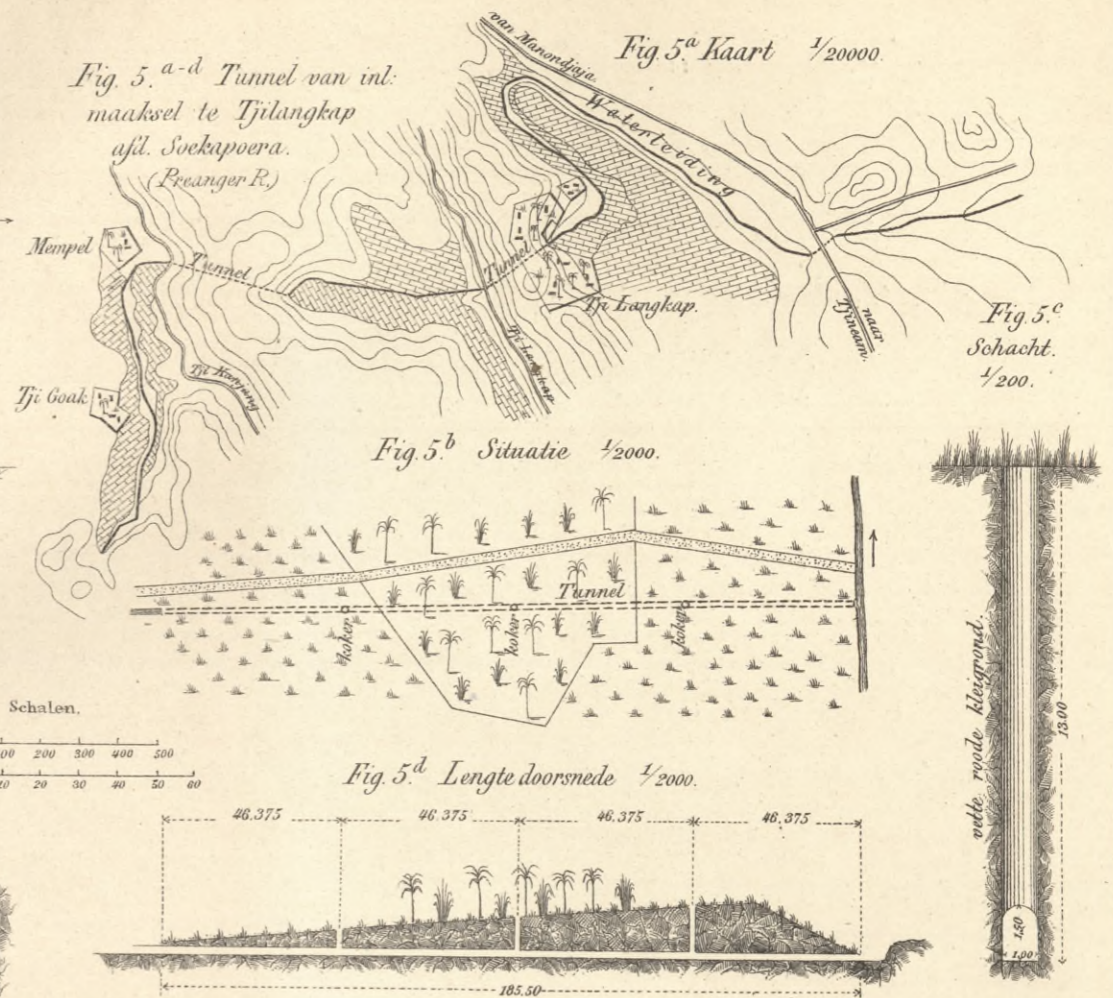


Fig. 2^{a-c} Tunnelprofillen van het kanaal van Marveille.

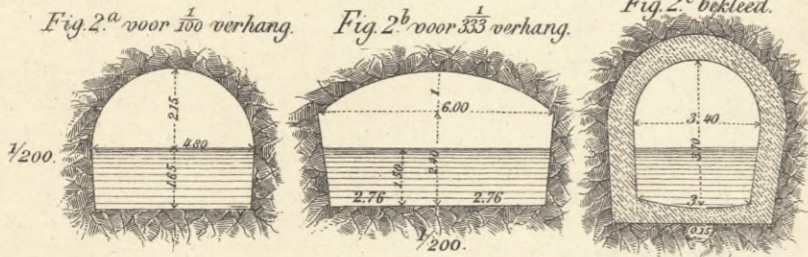
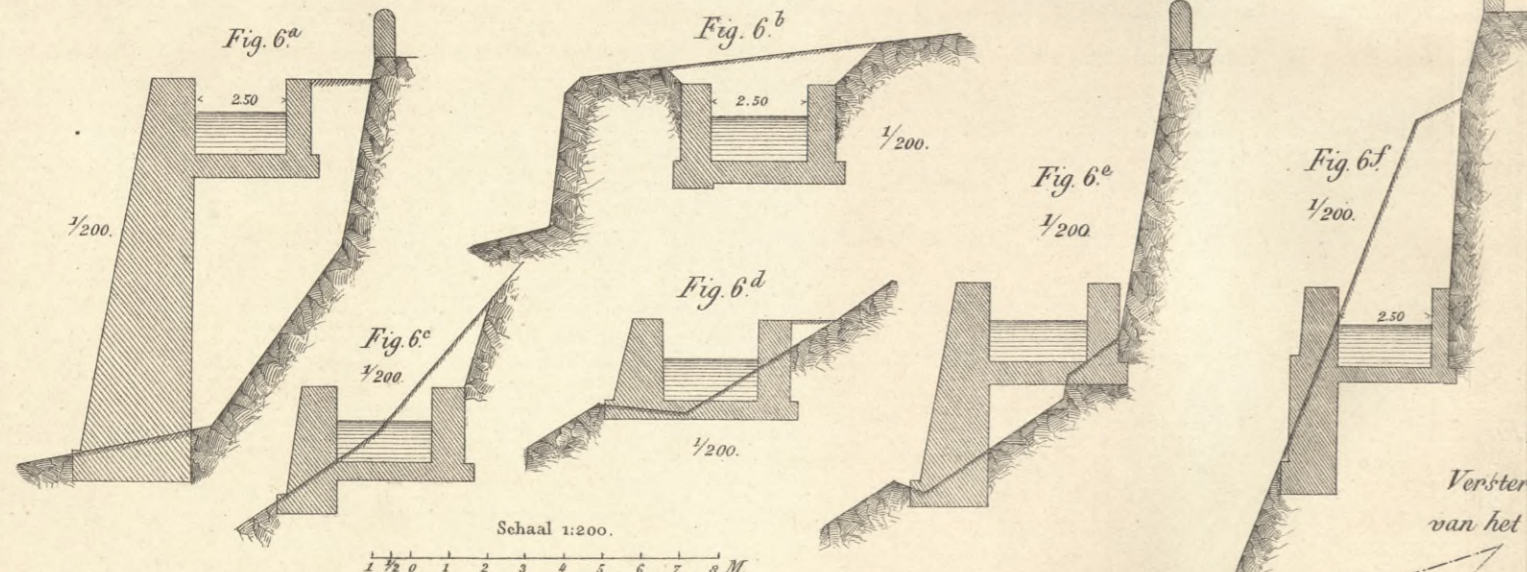


Fig. 6^{a-f} Typen van kunstmatige kanaalprofillen ontleend aan Nadault de Buffon.



Schaal 1:200.

Fig. 7^{a-e} Versterkte profillen van het Verdon kanaal.

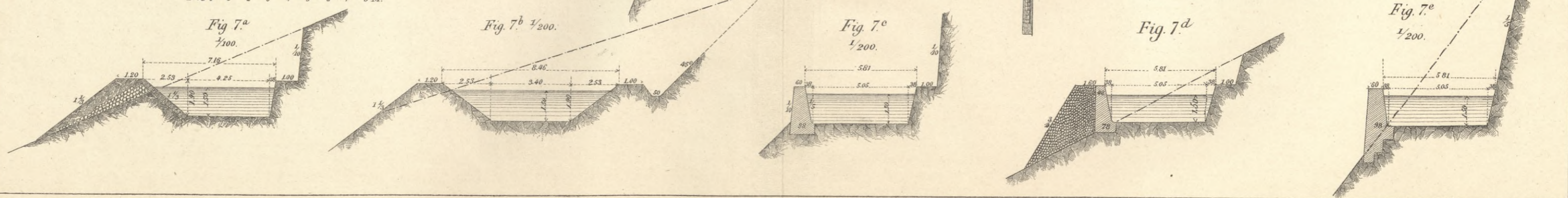
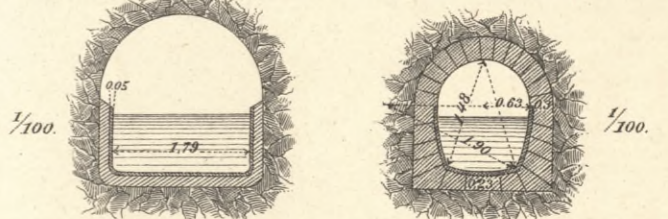


Fig. 3^a Bepoesterd op eene platte laag baksteen.

Fig. 3^b Bemetseld.



1: 100

Fig. 1. Waterrad (Kingir) op Sumatra in gebruik.

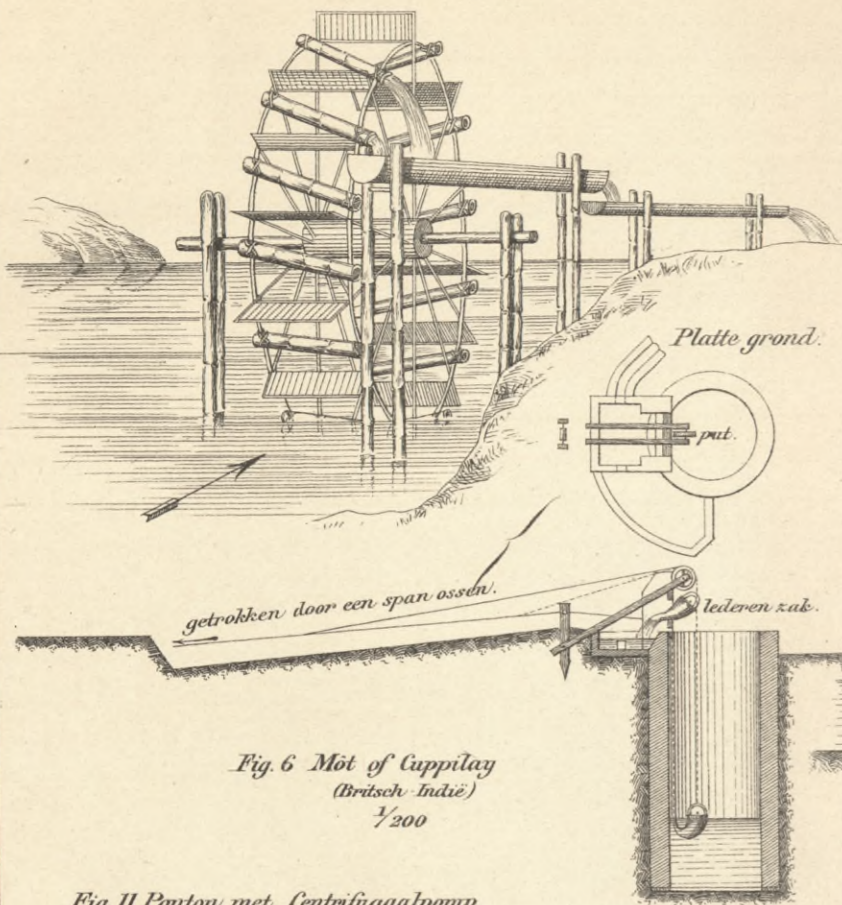


Fig. 6. Mot of Cuppilay (Britsch Indië) 1/200

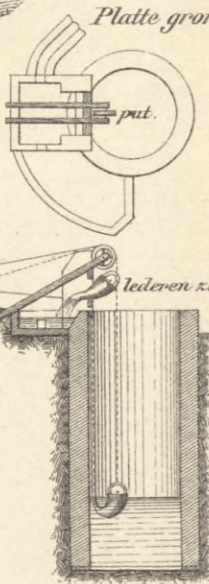


Fig. 11. Ponton met Centrifugaalpompe van Gwynne.

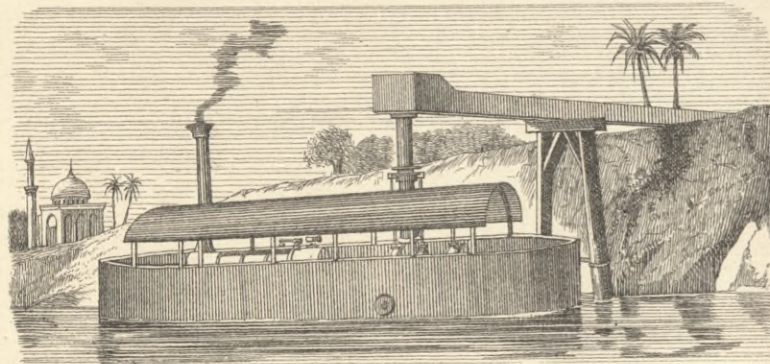


Fig. 7. Nattal (Egypte).



Schaal
 1:40 10 d.m. 5 0 1 M.
 1:20 1 1/2 0 1 2 3 4 5 6 7 8 9 d.M.

Fig. 2^a b. Spaansche Noria.

Fig. 2^a Aanzicht.

1:100.

Fig. 2^b Doorsnede.

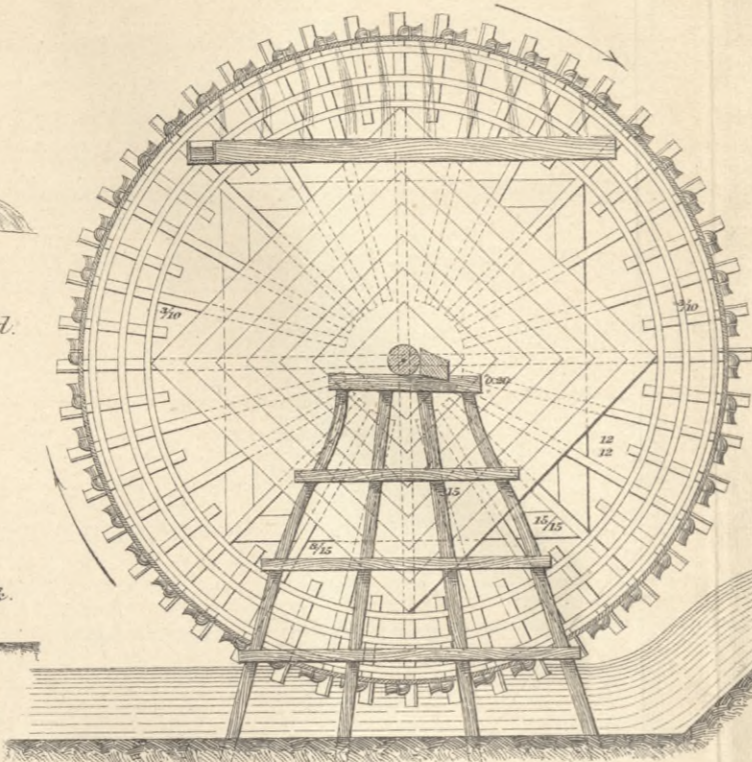


Fig. 8. Gobak (Java).

Schaal 1:100.



Fig. 9^a Aanzicht 1:40

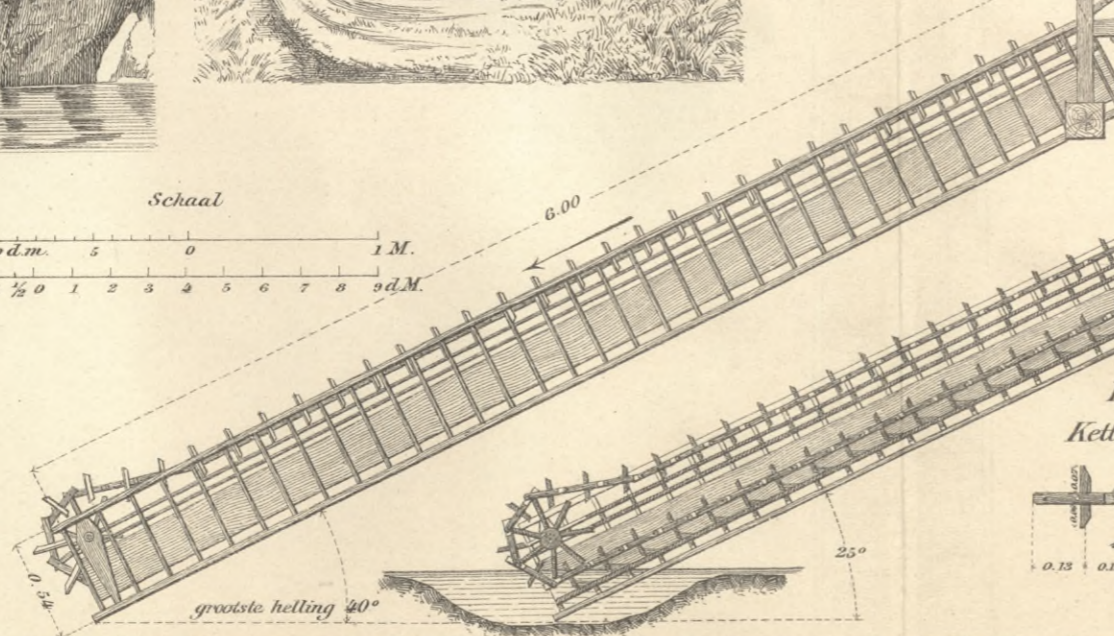


Fig. 9^d Ketting 1:20

Fig. 9^a f. Kettingmolen (Tsjoei tsja).

Fig. 9^b

Lengte doorsnede 1:40

Fig. 9^c Dwarsdoorsnede 1:20

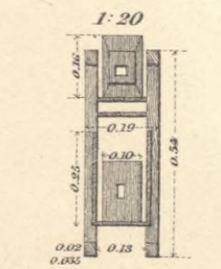


Fig. 9^e Trapstelling en boven as 1:40.

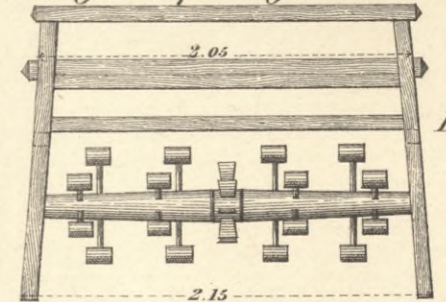
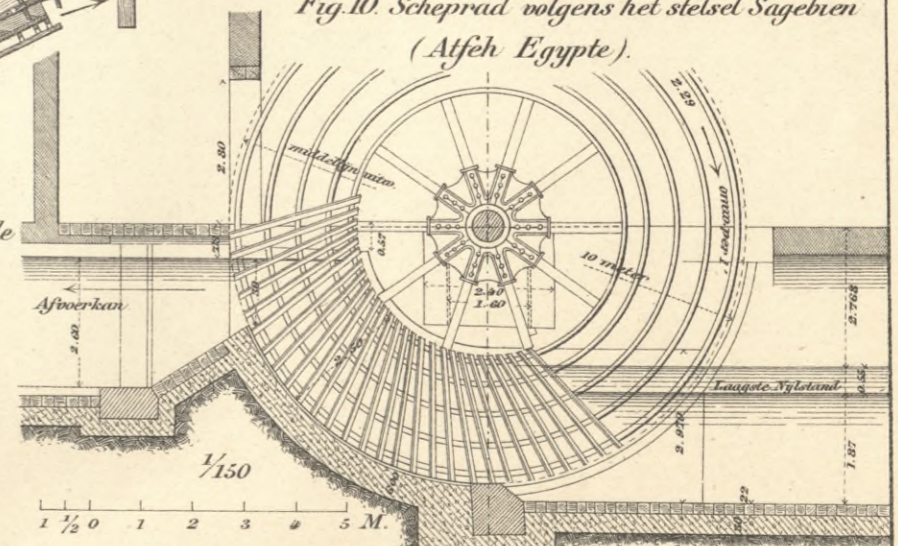
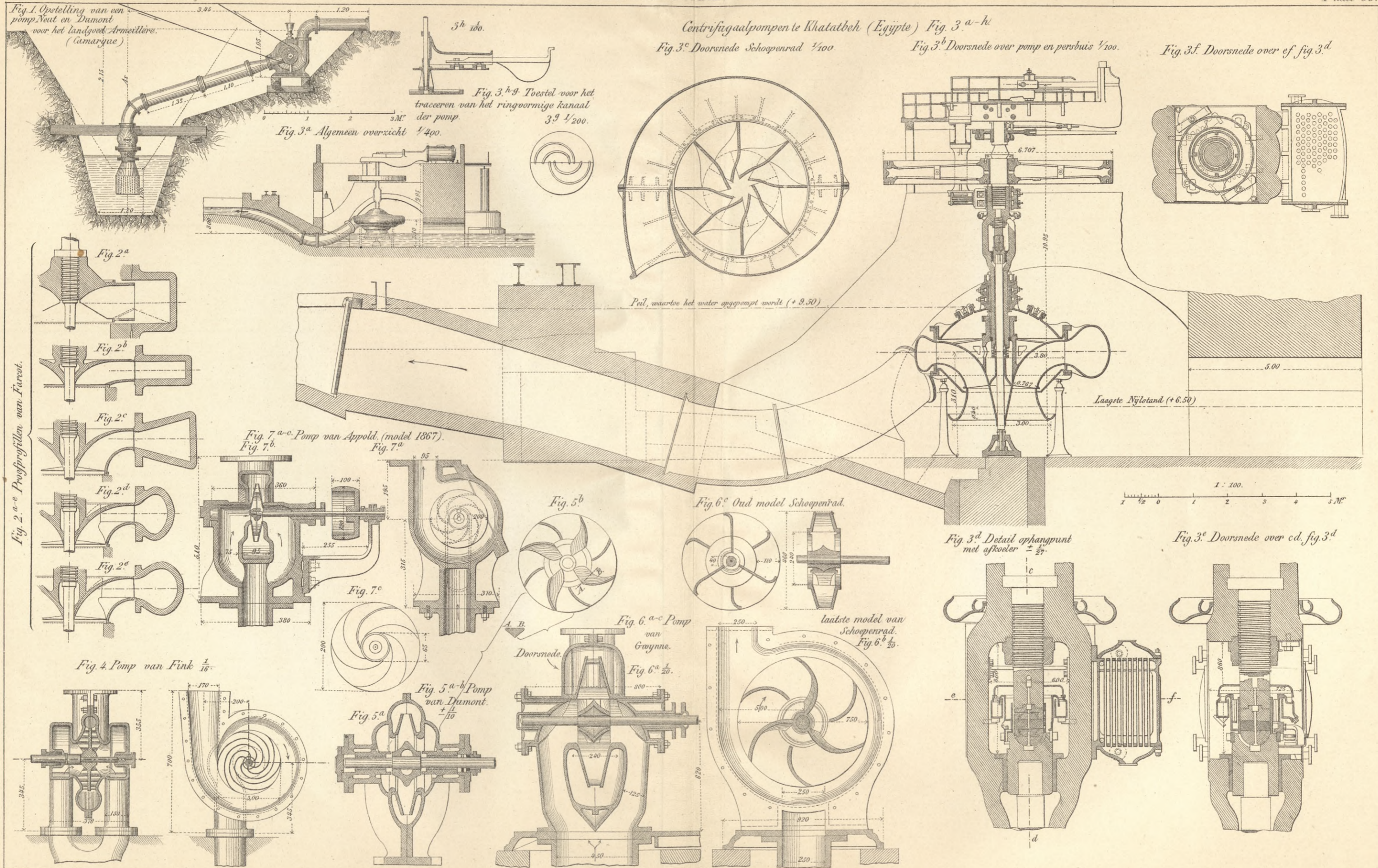
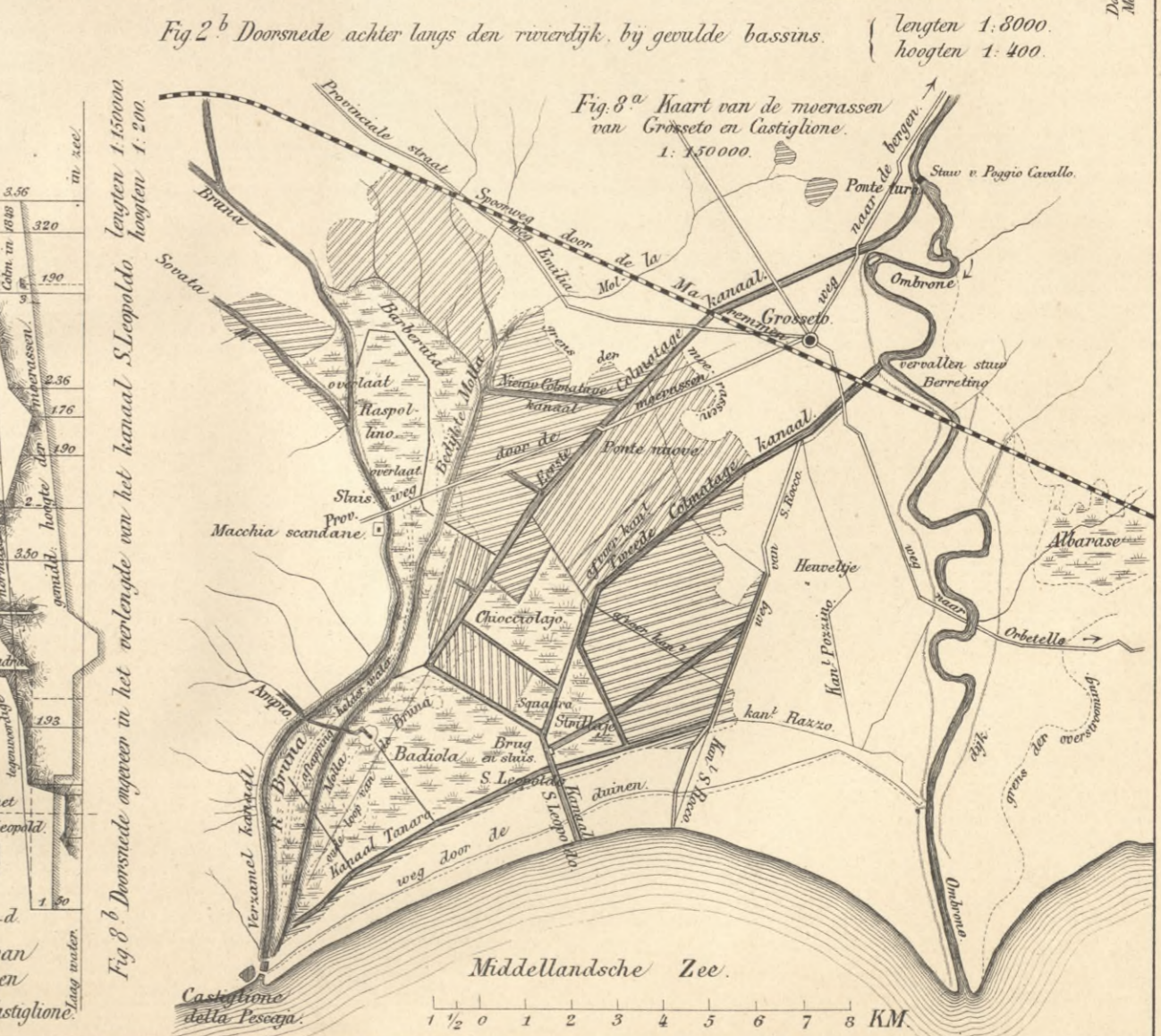
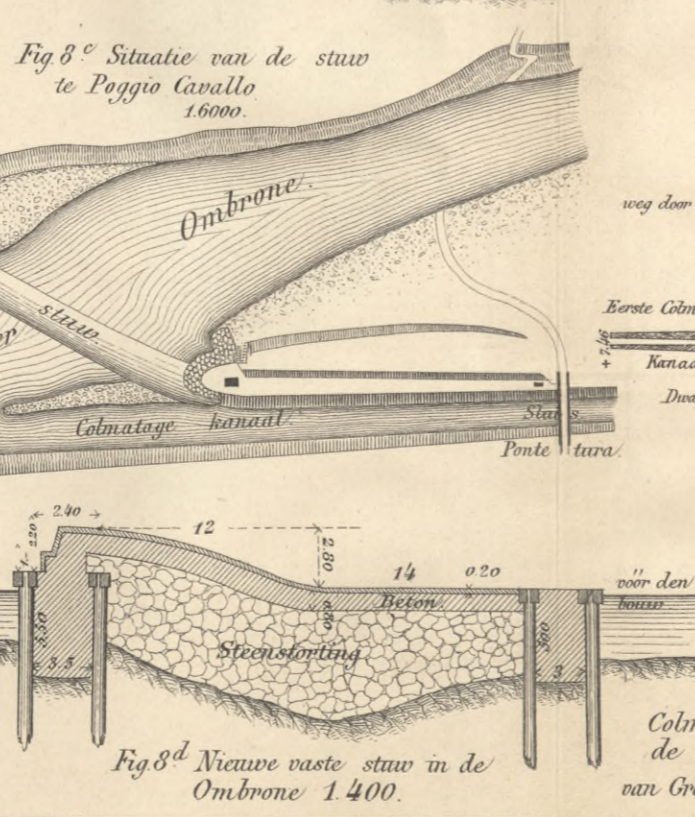
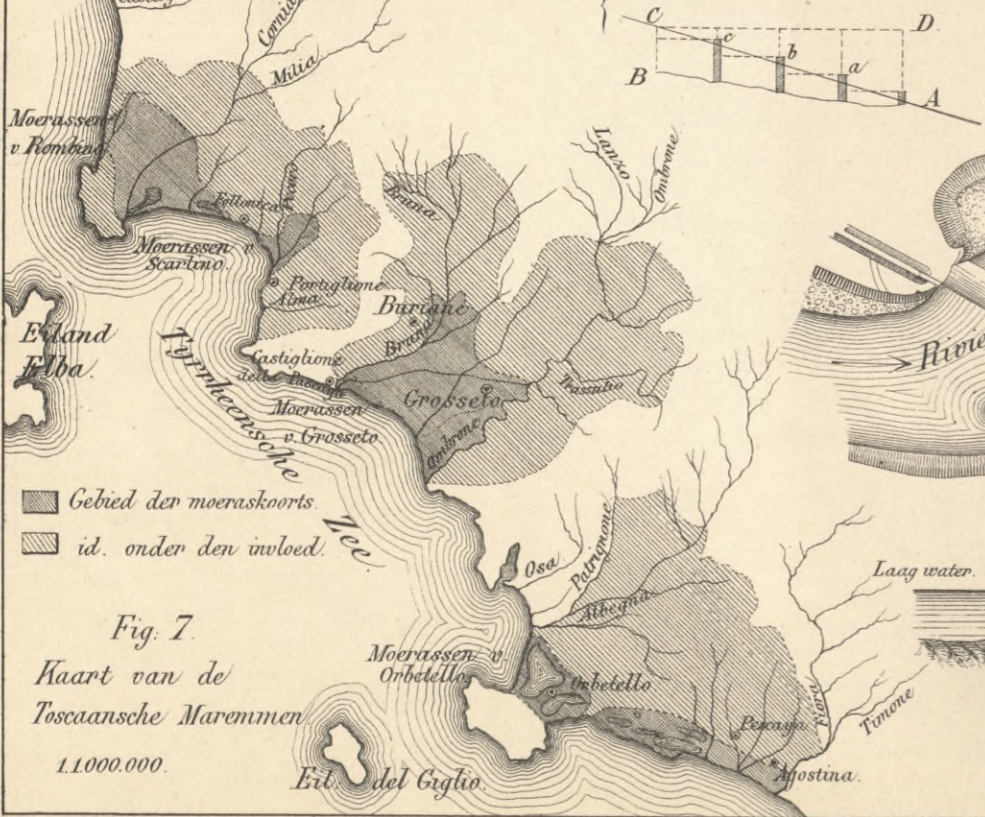
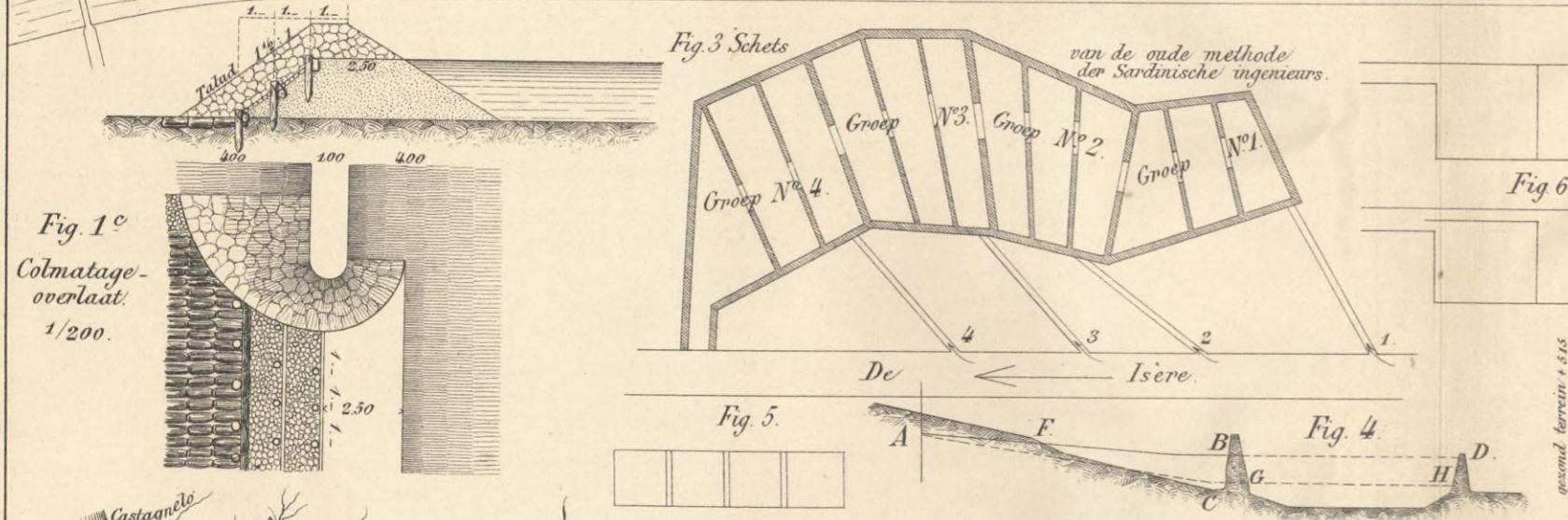
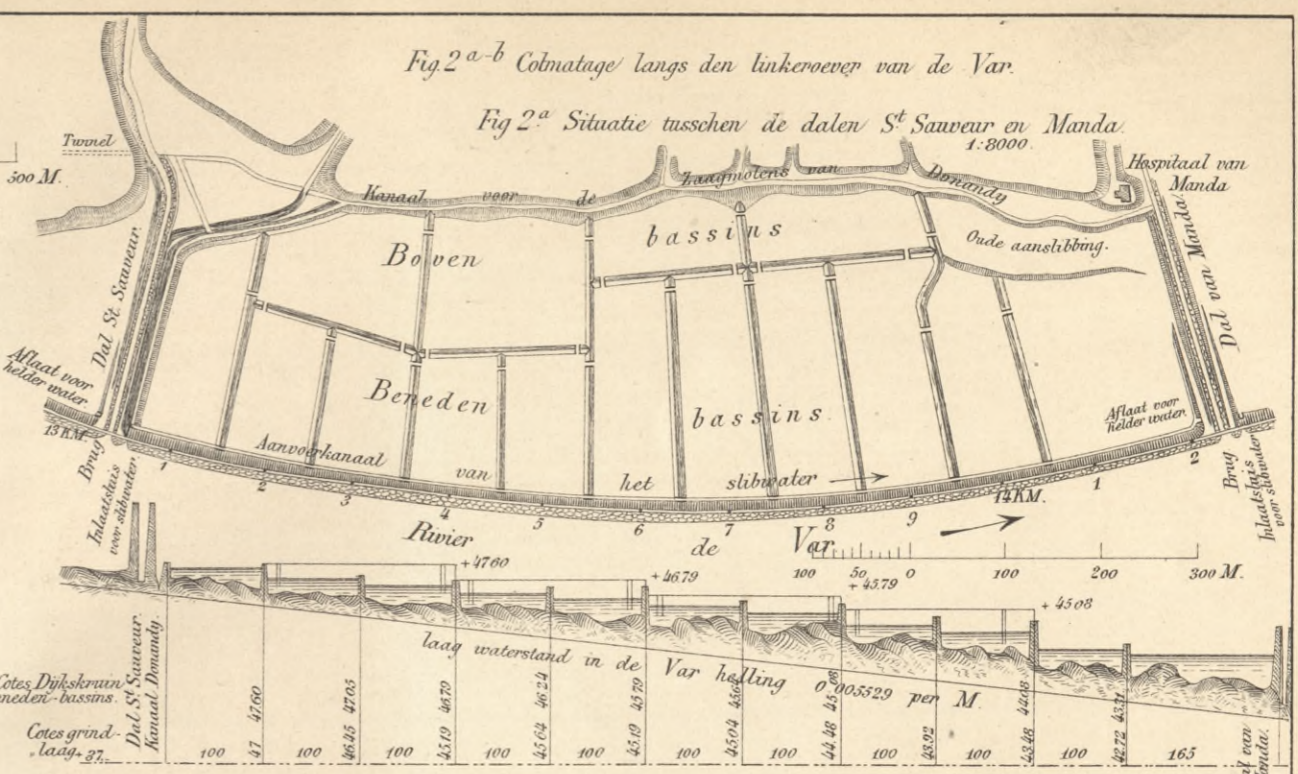
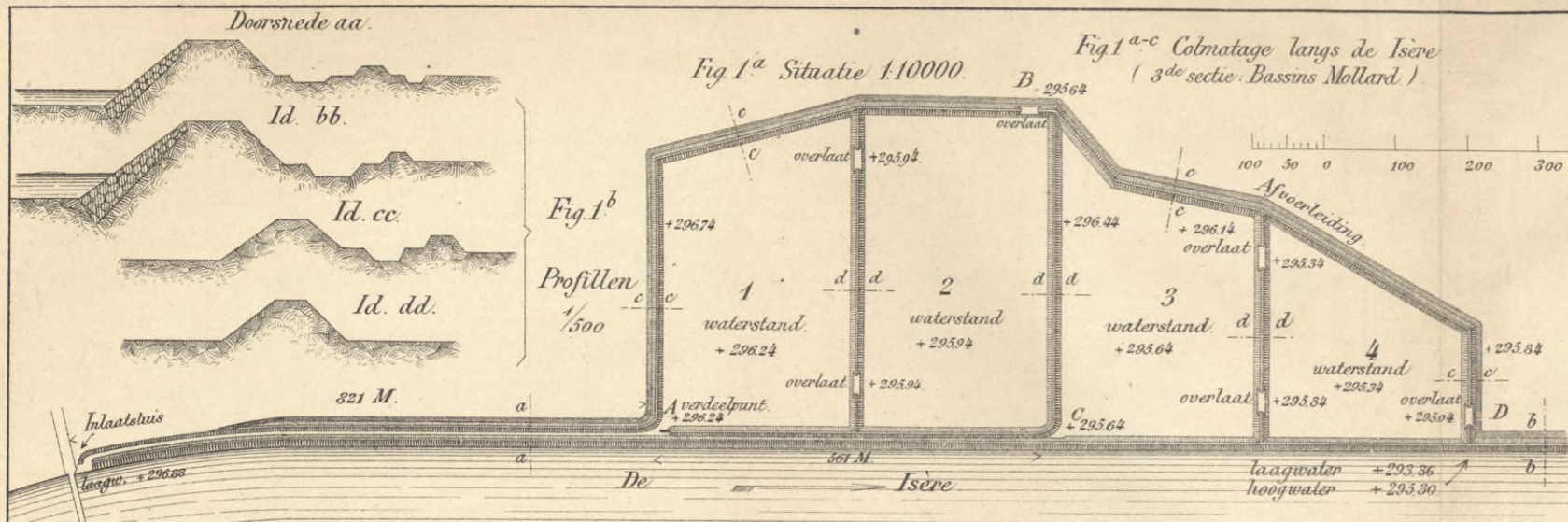


Fig. 9^f Beneden as

Fig. 10. Scheprad volgens het stelsel Sagebien (Atfeh Egypte).







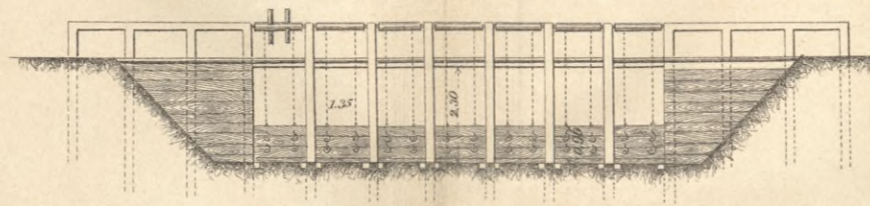
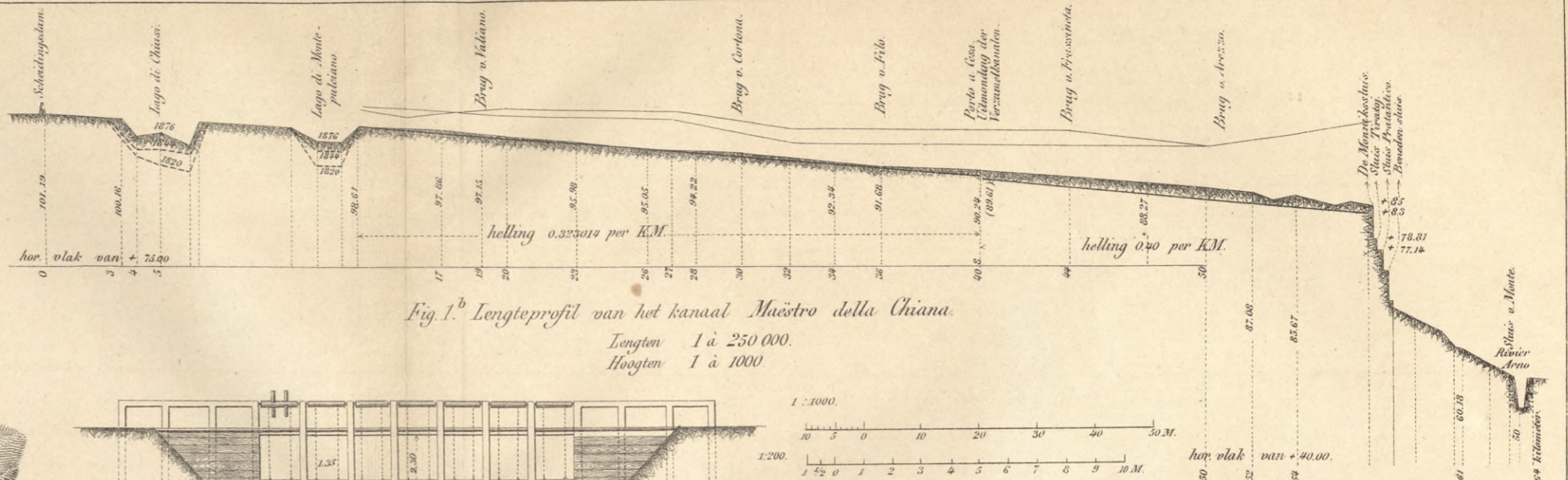


Fig. 1. c. Aflaatsluis. 1:200.

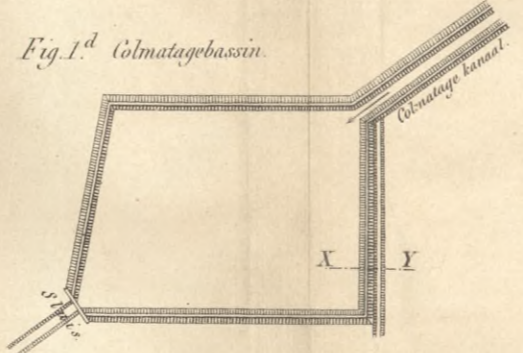


Fig. 1. d. Colmatagebassin.



Fig. 1. e. Profiel XY.

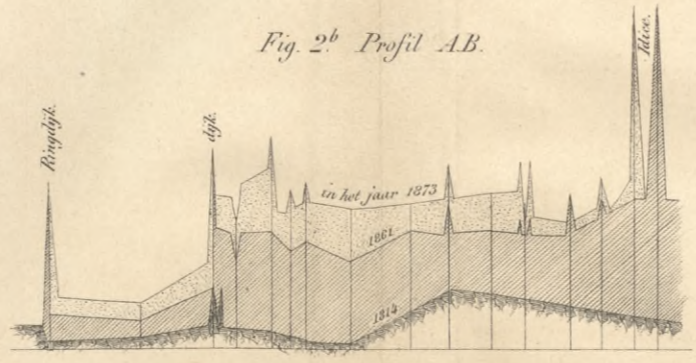


Fig. 2. b. Profiel AB.

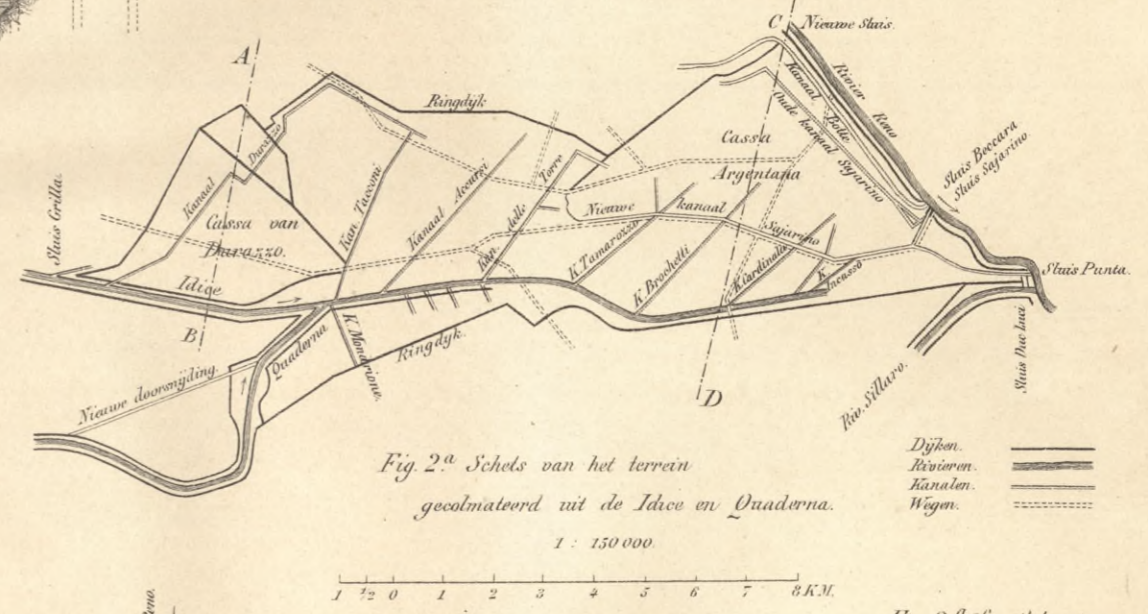


Fig. 2. a. Schets van het terrein gecolmatoord uit de Idice en Quaderna.

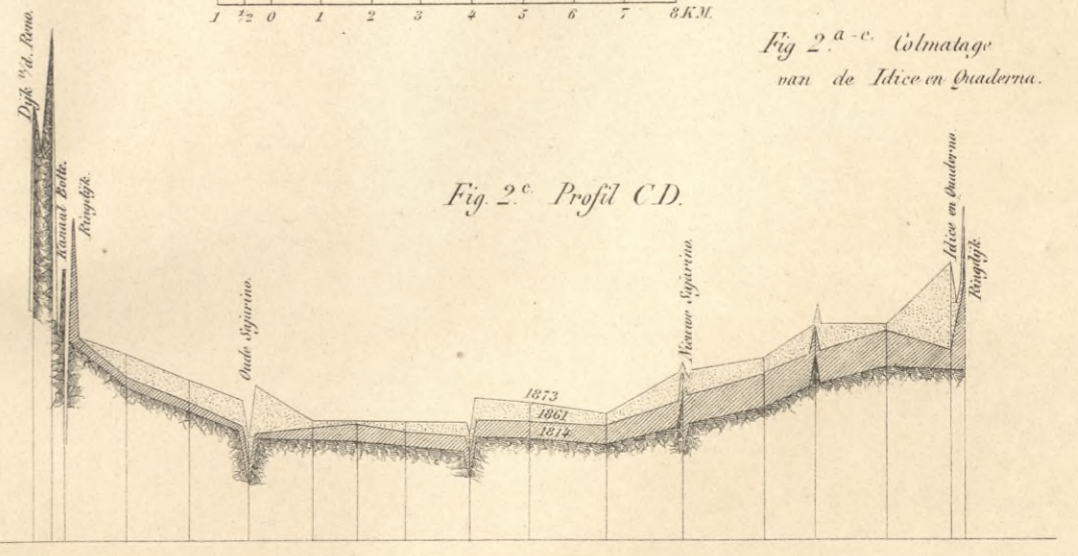
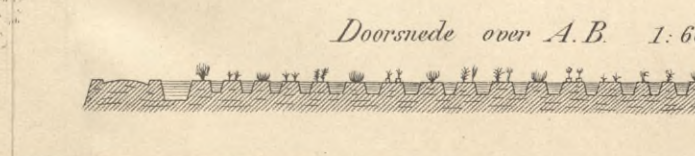
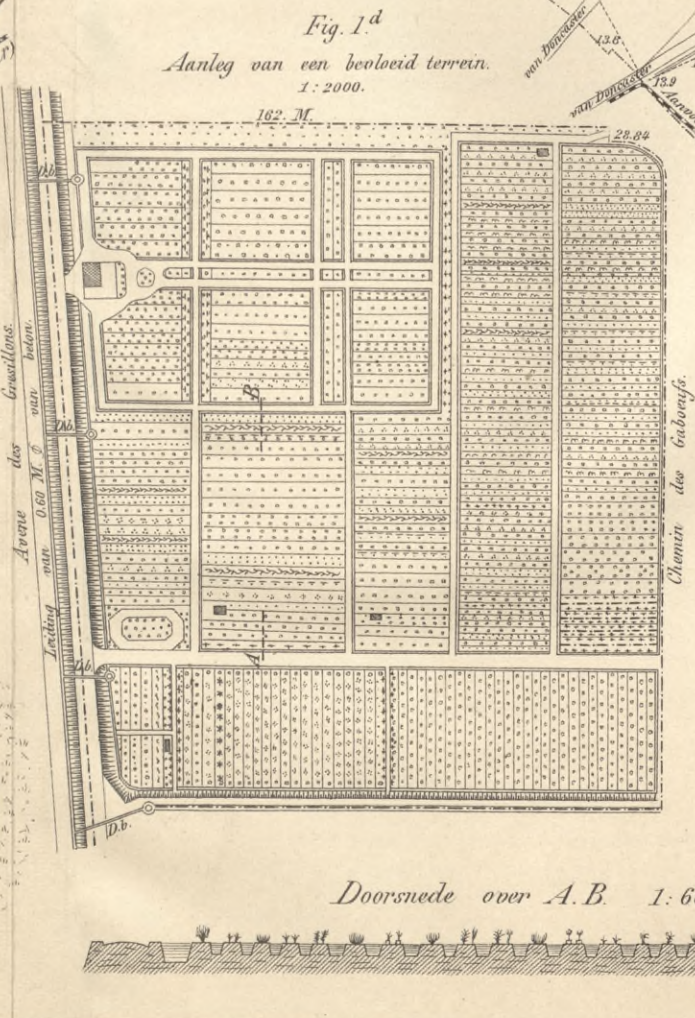
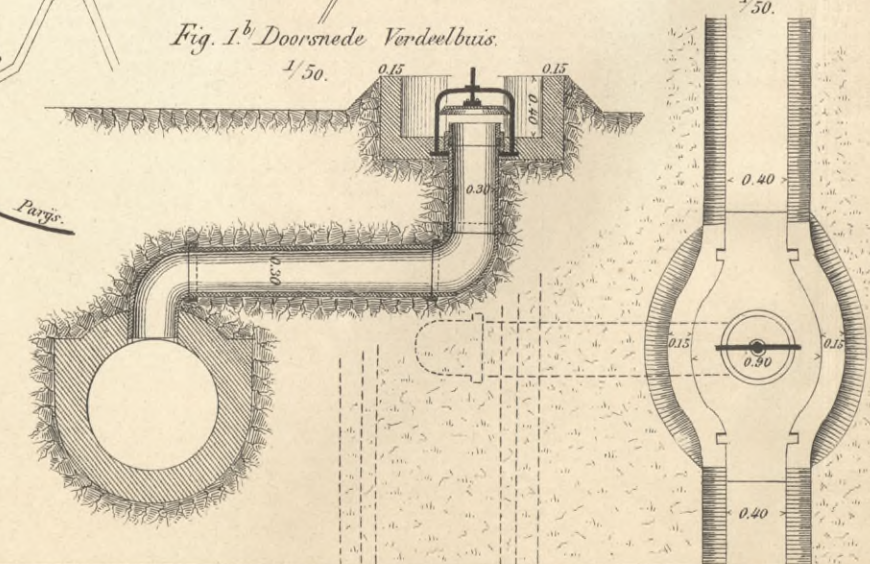
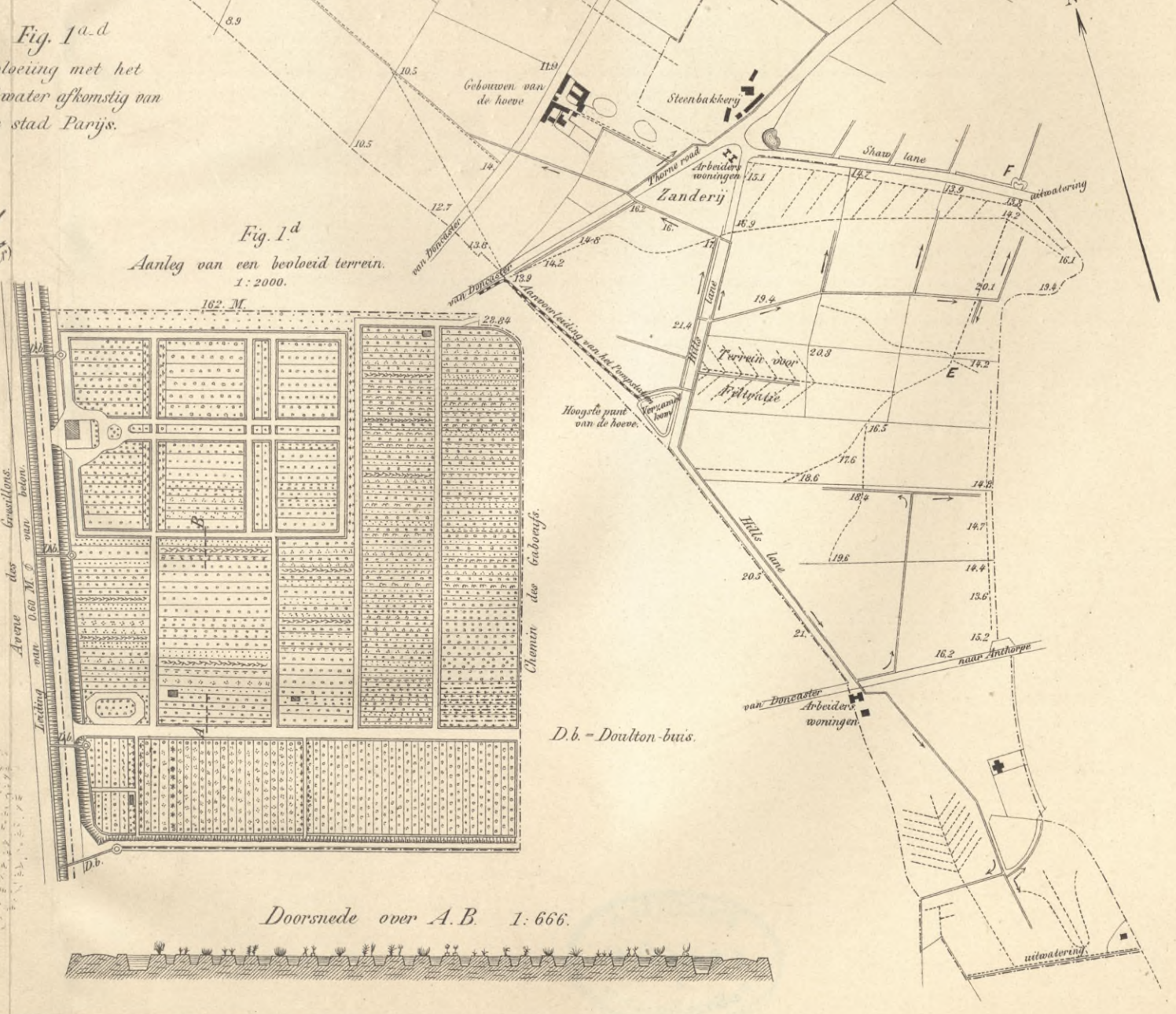
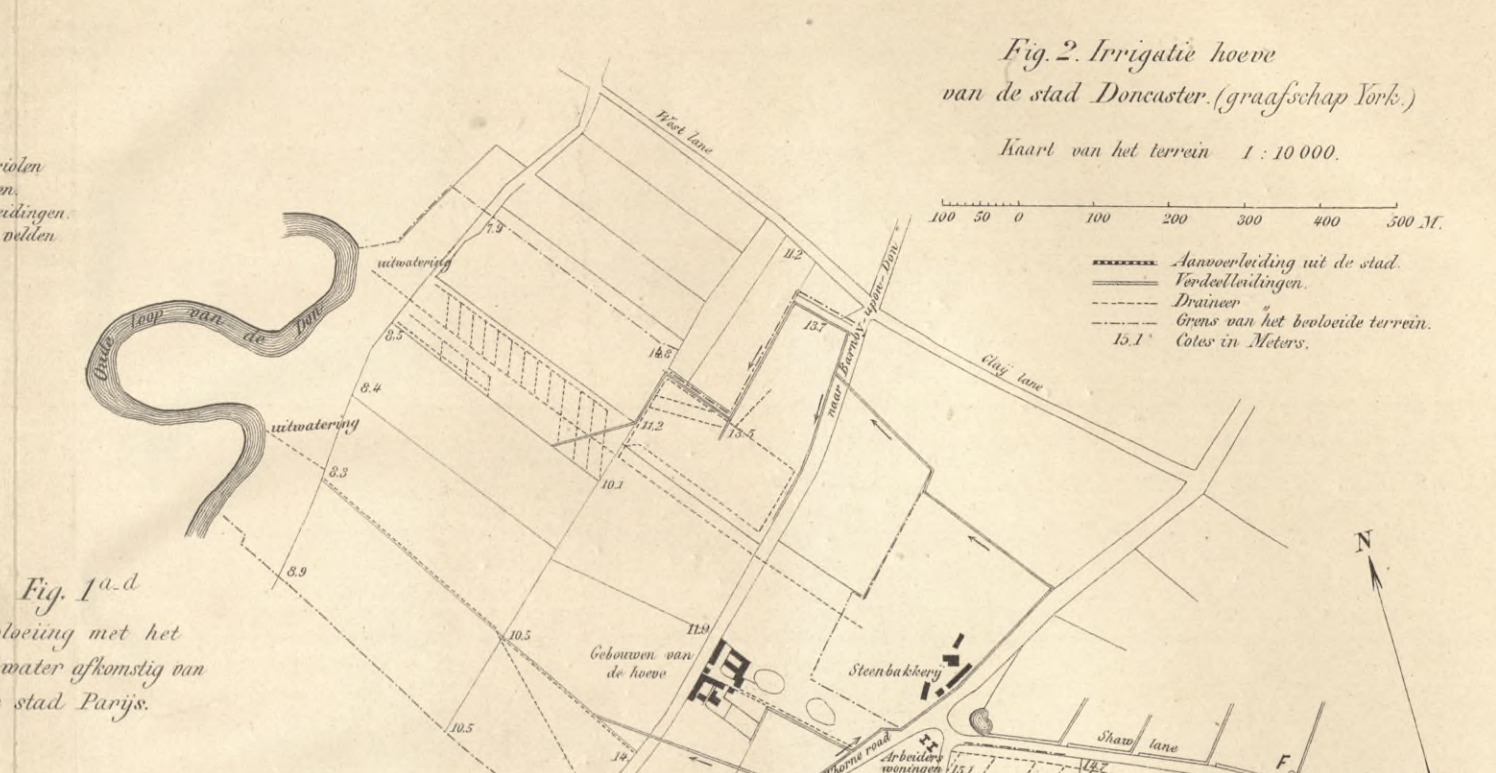
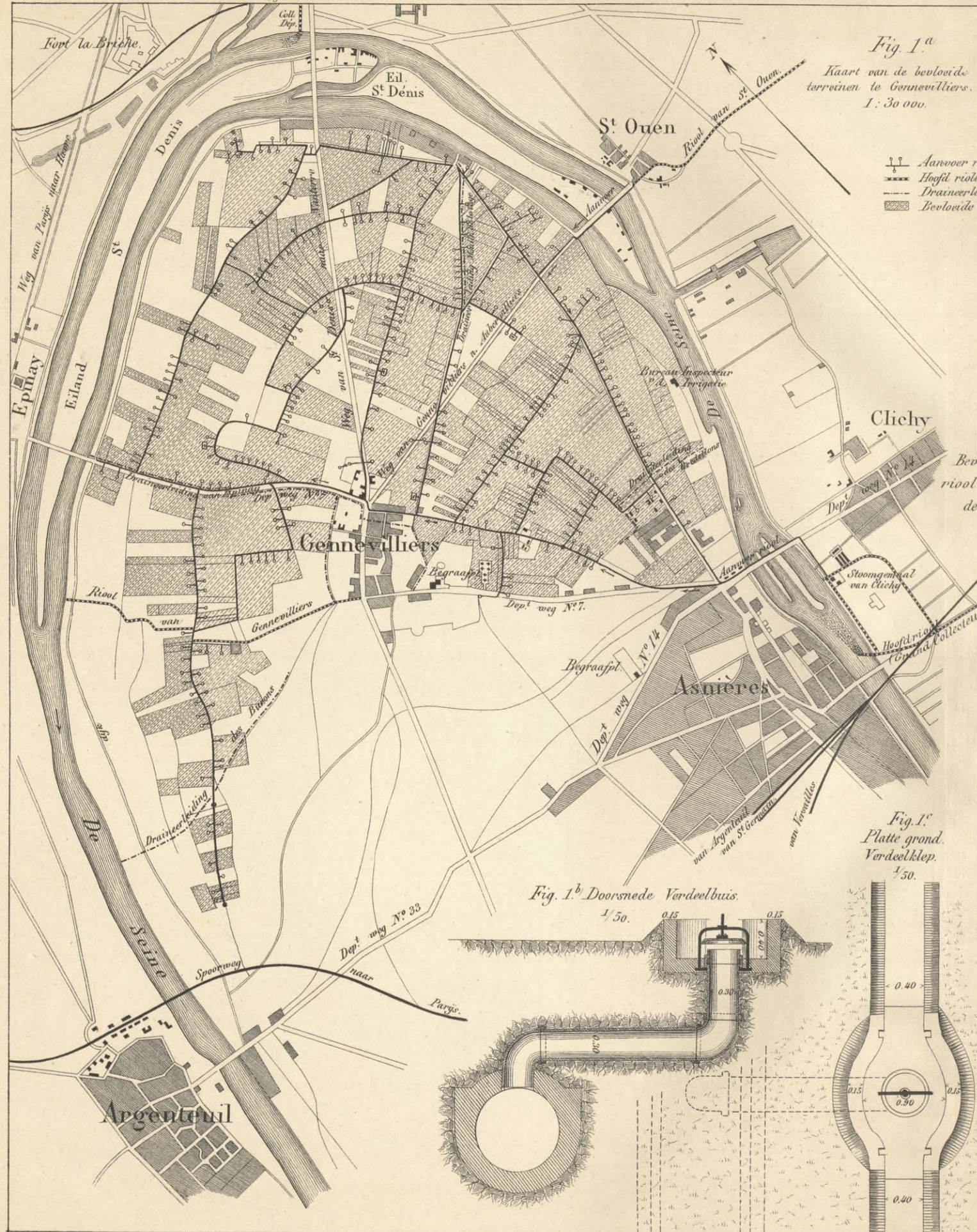


Fig. 2. c. Profiel CD.

Fig. 2. a-c. Colmatage van de Idice en Quaderna.

Fig. 1. a. Kaart van het Chiana dal. 1:250000.

Lengteschaal der profillen Fig. 2. b en 2. c. 1:50000. Hoogteschaal 1:200.





WYDZIAŁY POLITECHNICZNE KRAKÓW

BIBLIOTEKA GŁÓWNA

Biblioteka Politechniki Krakowskiej



IV-300965

Druk. U. J. Zam. 356. 10.000.

Biblioteka Politechniki Krakowskiej



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