10226132

TRAITÉ

DE

L'EXPLOITATION DES MINES

PAR

M. Ch. COMBES,

INGÉNIEUR EN CHEF DES MINES, PROFESSEUR D'EXPLOITATION
A L'ÉCOLE ROYALE DES MINES.

ATLAS.

PARIS.

CARILIAN-GŒURY ET Vᵉ DALMONT, ÉDITEURS,

LIBRAIRES DES CORPS ROYAUX DES PONTS ET CHAUSSÉES ET DES MINES,

Quai des Augustins, nos 39 et 41.

1846

Fig. 1.

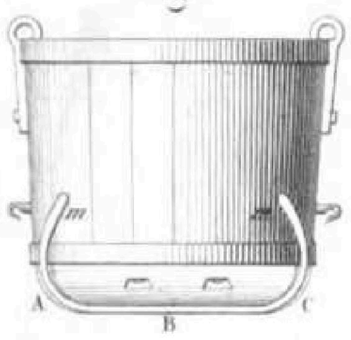


Fig. 2.

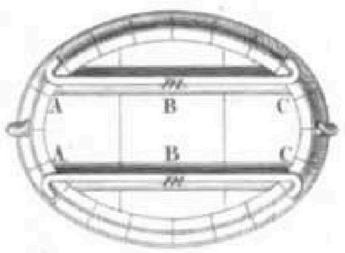


Fig. 3.

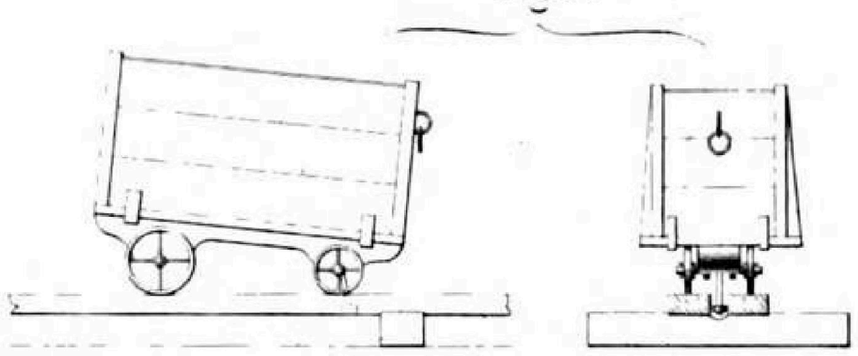
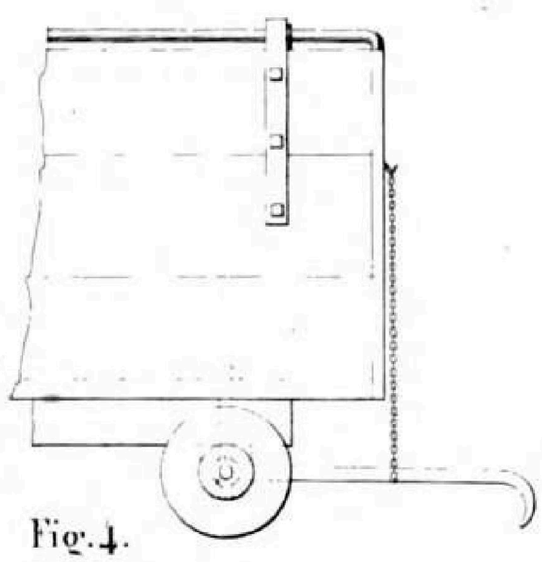


Fig. 4.



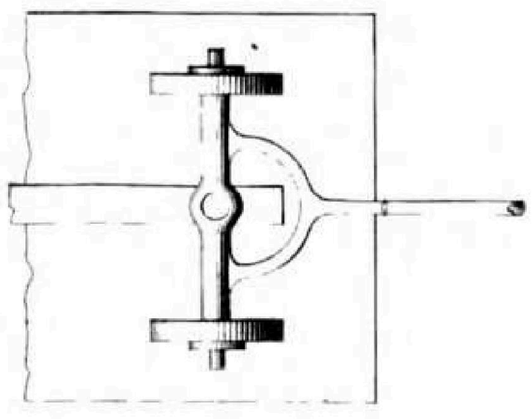


Fig. 5.

Coupe par A B.

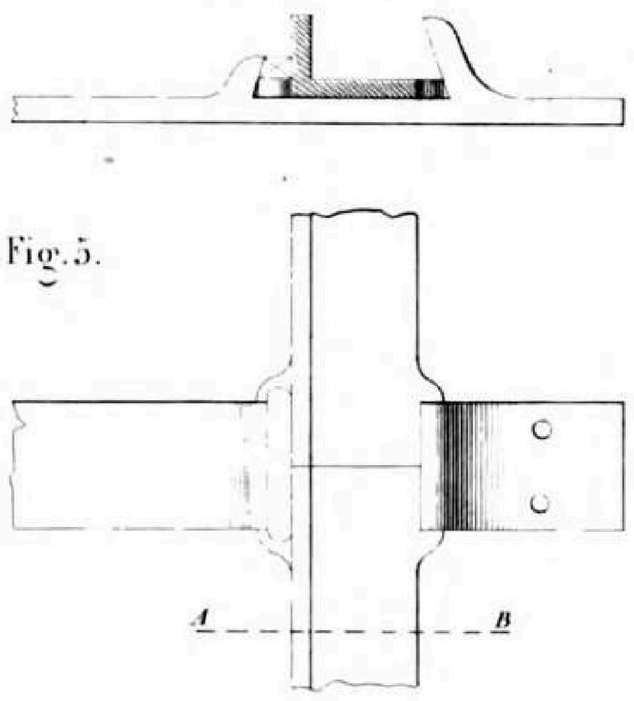


Fig. 6.

Coupe par C D.

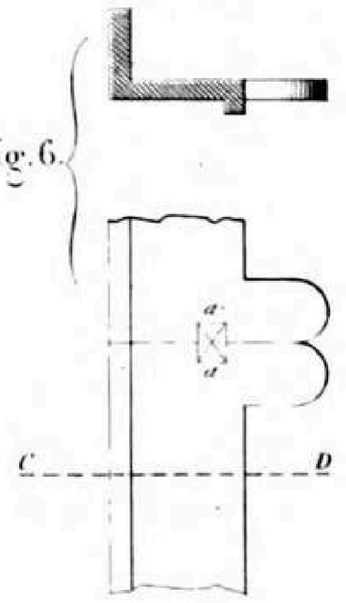


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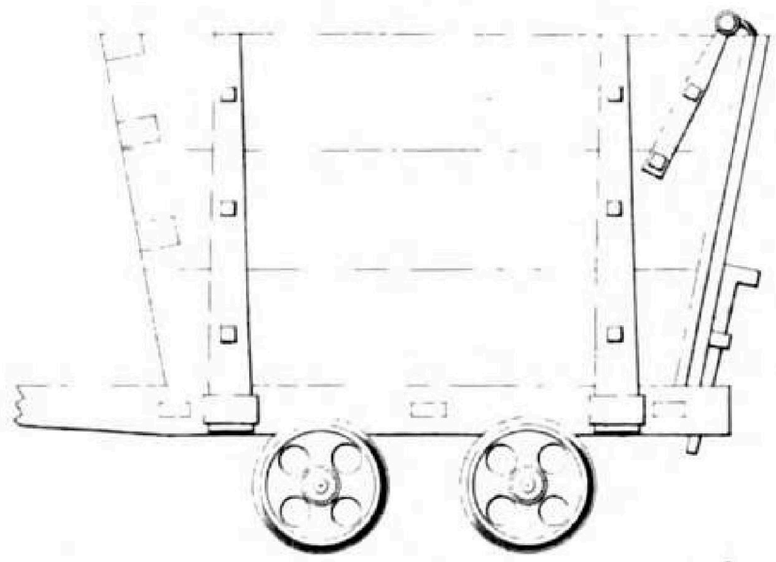


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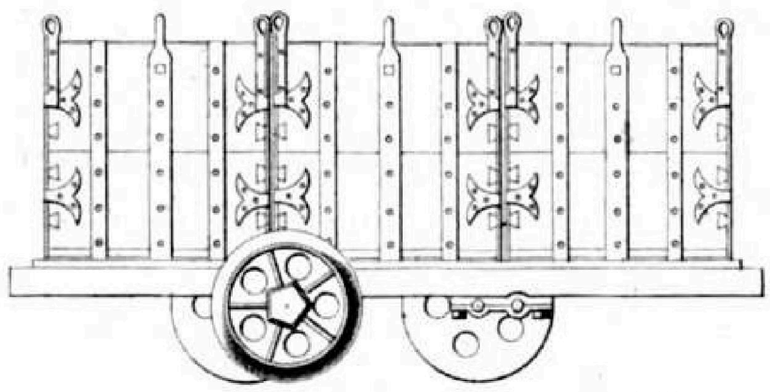


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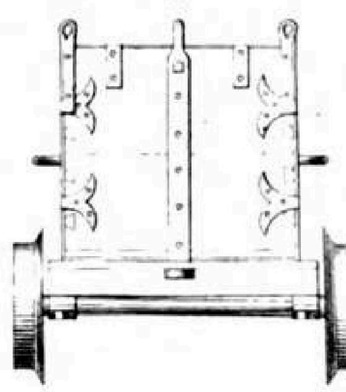
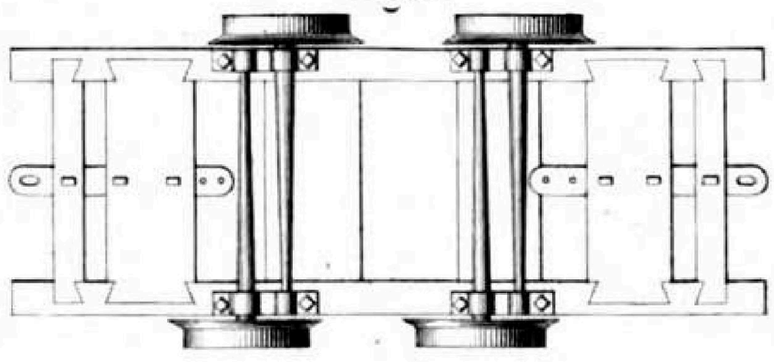


Fig. 18.



Echelles

des Fig. 1, 2, 4, 20 et 21 — 1/2

de la Fig. 3 — 1/2

des Fig. 5, 6, 7, 8, 9, 14 et — 0,1 — 0,2 — 0,3

des Fig. 17, 18 et 19 — 1/4

des Fig. 10, 11, 12, 13 et 16

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Bayerische Staatsbibliothek MÜNCHEN

EAUX, CHARIOTS, BROUETTES.

Fig. 7.

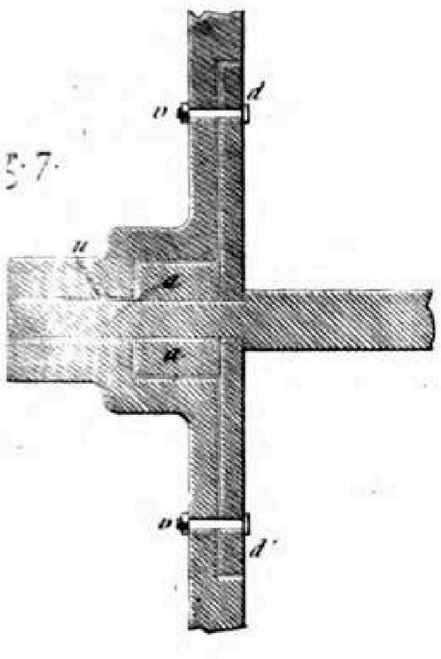


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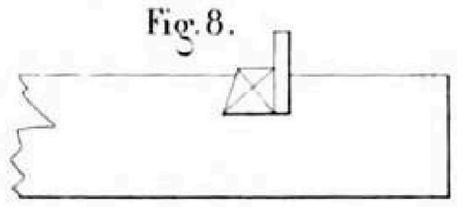


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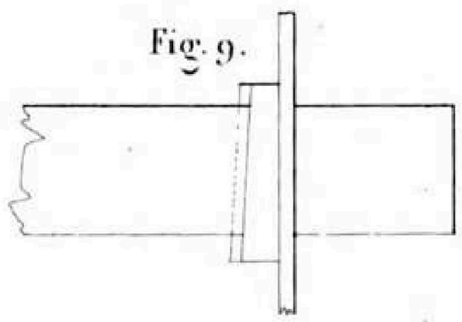


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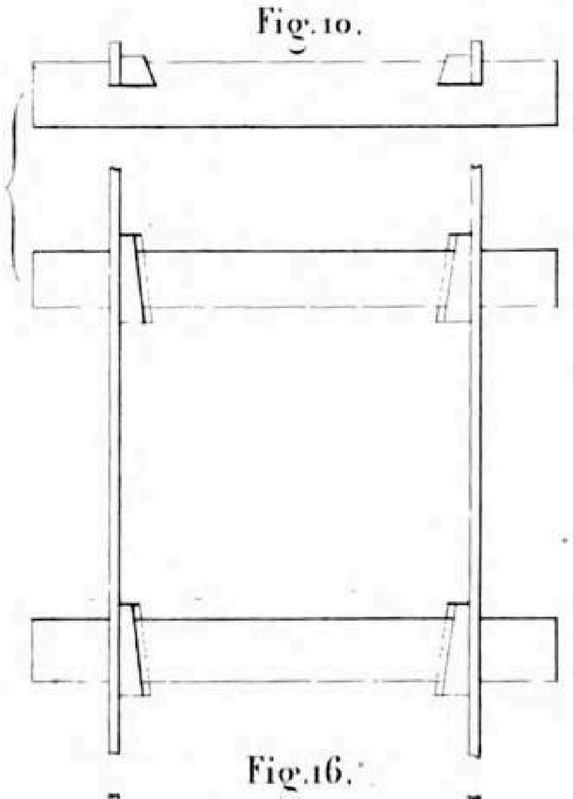


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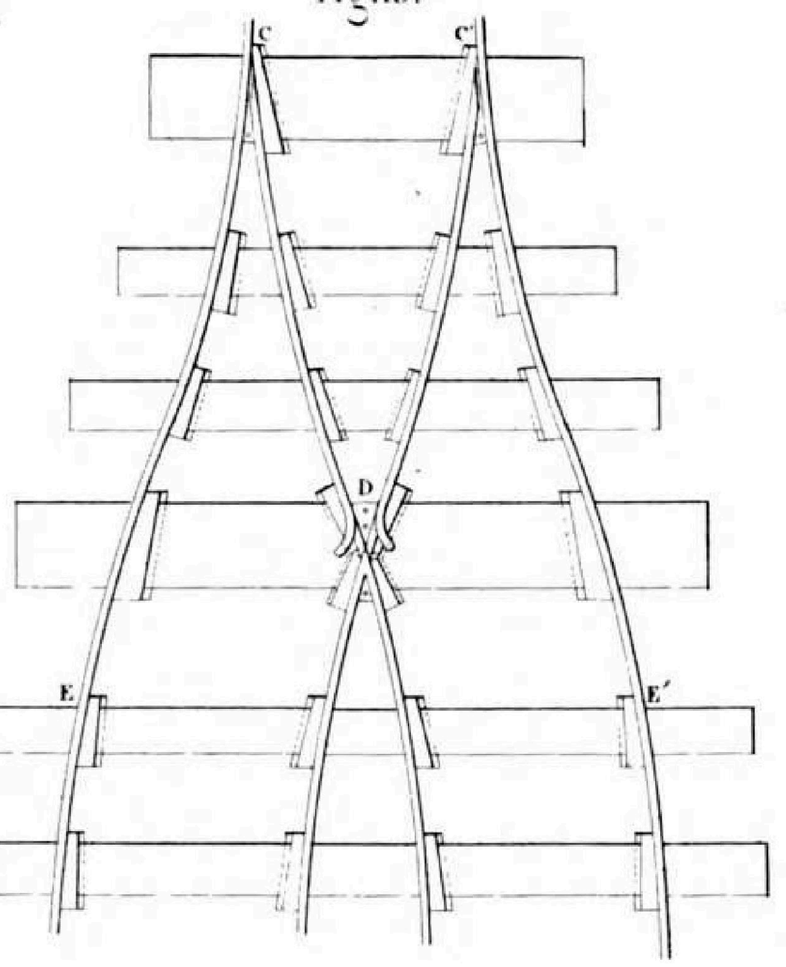


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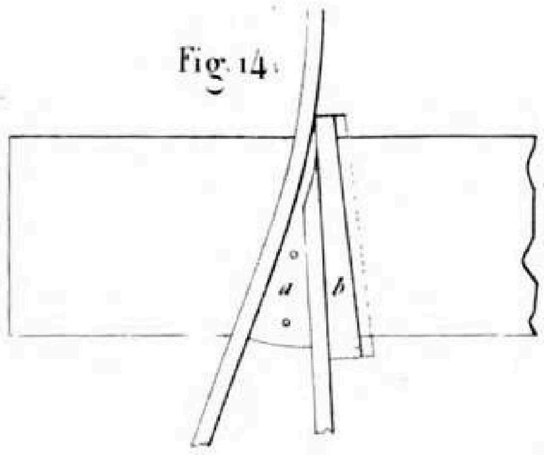


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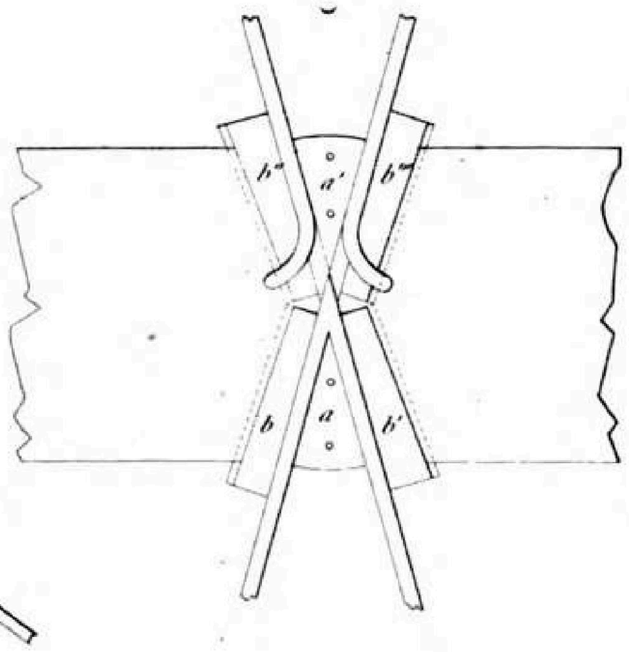


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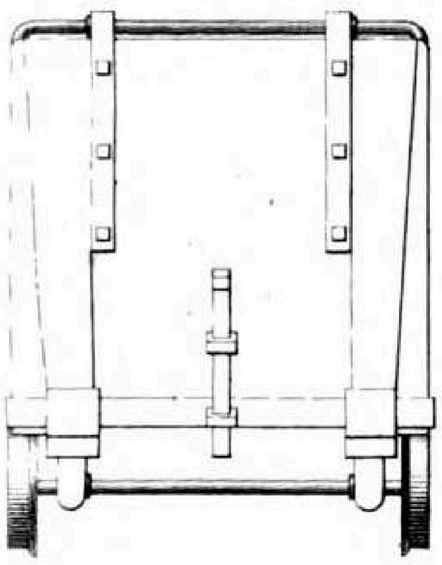


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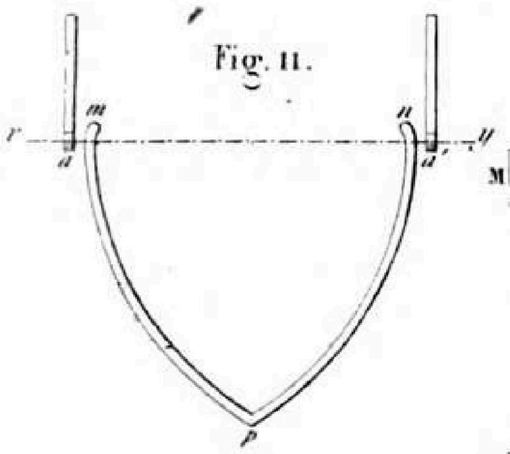


Fig. 12.

Coupe suivant x, y.

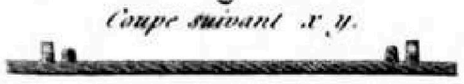
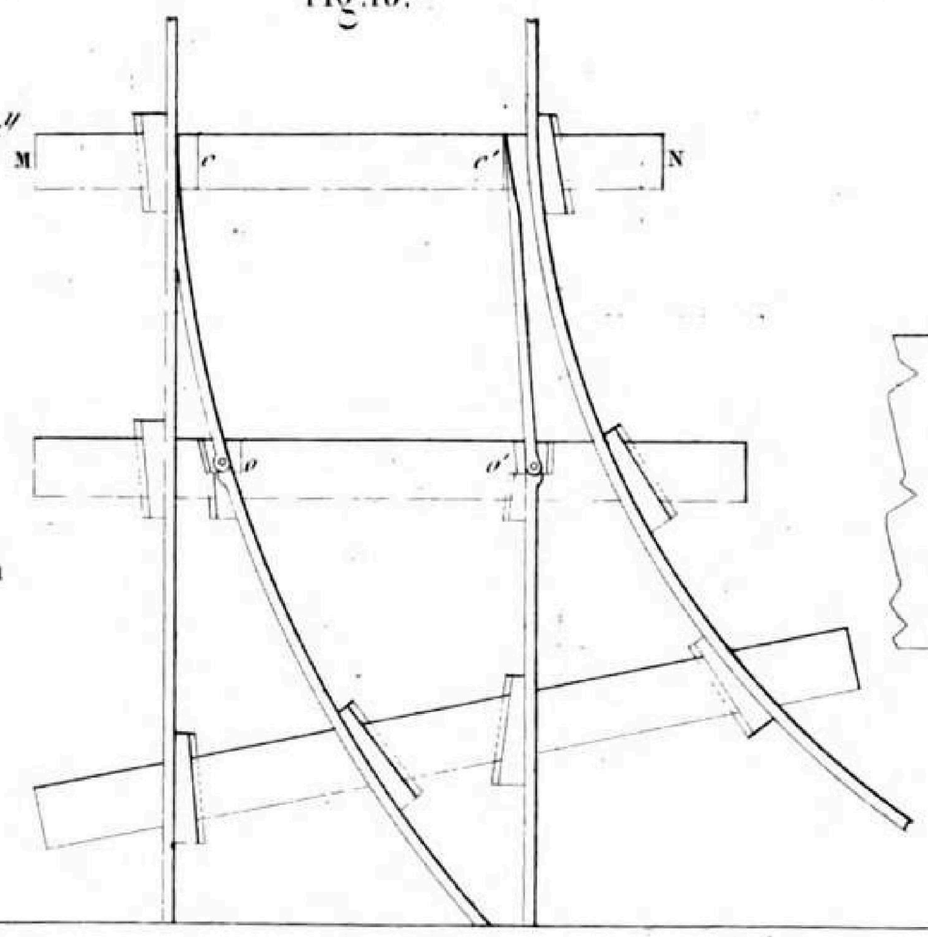


Fig. 16.



1 mètre

2 mètres

0,3 décimètres

2 mètres

1 mètre

Lemaitre sculp.

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Fig. 5.

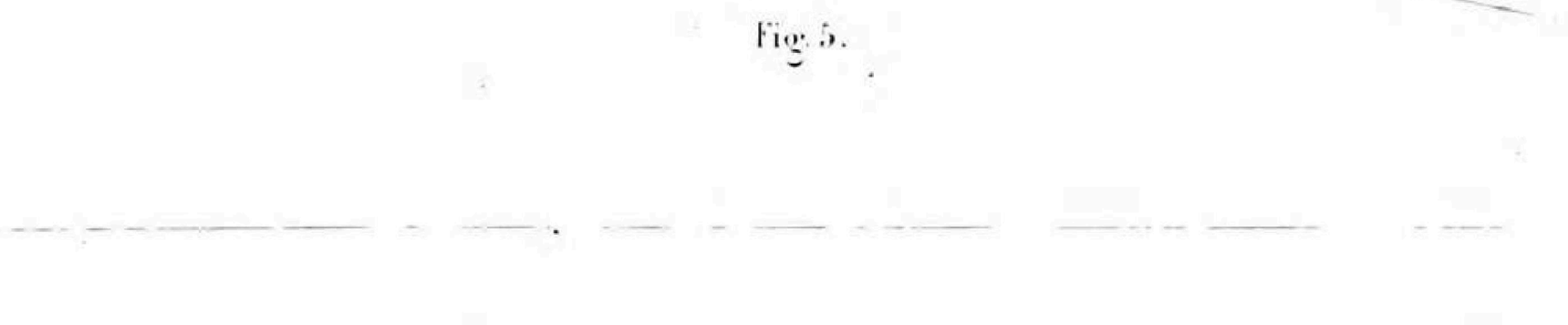


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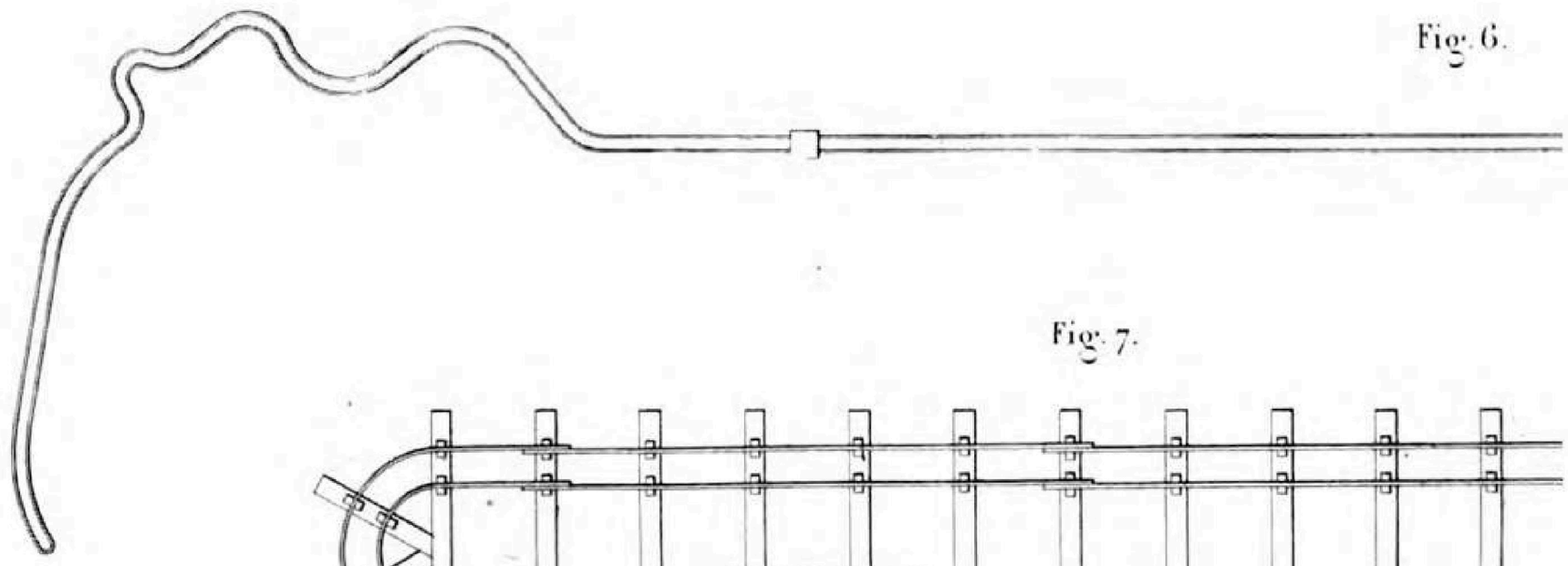


Fig. 7.

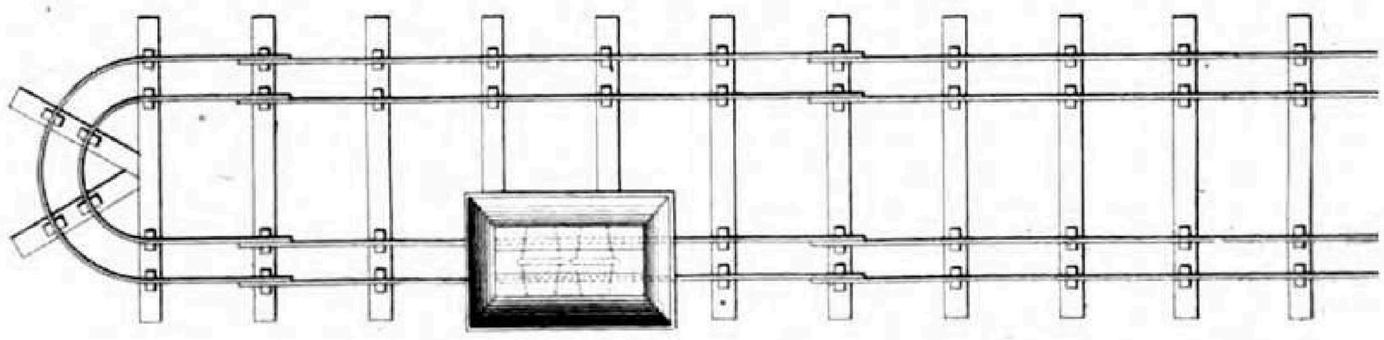


Fig. 1.

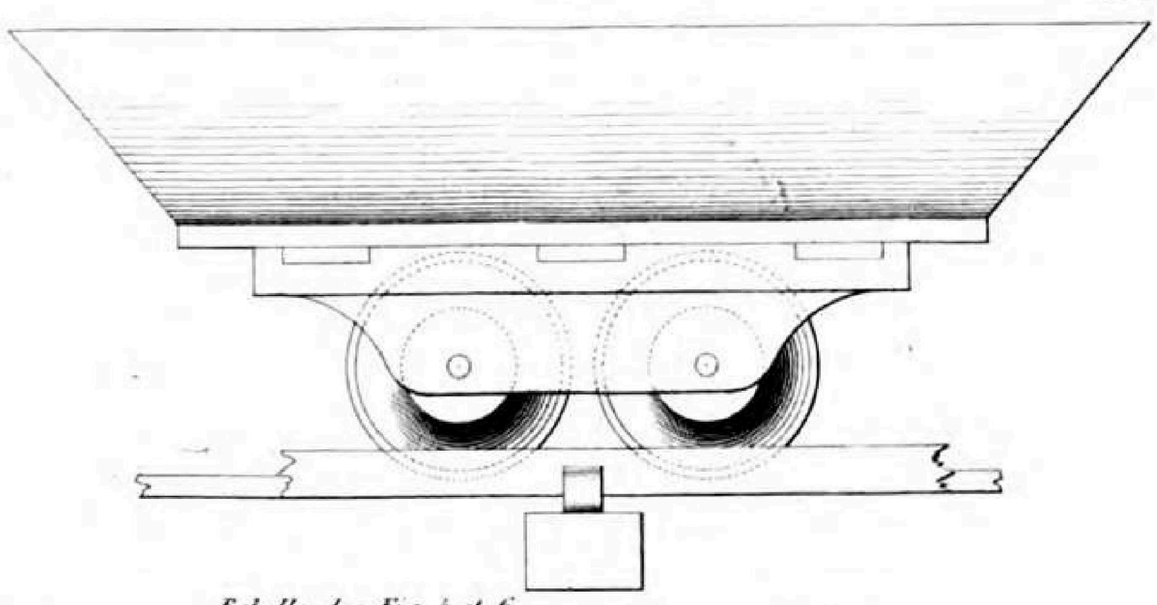
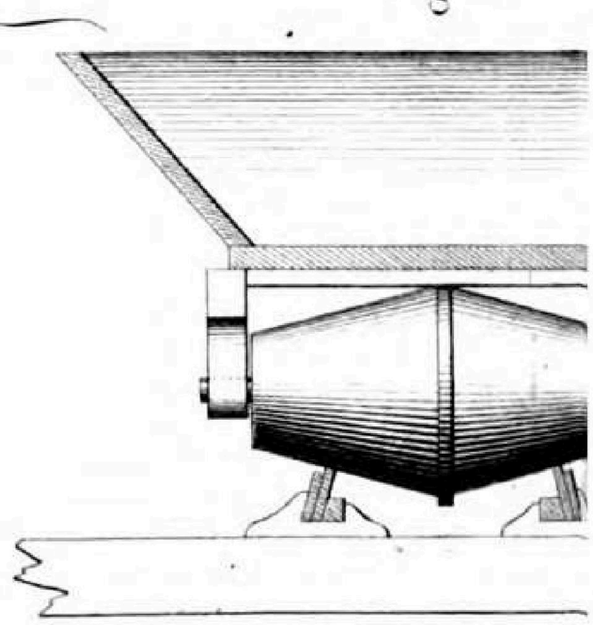


Fig. 2.



Echelle des Fig. 5 et 6.

1 2 3 4 5 10 mètres.

Echelle de la Fig 7.

1 2 3 6 mètres.

Echelle des Fig. 1 et 2.

0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9

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NIQUES DE Mr SERVEILLE AINÉ.

PL. XXX.

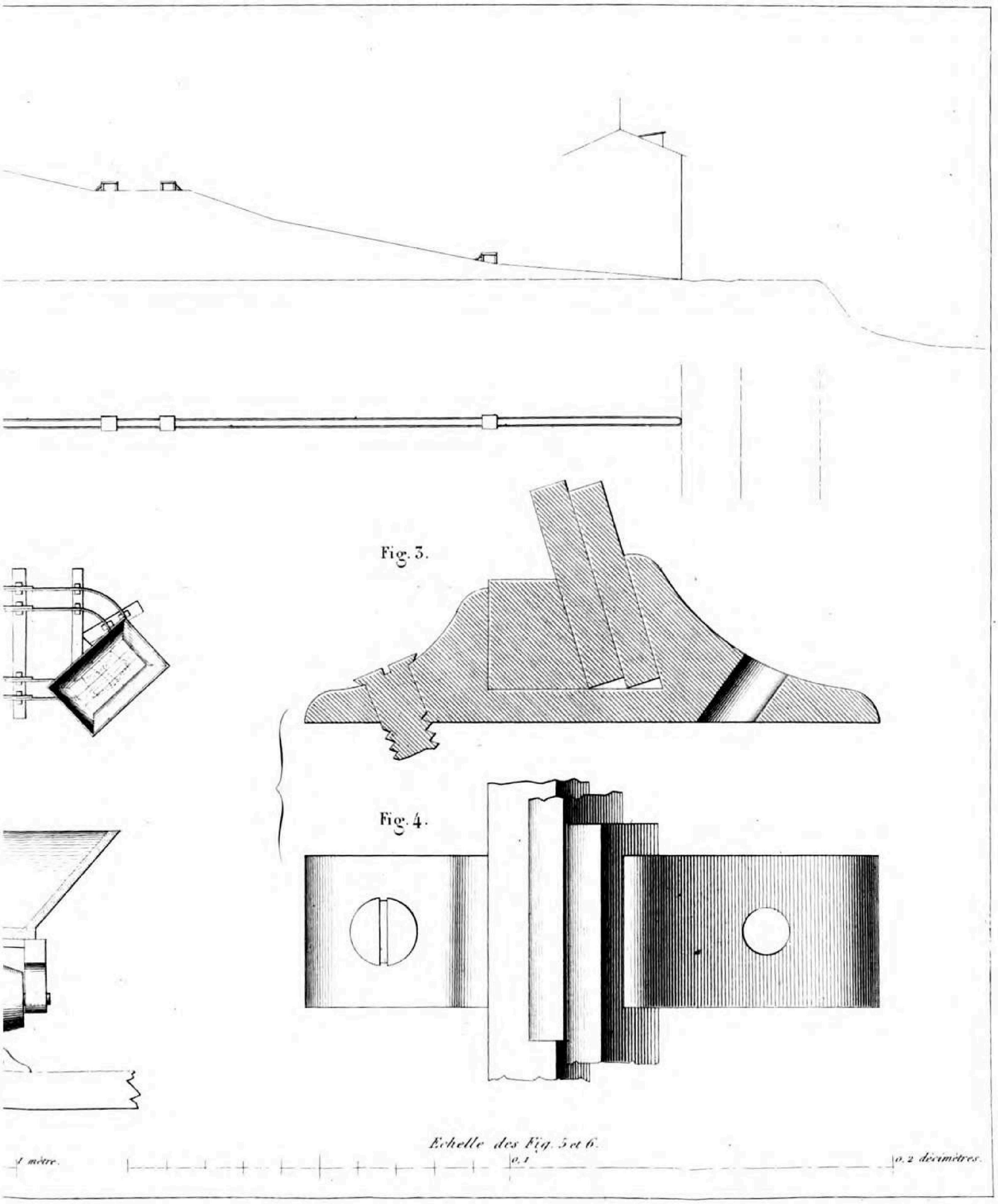


Fig. 3.

Fig. 4.

Echelle des Fig. 5 et 6.

1 mètre. *0.1* *0.2 décimètres.*

Lemaitre sc.

Fig. 2.

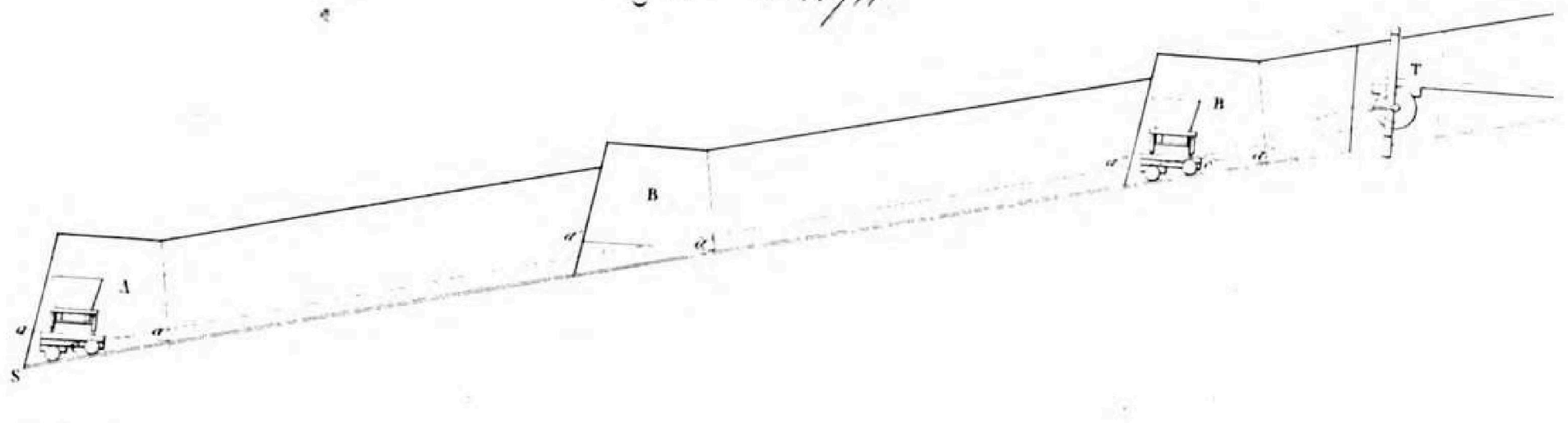


Fig. 3.

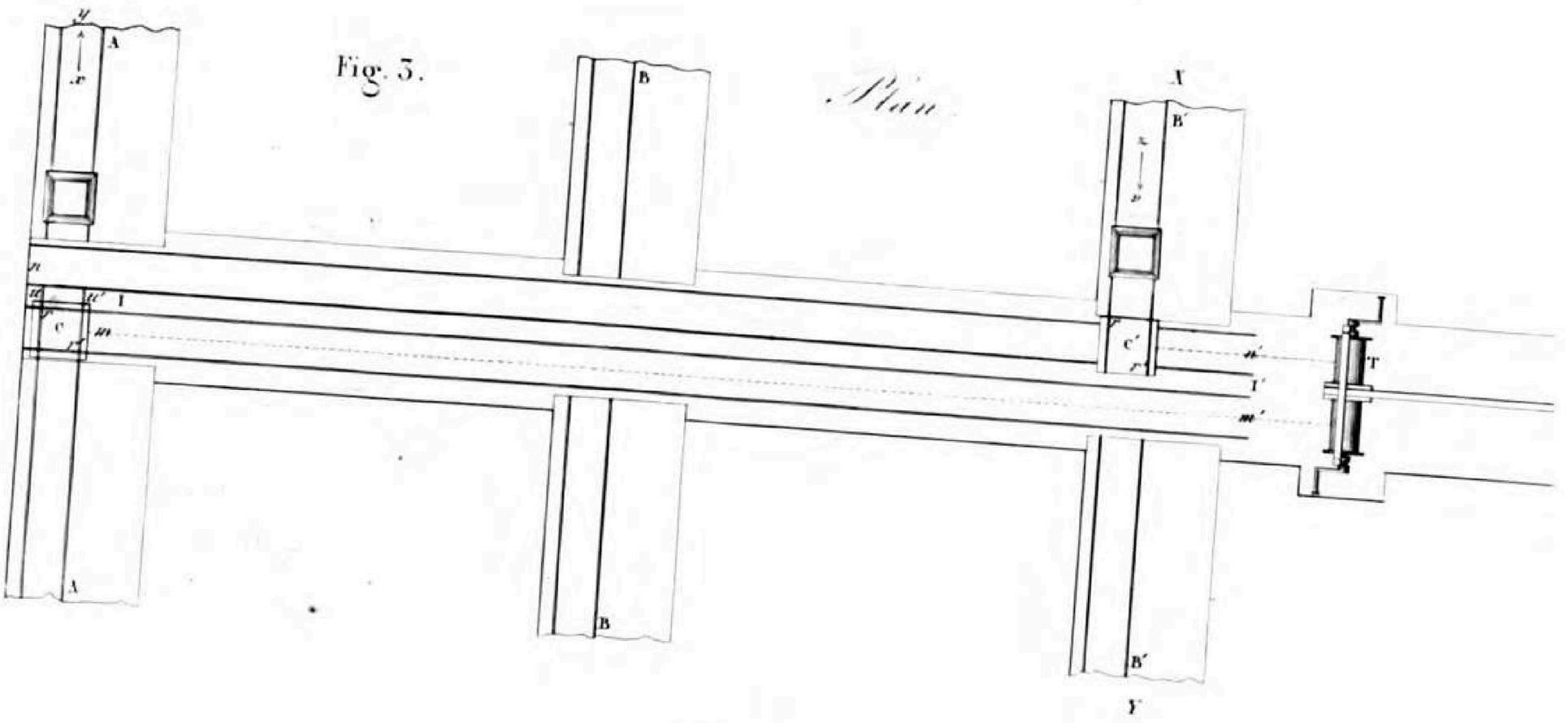


Fig. 5.

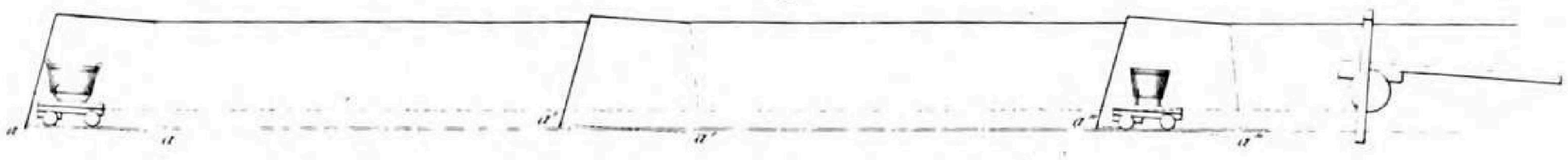


Fig. 7.

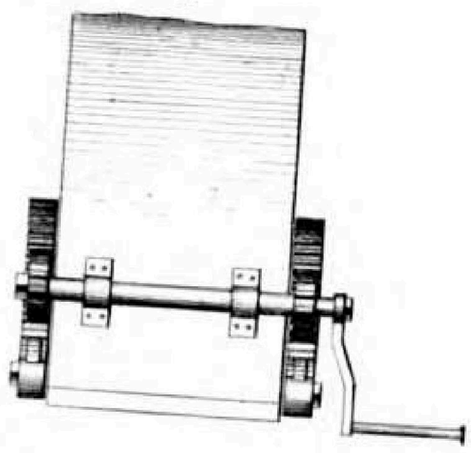
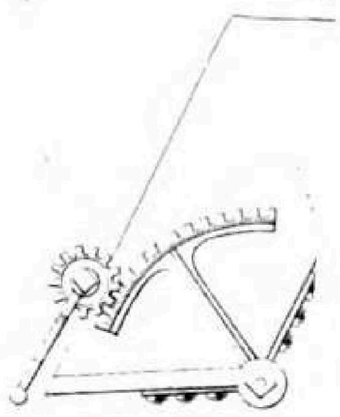
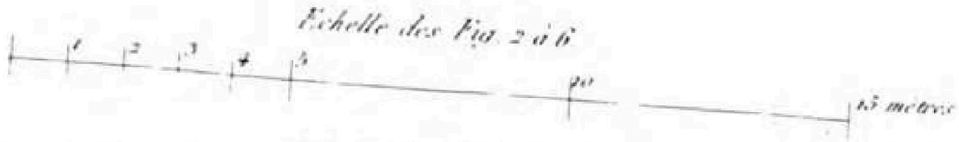


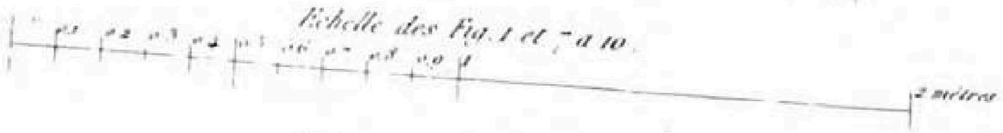
Fig.



Échelle des Fig. 2 à 6



Échelle des Fig. 1 et 7 à 10.



Échelle des Fig. 11 et 12.

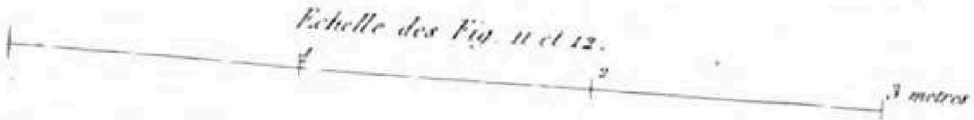


Fig. 1.

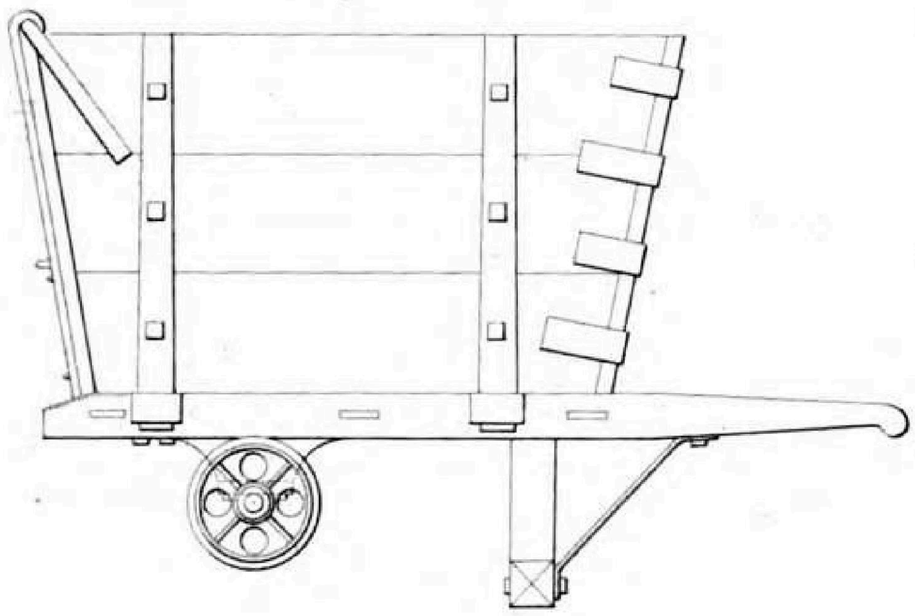


Fig. 4.

Coupe suivant XY.

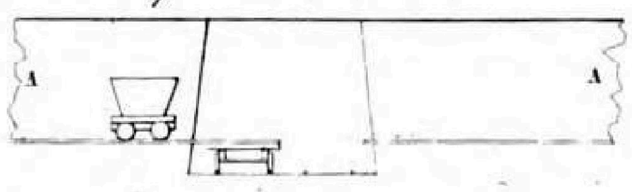


Fig. 6.

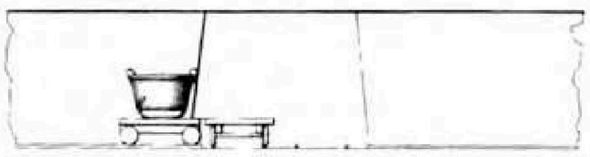


Fig. 9.

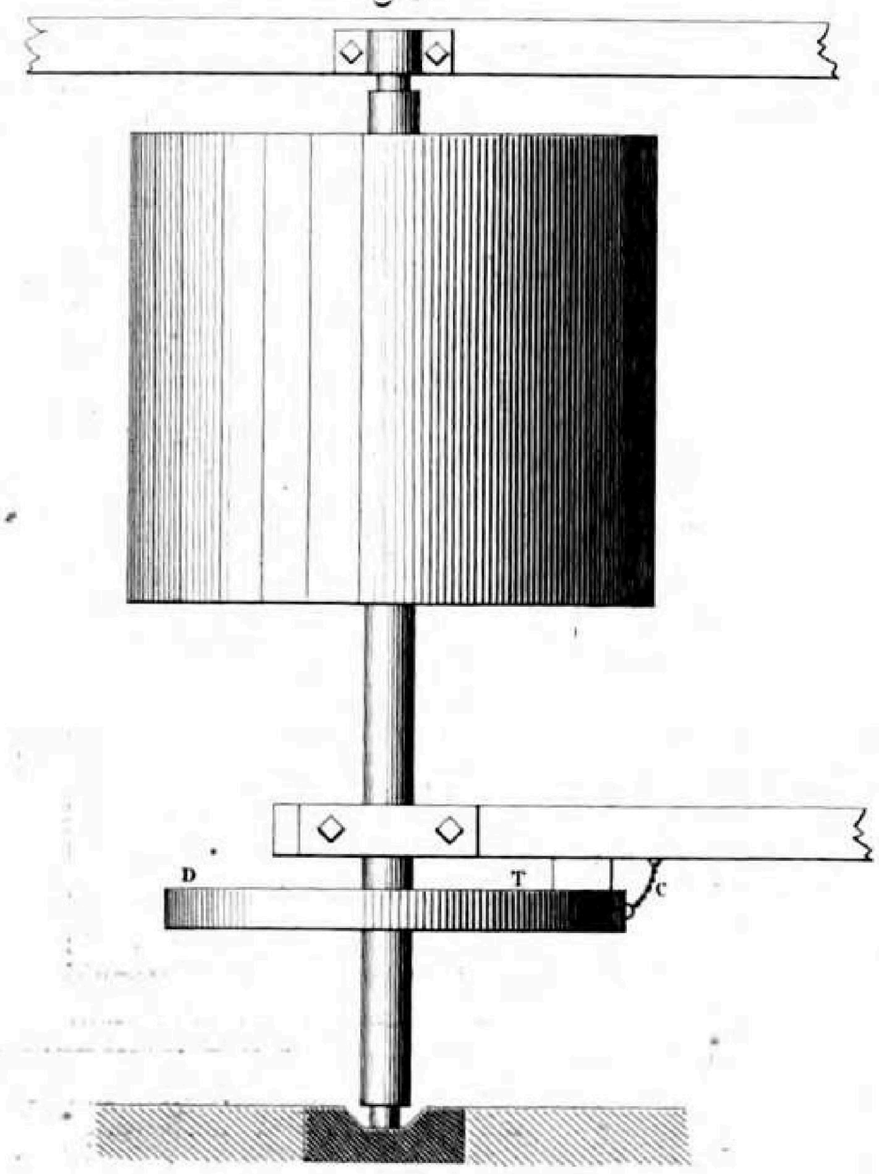


Fig. 10.

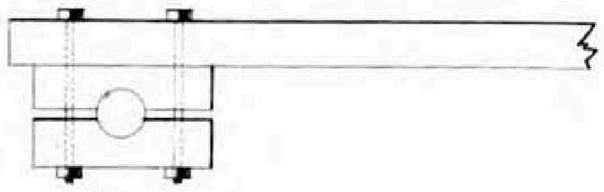


Fig. 11.

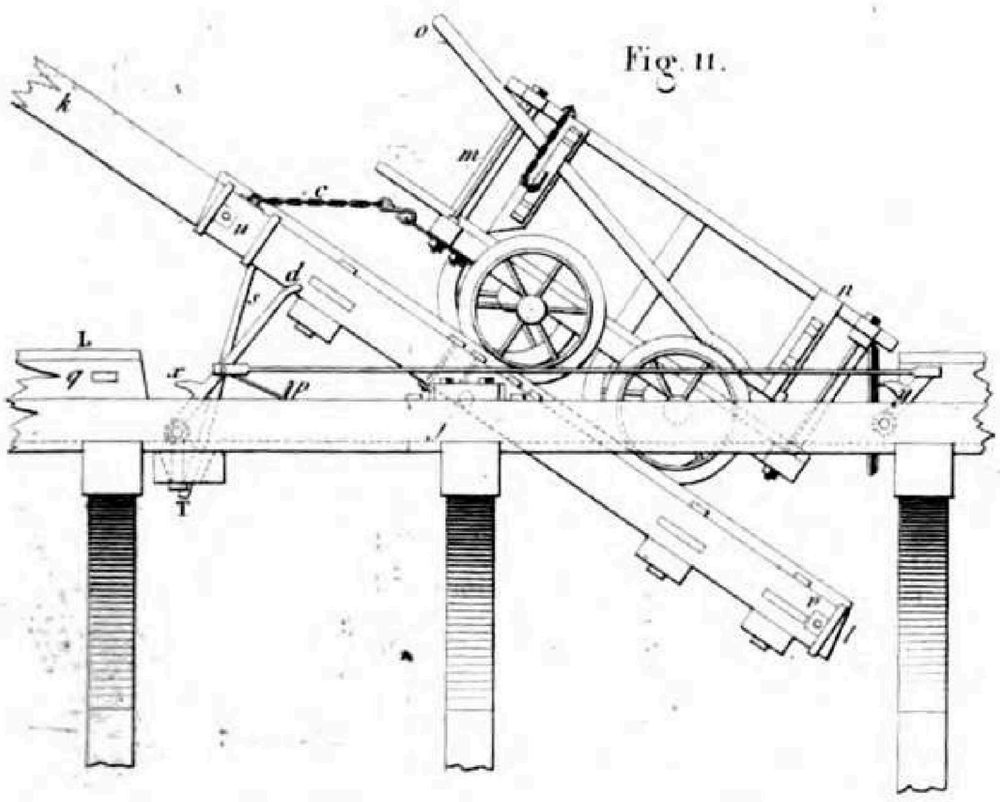


Fig. 12.

Lemaître sc

PLAN INCLINÉ AUTOMOTEUR ÉTABLI DANS UNE

Fig. 2.

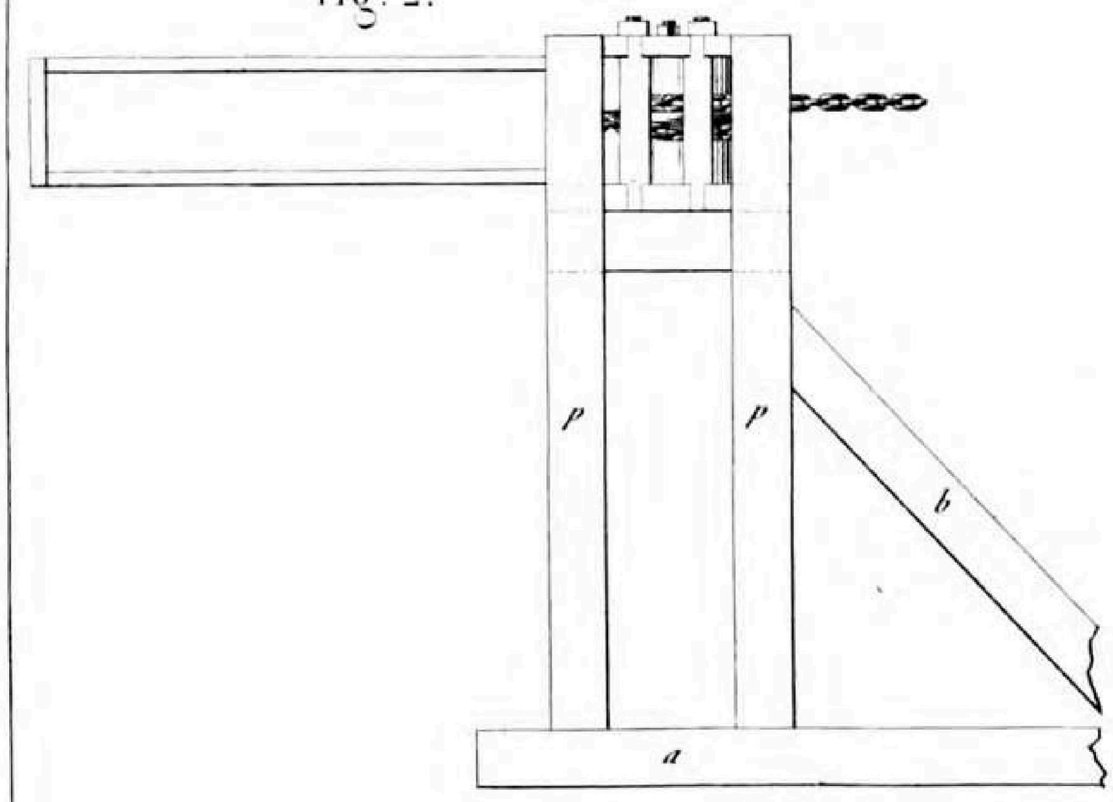


Fig. 3.

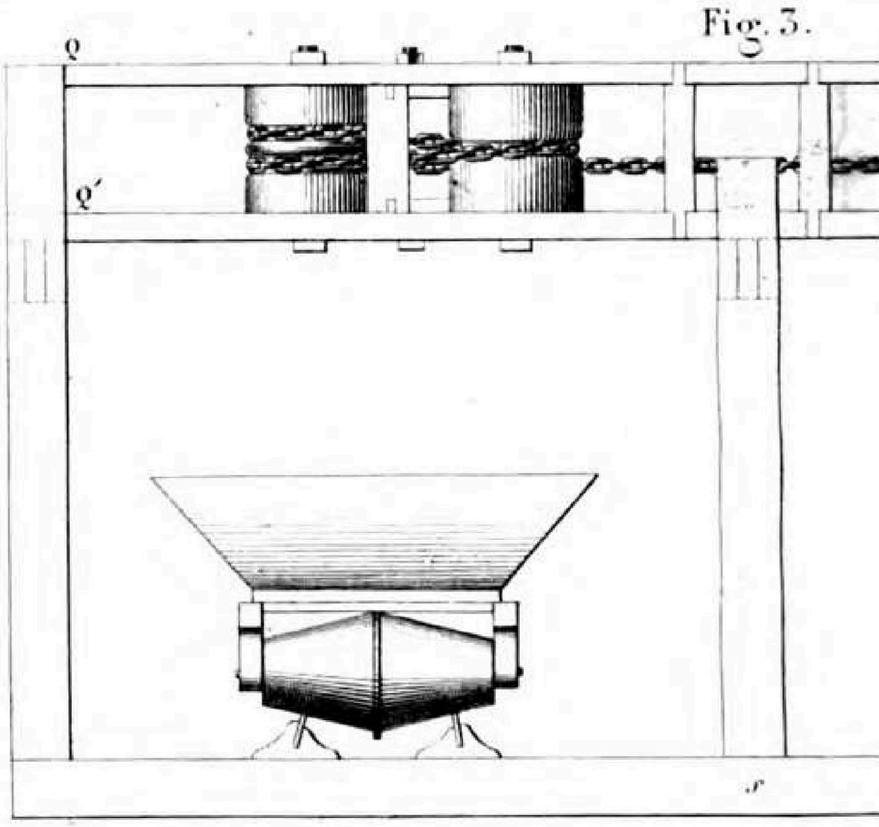


Fig. 1.

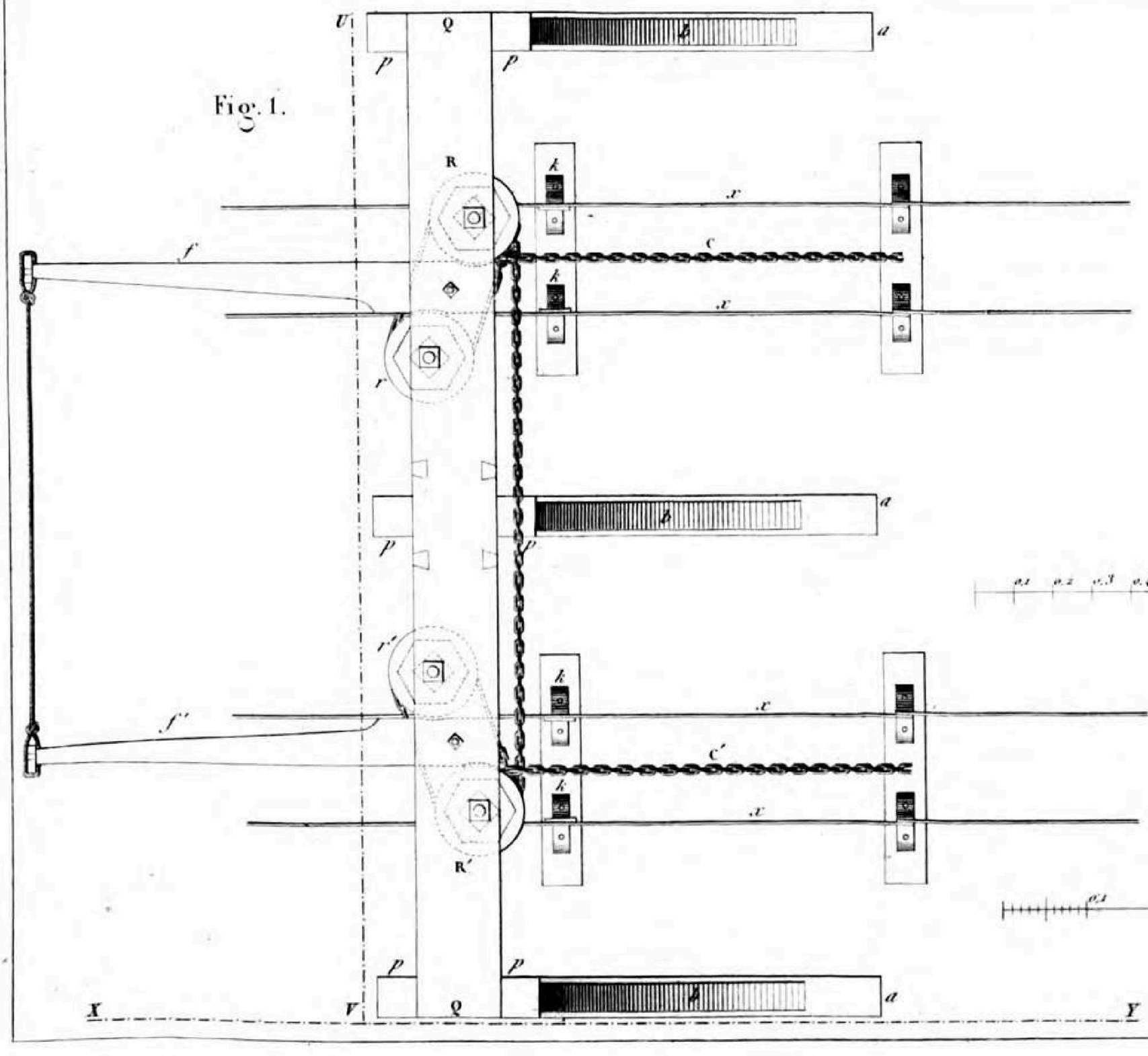


Fig. 7.



Echelle des



Echelle



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ARRIÈRE DE PIERRE A BÂTIR, PAR M SERVEILLE.

PL. XXXII.

Fig. 4.

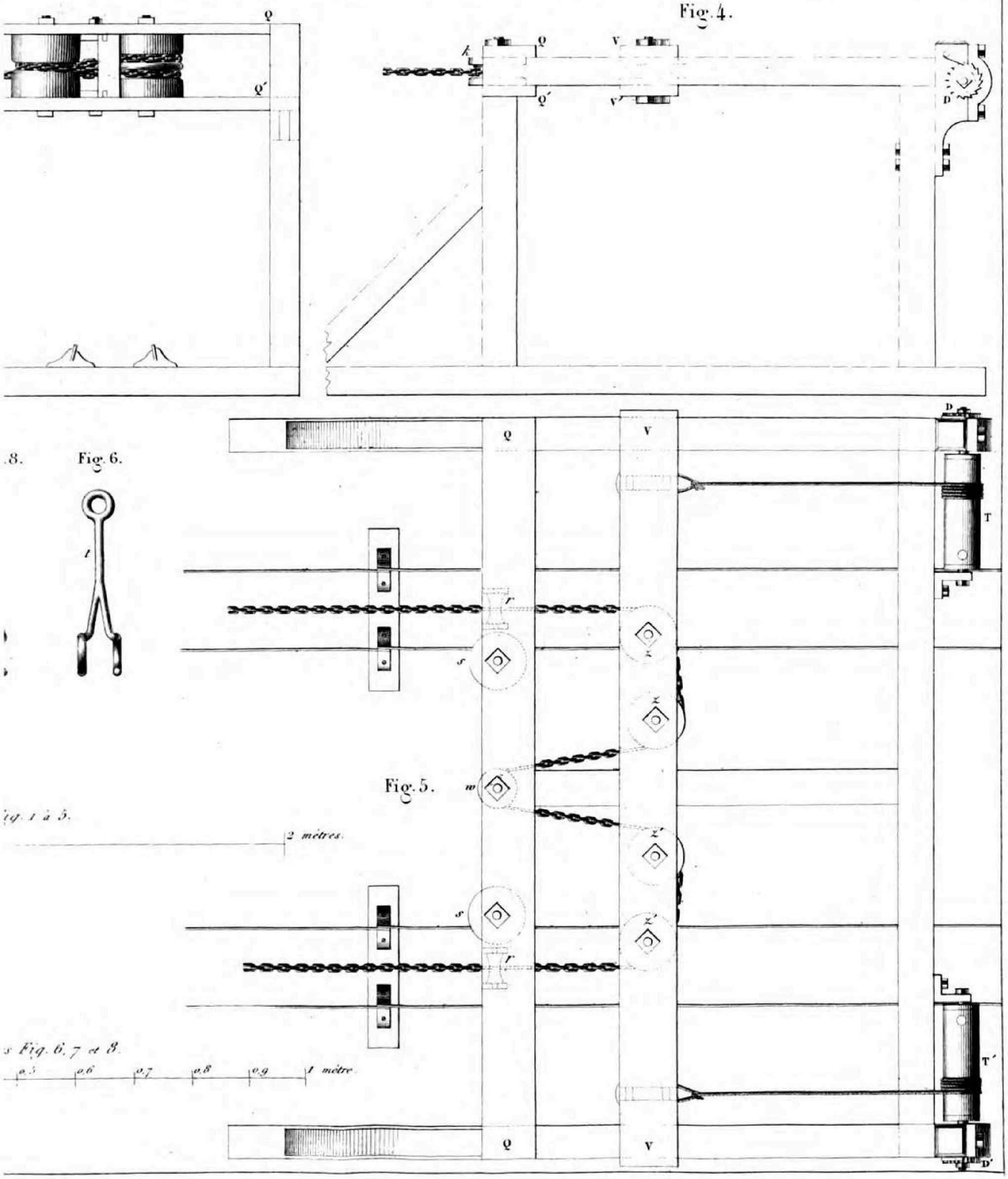


Fig. 5.

.8. Fig. 6.

ig. 1 à 5.

2 mètres.

s Fig. 6, 7 et 8.

0.5 0.6 0.7 0.8 0.9 1 mètre

Lemaitre sc.

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PLAN INCLINÉ AUTOM

Fig. 1.

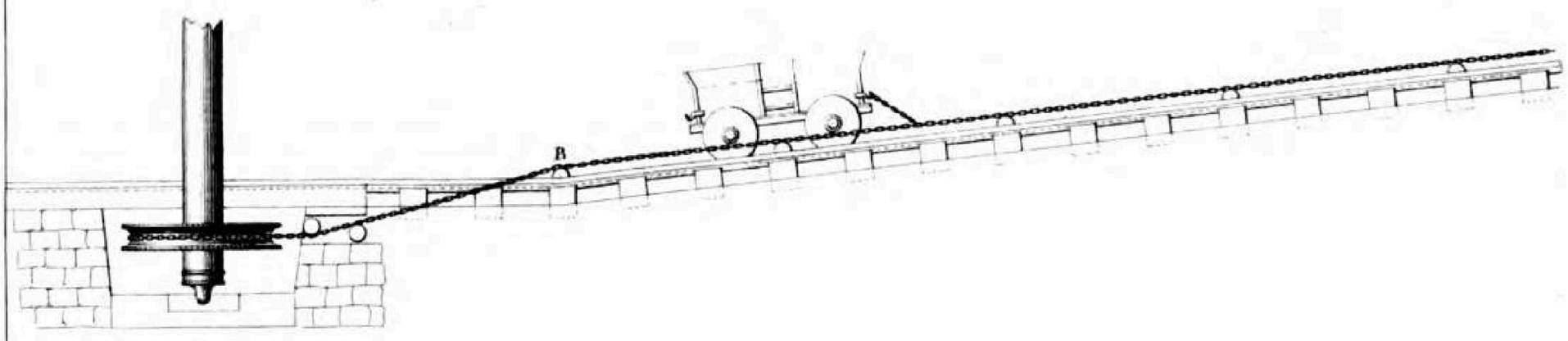
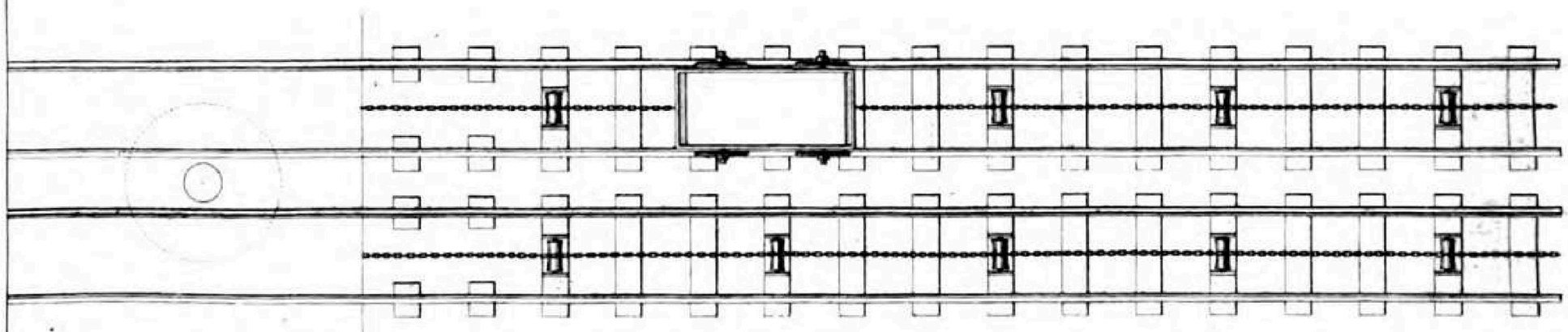
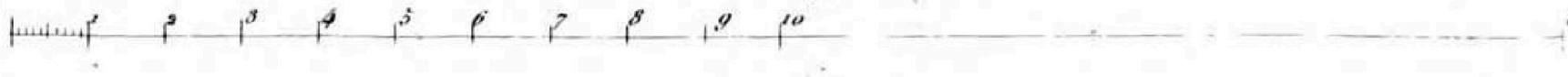


Fig. 2.



Echelle des Fig. 1 et 2.



Echelle de la Fig. 3.

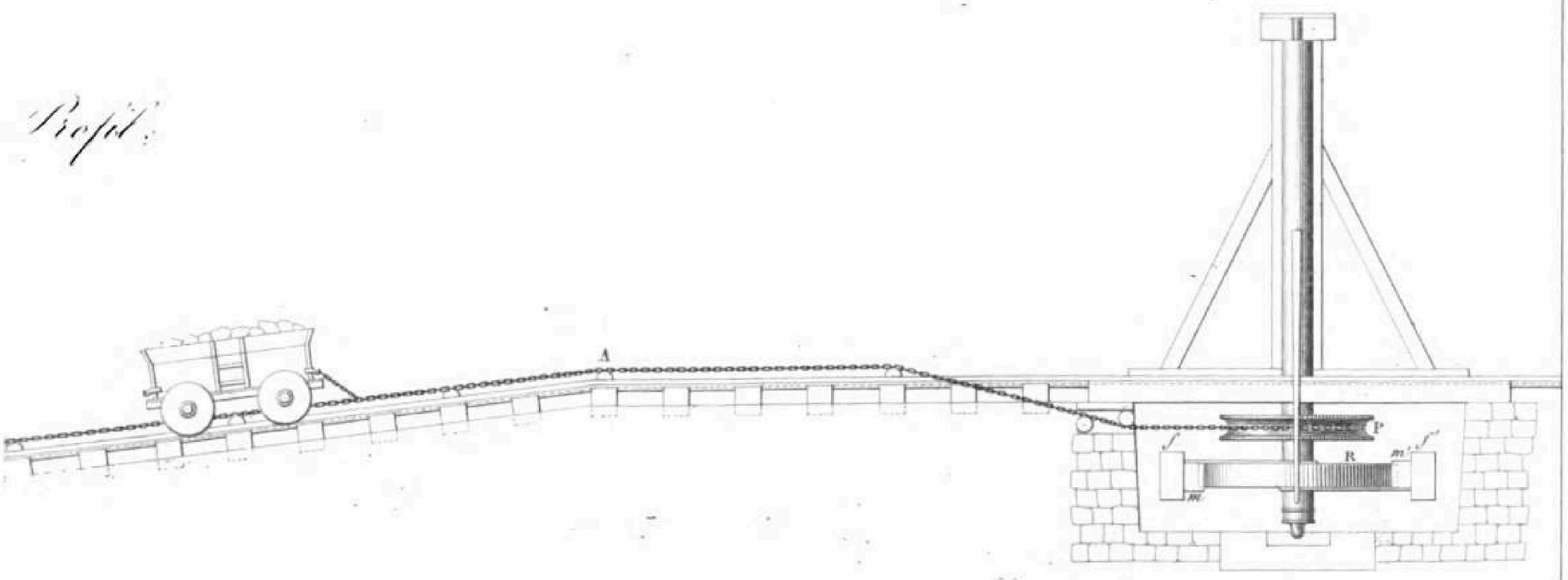


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OTEUR DE CRUMLYN.

PL. XXXIII.

Profil.



Plan.

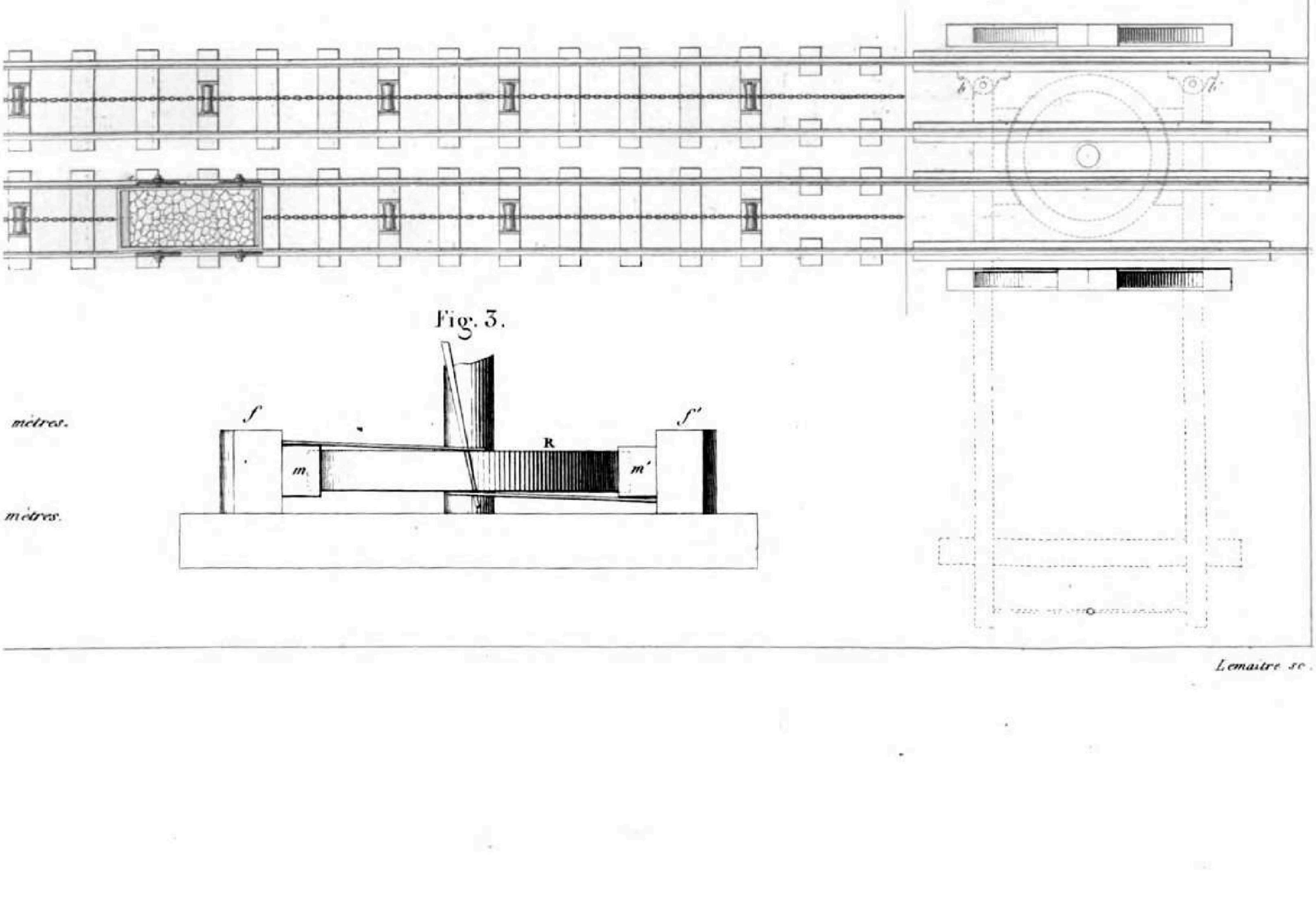


Fig. 3.

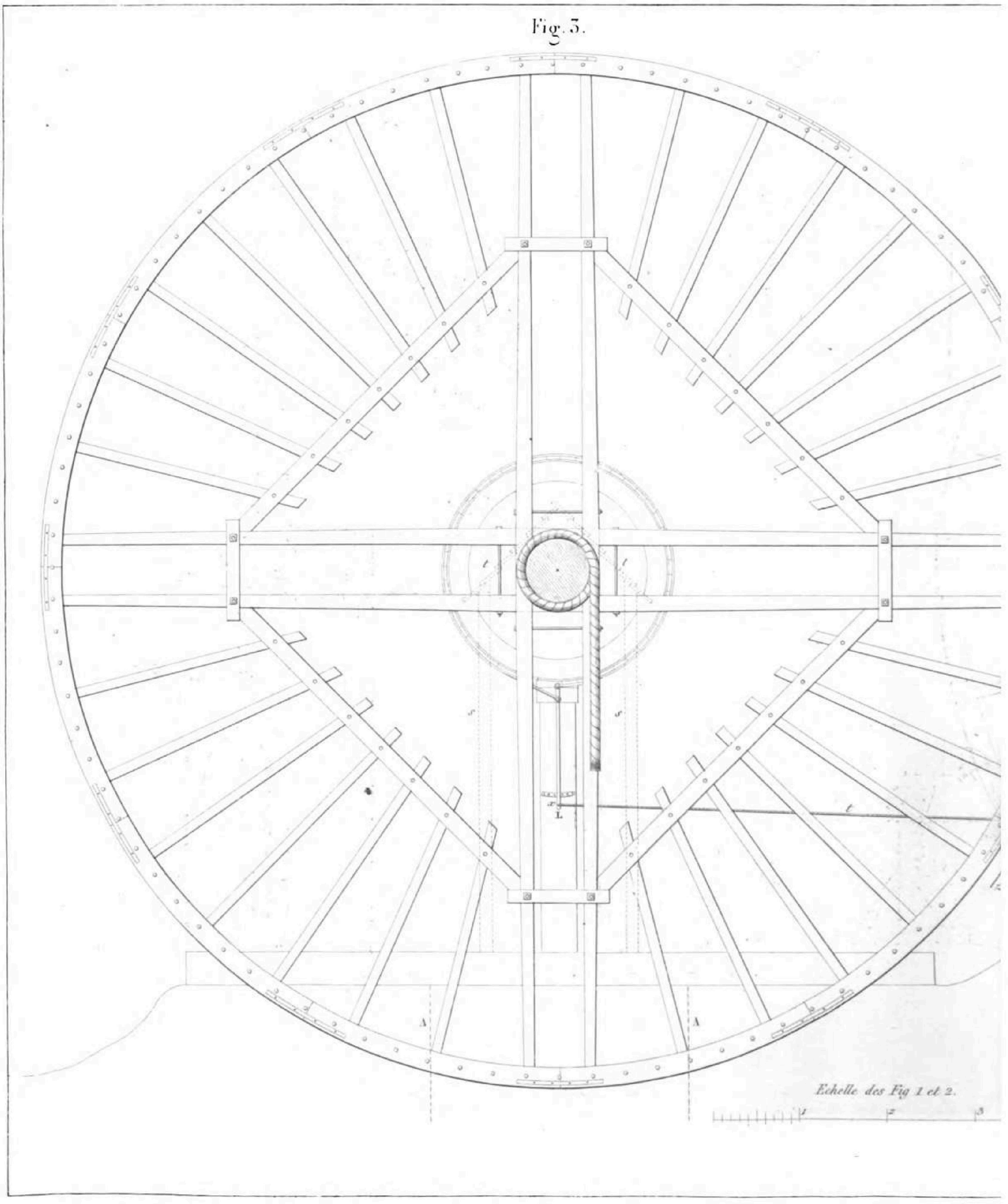
mètres.

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Fig. 3.



ROUE A CHEVILLES.

PL. XXXIV.

Fig. 1.

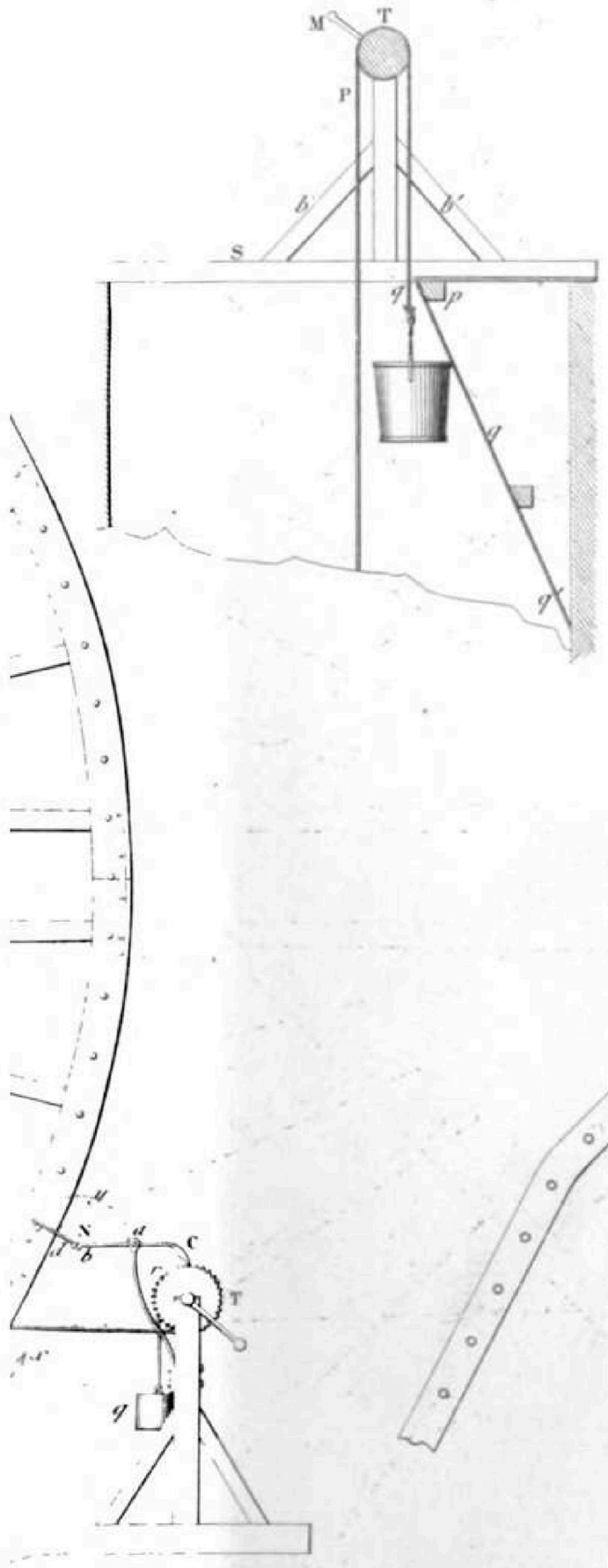


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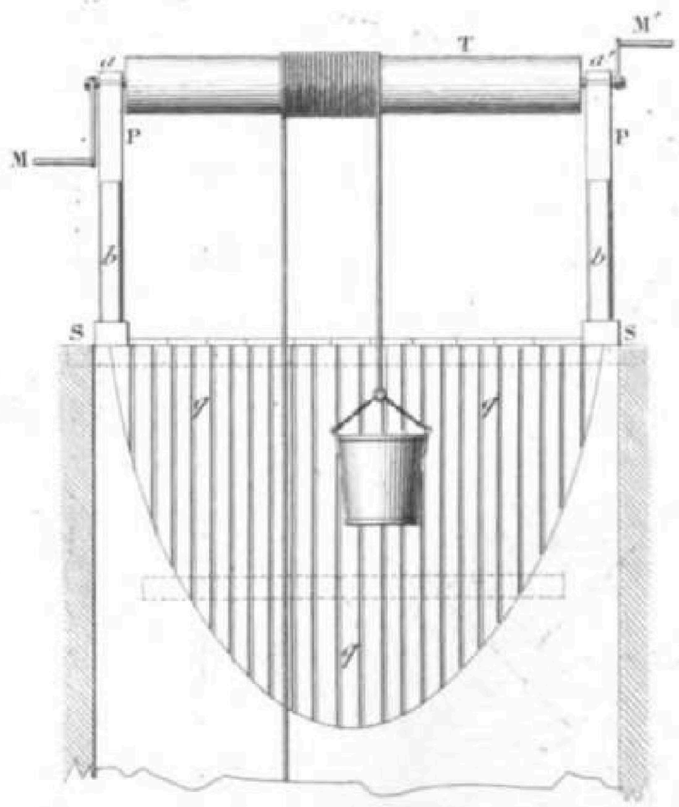
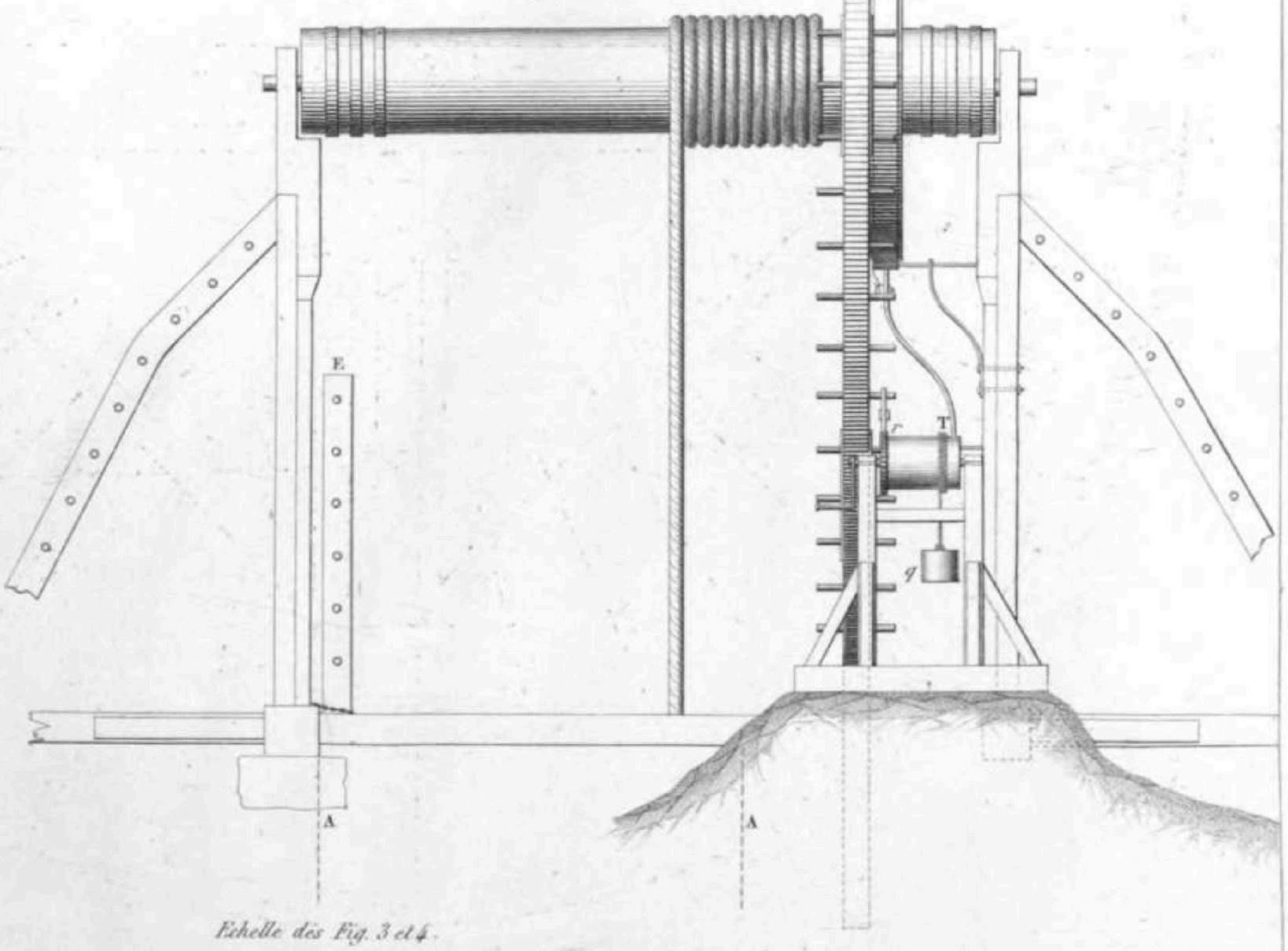


Fig. 4.



Echelle des Fig. 3 et 4.

0 mètres 1 2 3 mètres.

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BARITEL A CHERAUX ORDINAIRE D

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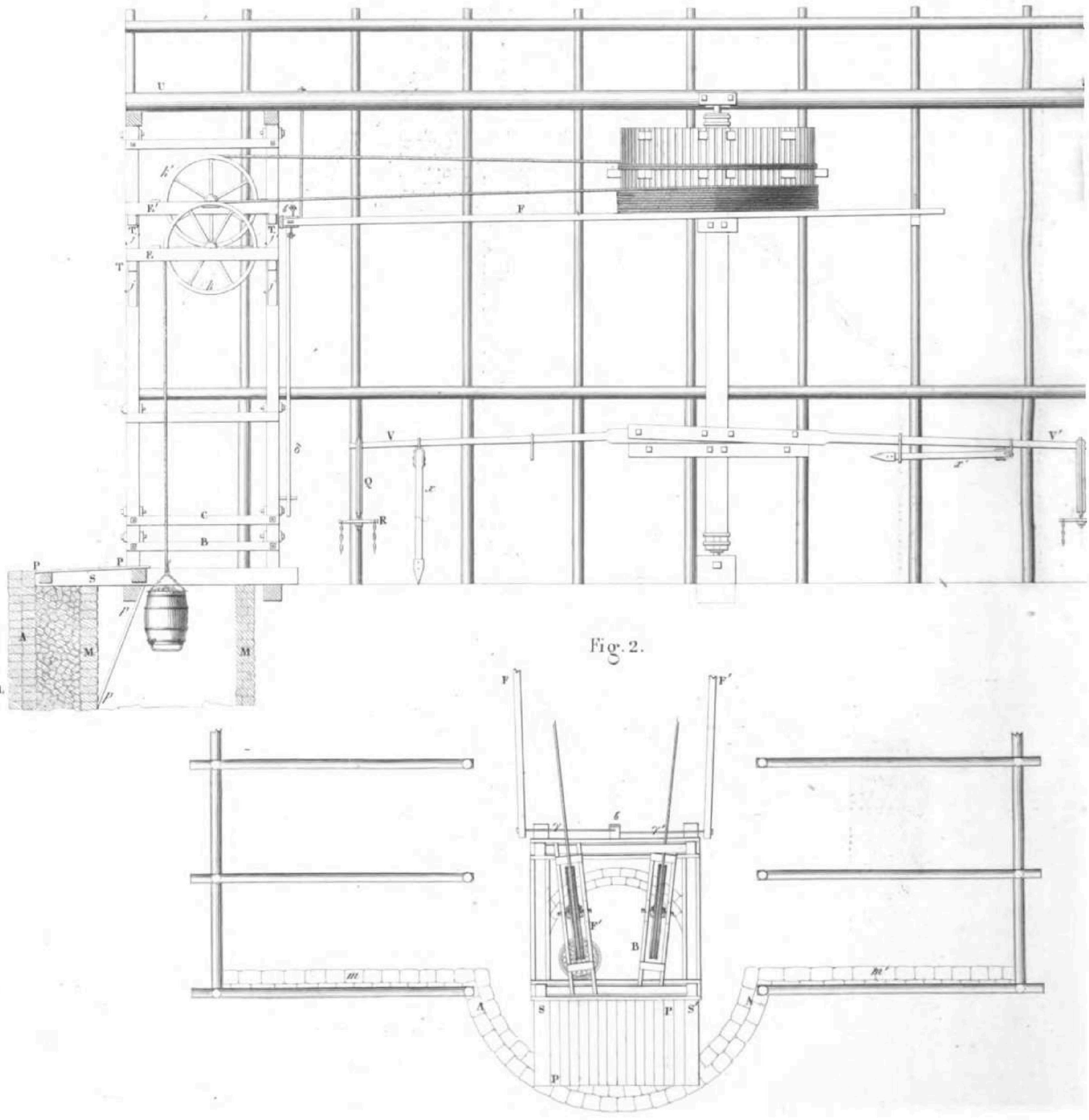


Fig. 2.

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Fig. 3.

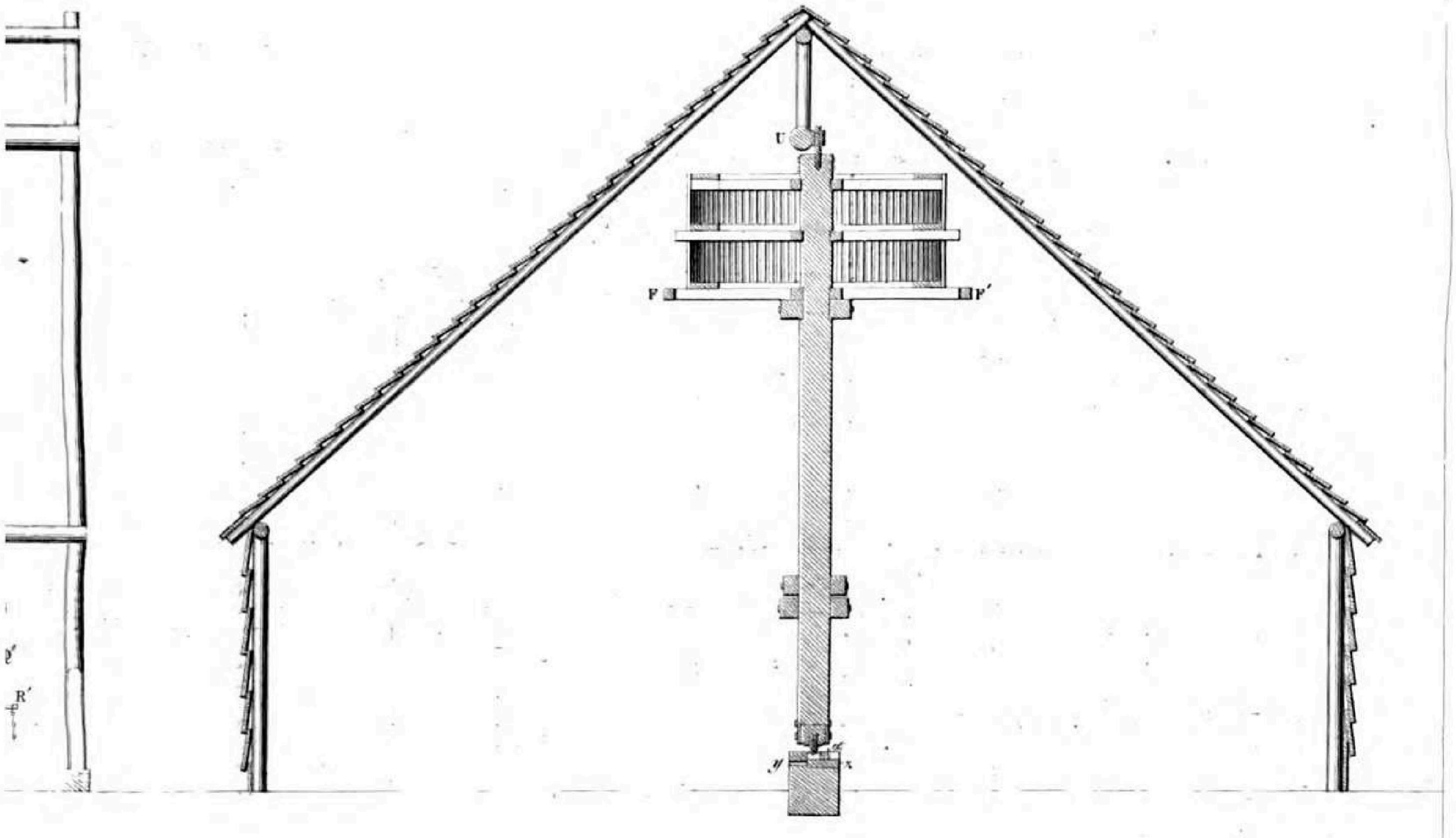


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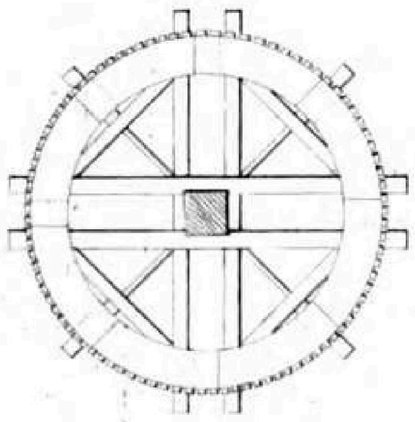


Fig. 5.



Fig. 7.

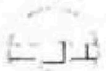
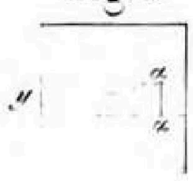
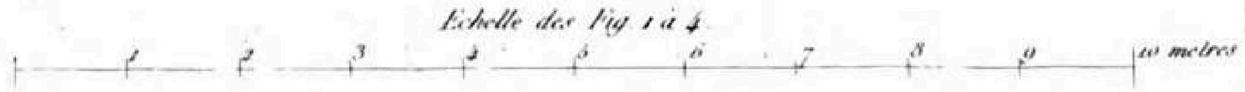


Fig. 6.



Echelle des fig 1 à 4.



Echelle des fig 5 à 7.



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Fig. 1.

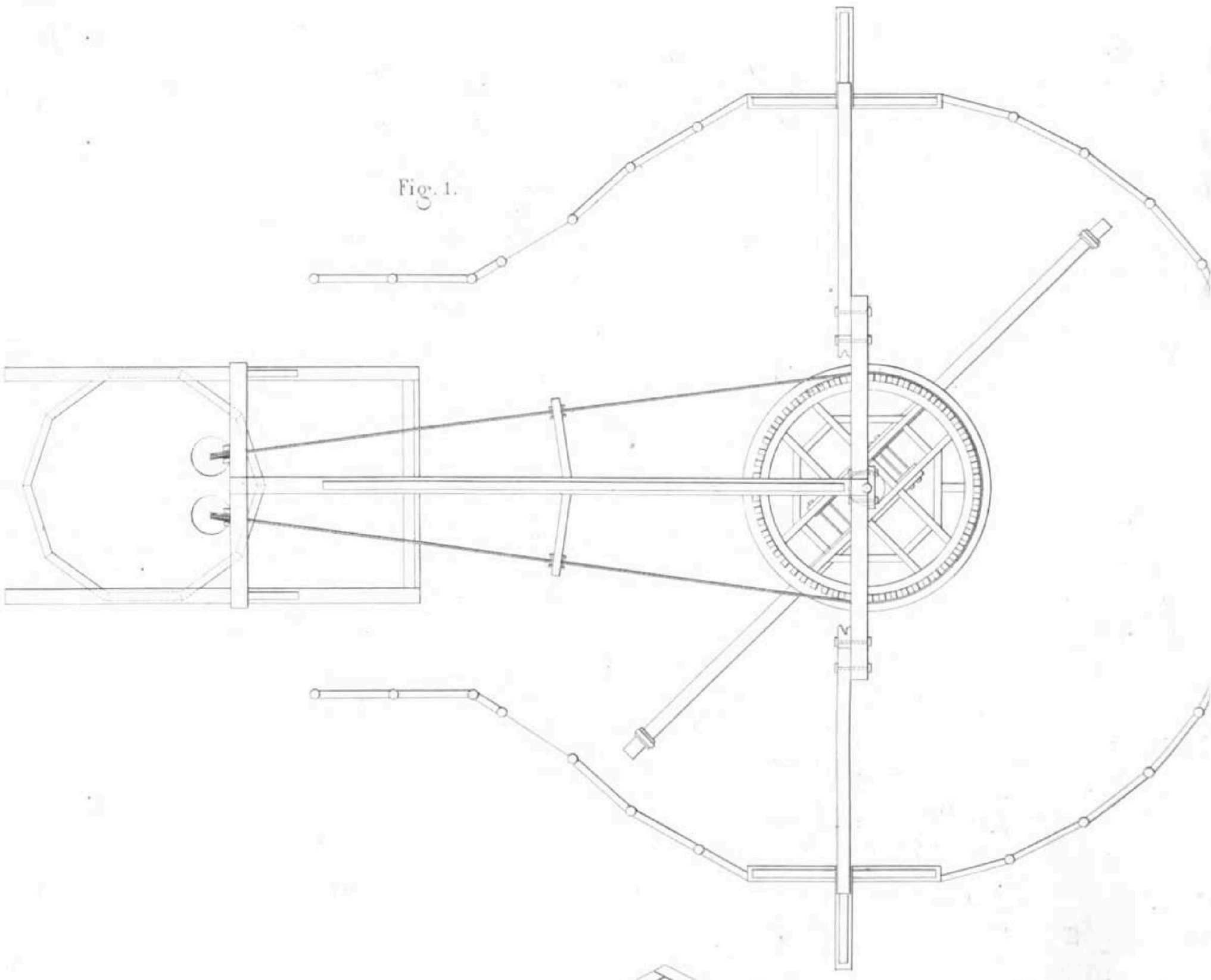


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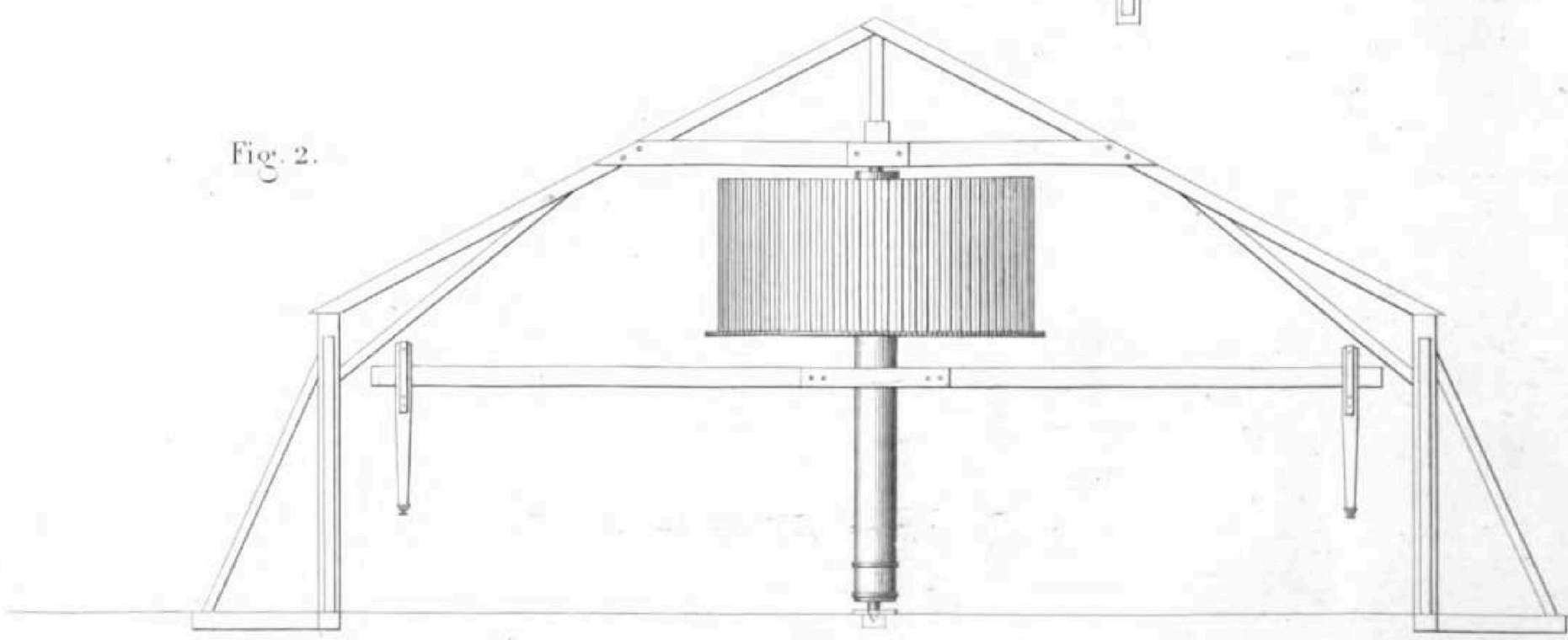
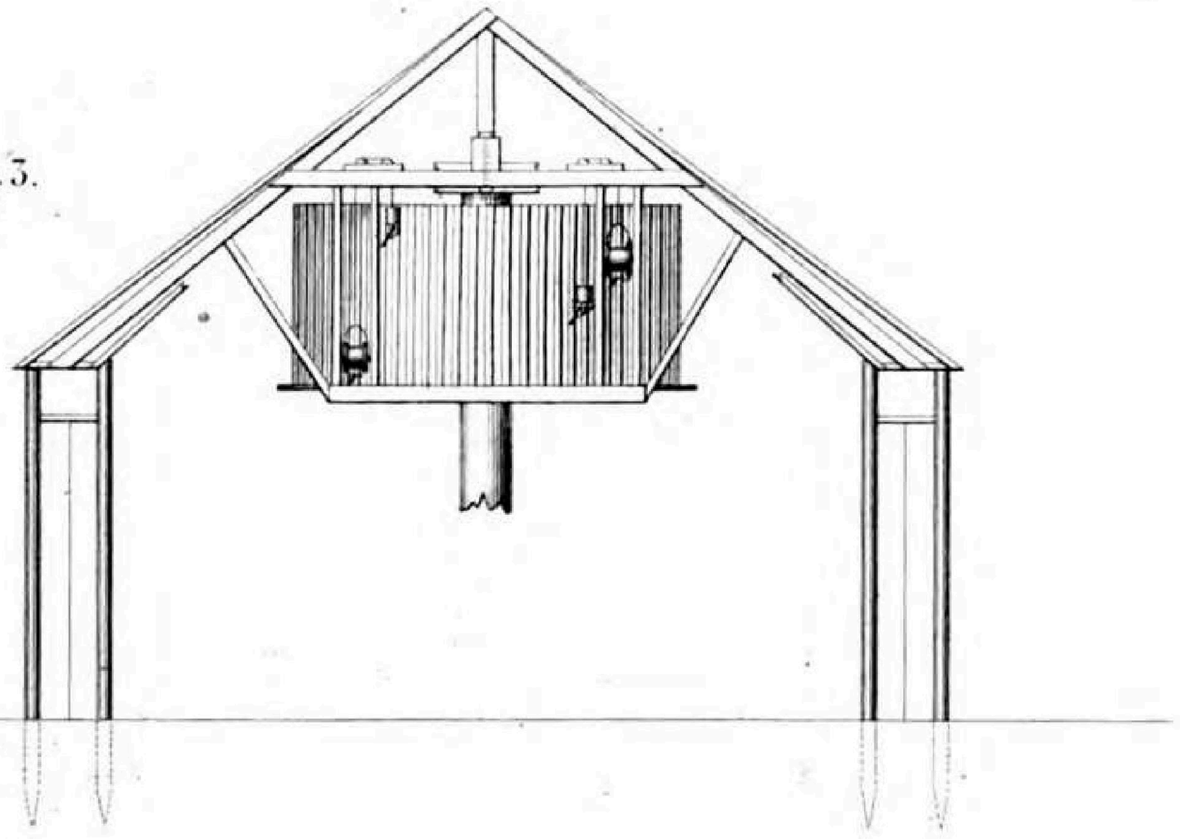


Fig. 3.



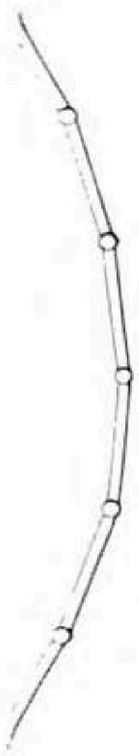


Fig. 4.

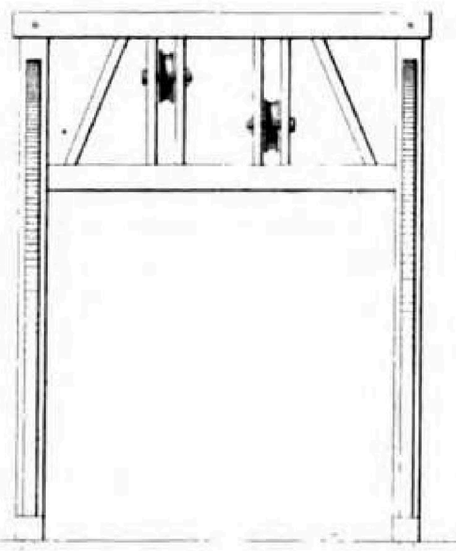
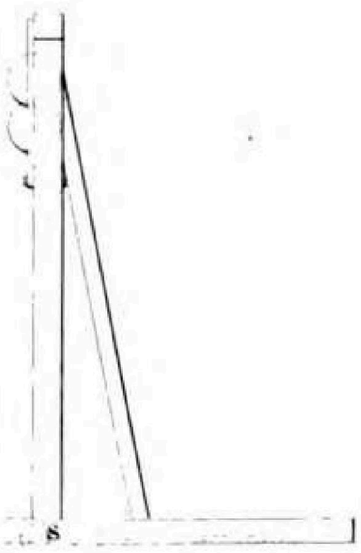


Fig. 5.



Echelle des Fig 1 à 3.

0 1 2 3 4 5 10 mètres

Lemaitre sc

Fig. 3.

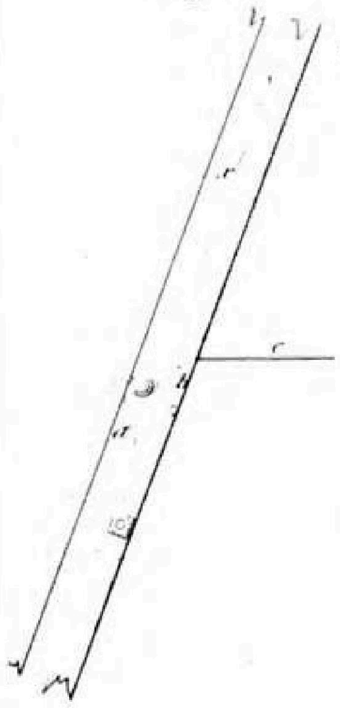


Fig. 4.

Fig. 1.

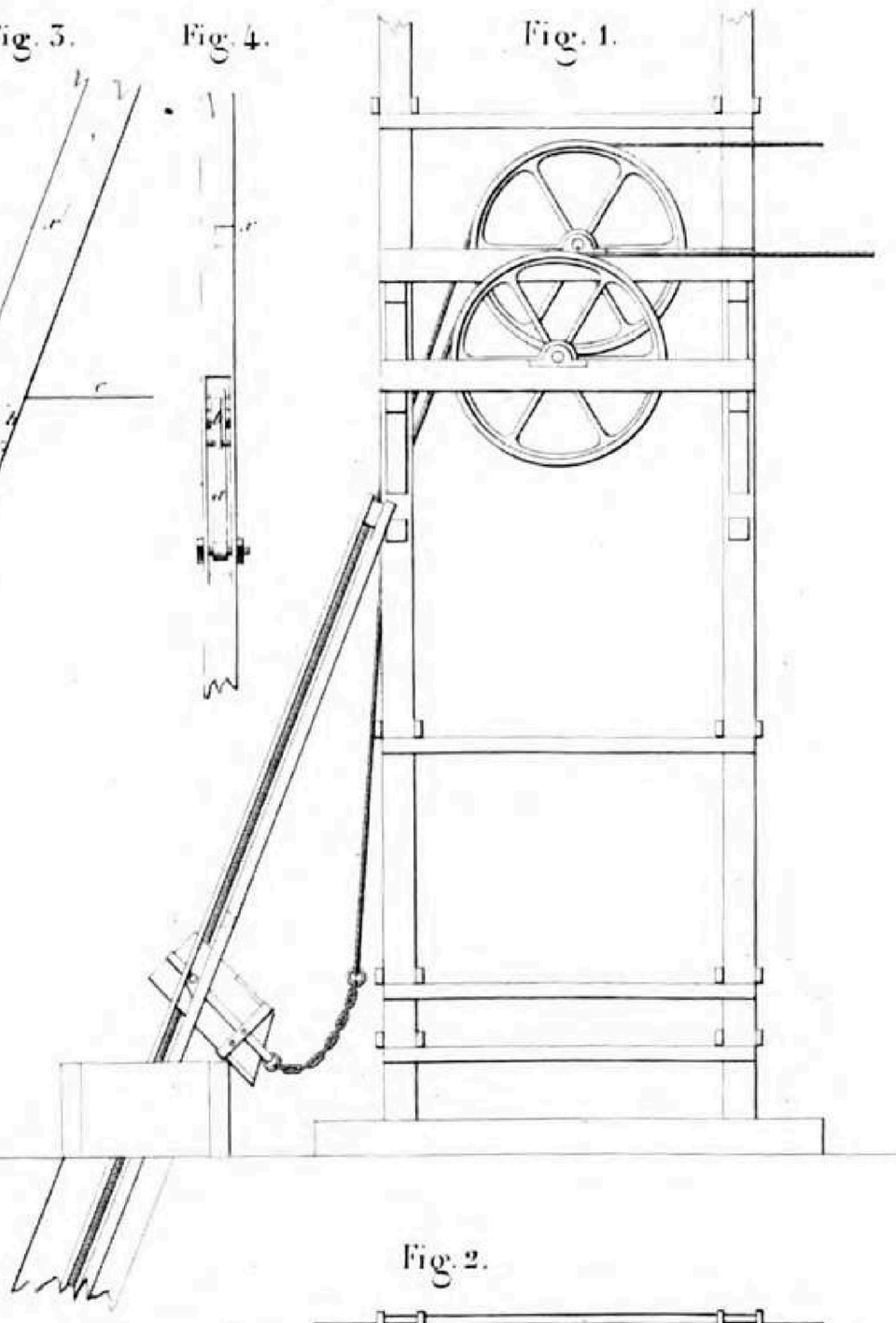
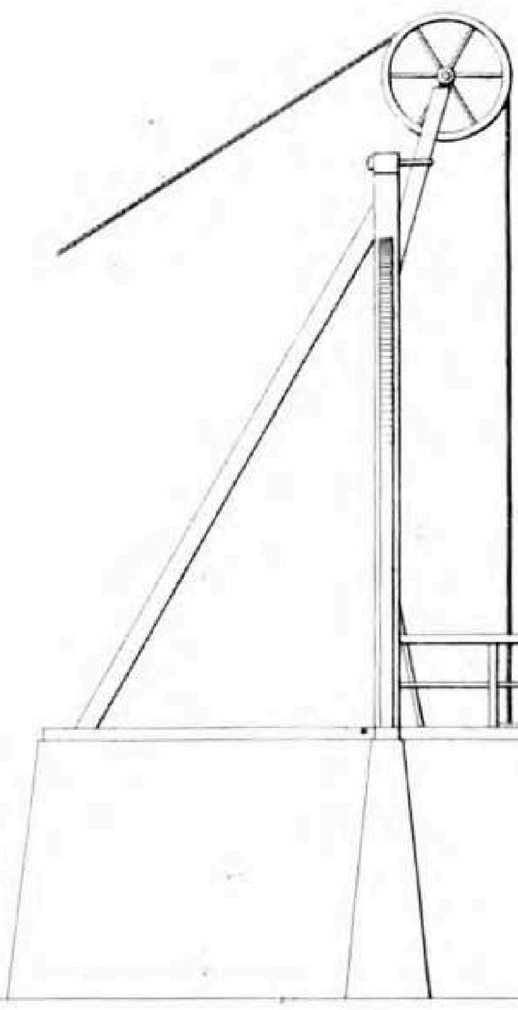


Fig. 5.



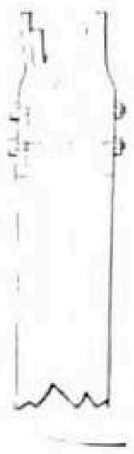
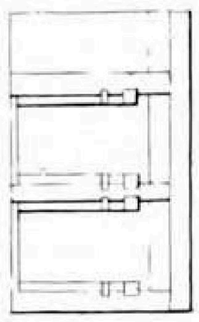


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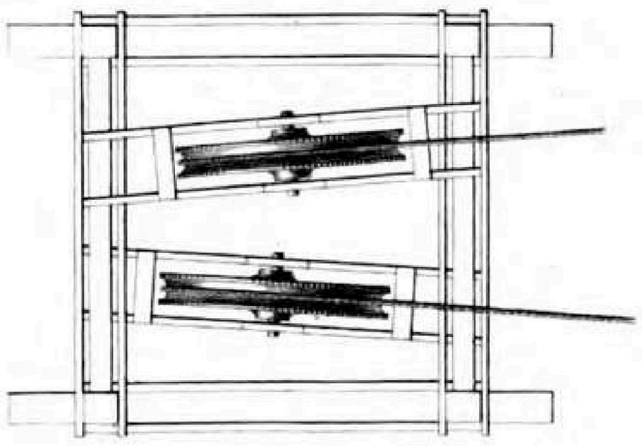


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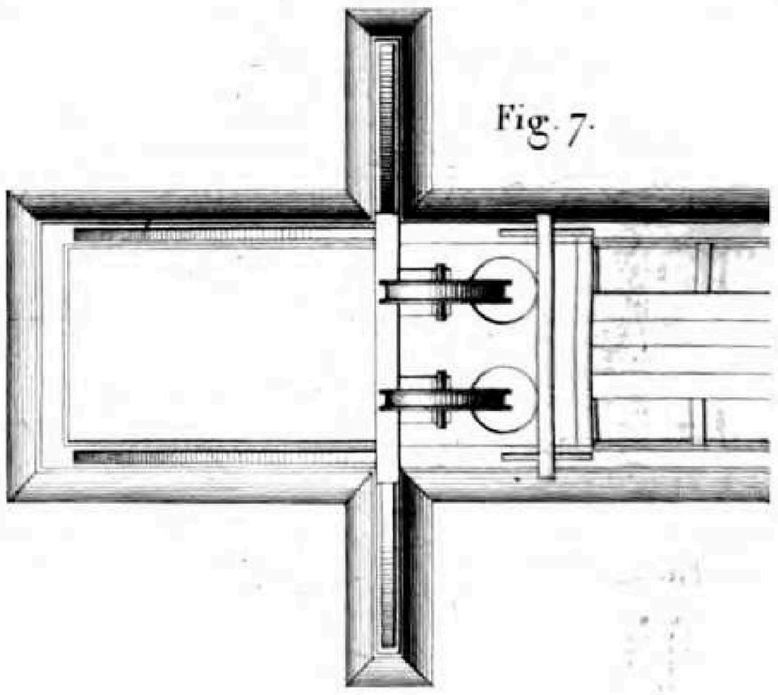


Fig. 17.



Echelle des Fig 1 2, 12, 13 et 14



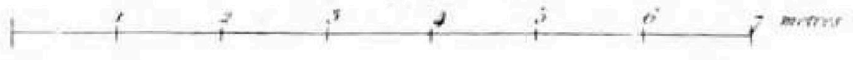
Echelle des Fig. 3, 6 et 7.



Echelle des Fig 3, 4, 8, 15 et 16.



Echelle des Fig 9, 10 et 11



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RIE DES CABLES PLATS ET DES TAMBOURS CONIQUES.

Fig. 8.

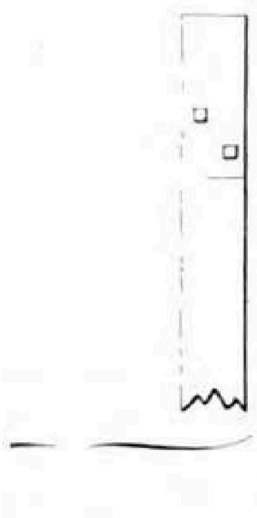


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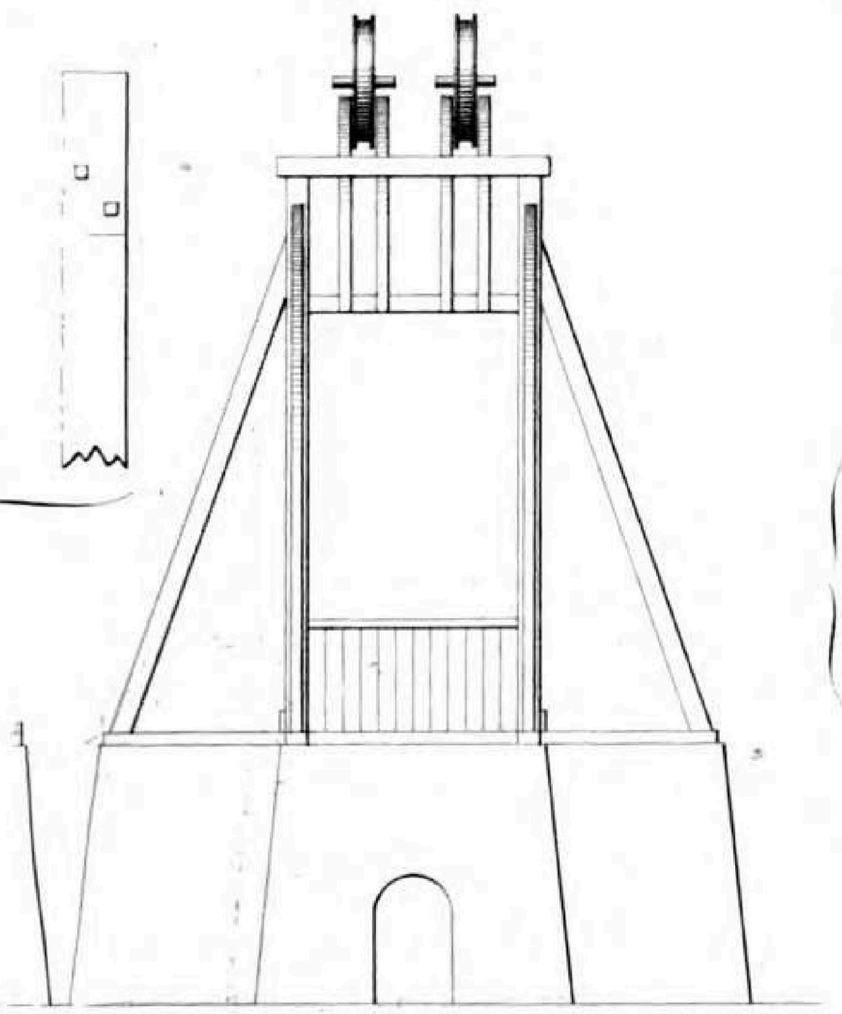


Fig. 13.

Fig. 15.



Fig. 16.

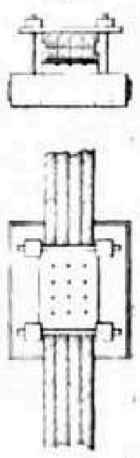


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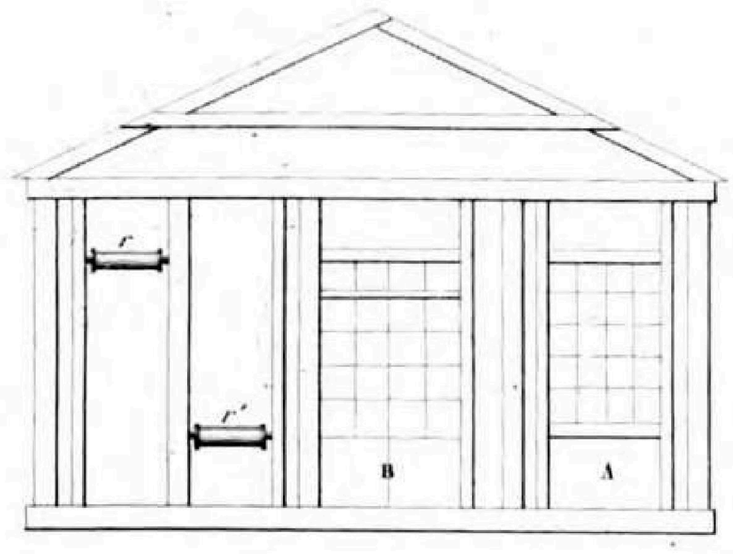


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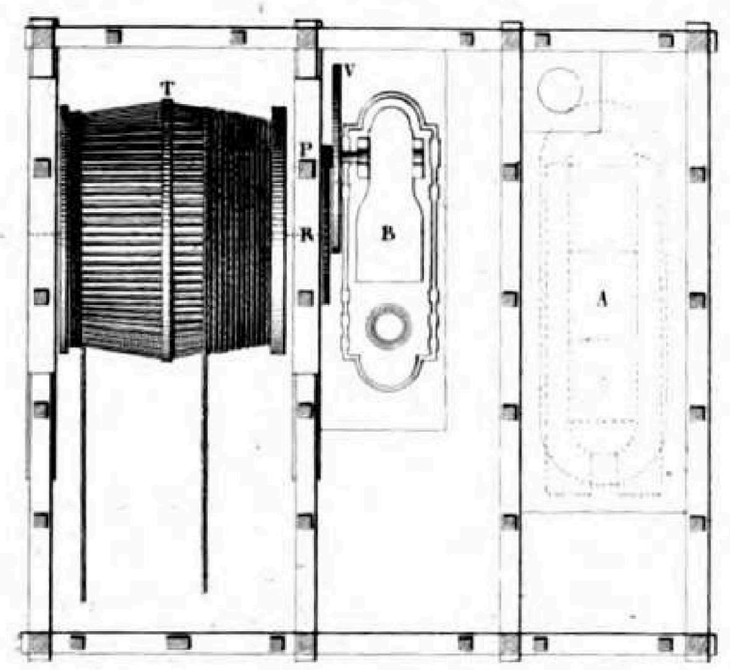


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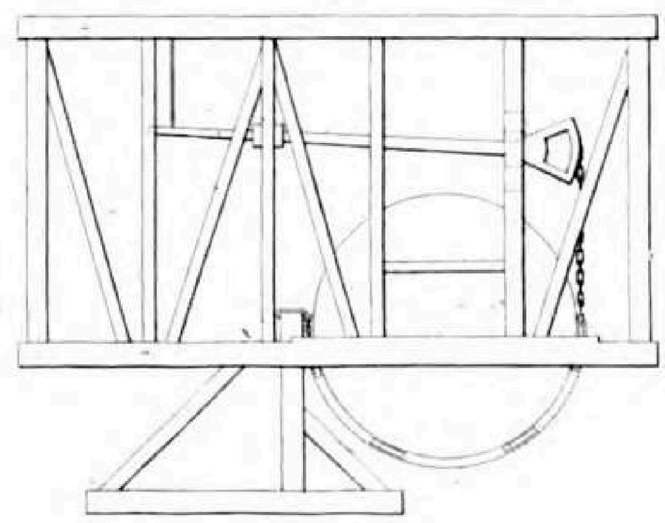


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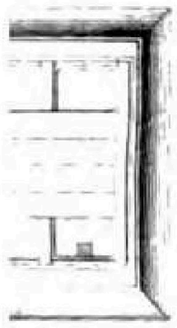
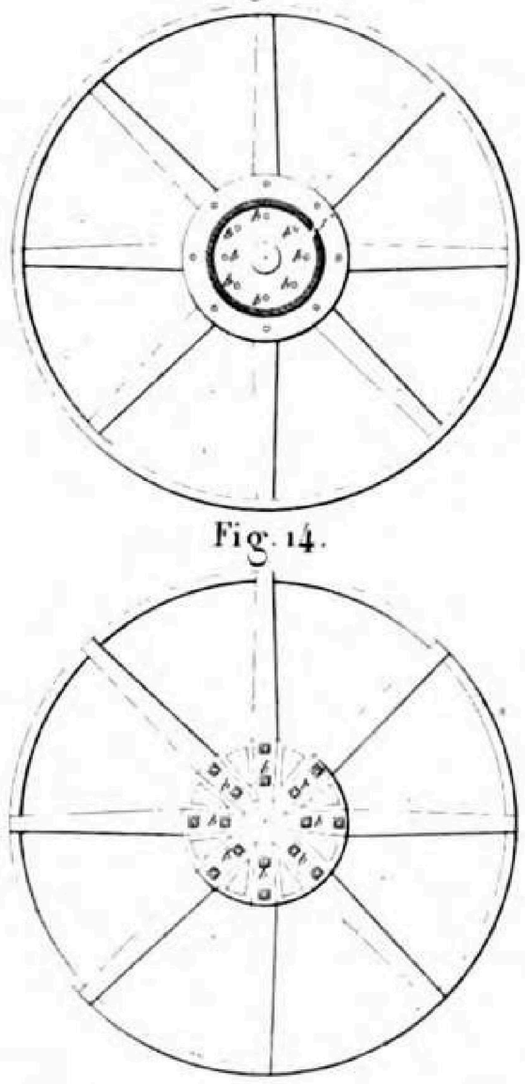




Fig. 14.



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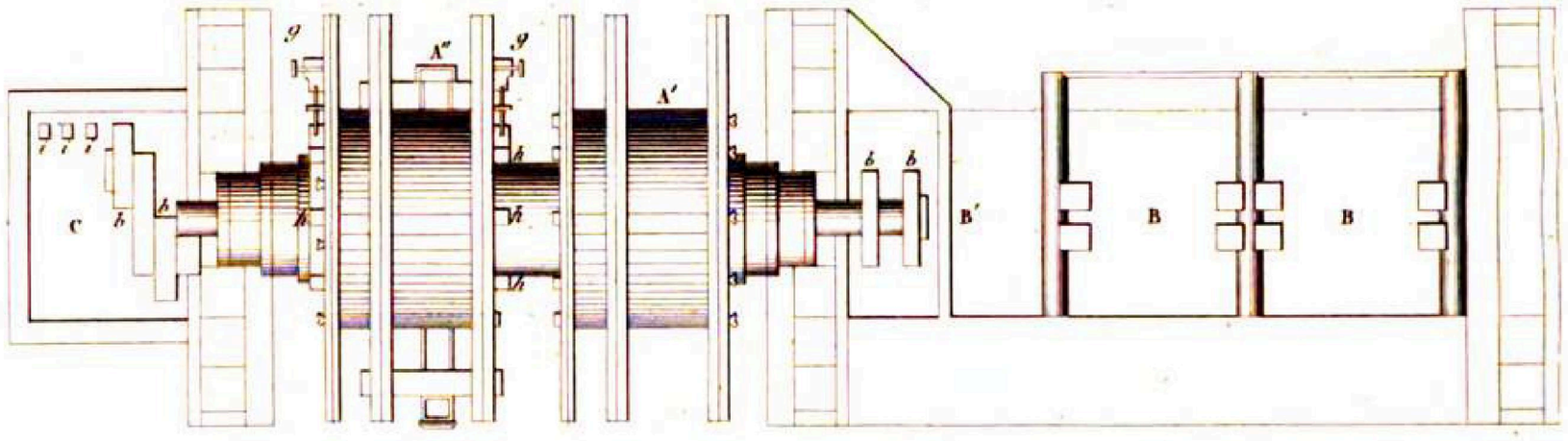
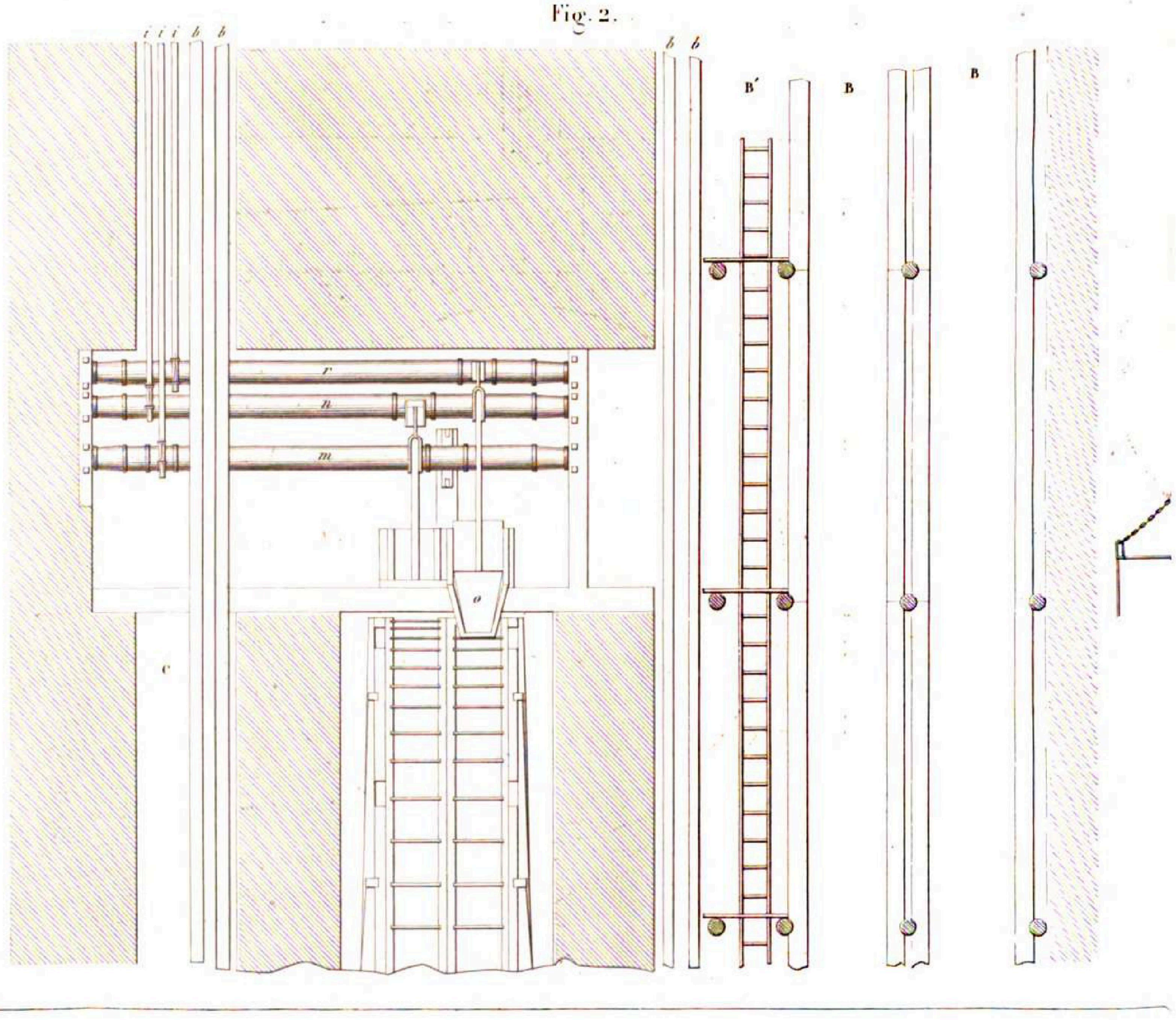


Fig. 2.



COUDRE LES CABLES PLATS.

PL. XXXVIII.

Fig. 4.

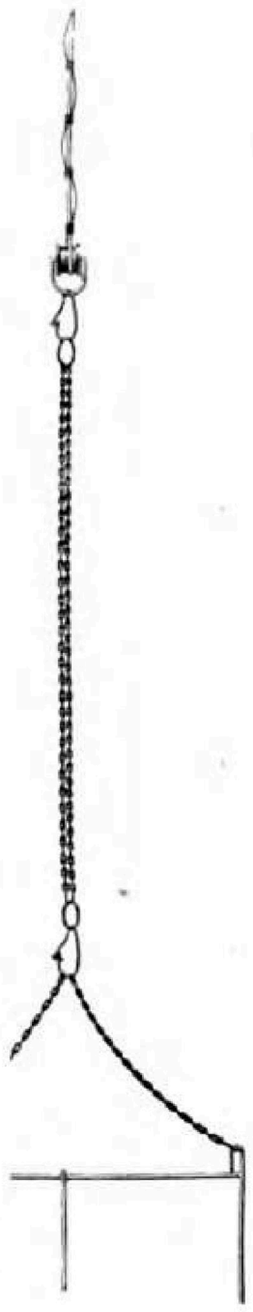


Fig. 5.

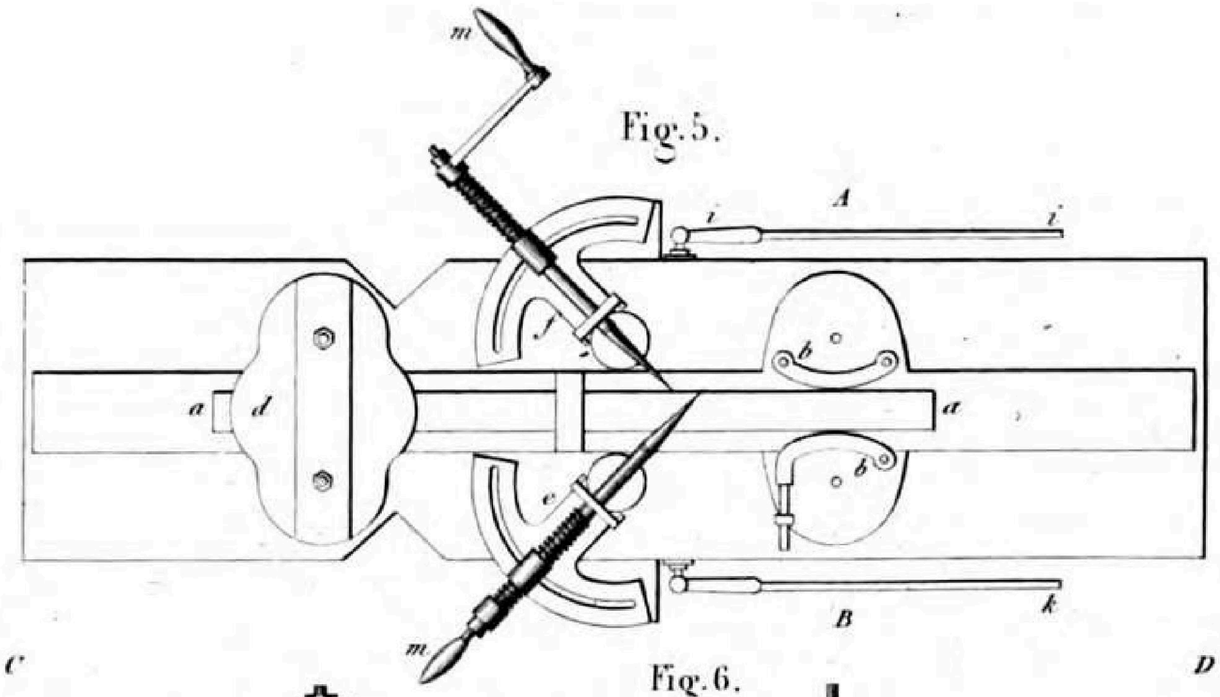


Fig. 6.

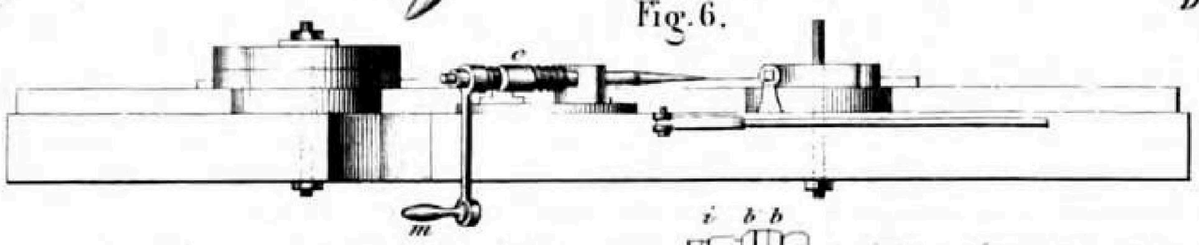


Fig. 7.

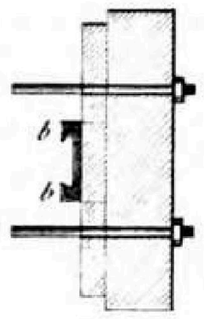
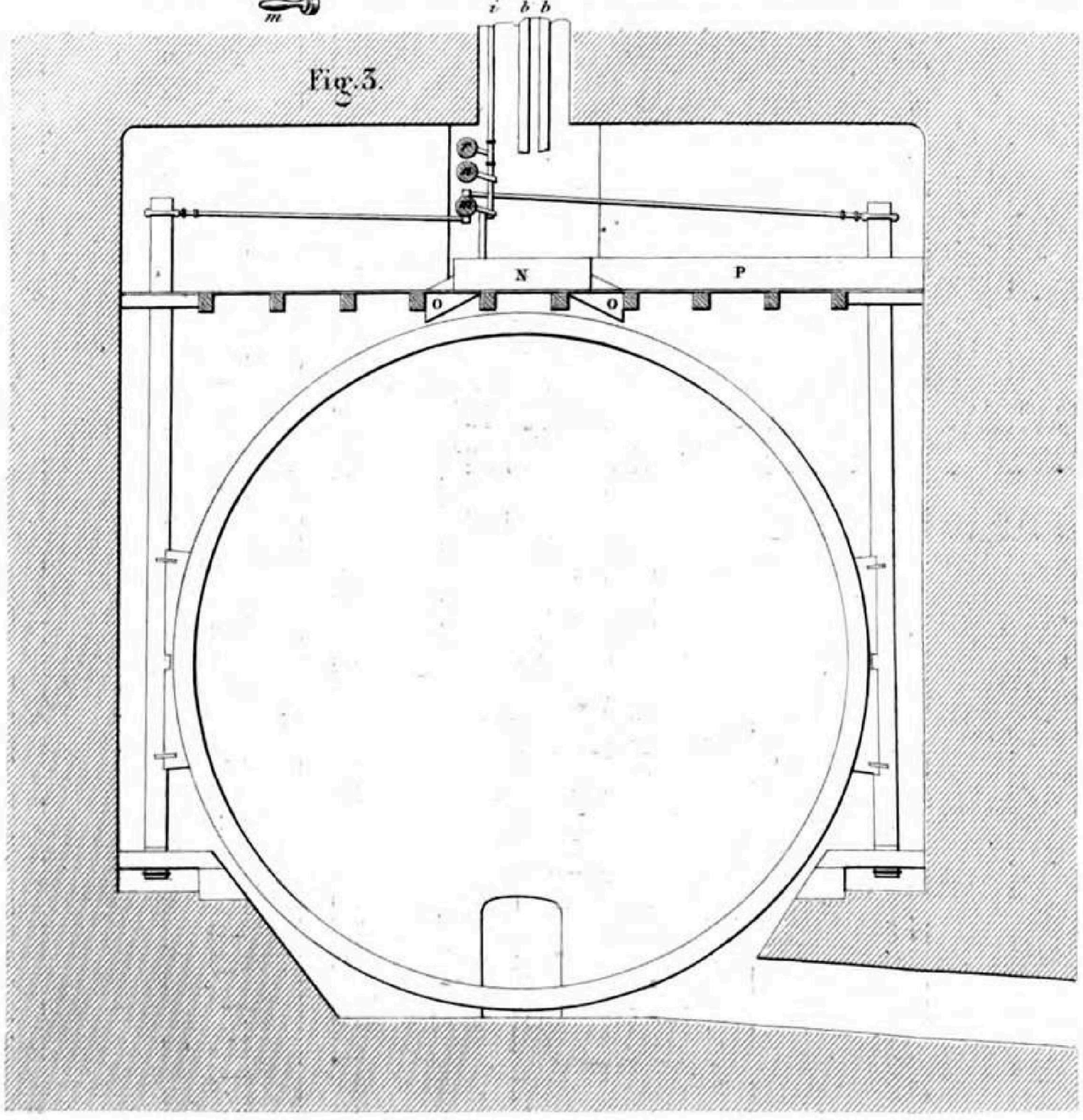


Fig. 3.



Lemaître sc

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MACHINE A VAPEUR POUR L'EXTR

Fig. 1.

Coupe et projection verticale suivant AB de Fig. 2.

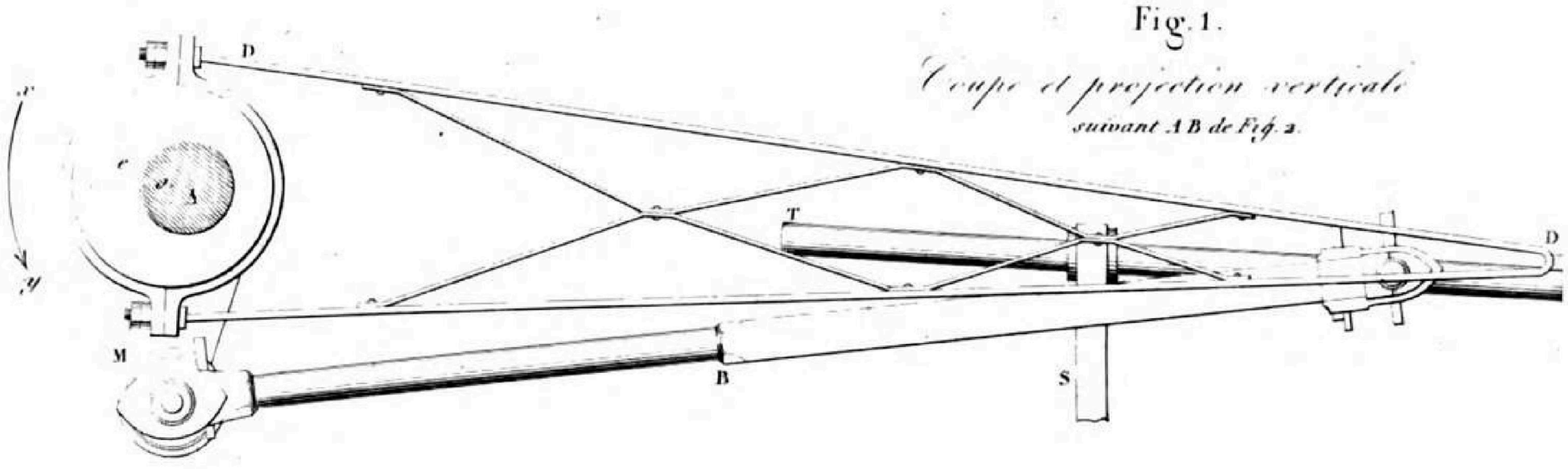


Fig. 2.

Projection horizontale.

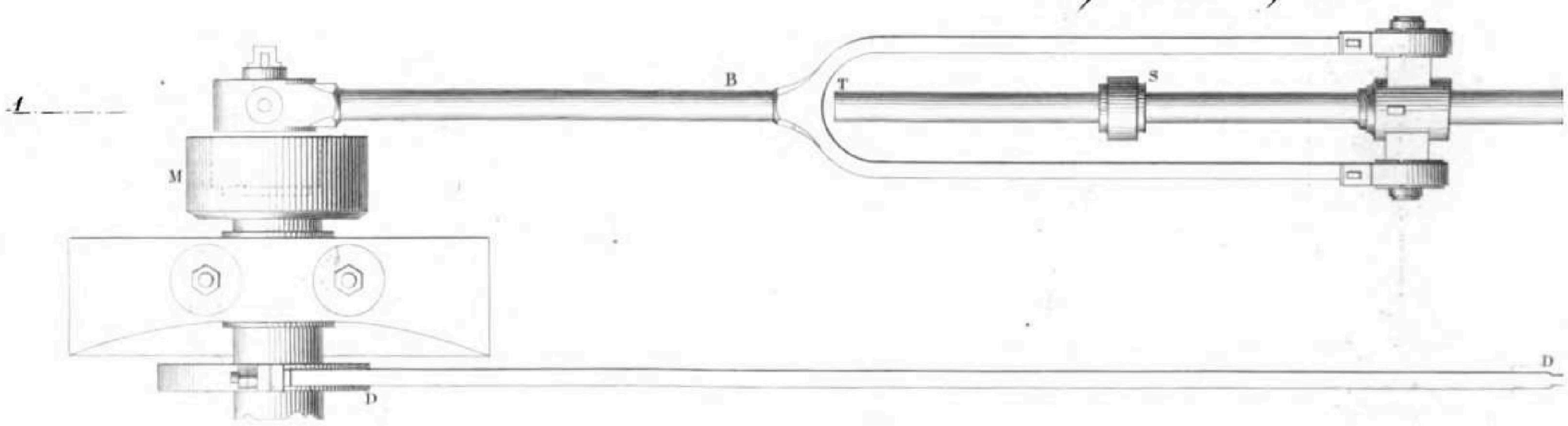
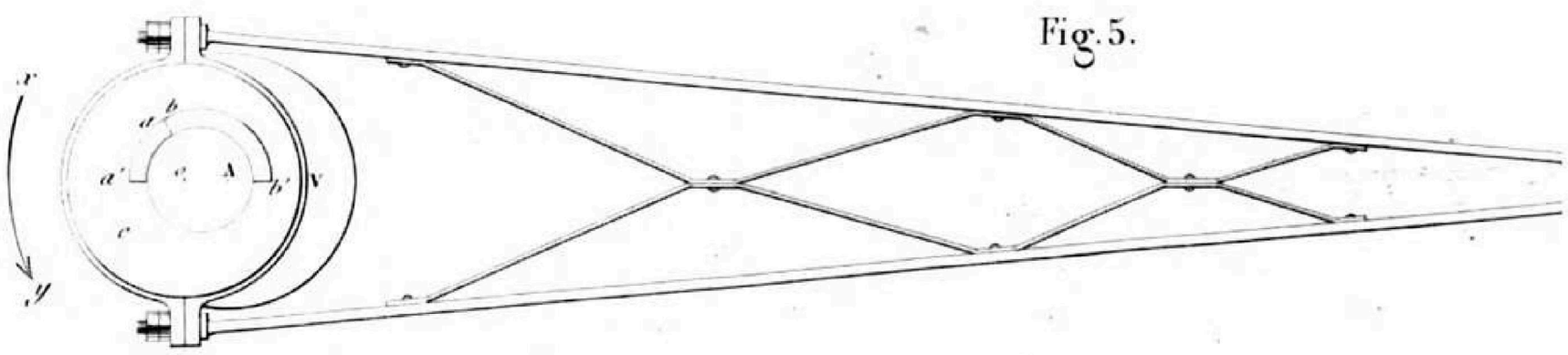


Fig. 5.





10226132

TION A CYLINDRE HORIZONTAL.

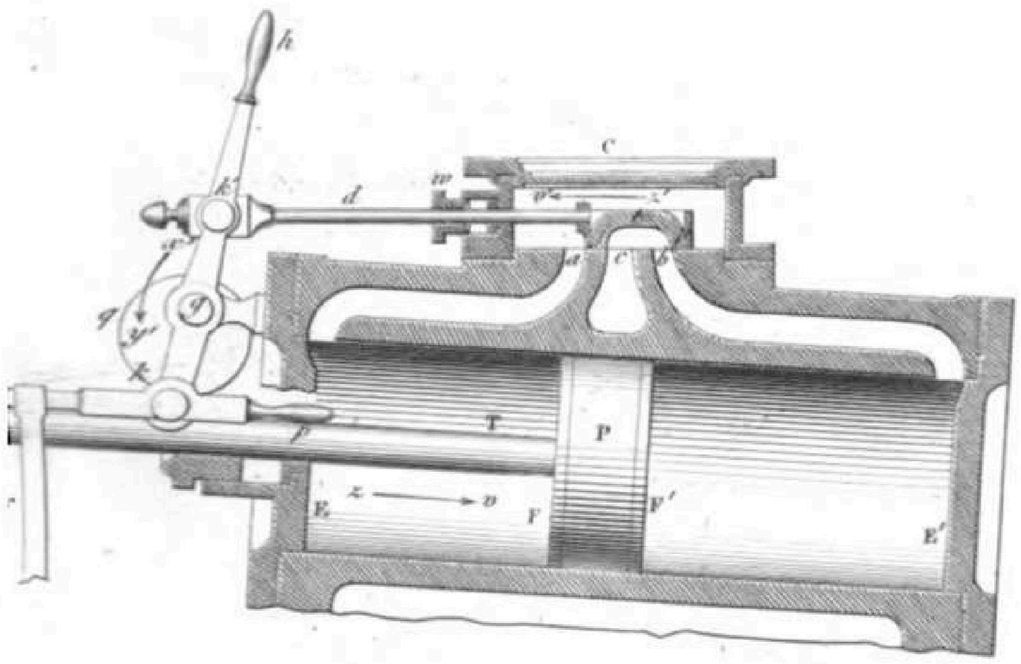
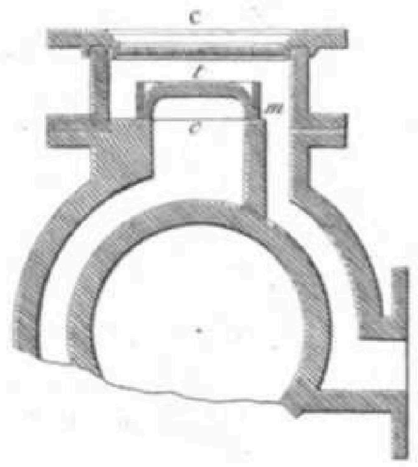


Fig. 3.

Coupe verticale
suivant CD de Fig 2.



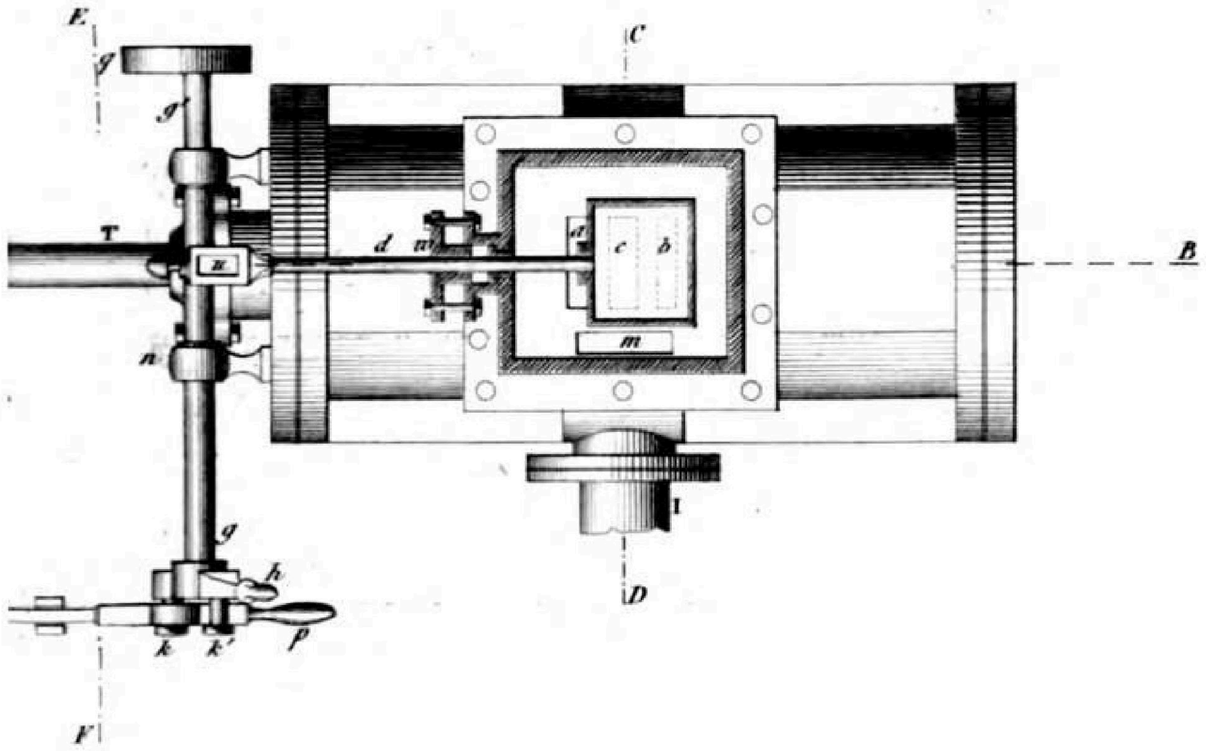
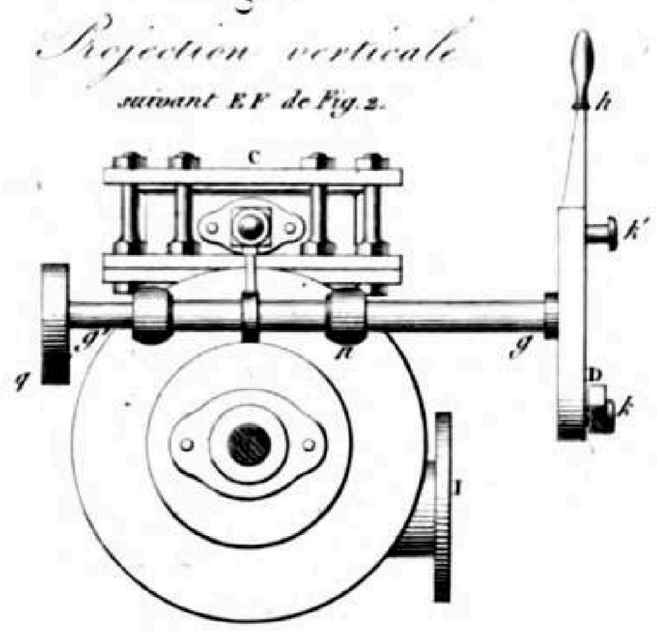


Fig. 4.

Projection verticale
suivant EF de Fig 2.



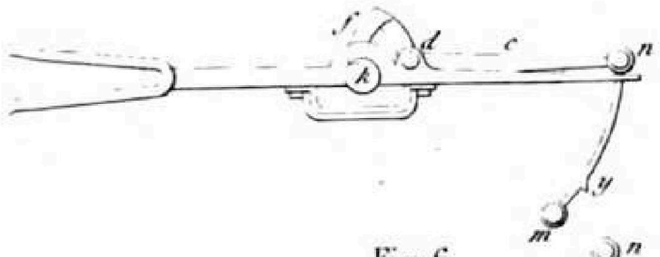


Fig. 6.

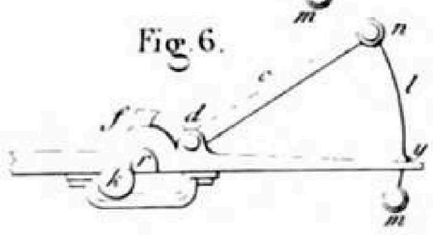


Fig. 7.

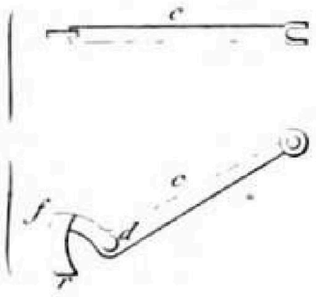
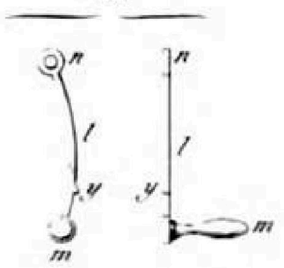


Fig. 8.



Lemaitre sc

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MARCHE DU TIROIR DE DISTRIBUTION DANS LES MACHINE

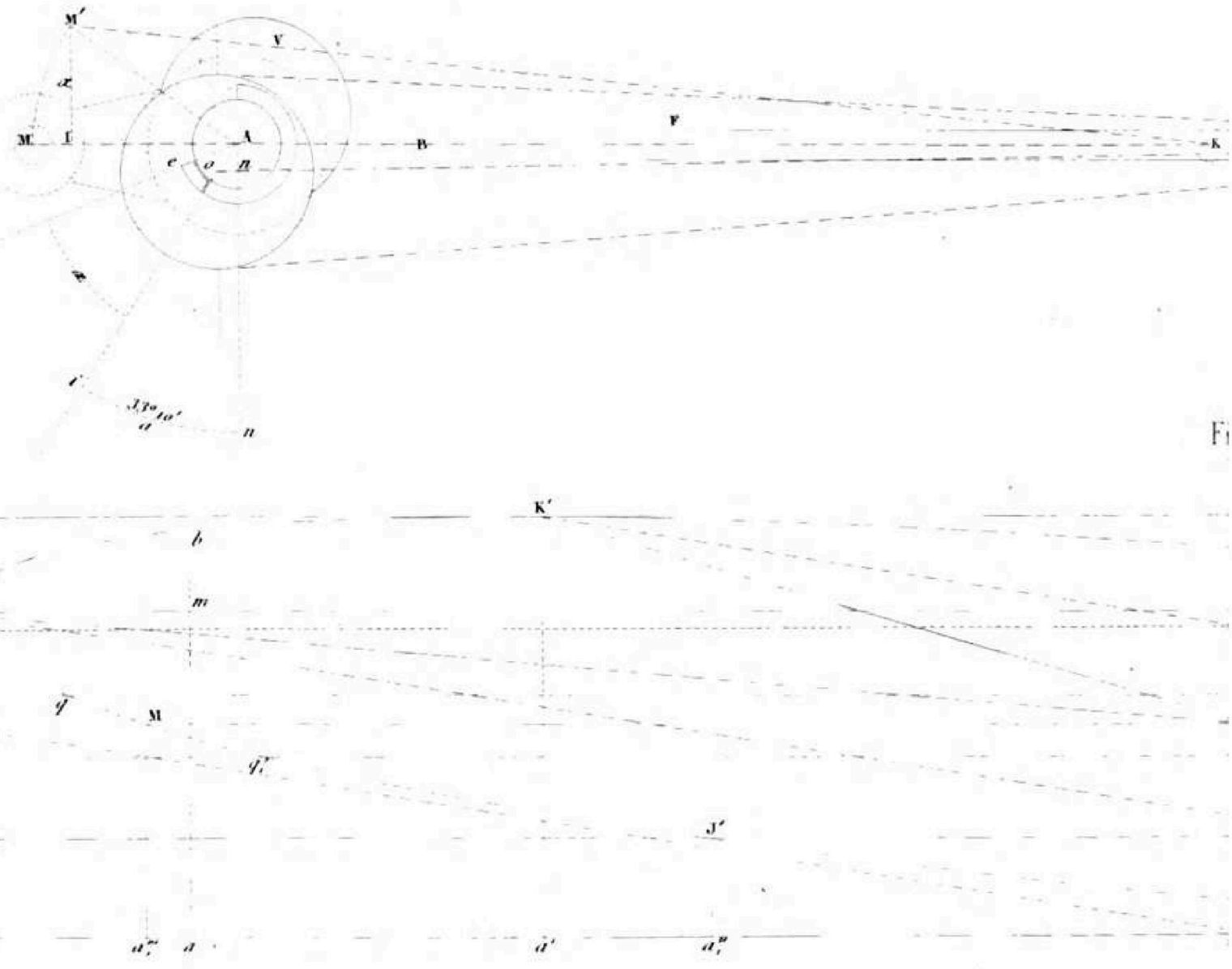
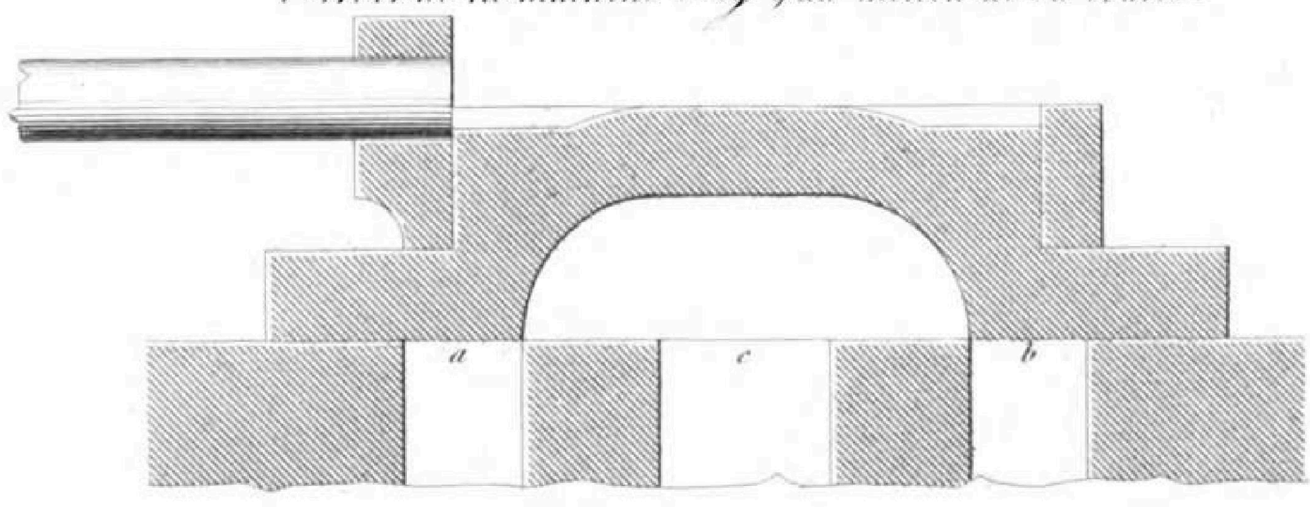


Fig. 11.

Tiroir de la machine Fig 9 au milieu de sa course.

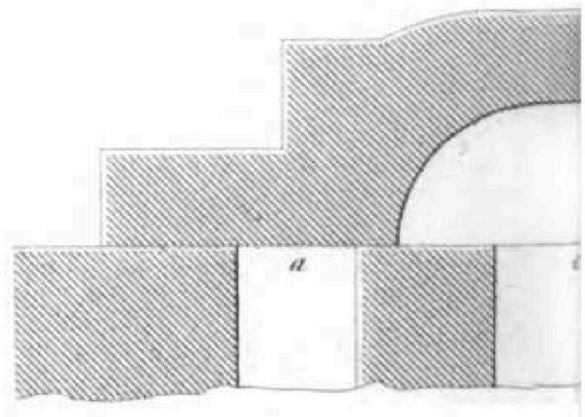


Echelle de la Fig. 9.

1 mètre.

Fig

Tiroir avec recou



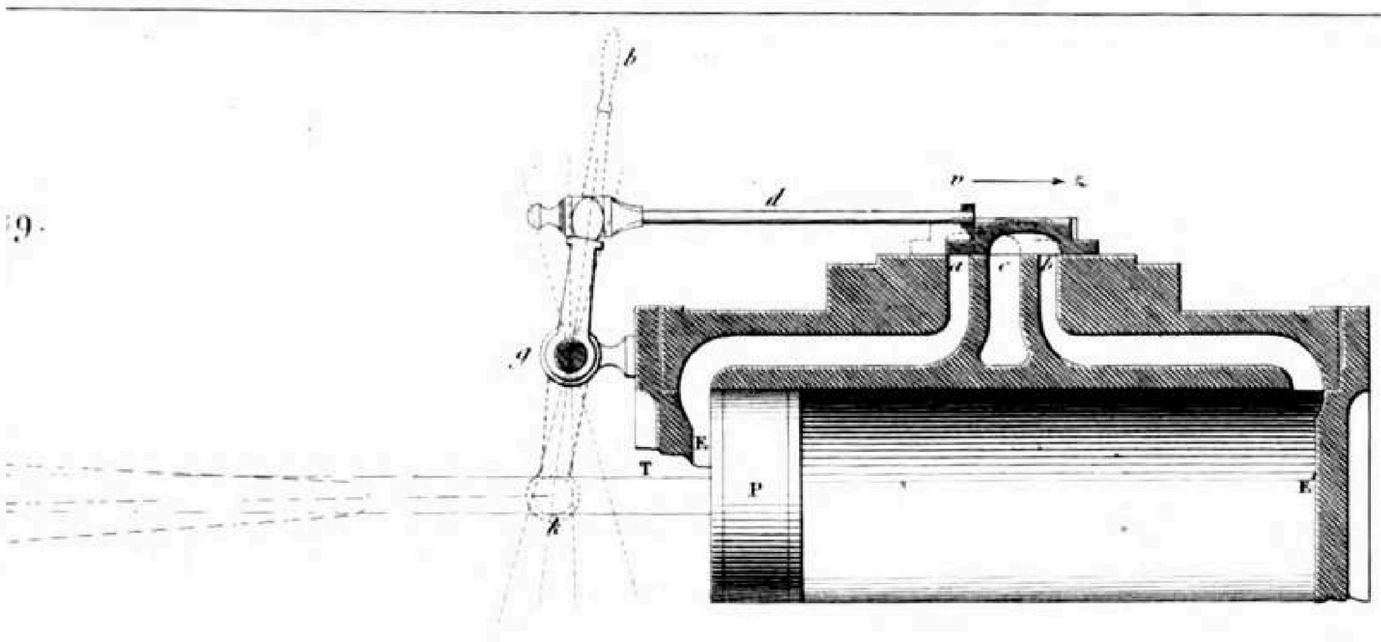
Echelle des

1 2 3 4 5

10226132

A VAPEUR, EFFETS DE L'AVANCE ET DU RECOUVREMENT.

9.



10.

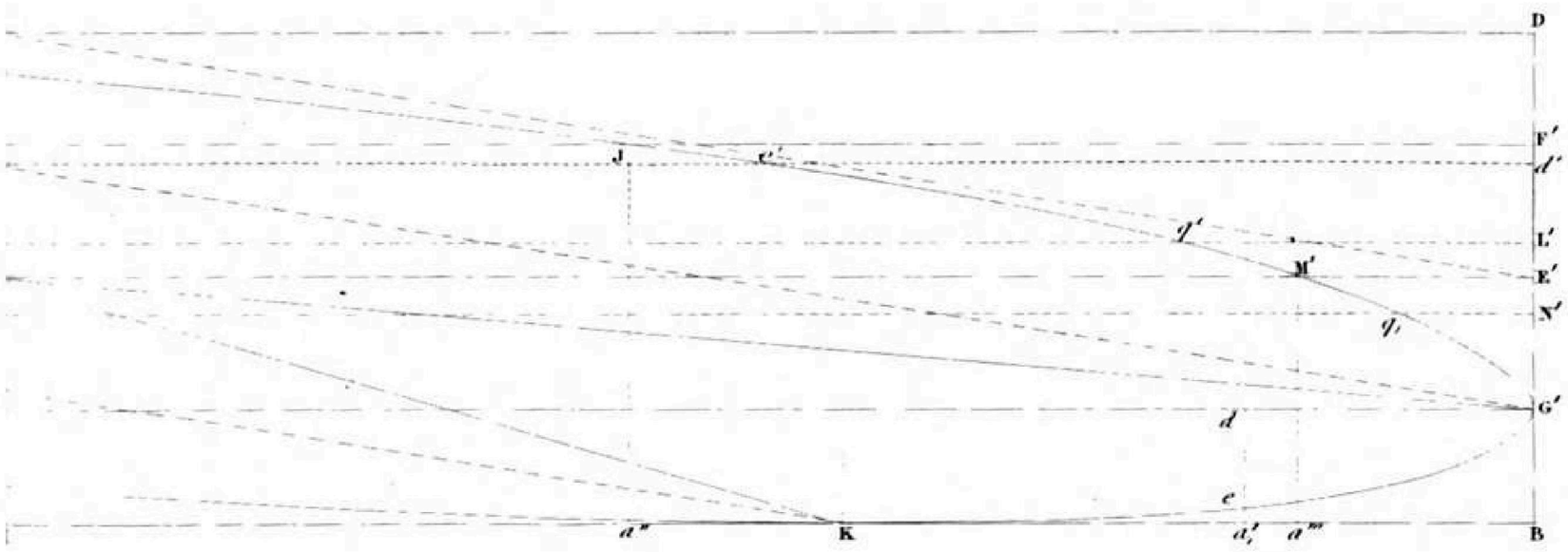
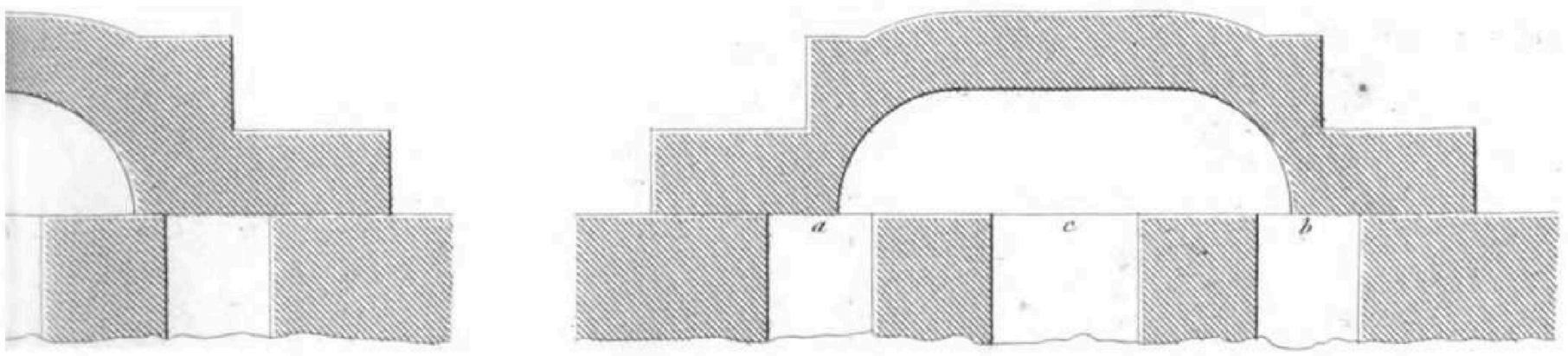


Fig. 13.

2.

vement intérieur.

Tiroir avec decouvert intérieur.



10 à 12.

15 *20 centimètres.*

Lemaitre sc.

Fig. 1.

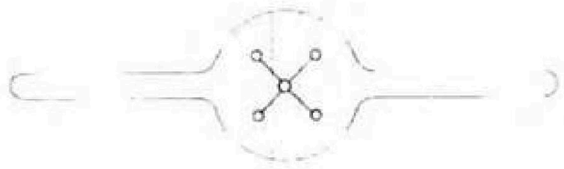


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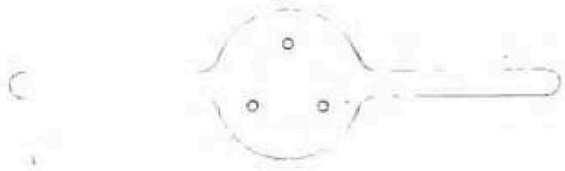


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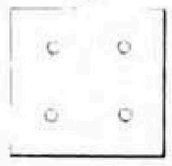


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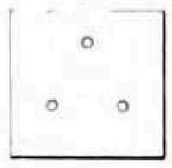


Fig. 5.



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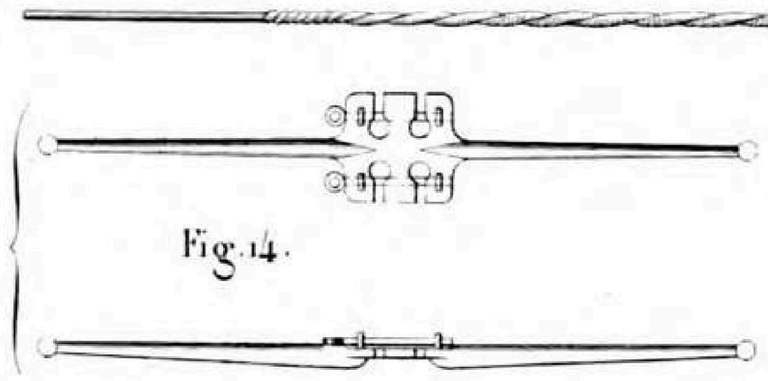


Fig. 14.

Fig. 7.

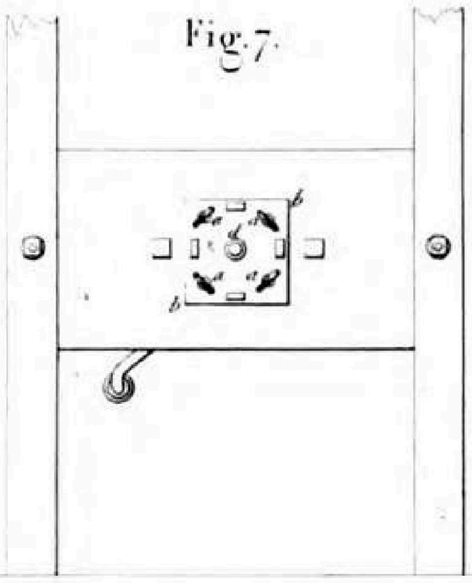


Fig. 8.

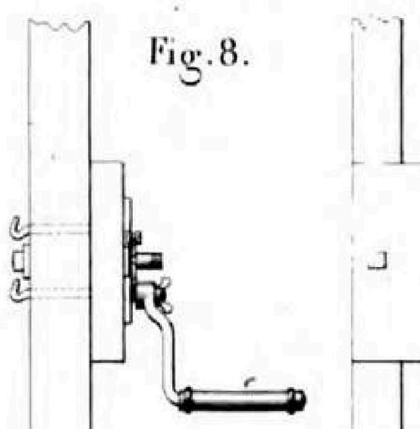


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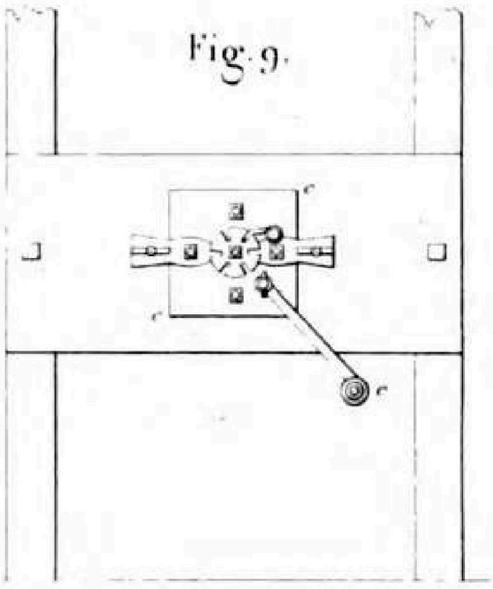


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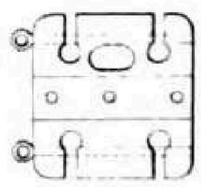


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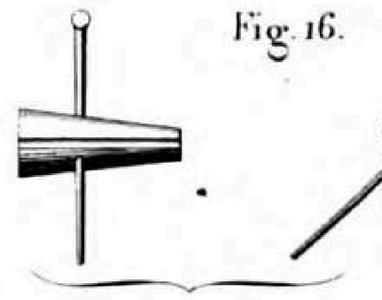
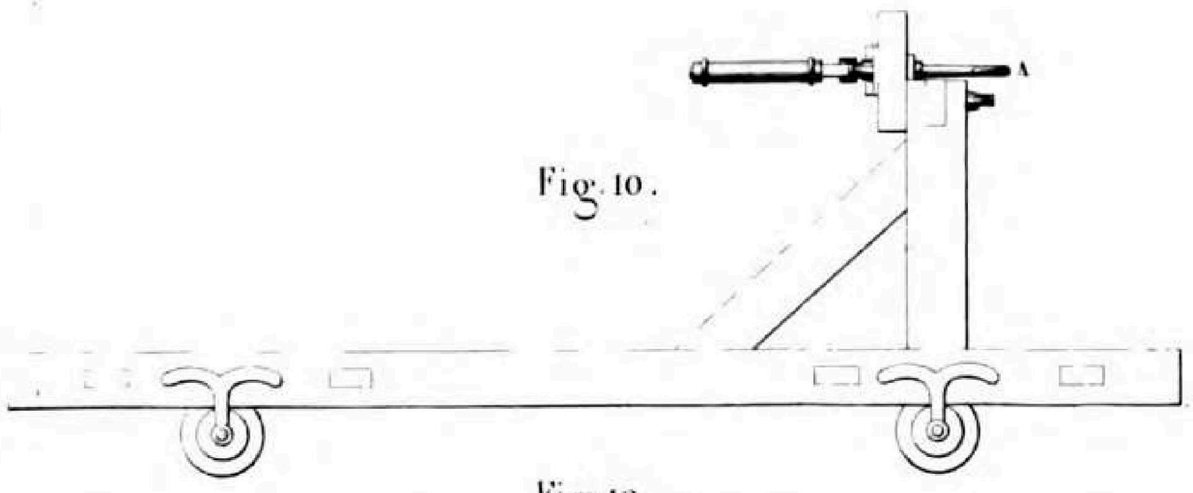


Fig. 11.

Fig. 10.



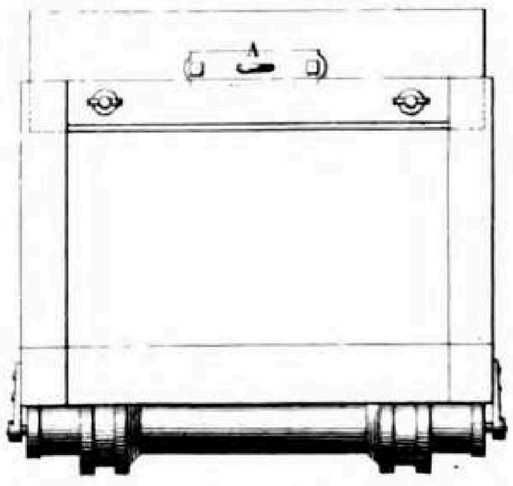


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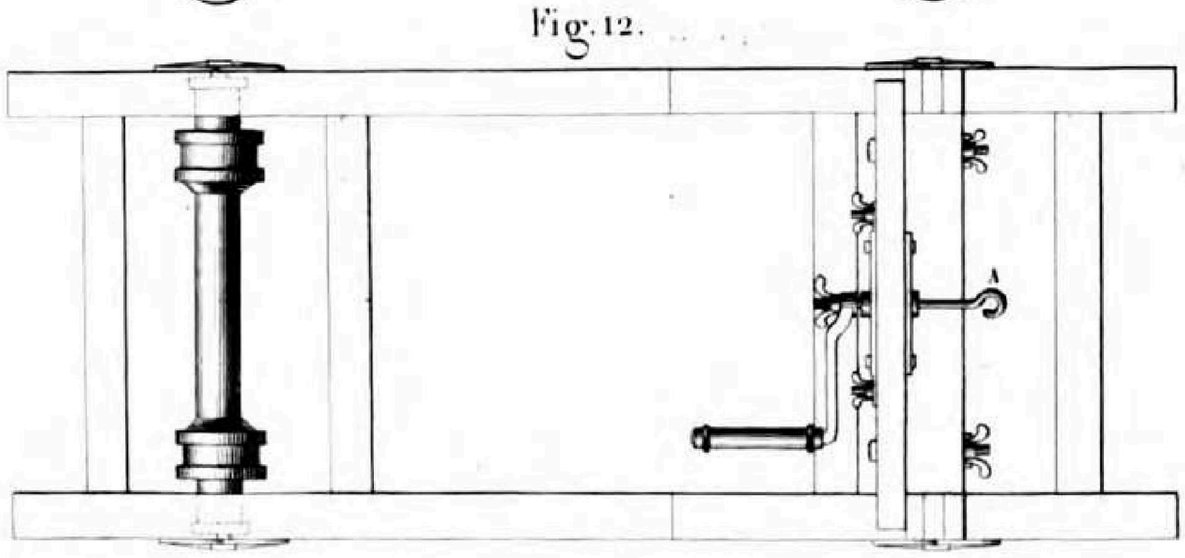
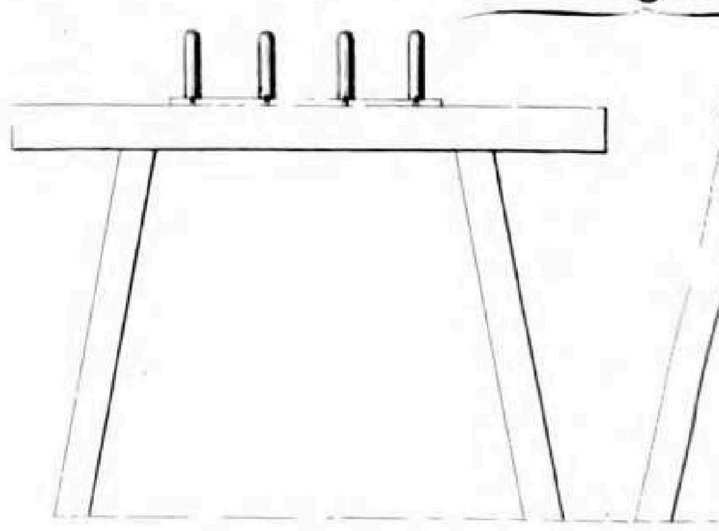


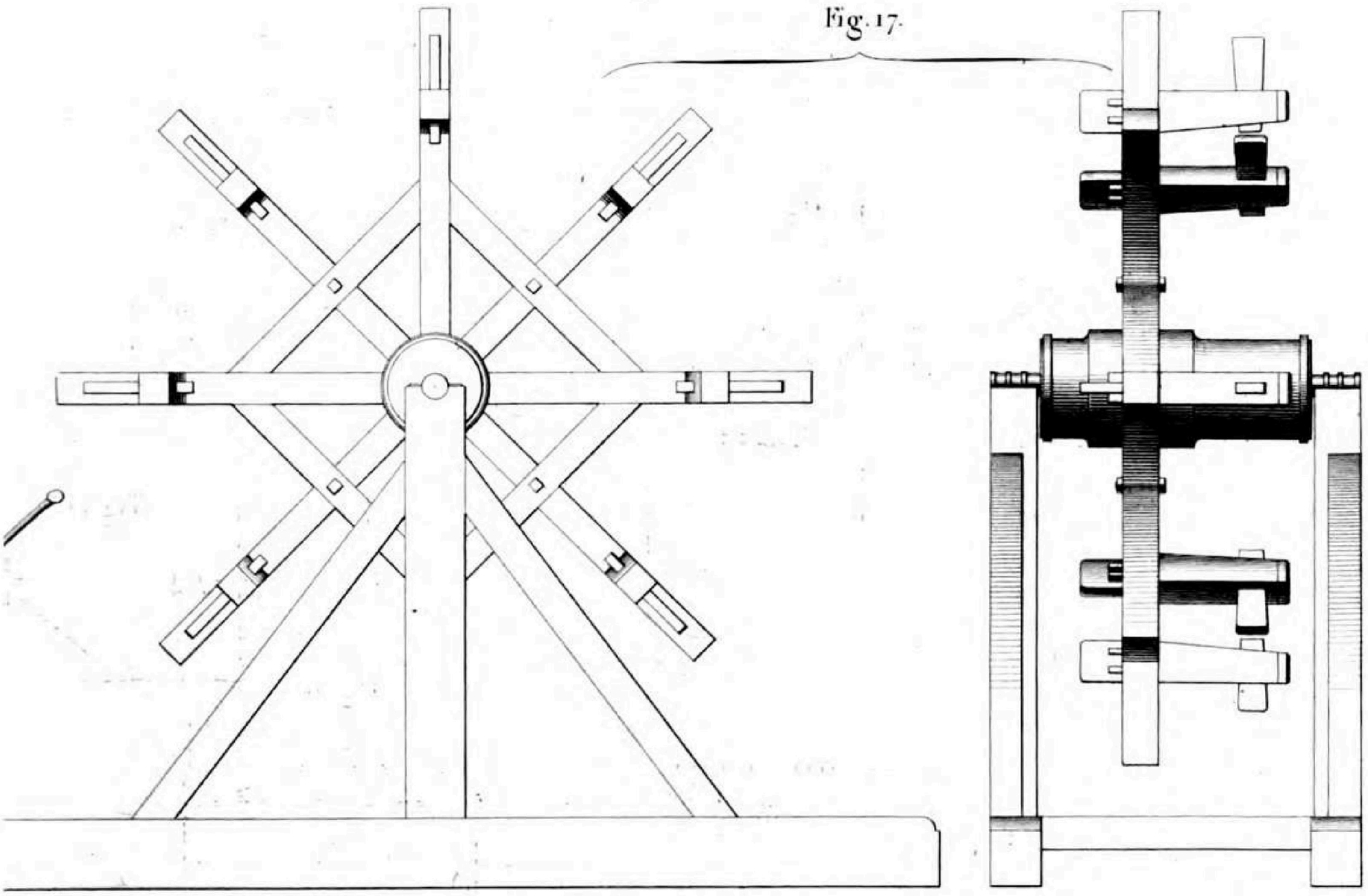
Fig. 13.



FIL DE FER A FREYBERG.

PL. XLI.

Fig. 17.



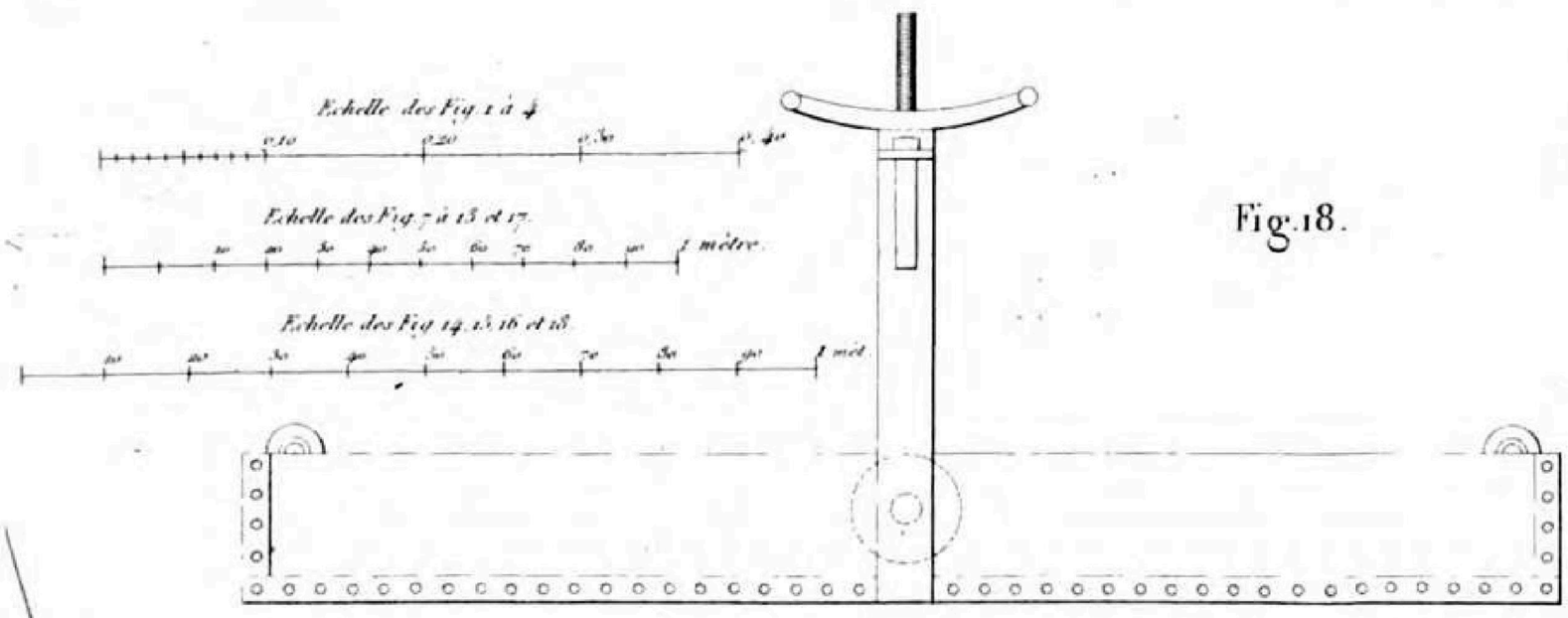
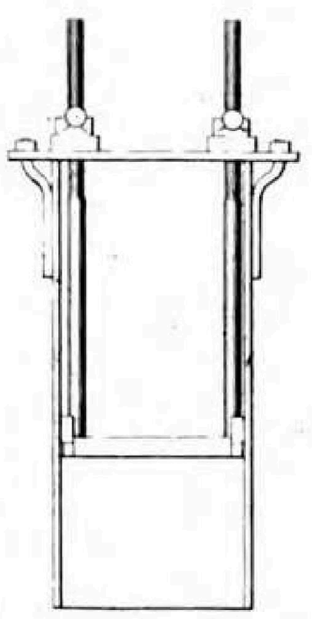


Fig. 18.



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Fig. 2.

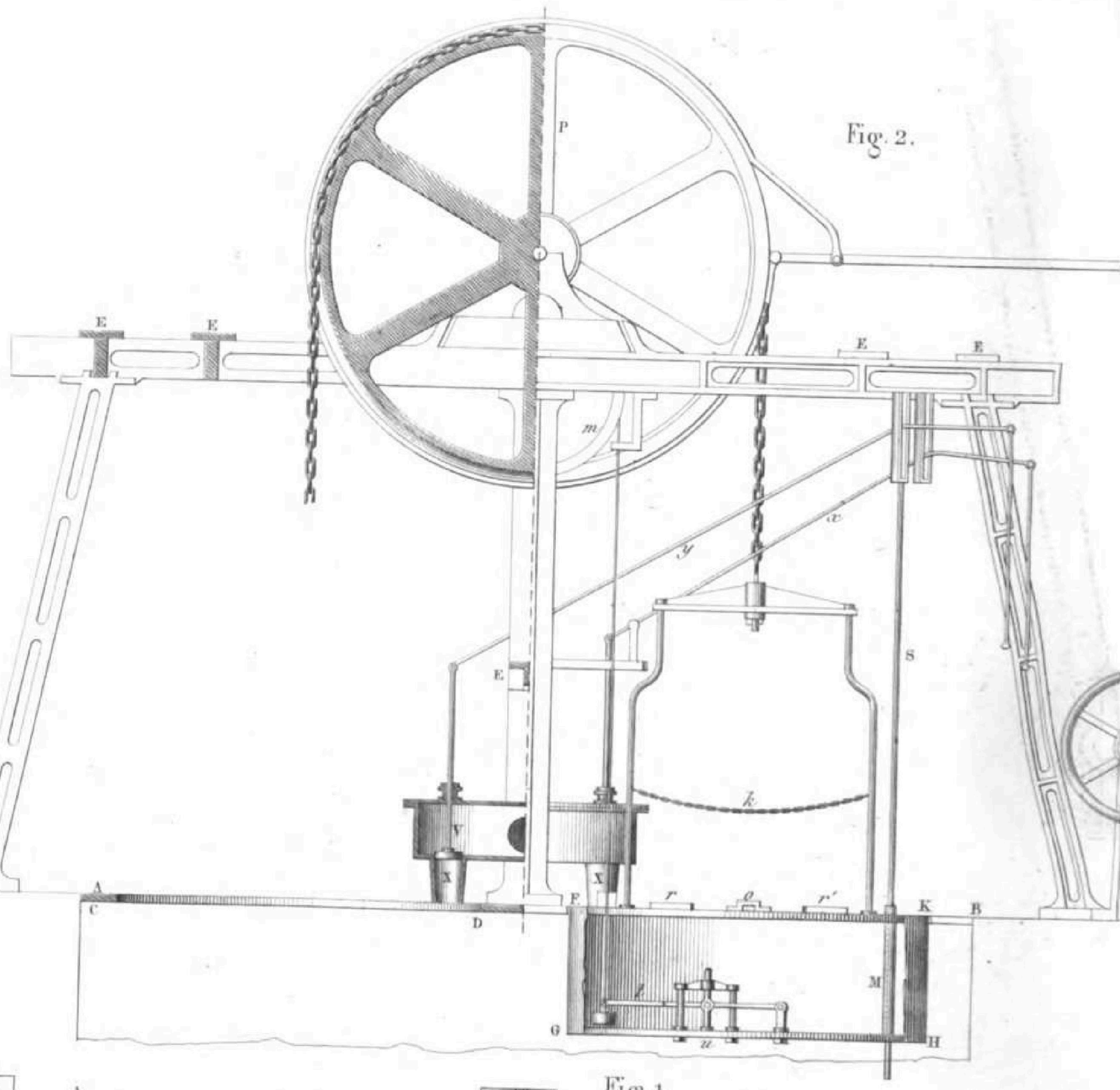
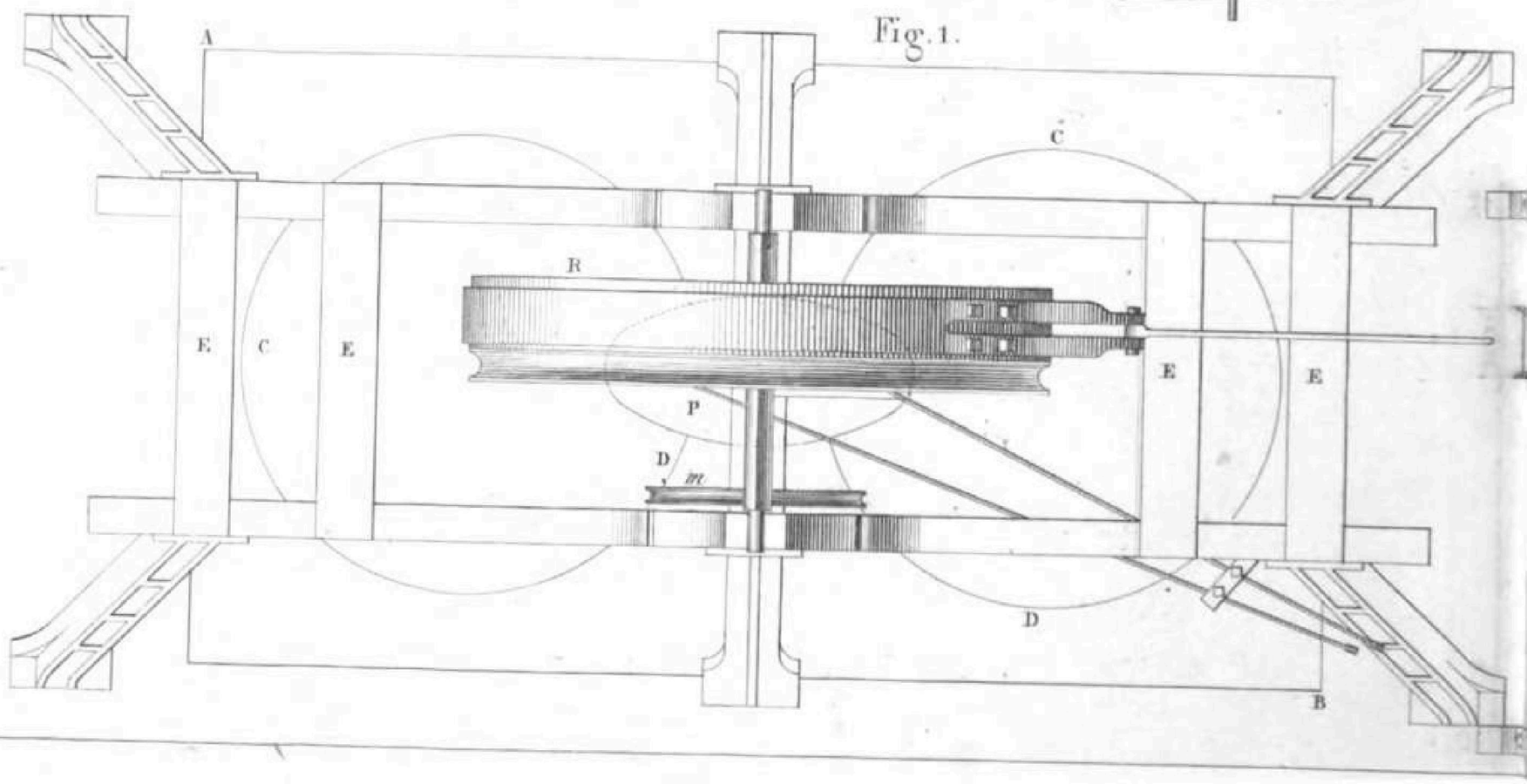


Fig. 1.



D' EAU.

PL. XLII.

Fig. 3.

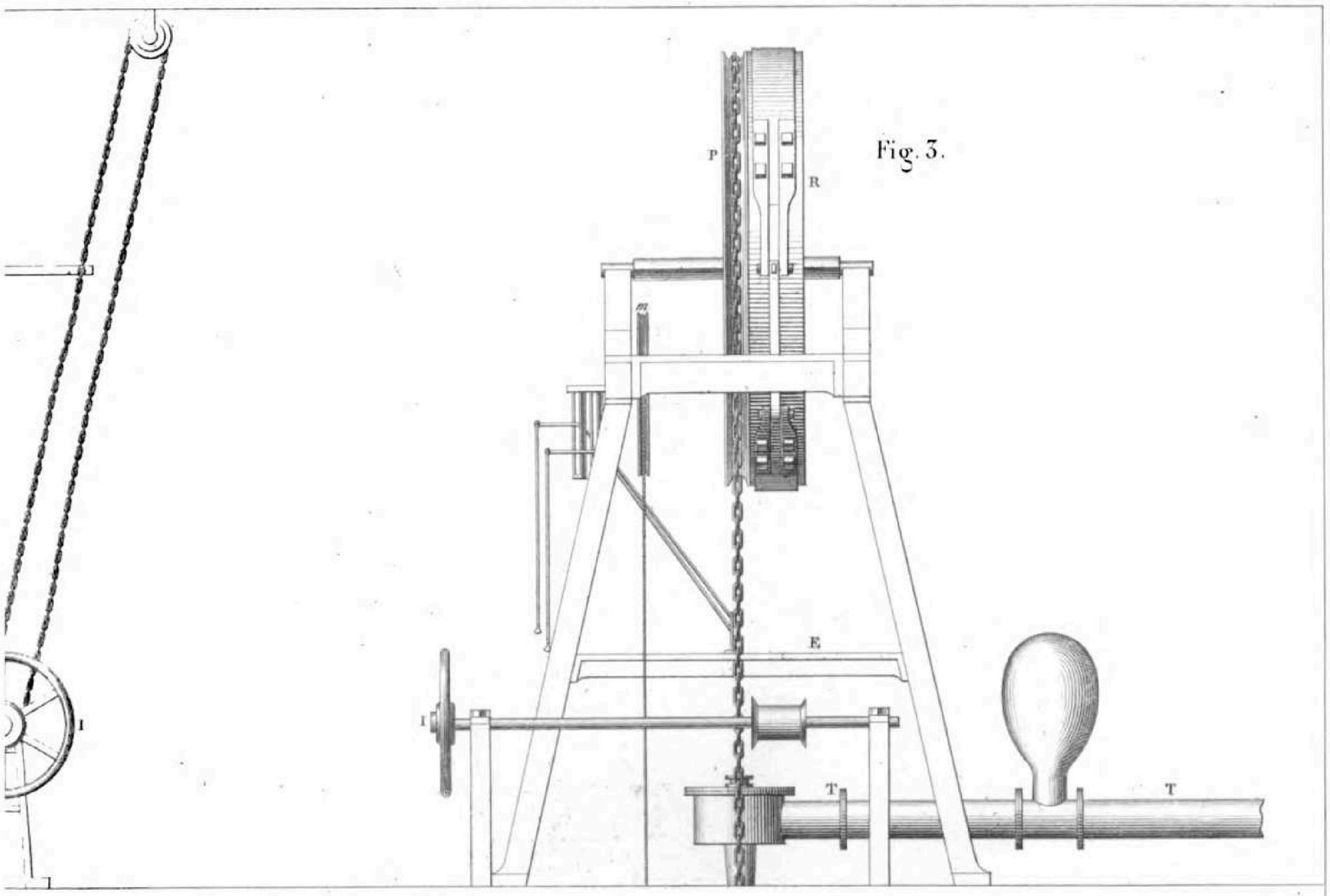


Fig. 4.

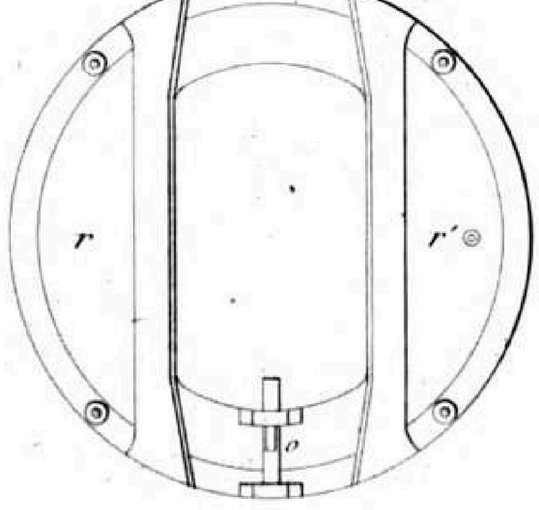
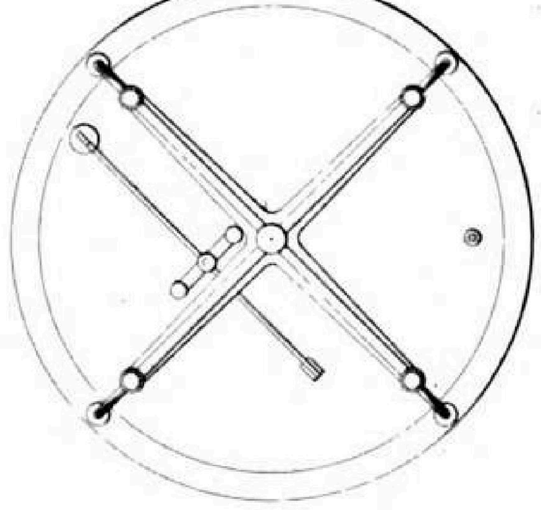


Fig. 5.





Lemaitre sc.

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PLAN INCLINÉ AVE

Fig. 1.

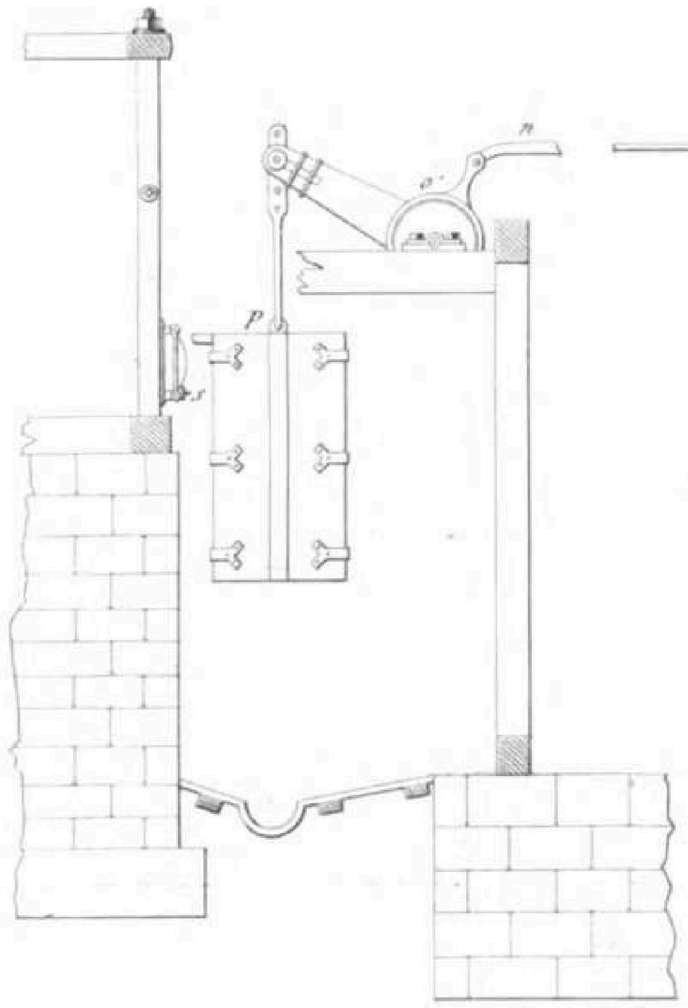
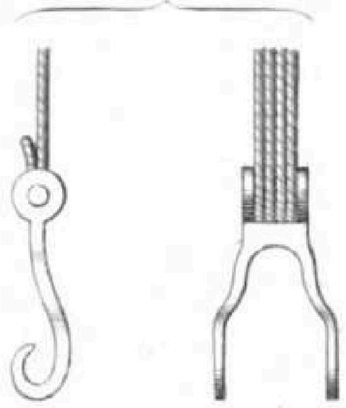


Fig. 3.



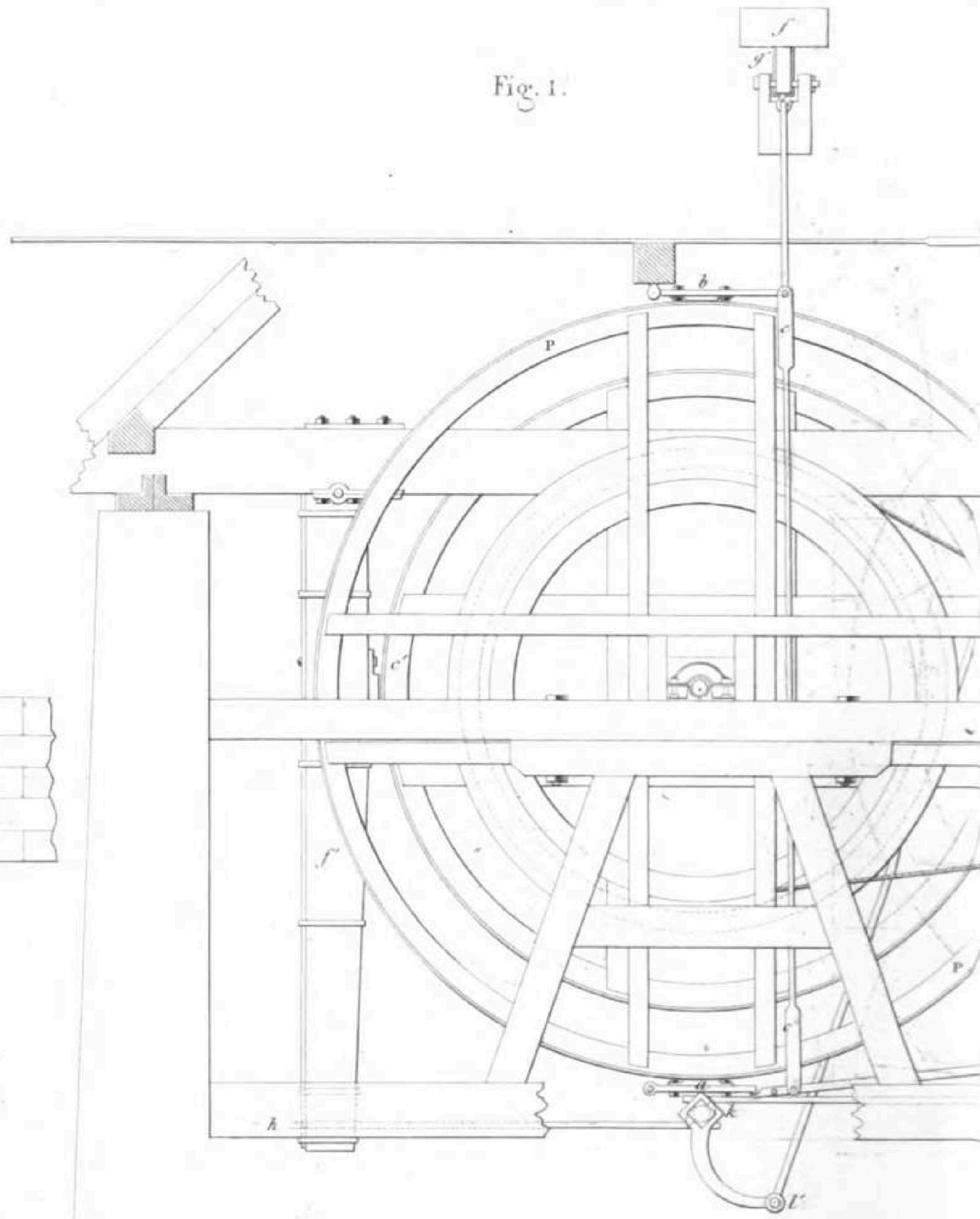
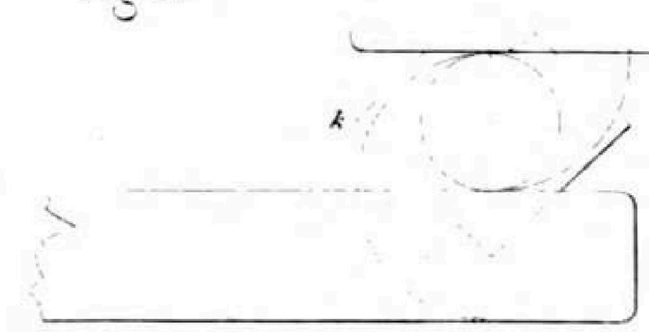


Fig. 2.



Echelle de la Fig. 1.

1 2 3 4 5 mètres

Echelle de la Fig. 2.

10 20 30 40 0 30 centimèt.

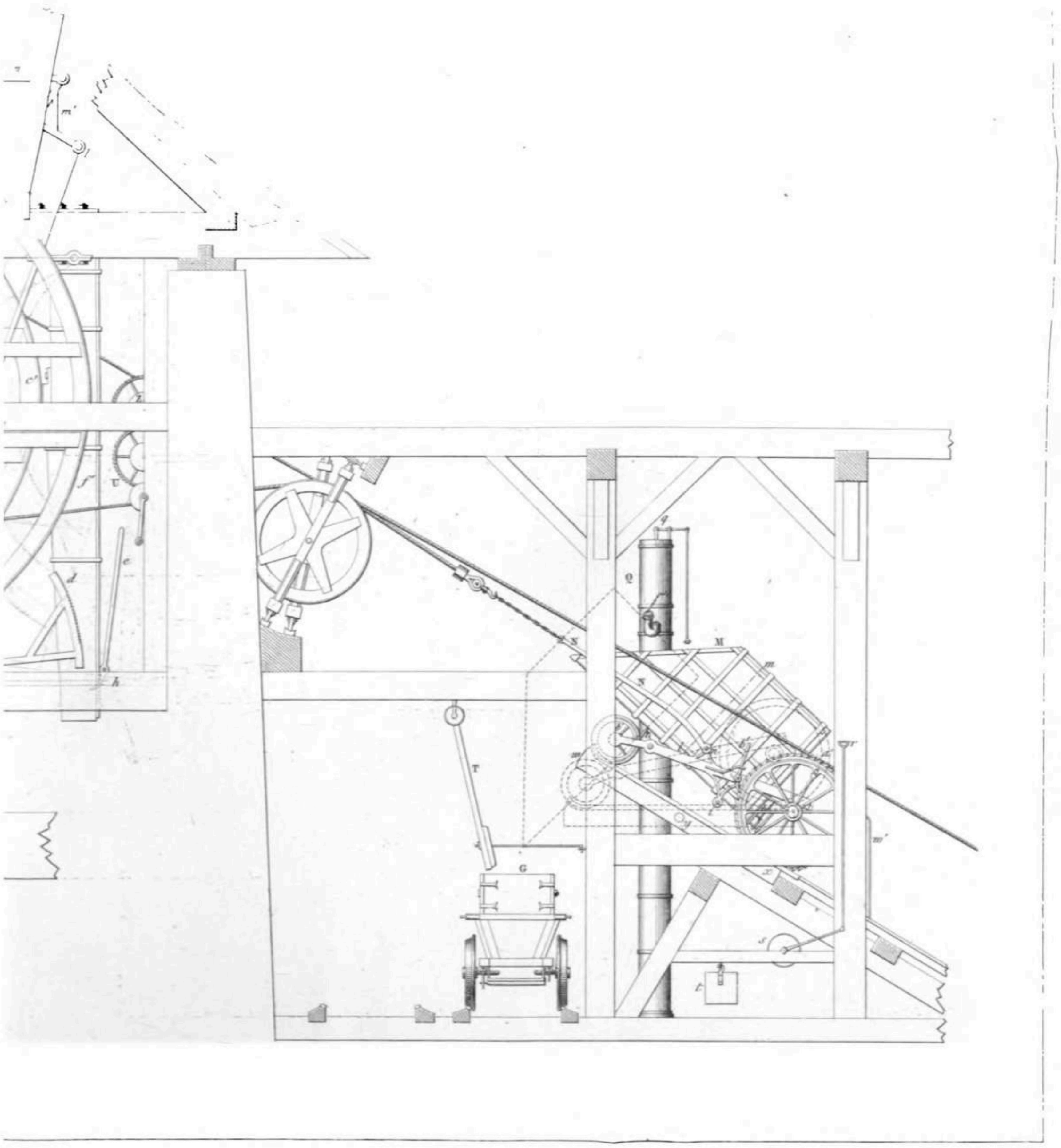
Echelle de la Fig. 3.

1 2 mètres

10226132

BALANCE D'EAU.

PL. XLIII. *a*.

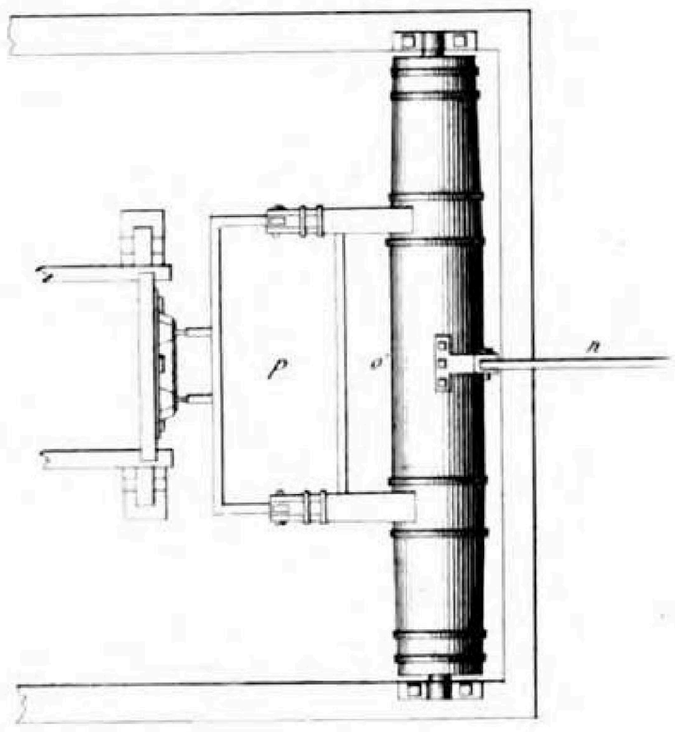


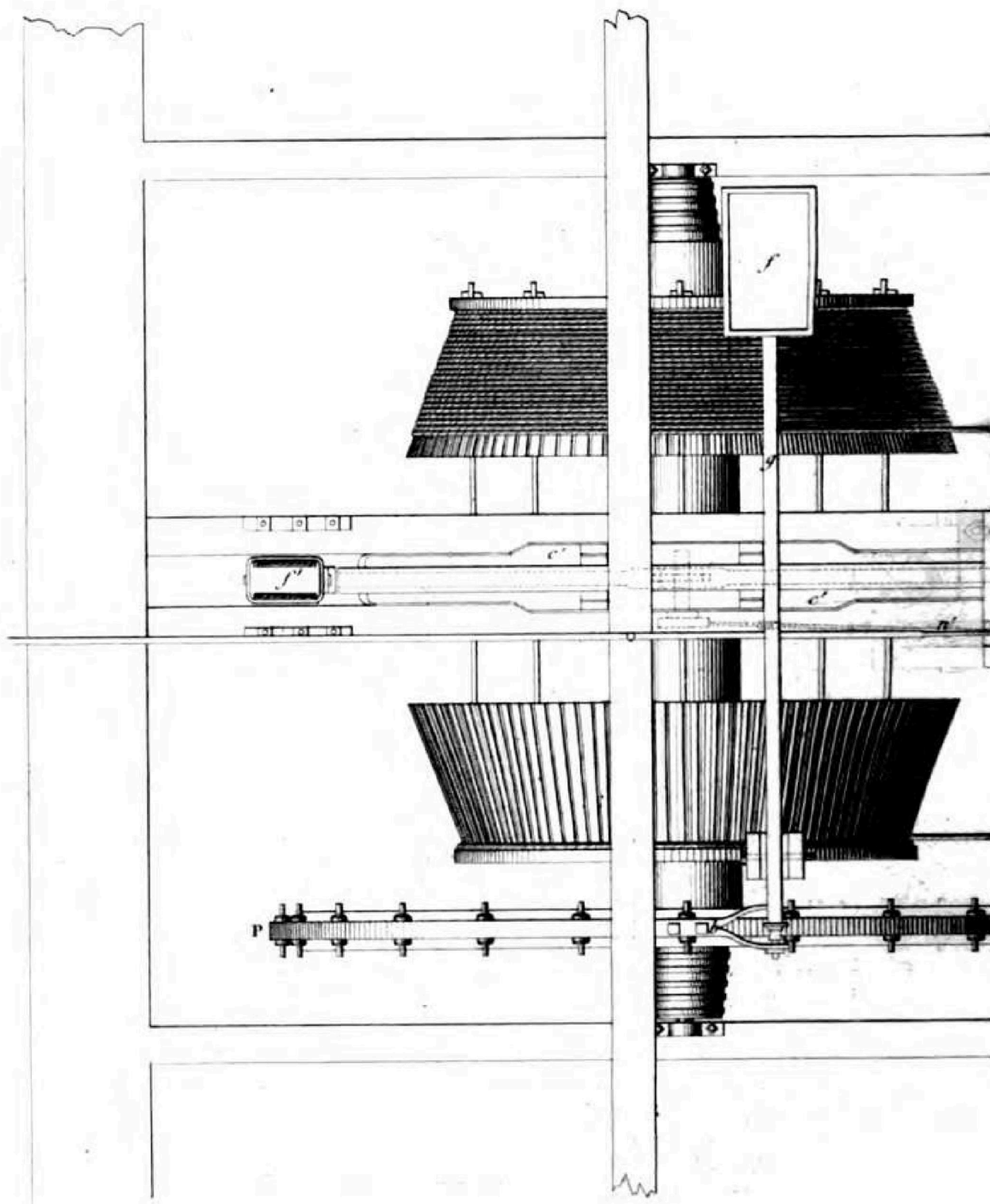
Lemaire sc

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PLAN INCLINÉ AVE

Fig





Echelle de la Fig 1.

1 mètre — 2 — 3 — 4 — 5 mètres

Echelle de la Fig. 2.

1 mètre — 2 mètres.

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C BALANCE D'EAU.

PL. XLIII. *(b).*

g. 1.

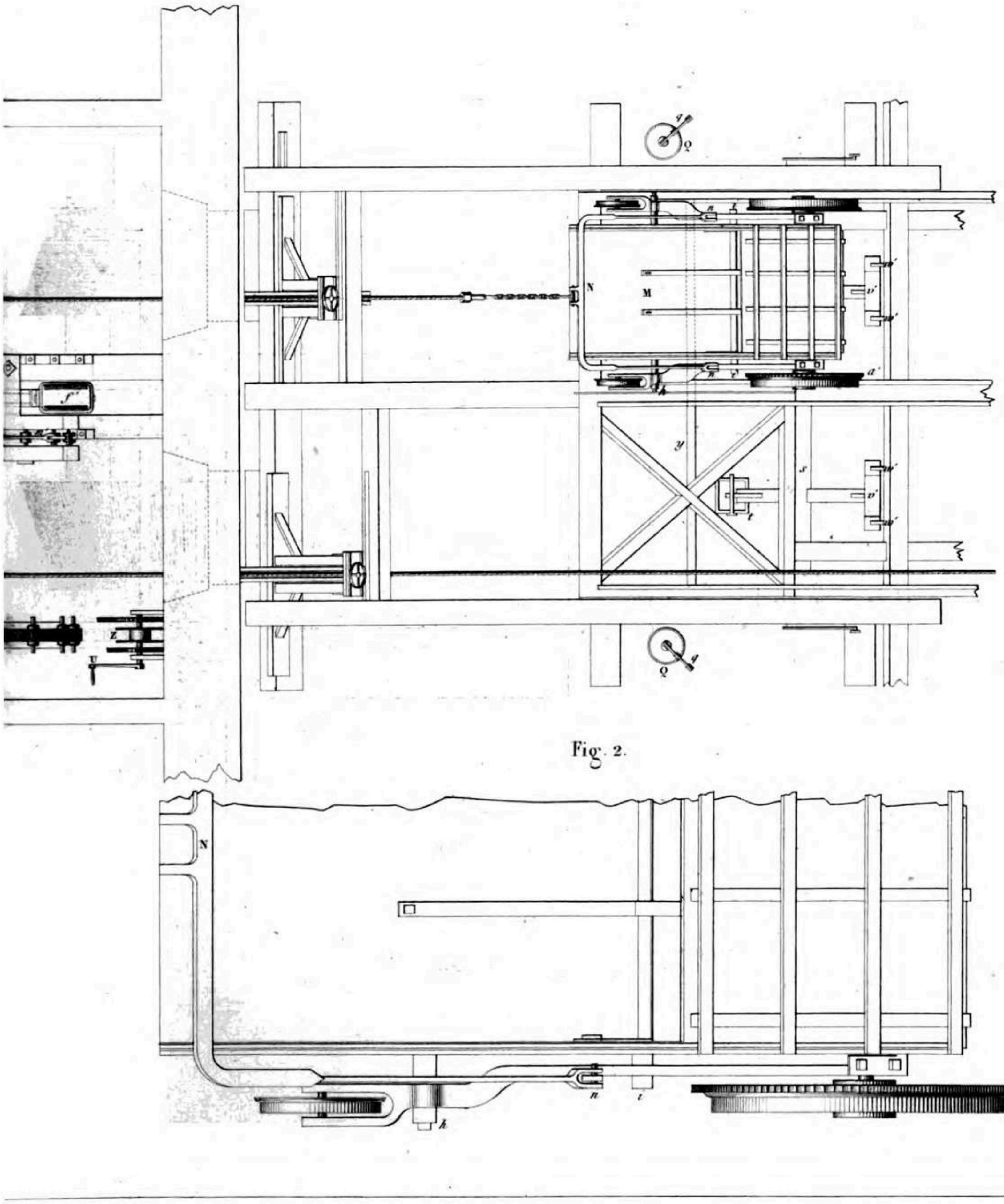


Fig. 2.

Lemaitre sc.

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PLAN INCLINÉ AVEC

Fig. 1.

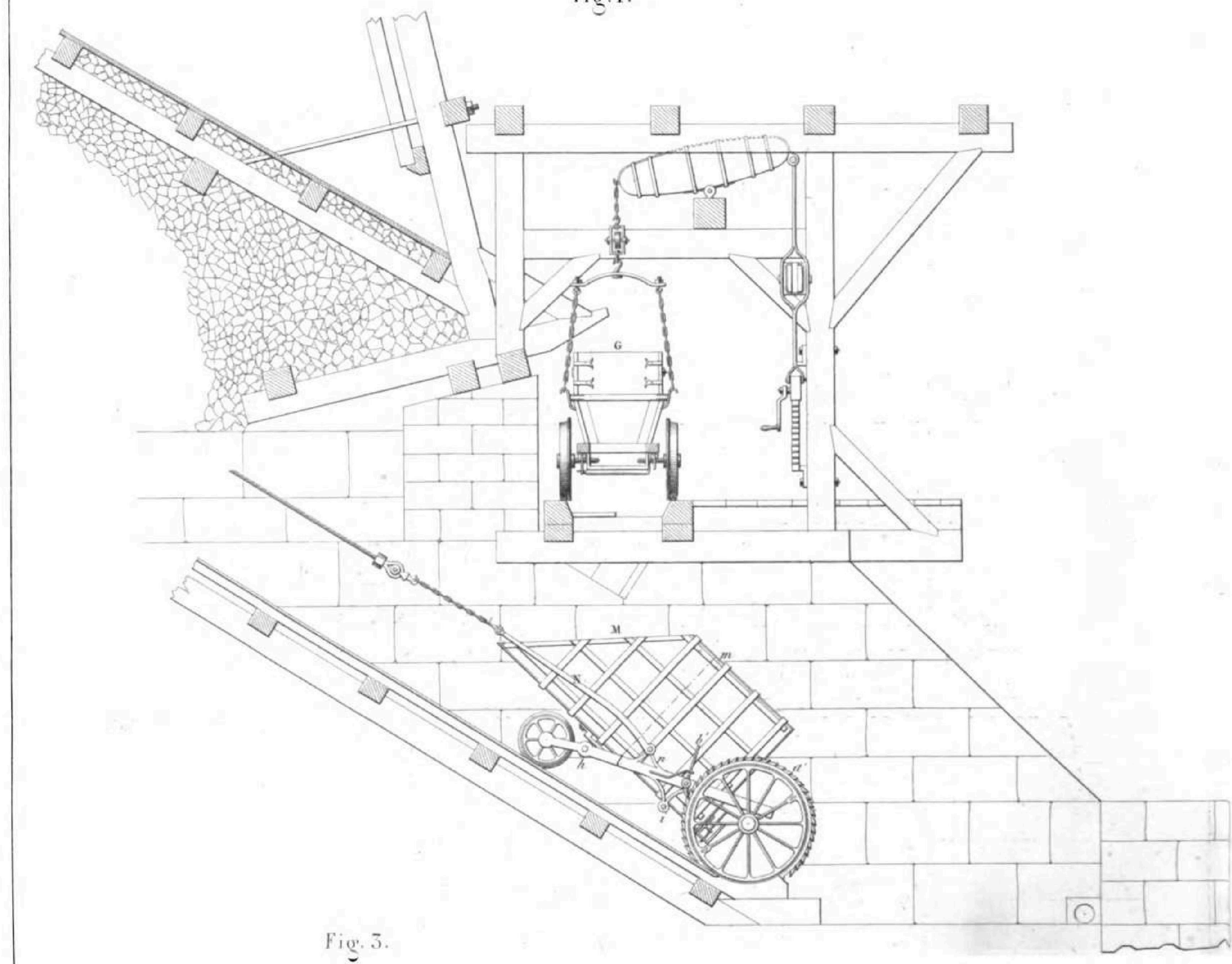
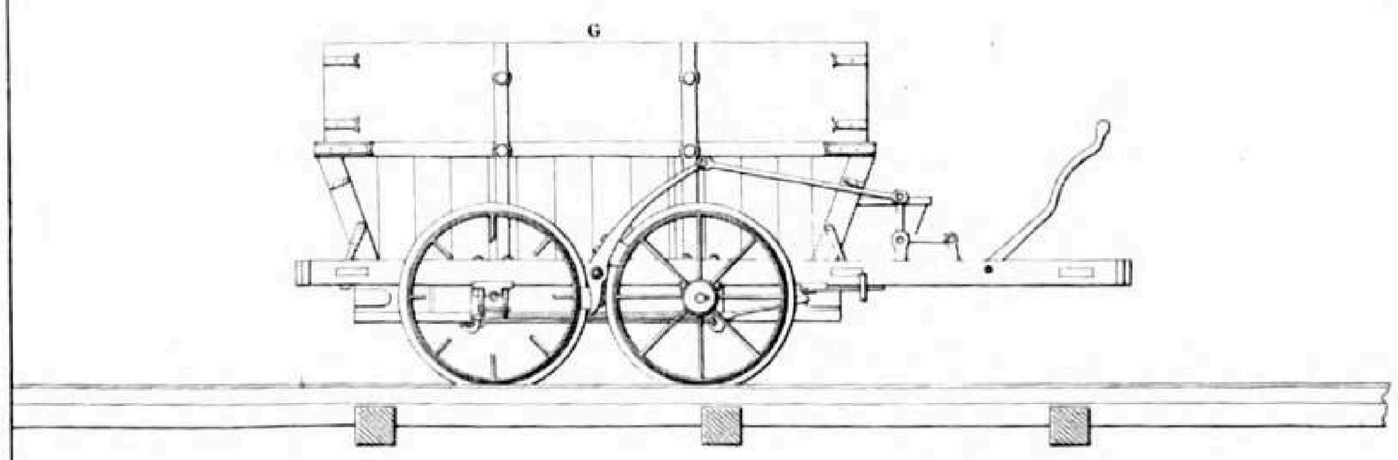


Fig. 3.



Echelle des Fig. 1 et 2.

1 2 3

Echelle de la Fig. 3.

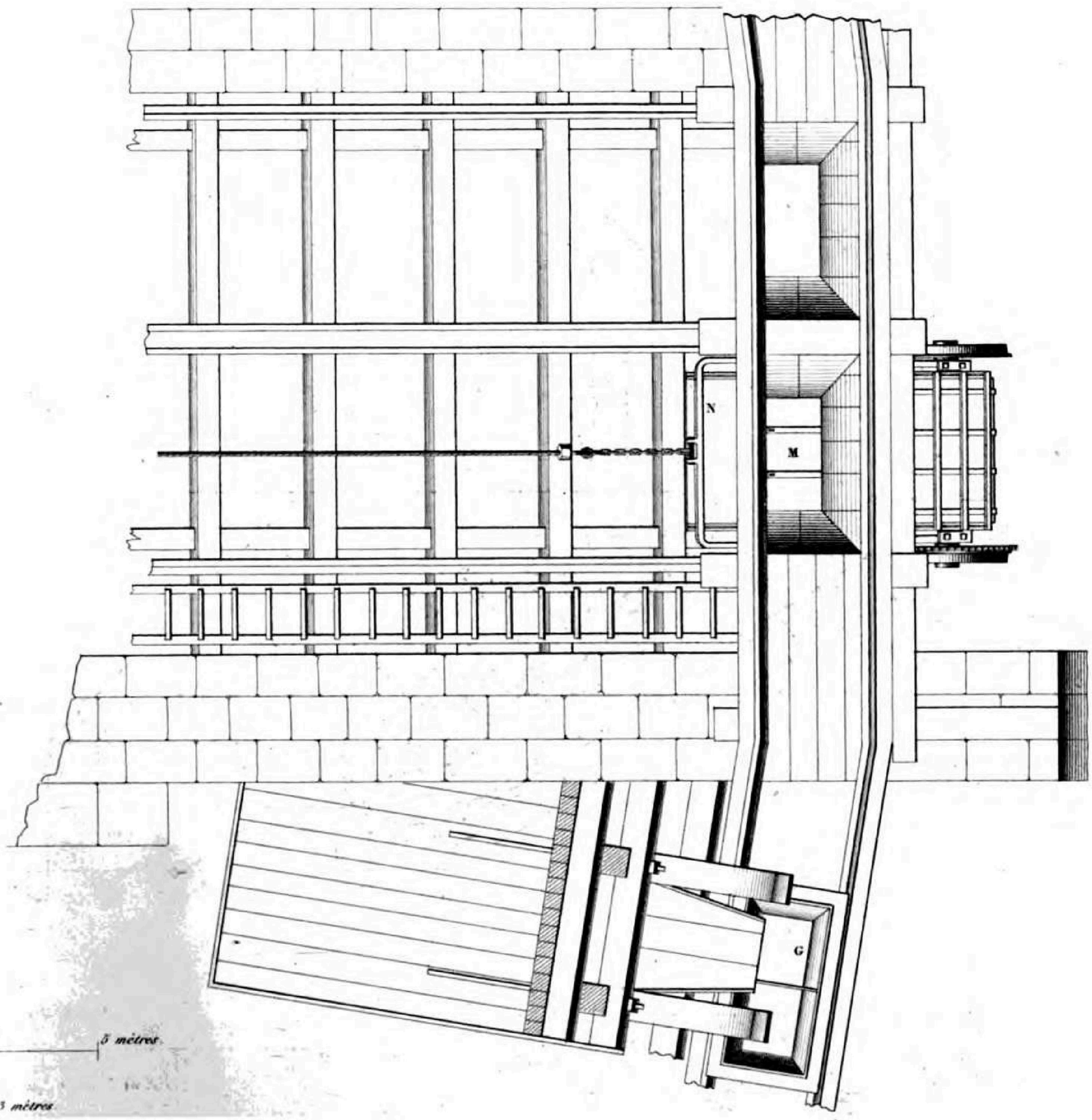
1 2

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BALANCE D'EAU.

PL. XLIII. *c*.

Fig. 2.



Lemaitre sc.

10226132

Fig. 1.

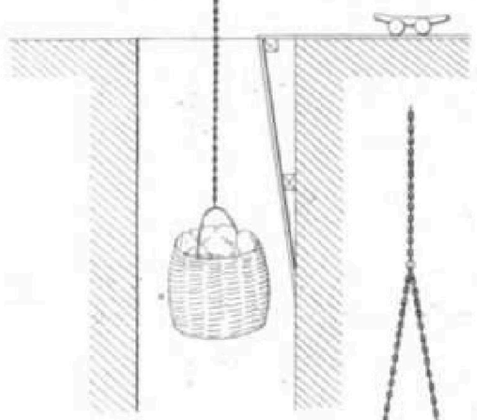


Fig. 2.



Fig. 3.

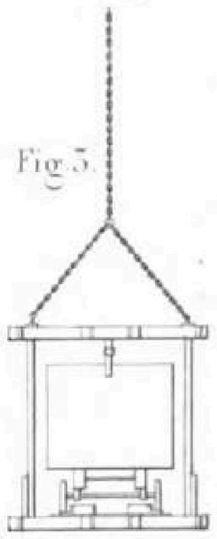


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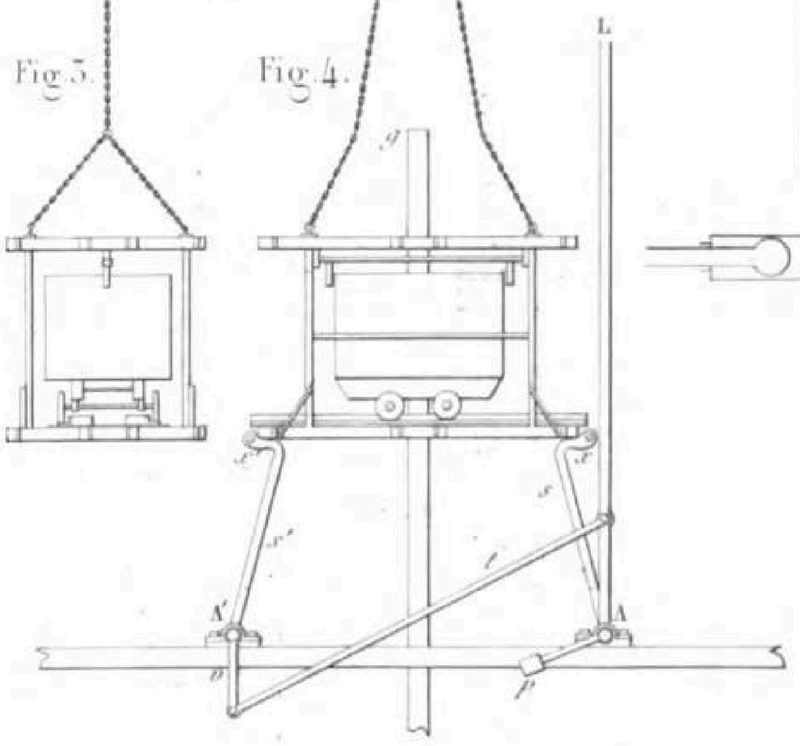


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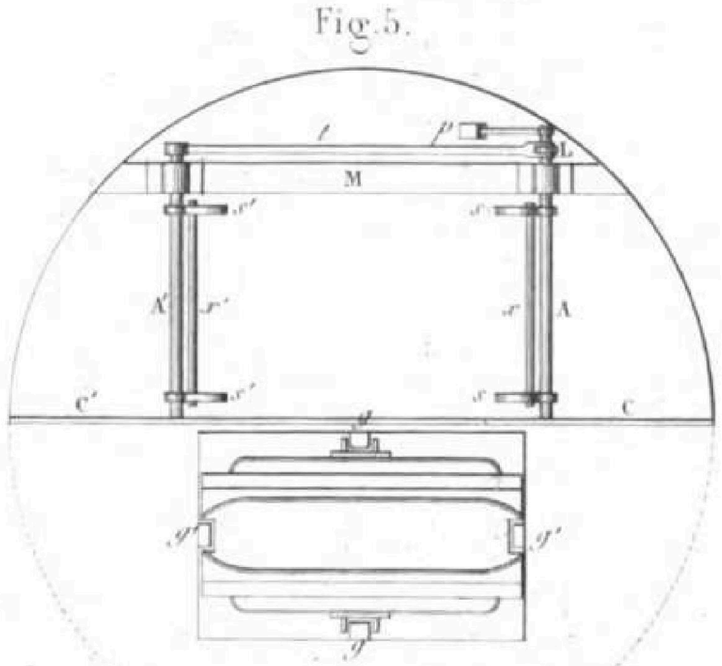


Fig. 11.

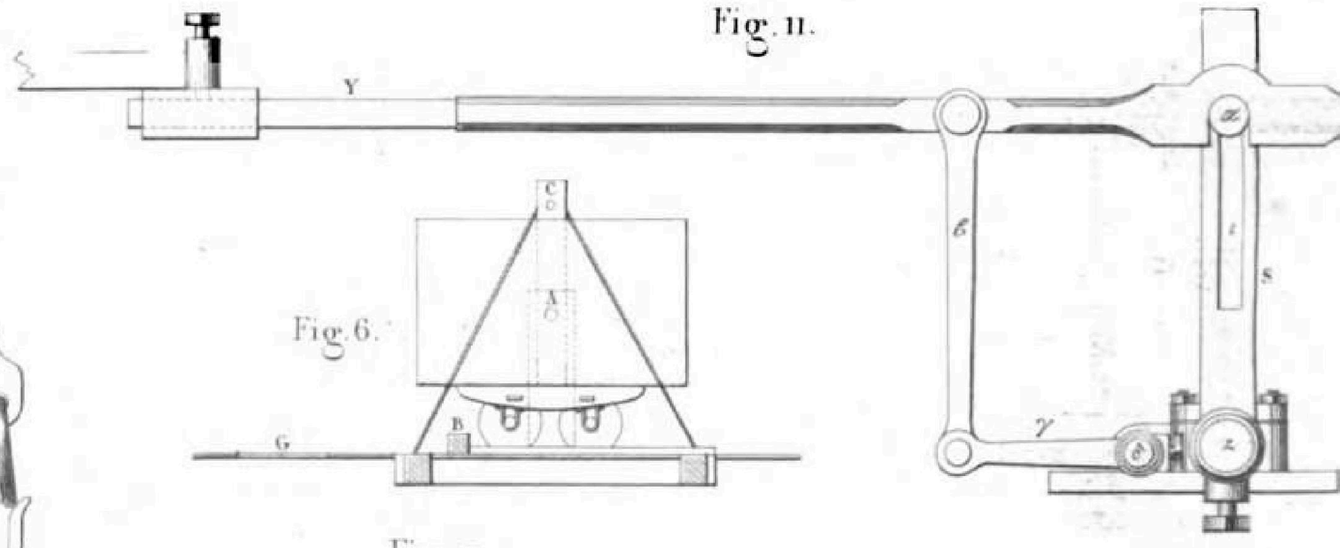


Fig. 6.

Fig. 7.

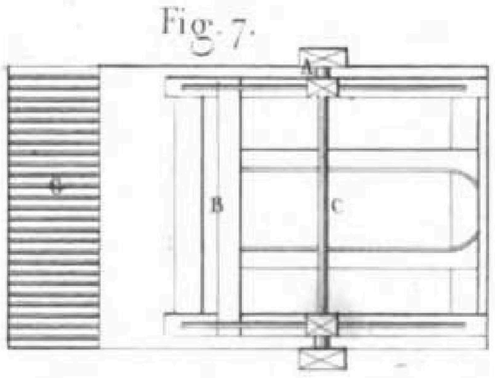


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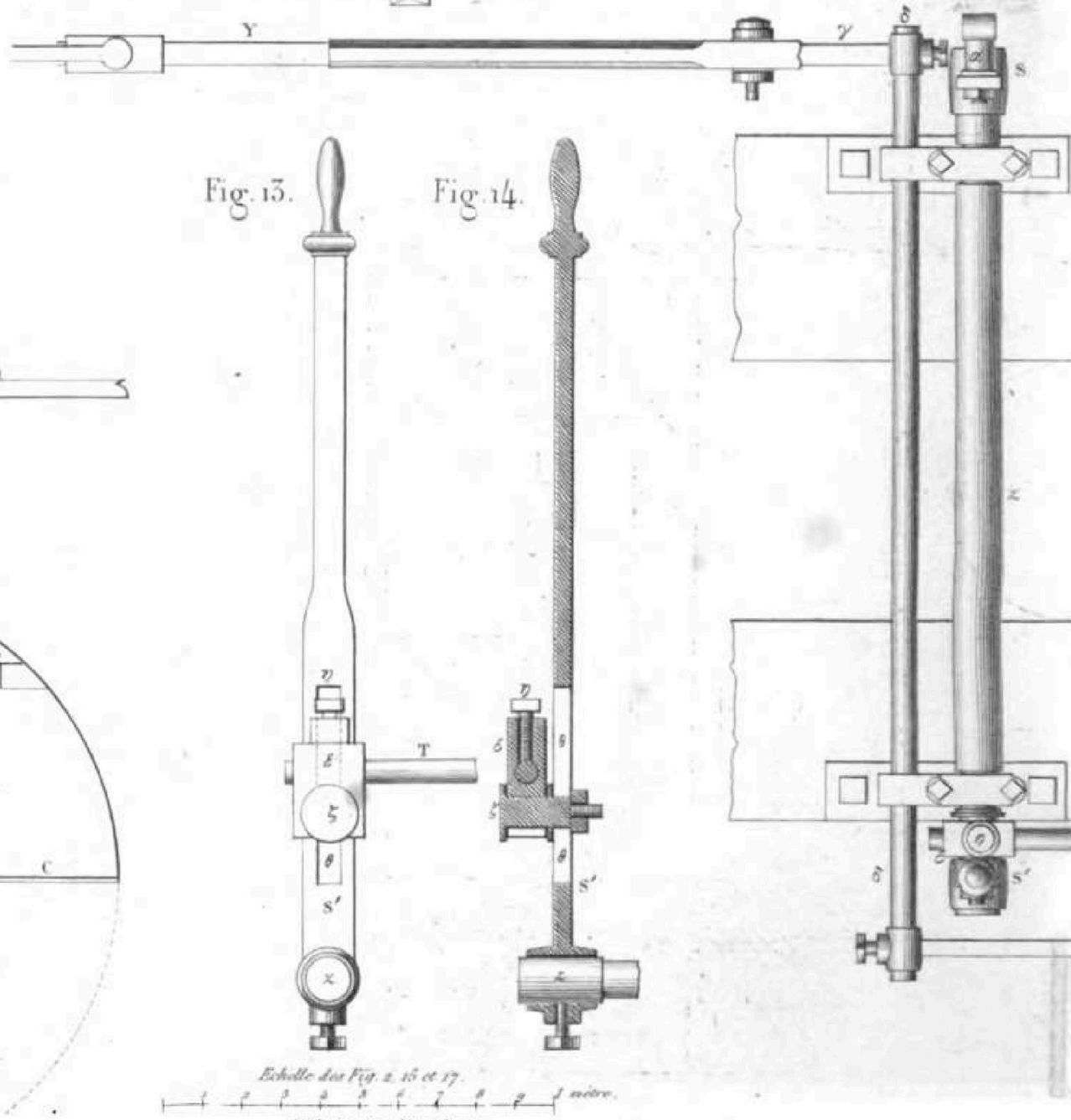
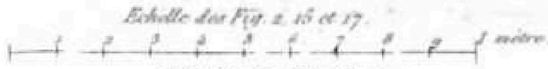


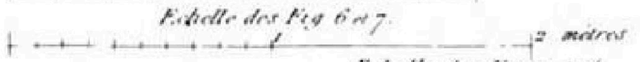
Fig. 13.

Fig. 14.

Echelle des Fig. 2, 13 et 17.



Echelle des Fig. 6 et 7.



Echelle des Fig. 10 à 14.

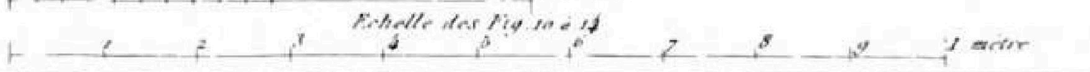


Fig. 12.

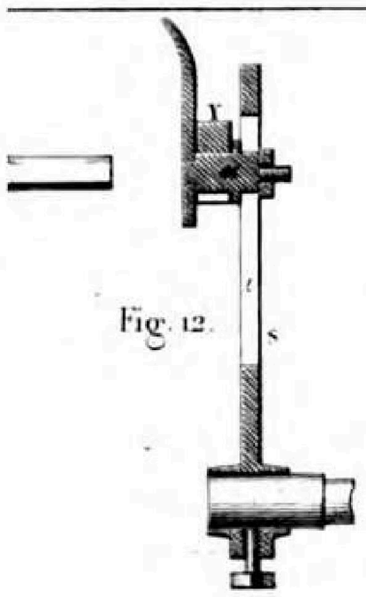


Fig. 17.

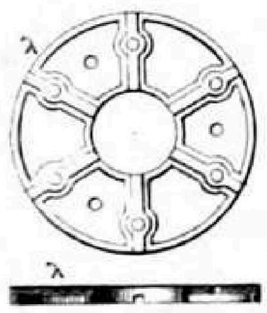


Fig. 15.

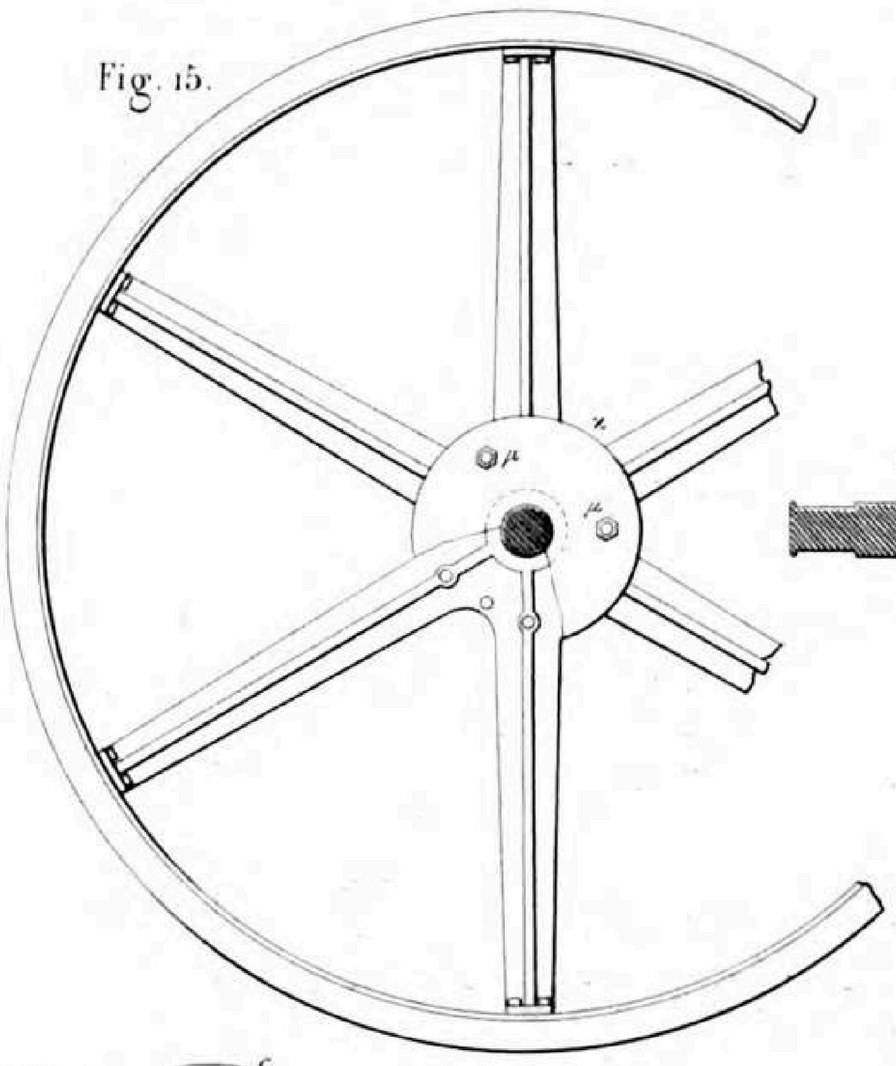


Fig. 16.

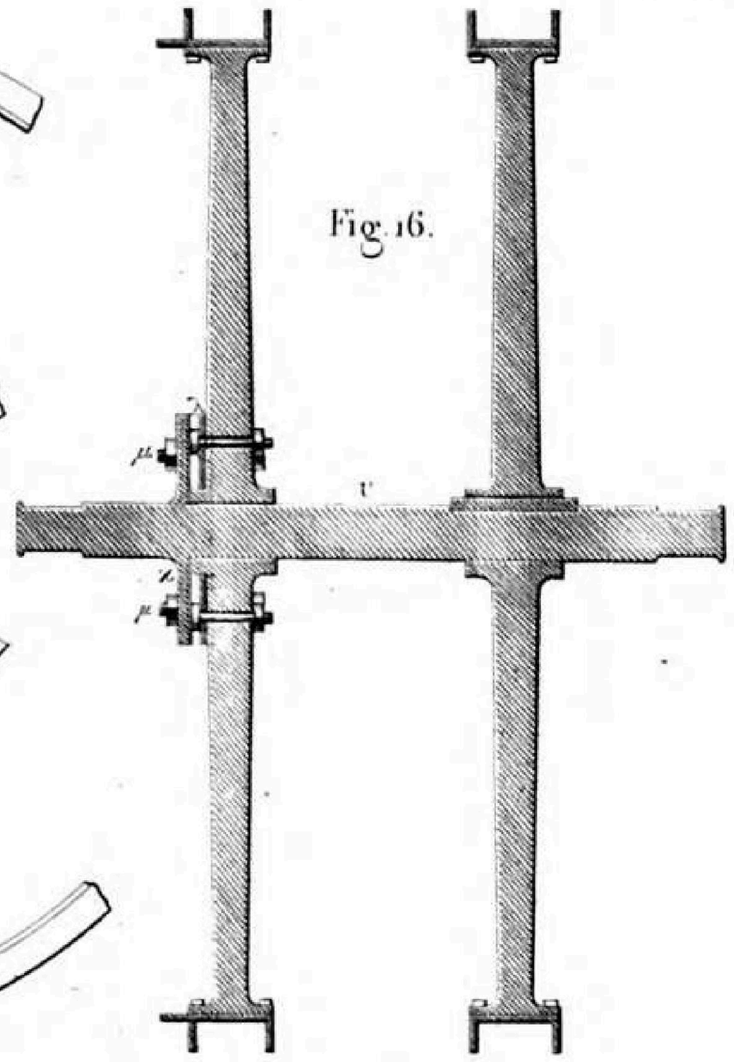


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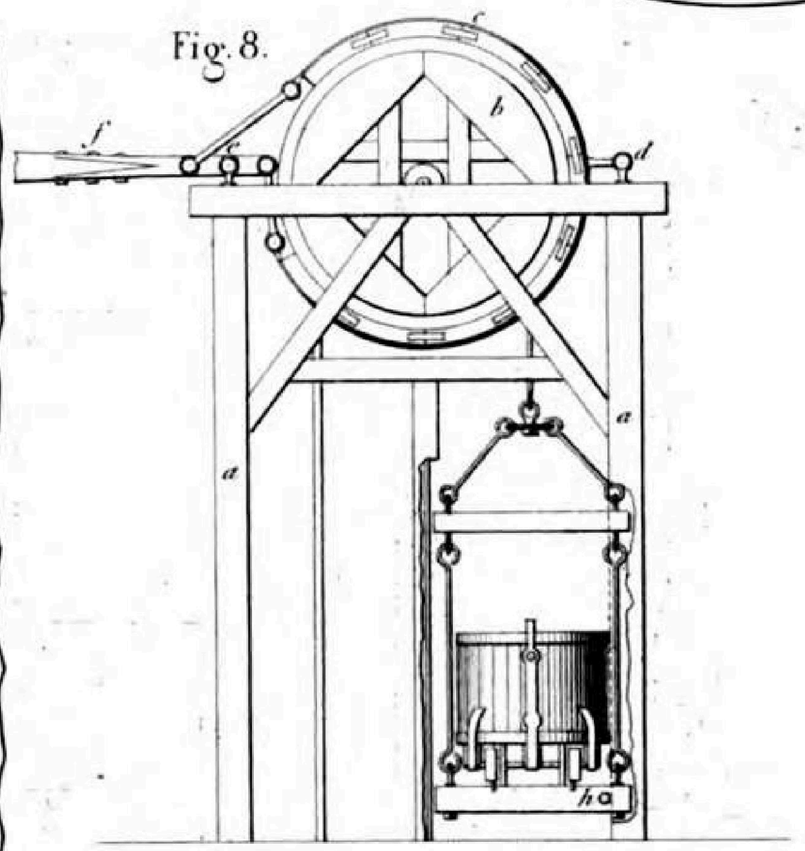


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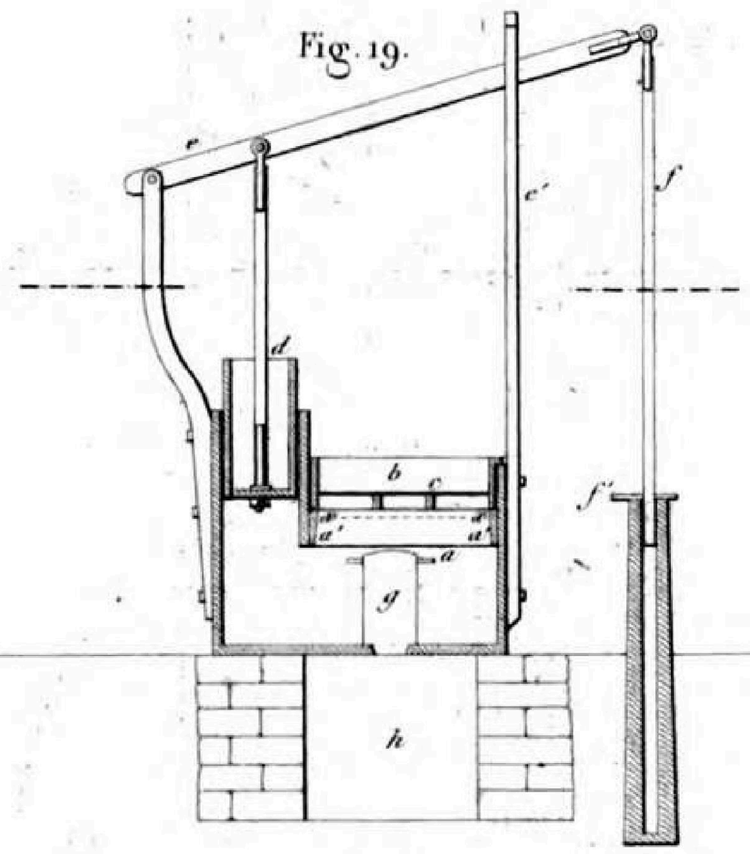


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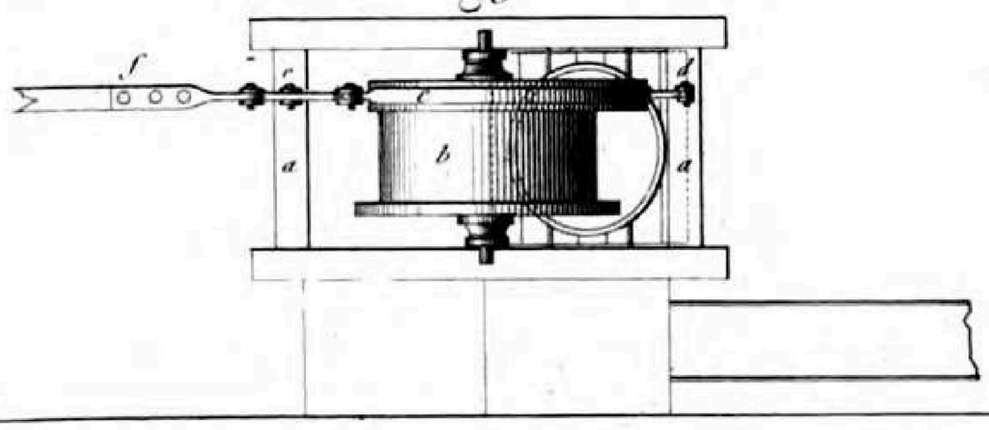
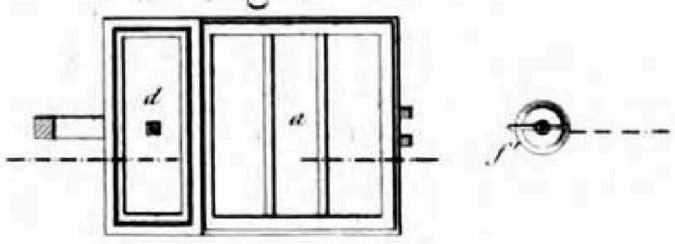


Fig. 18.



Echelle des Fig. 1, 3 à 5, 8, 9, 18 et 19.

0 1 2 3 4 mèt.

Lemaître sc.

10226132

MACHINE D' EXTRACTION DES

Fig. 2. *Élévation suivant AB.*

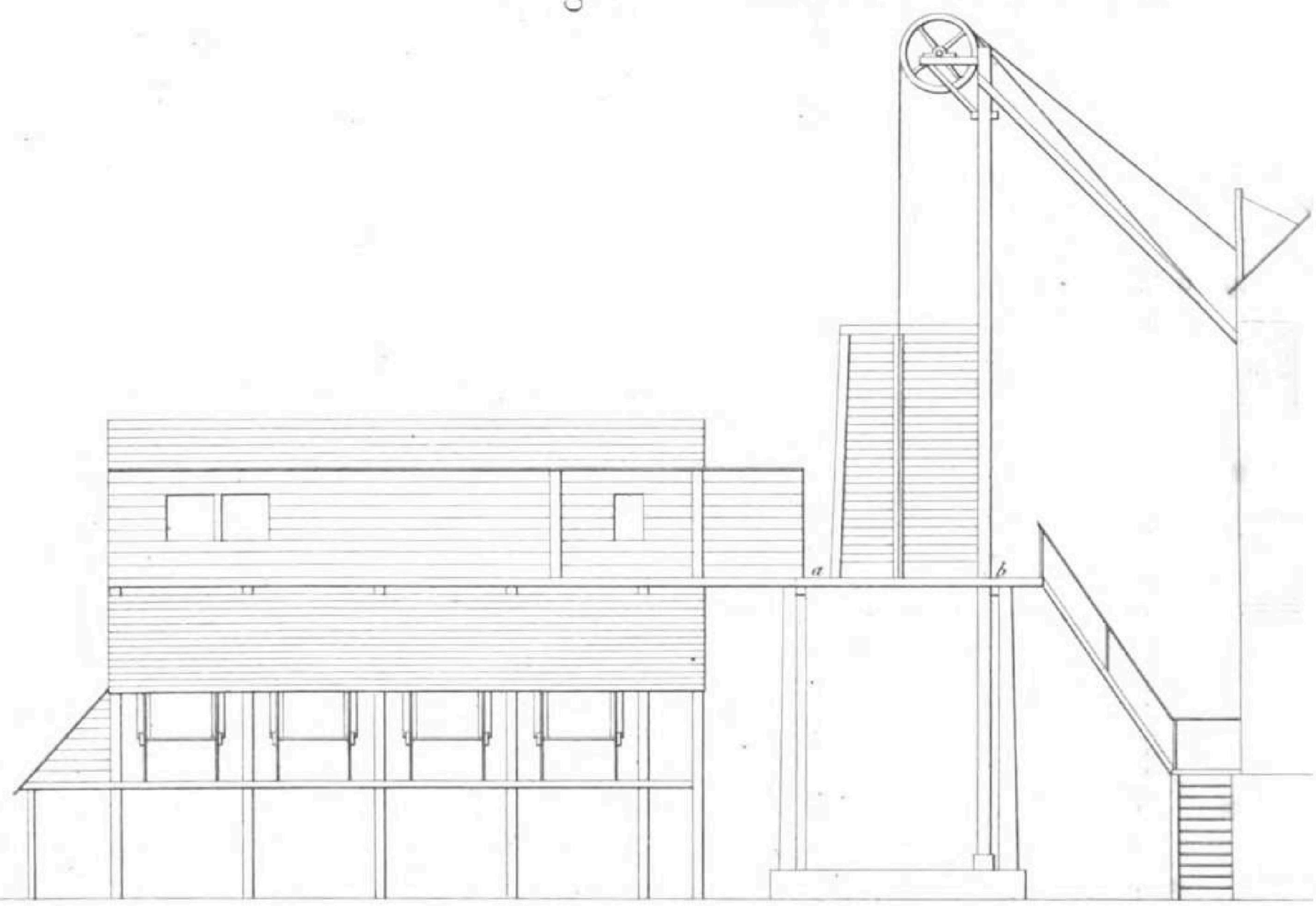
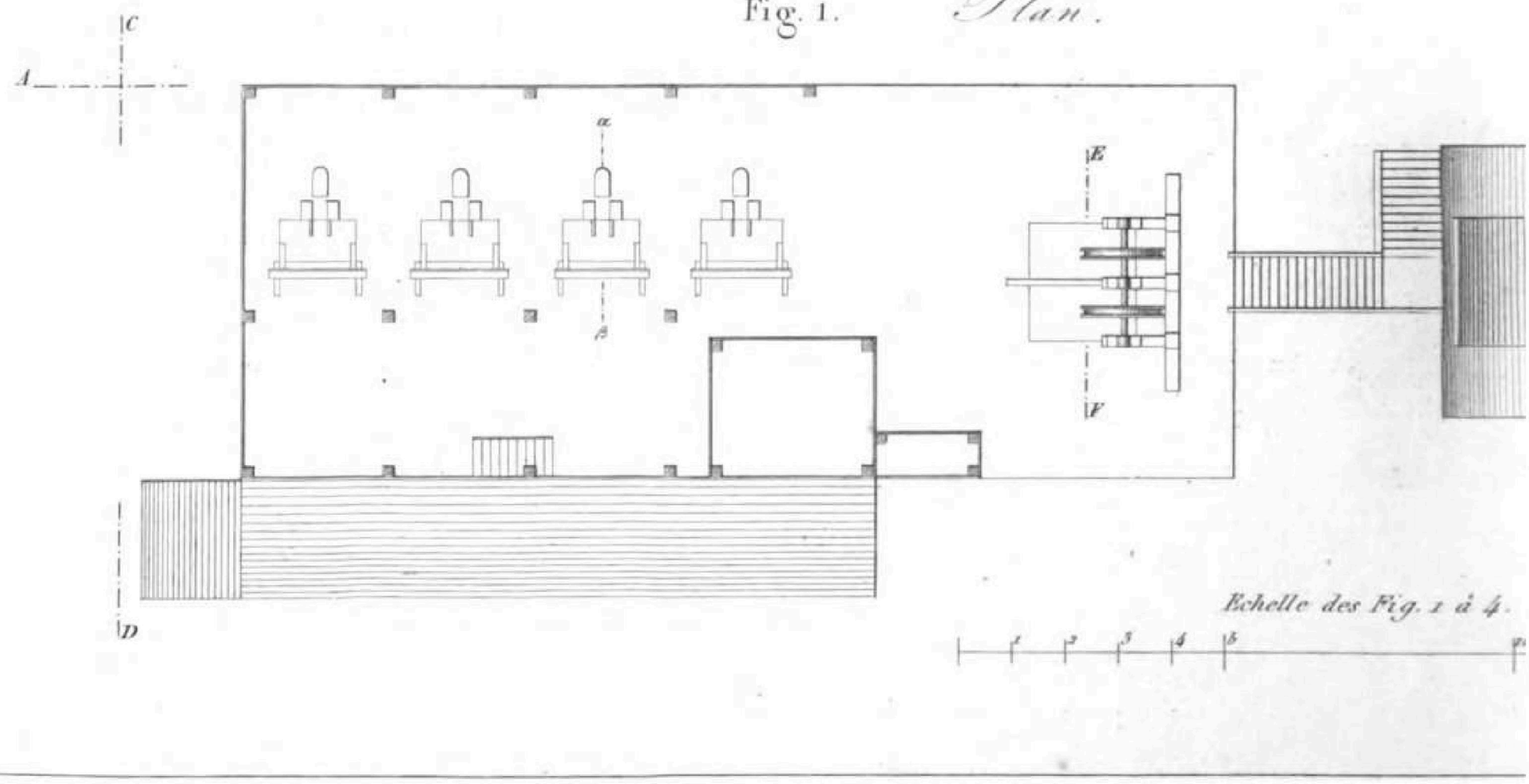


Fig. 1. *Plan.*



Echelle des Fig. 1 à 4.

1 2 3 4 5

ENVIRONS DE NEWCASTLE.

PL. XLV.

Fig. 4.

Elévation de la Charpente des Molettes suivant **E F.**

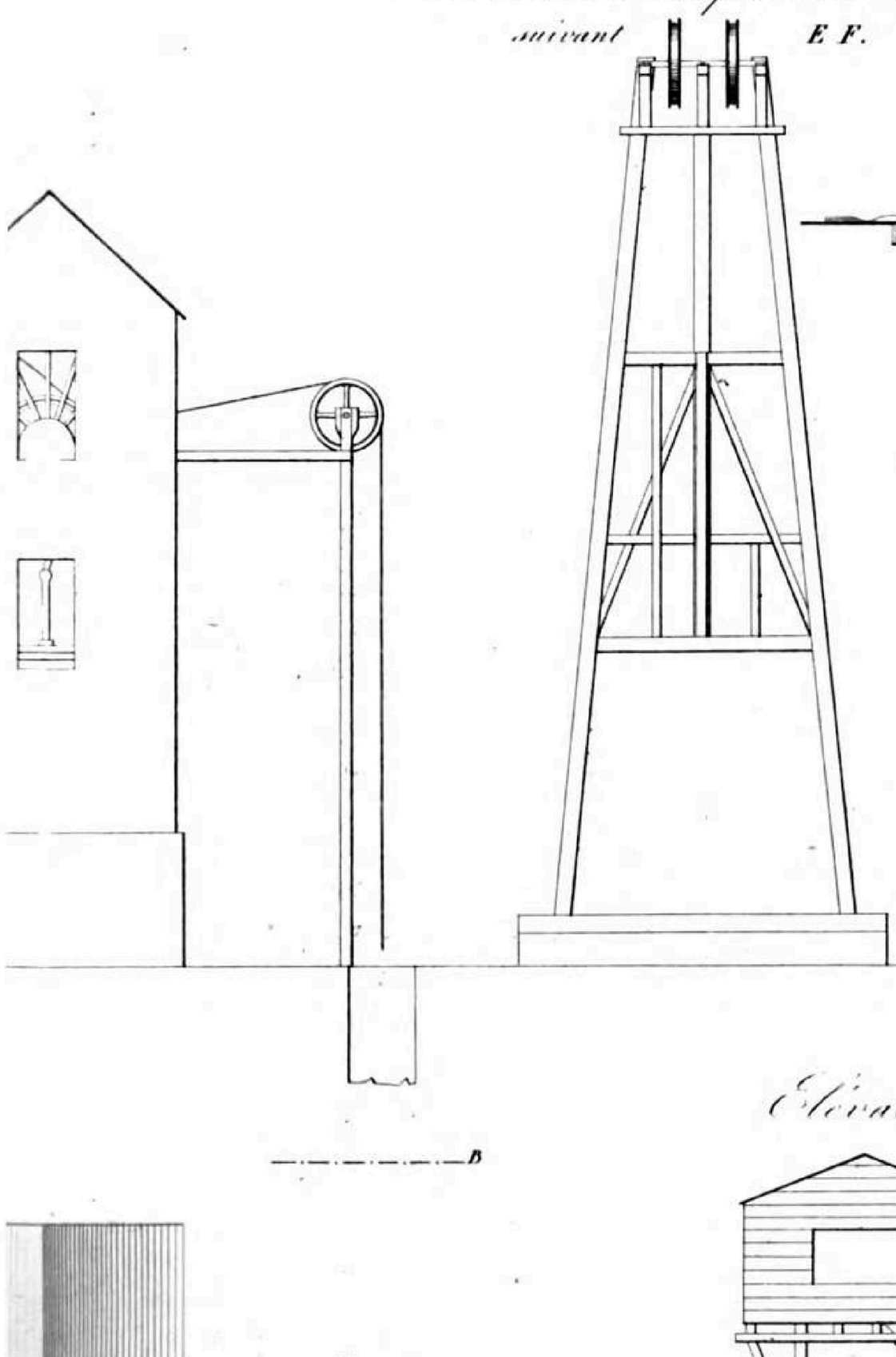


Fig. 5.

Coupe d'un des Cribles suivant α β

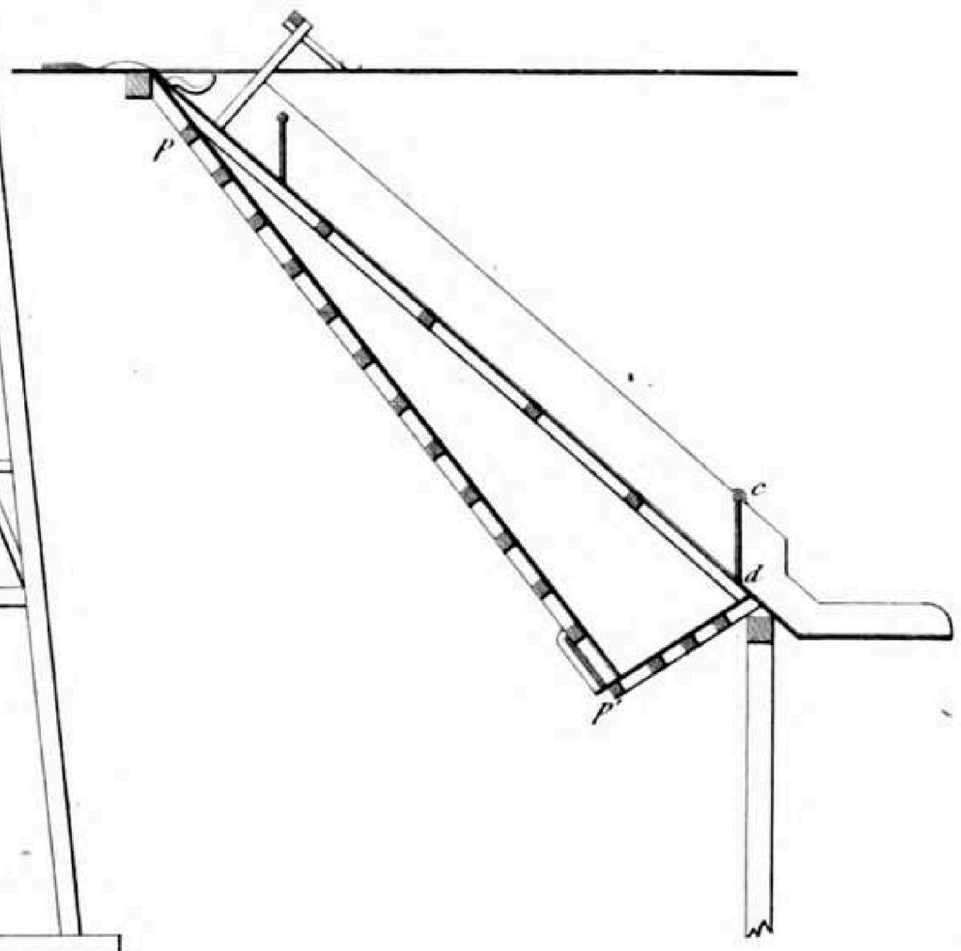
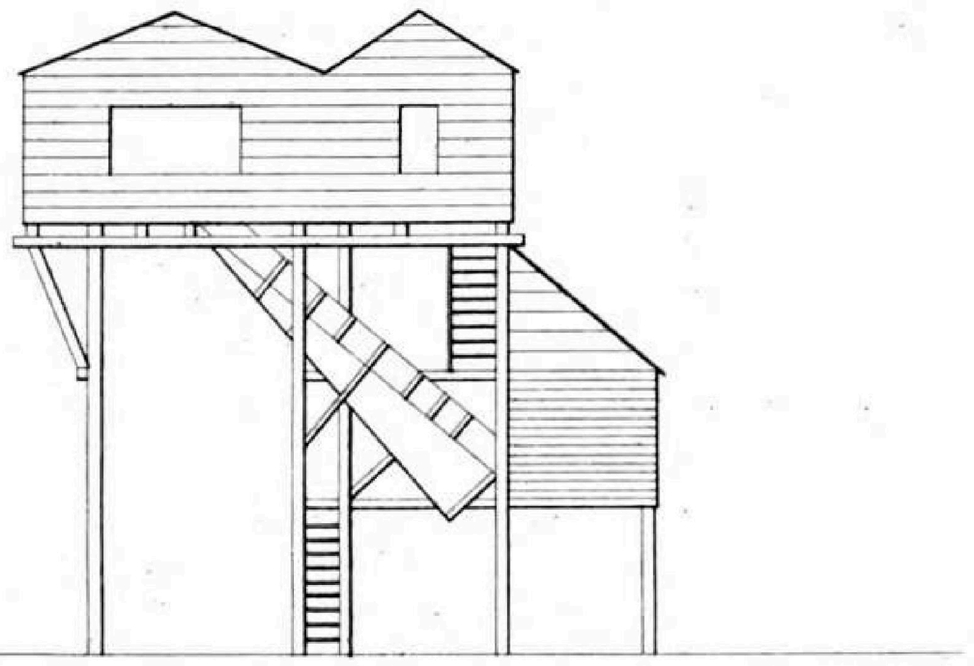
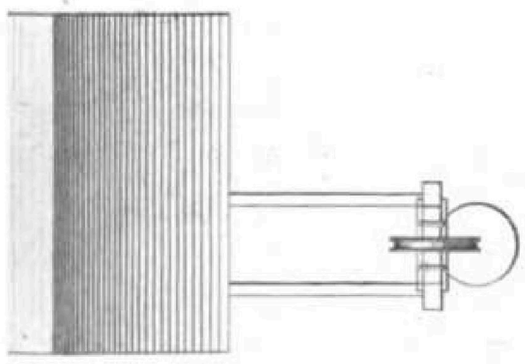


Fig. 3.

Elévation suivant **C D.**





5 mètres.

Echelle de la Fig. 5.

0 1 2 3 4 5 6 7 8 *mètres*

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10226132

MACHINE D'EXTRACTION DE

Fig. 3.

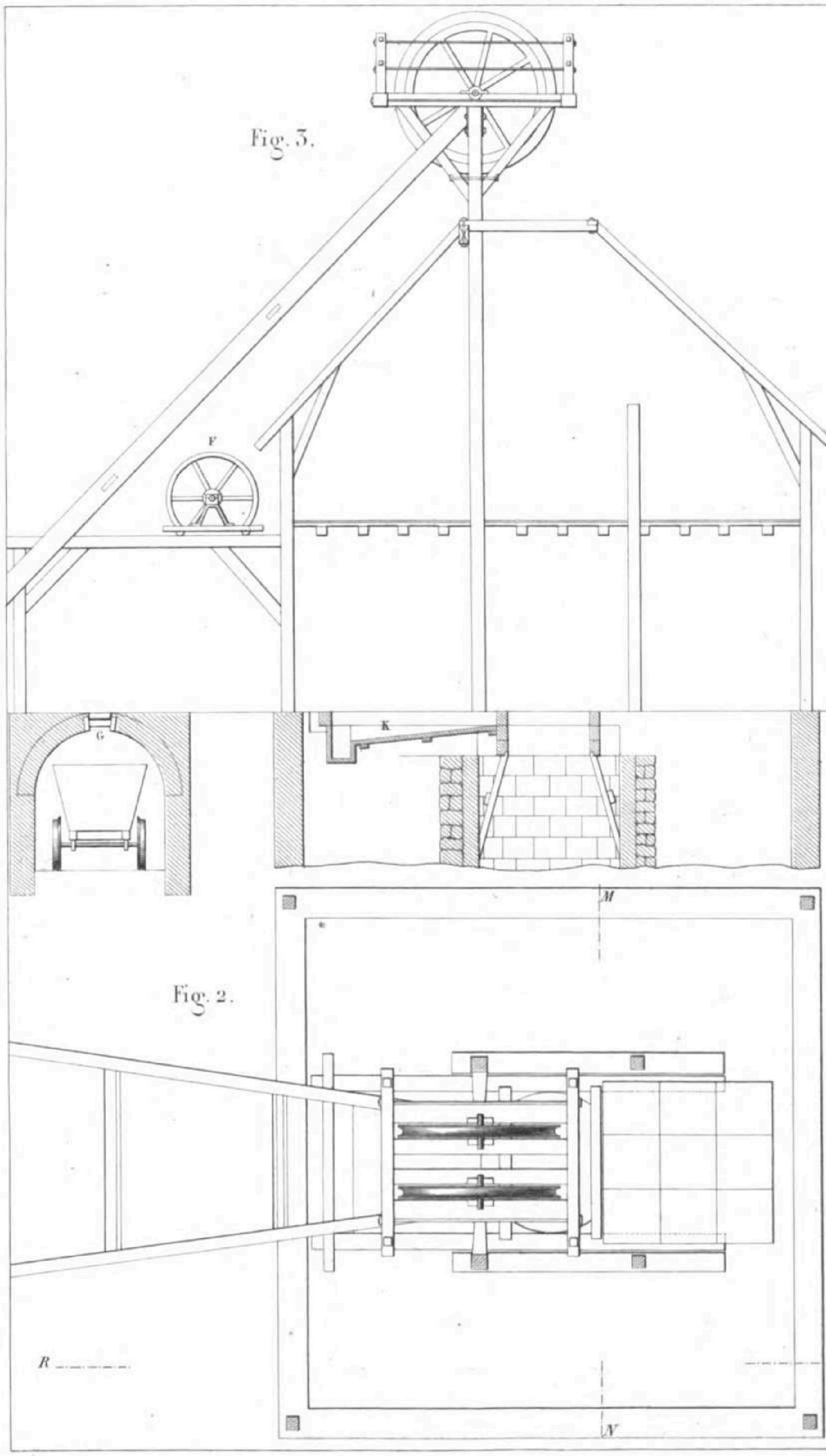


Fig. 4.

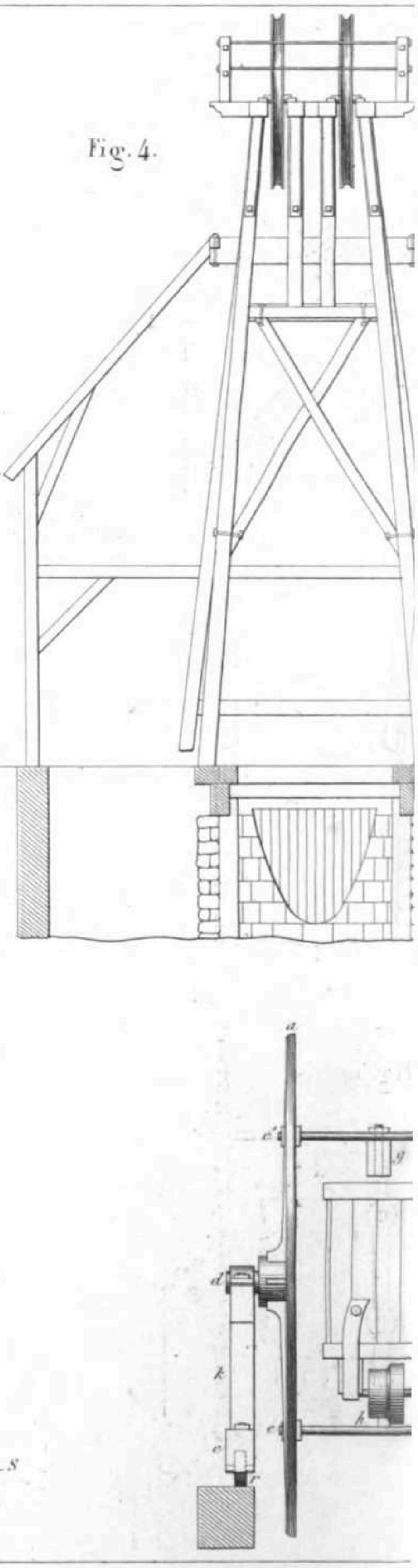


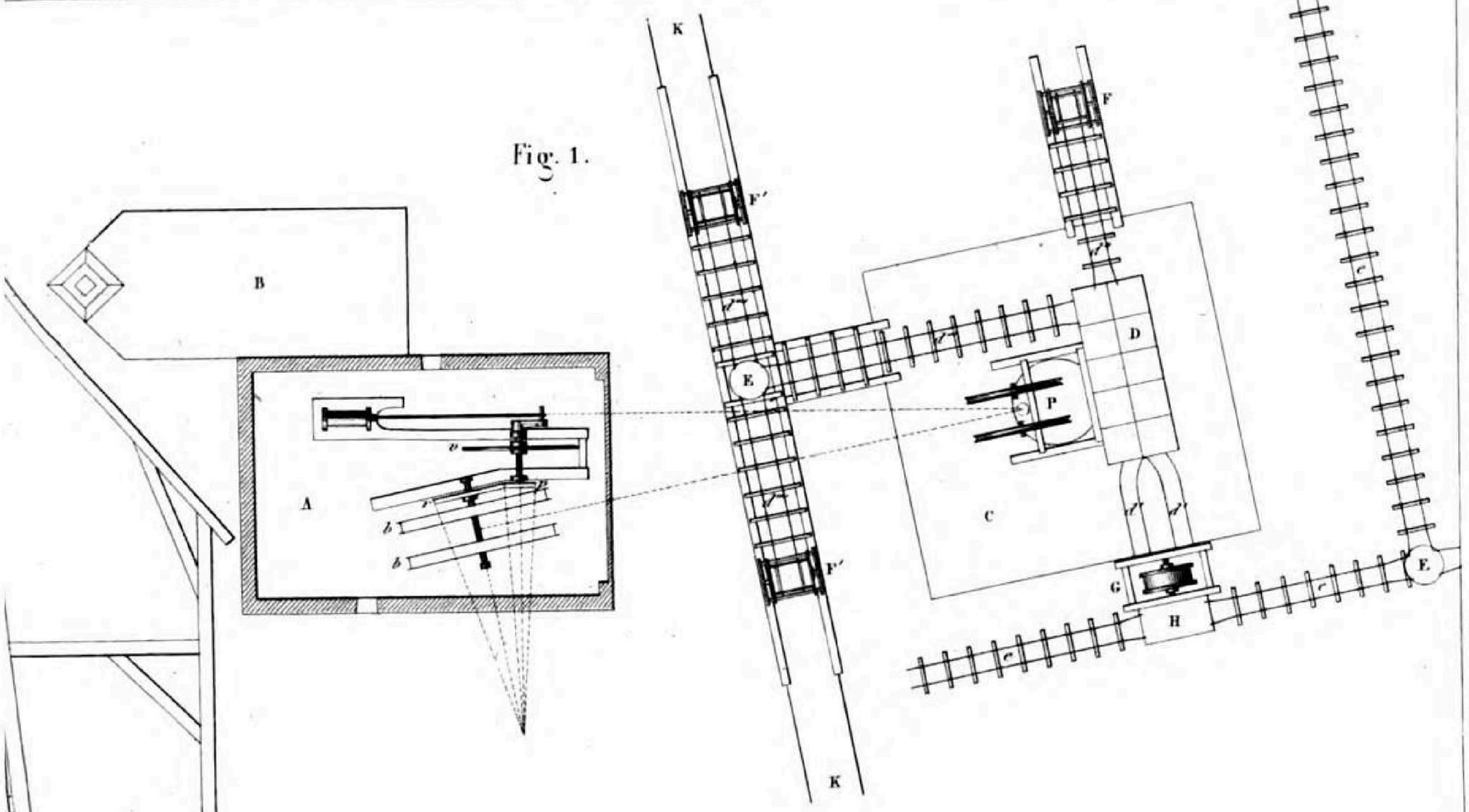
Fig. 2.

10226132

BÉRARD PRÈS St ETIENNE.

PL. XLVI.

Fig. 1.



Echelle de la Fig. 1.

1 2 3 4 5 6 7 8 9 10 mètres.

Echelle des Fig. 2 à 4.

1 2 3 4 5 6 7 8 9 10 mètres

Echelle des Fig. 5 et 6.

1 2 mètres

Fig. 5.

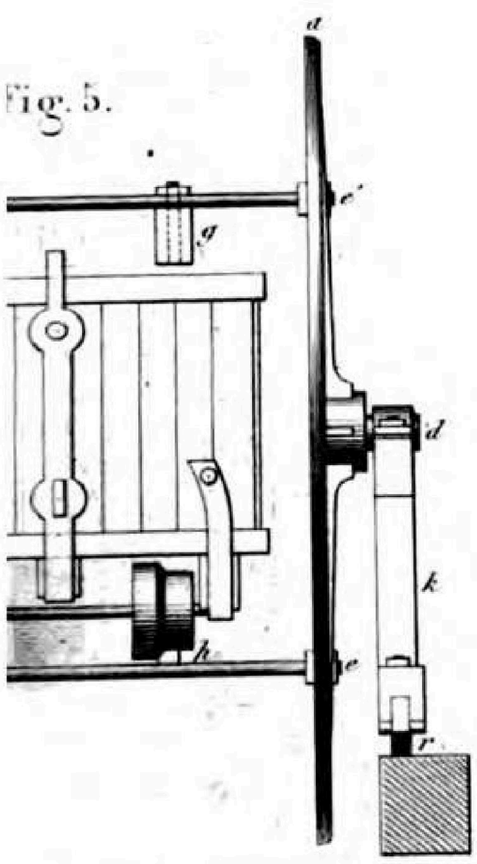
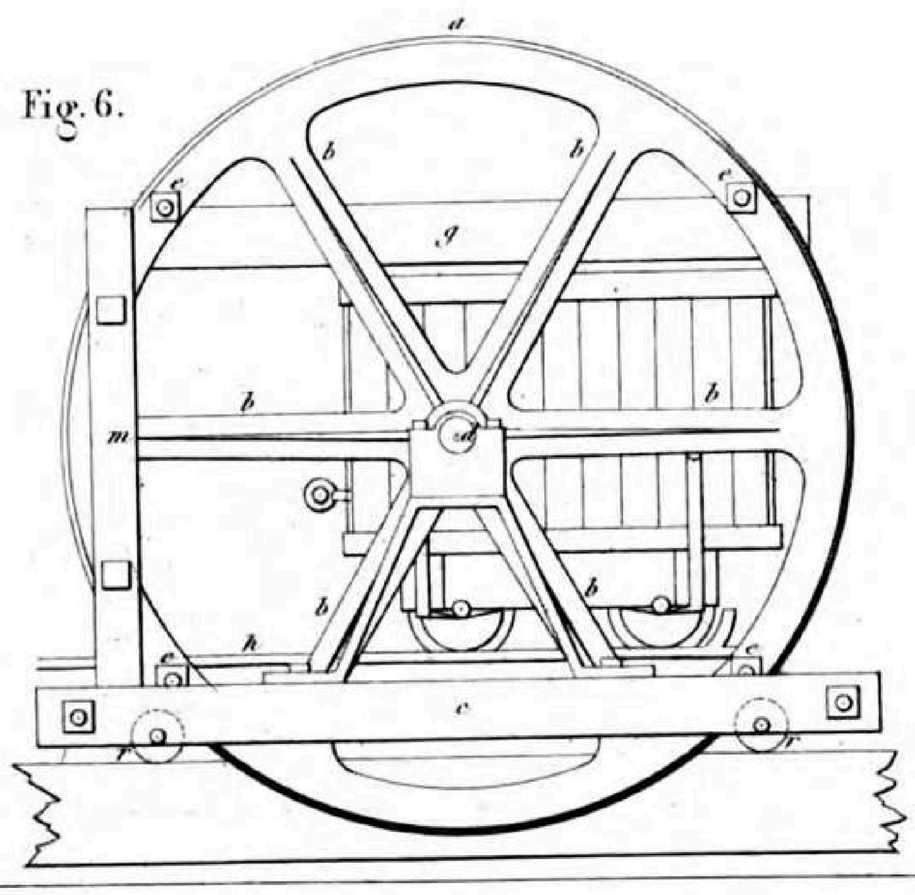


Fig. 6.

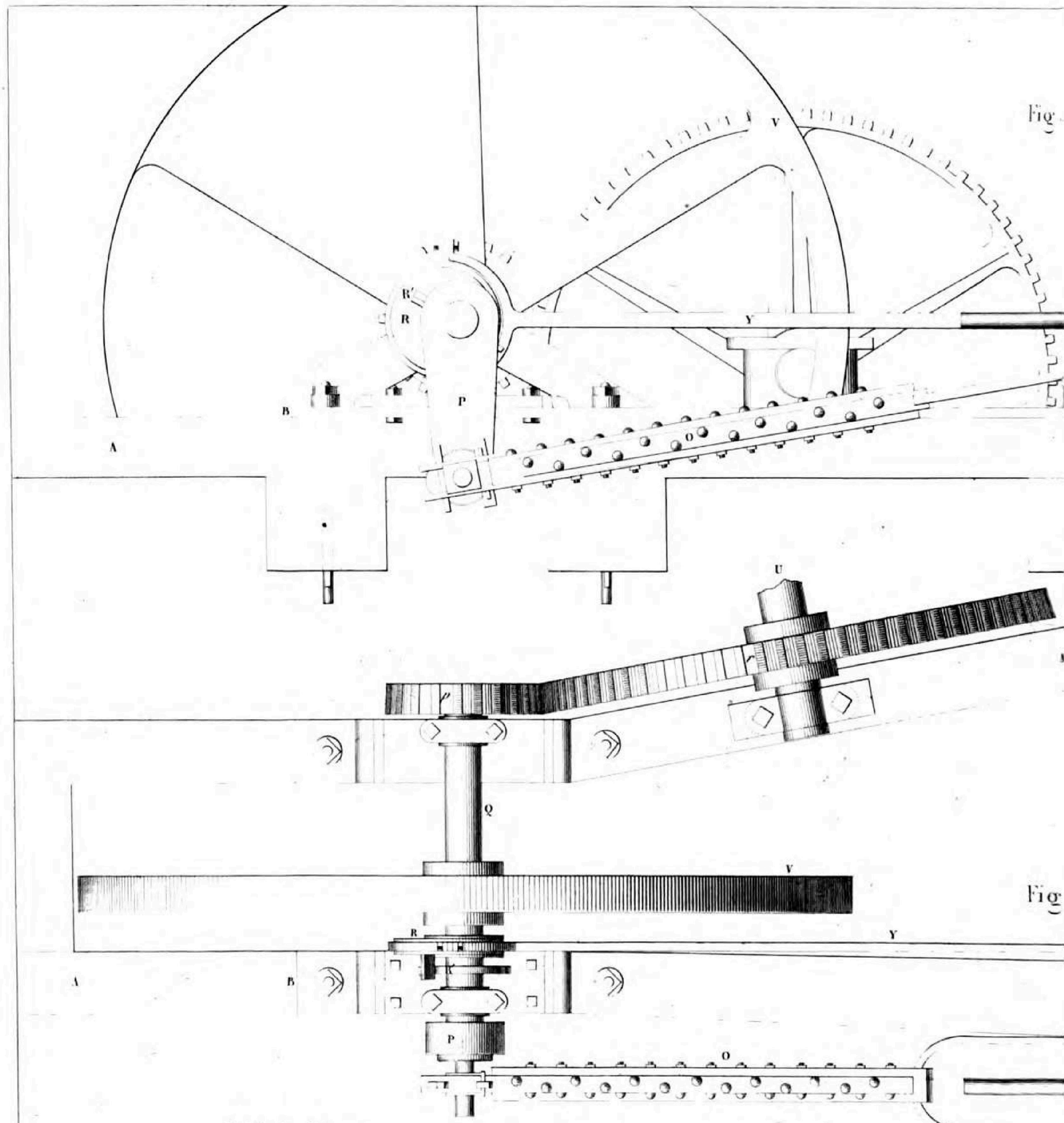


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MACHINE D'EXTRACTION A VAPEUR DE

Fig



Fig

Echelle des Fig 1 et 2

0m 0m50 1m 1m50 2 mètres

Echelle des Fig 3 à 5.

0m10 0m20 0m30 0m40 0m50 1 mètre

Echelle des Fig 6 et 7.

1 2 3 4 5 6 mètres

10226132

LA MINE DE BÉRARD PRÈS St ETIENNE.

PL. XLVII.

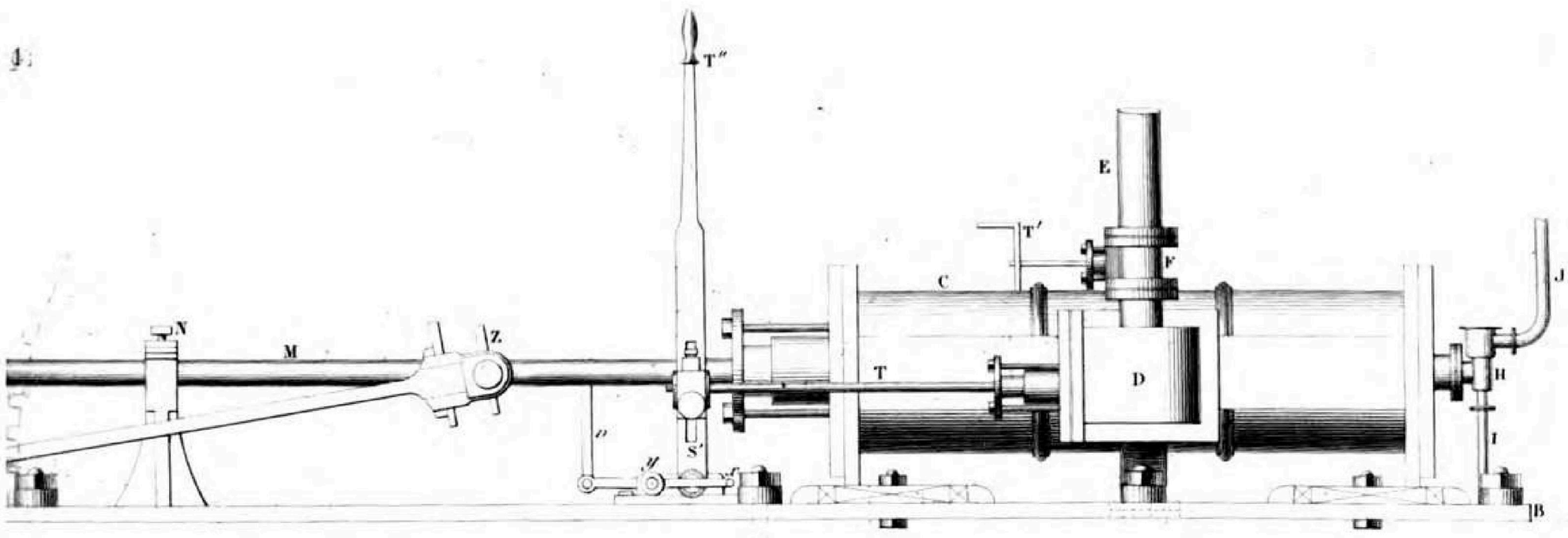


Fig. 6.

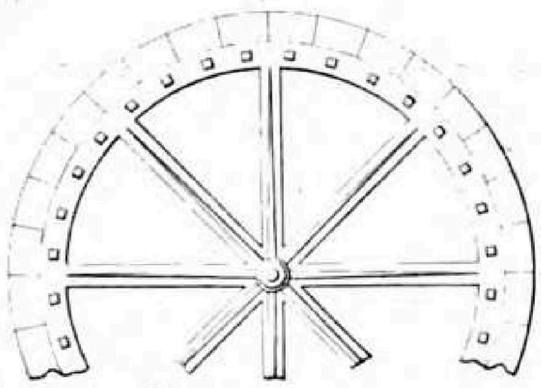


Fig. 7.

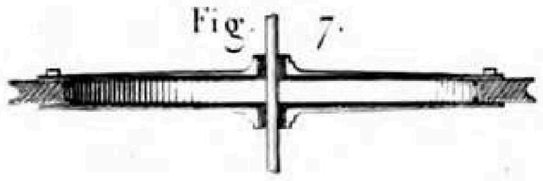


Fig. 3.

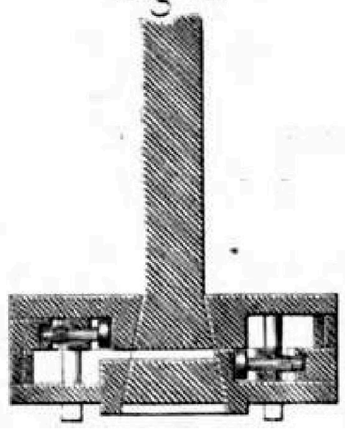


Fig. 4.

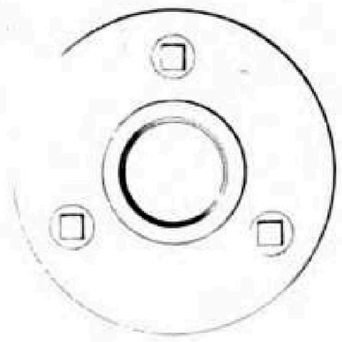
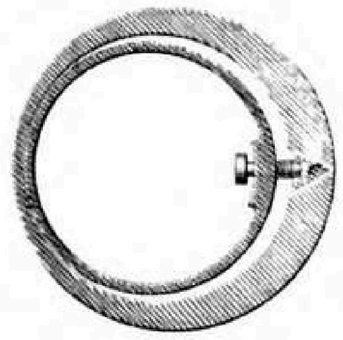
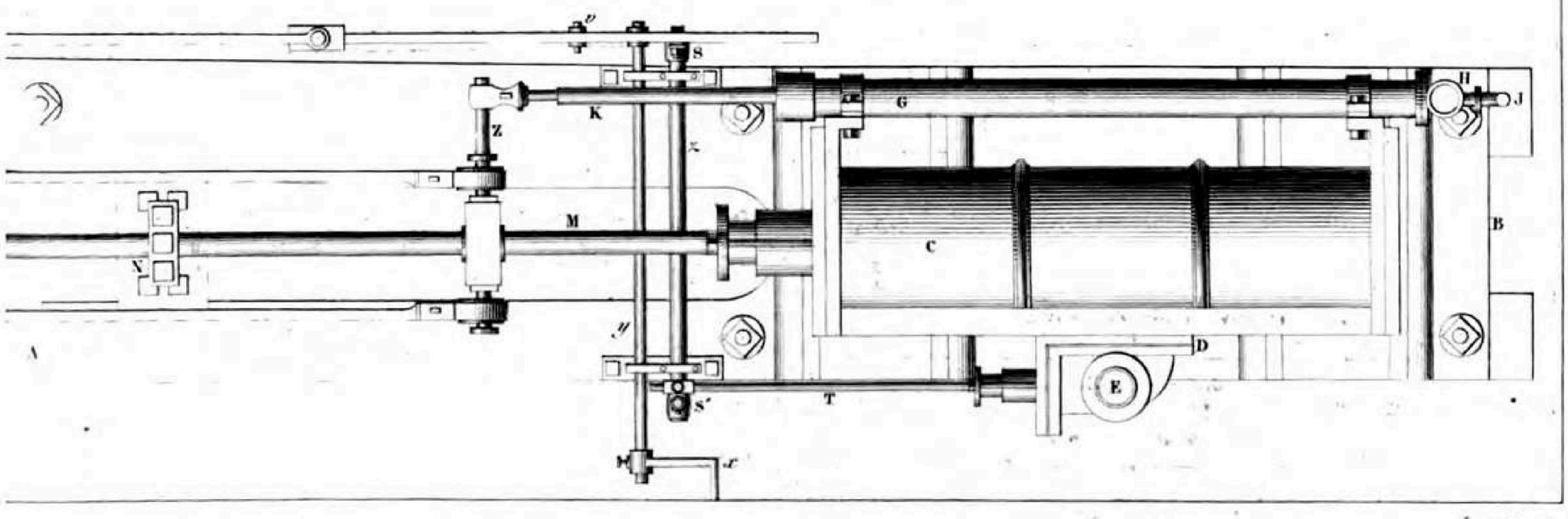


Fig. 5.





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MACHINE D'EXTRACTI

Fig. 1.

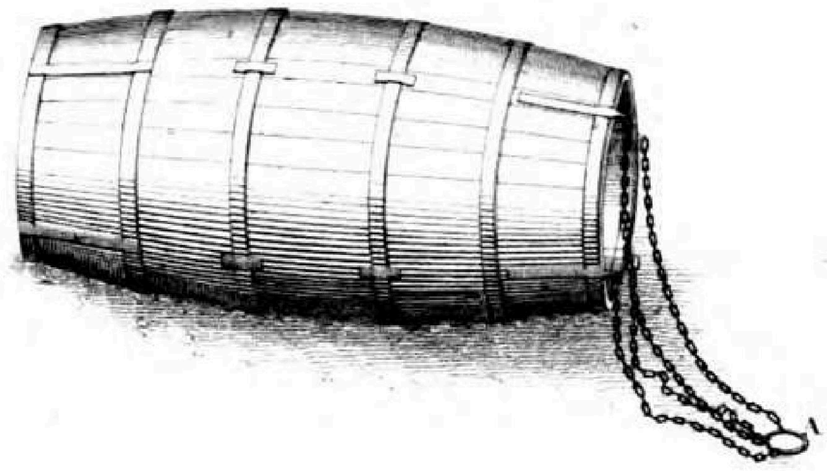


Fig.

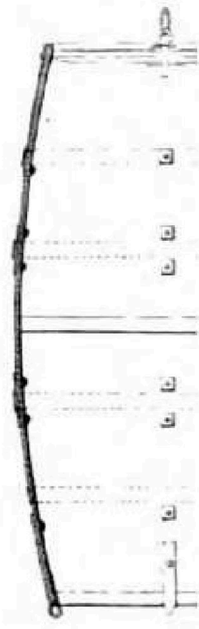
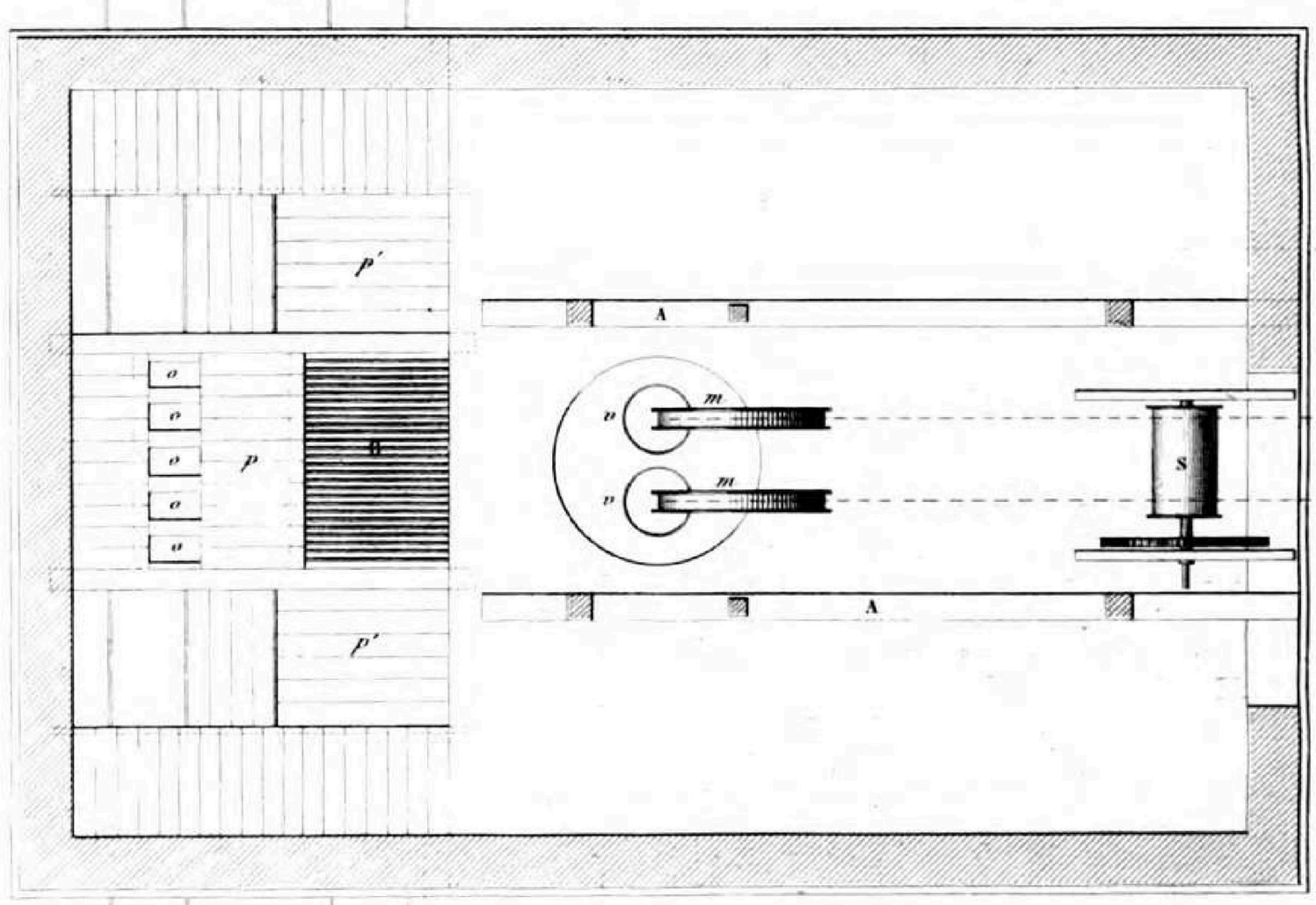


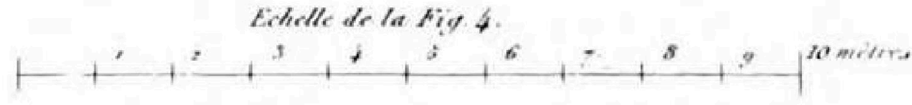
Fig.



Echelle des Fig. 1 à 3.



Echelle de la Fig. 4.

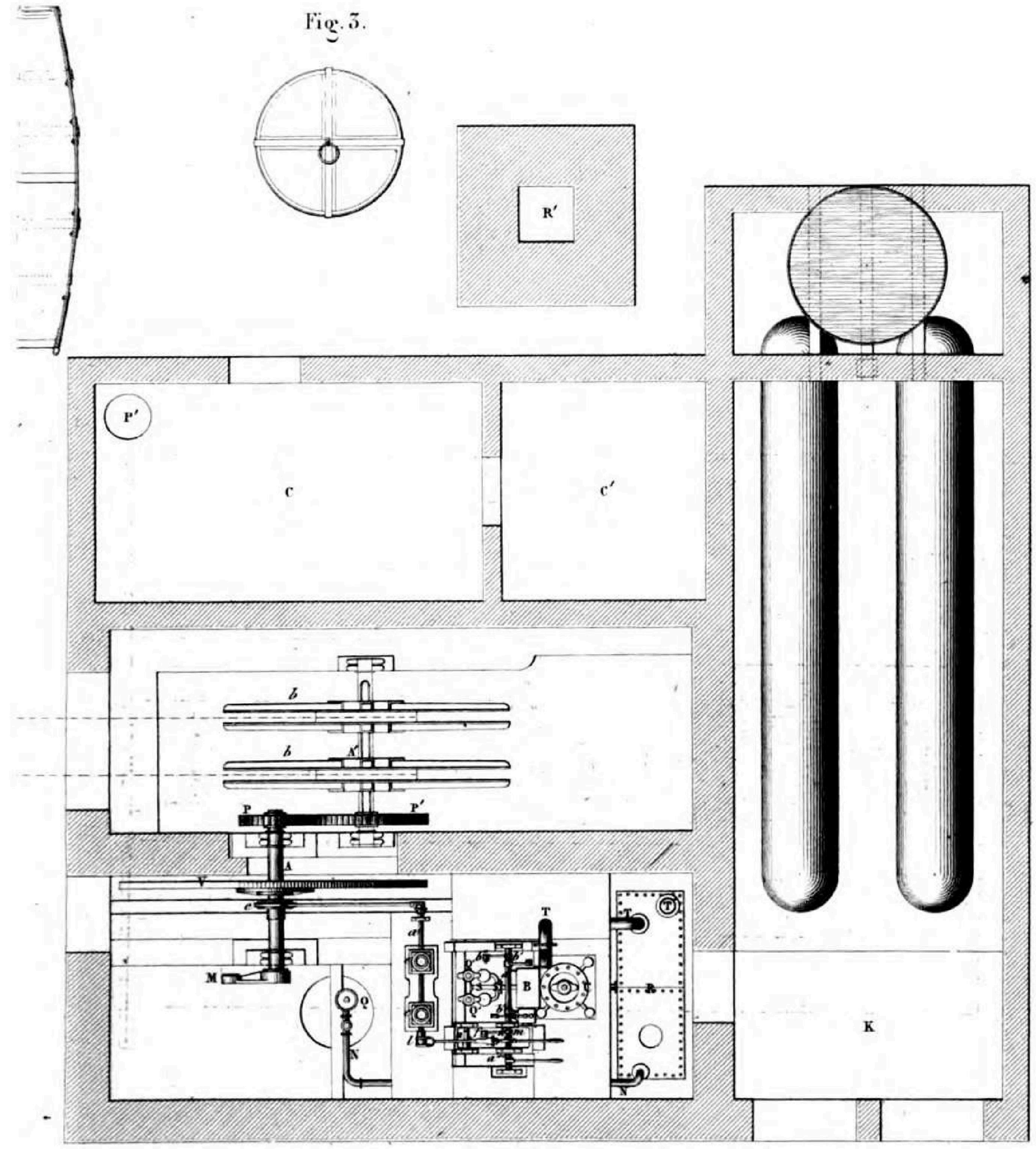


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ON DU GRAND HORNU.

PL. XLVIII.

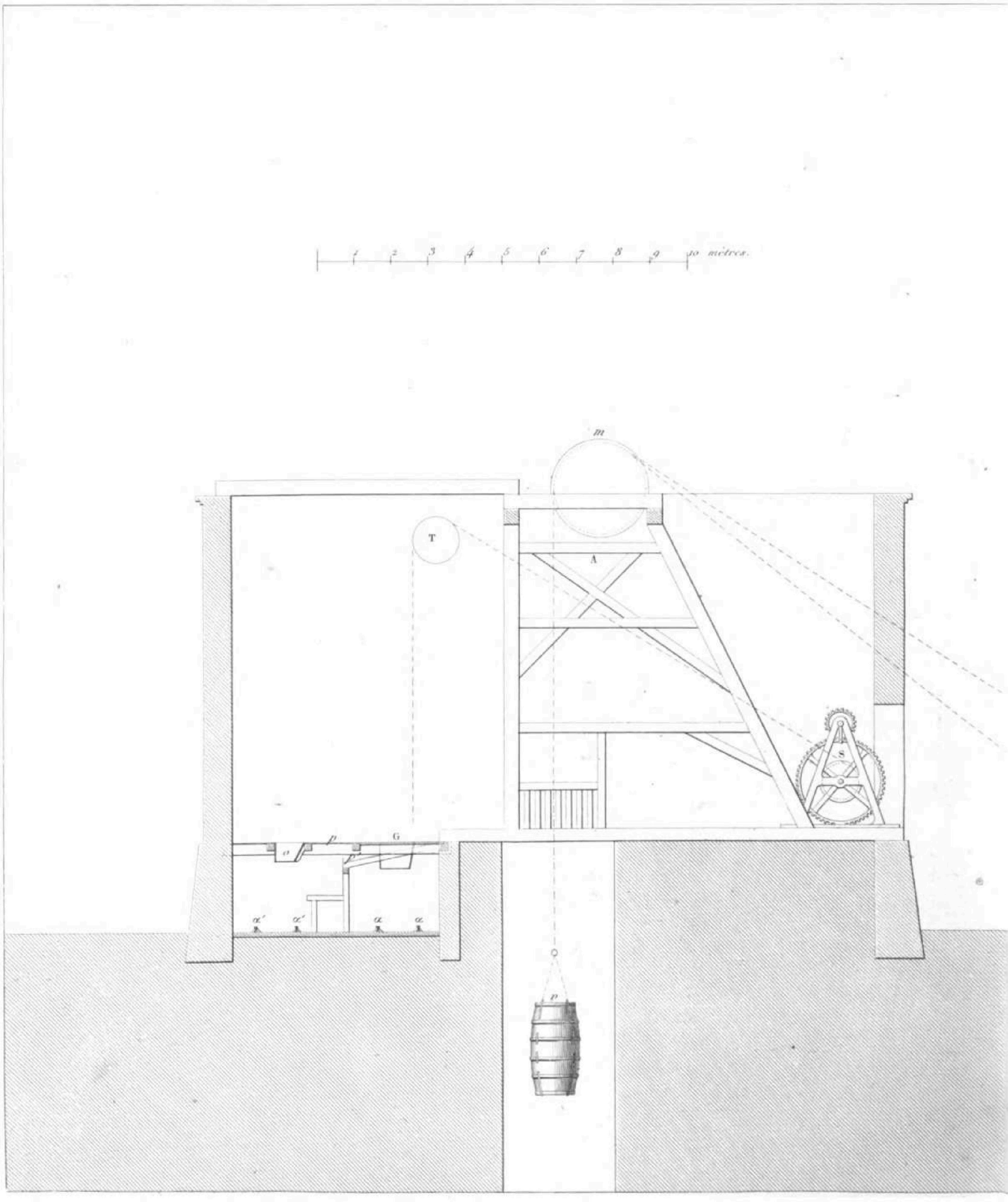
Fig. 3.



Lemaître sc.

10226132

MACHINE D'EXTRACTION



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DU GRAND HORNU.

Fig. 2.

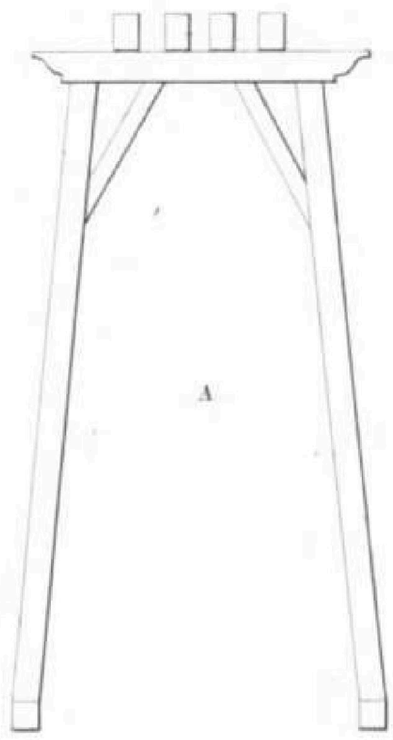


Fig. 3.

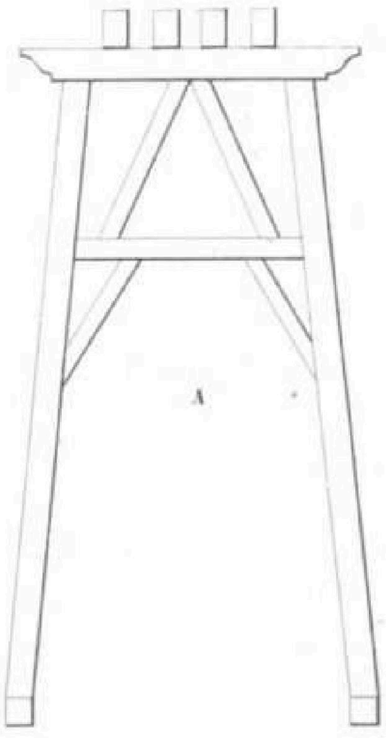
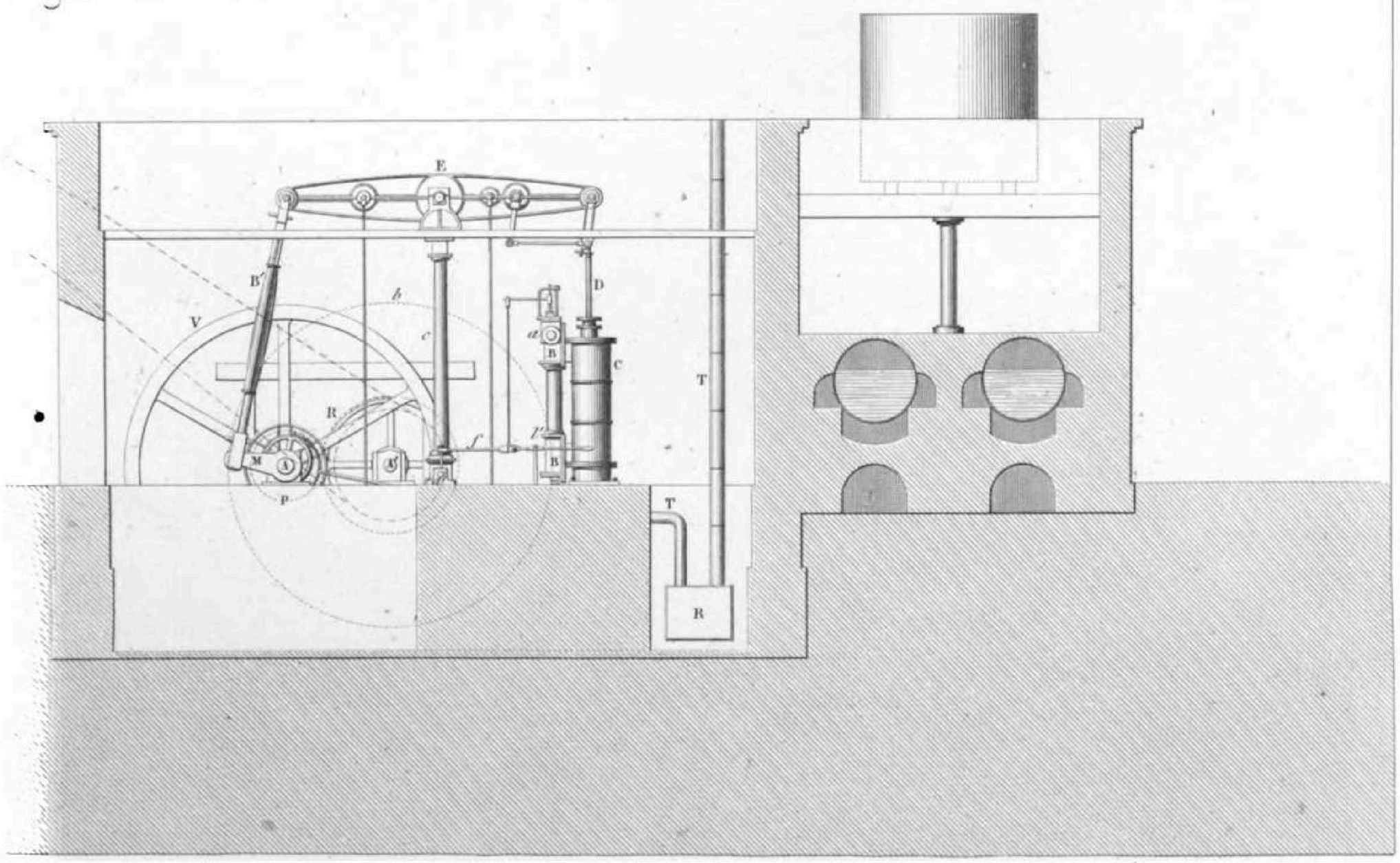


Fig. 1.

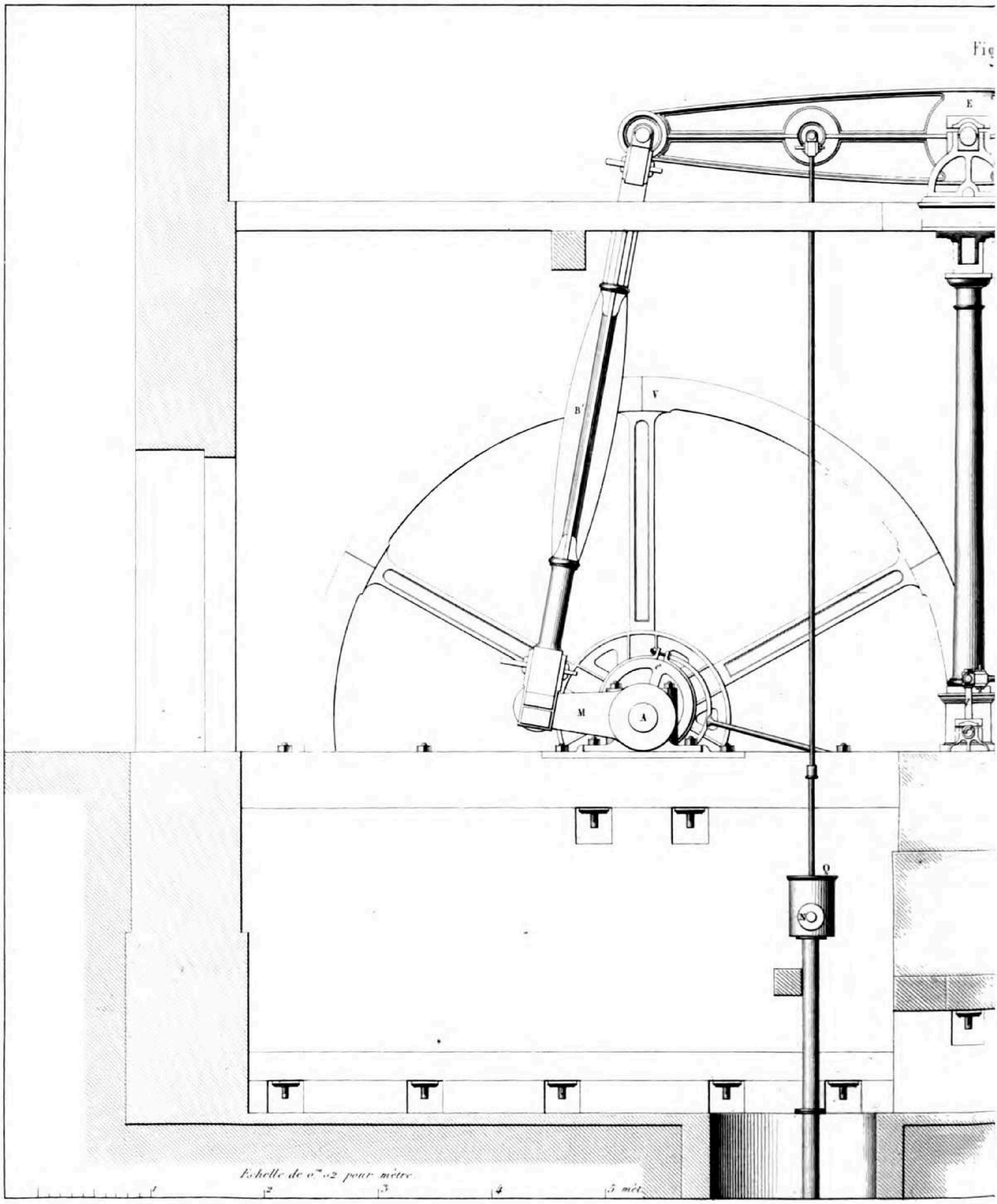


Lemaître sc.

10226132

MACHINE A VAPEUR D'EXT

Fig



10226132

RACTION DU GRAND HORNU.

PL. I.

.I.

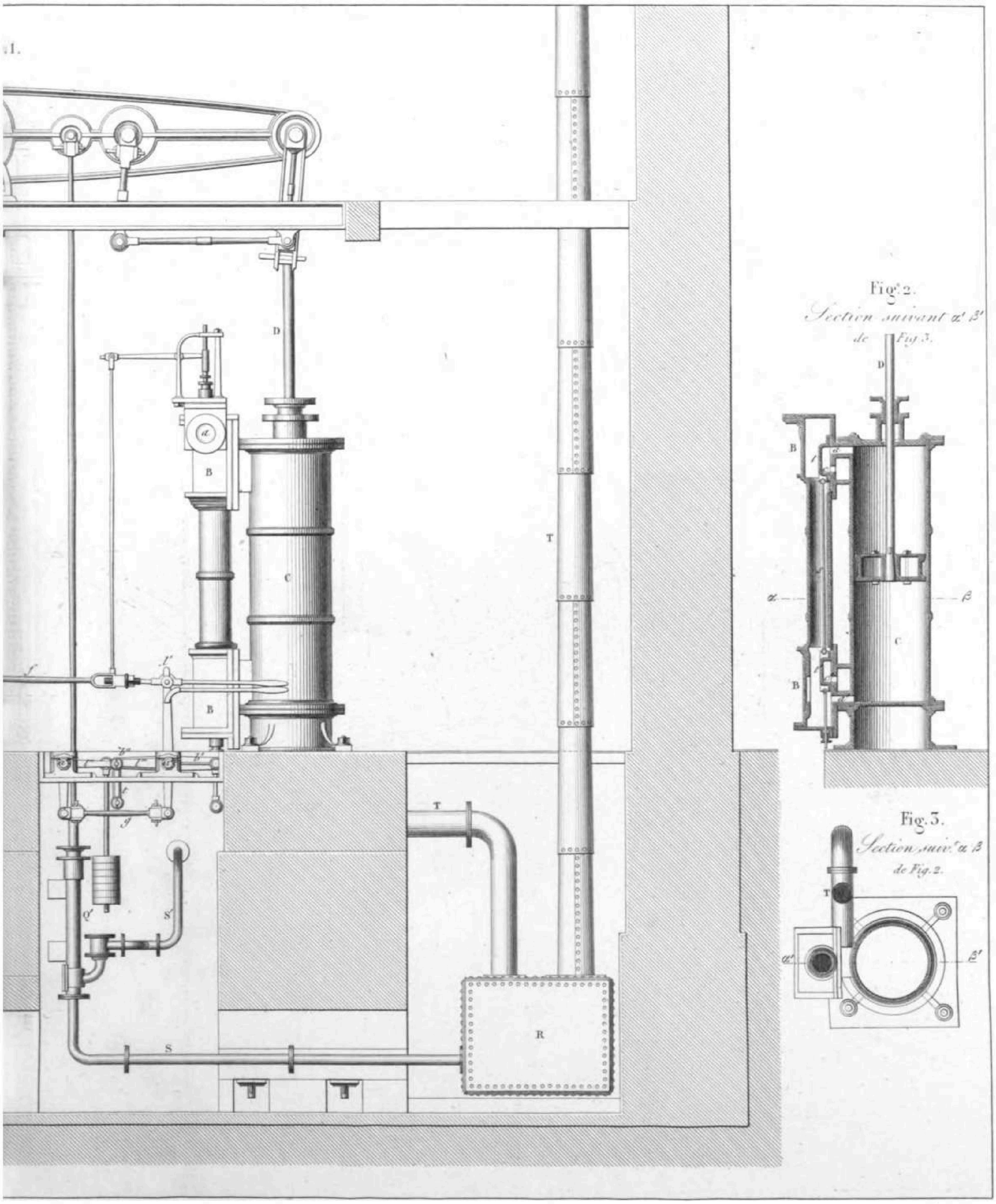


Fig. 2.
Section suivant α' β'
de Fig. 3.

Fig. 3.
Section suiv.ᵗ α β
de Fig. 2.

Lemaitre sc.

MACHINES DU HARTZ POUR MONTER ET DESCENDRE

Fig. 1.

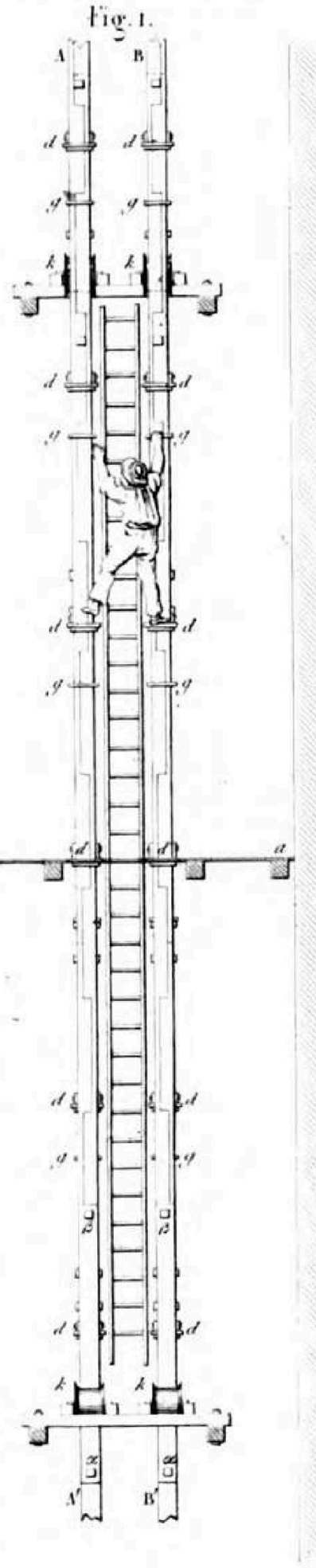


Fig. 2.

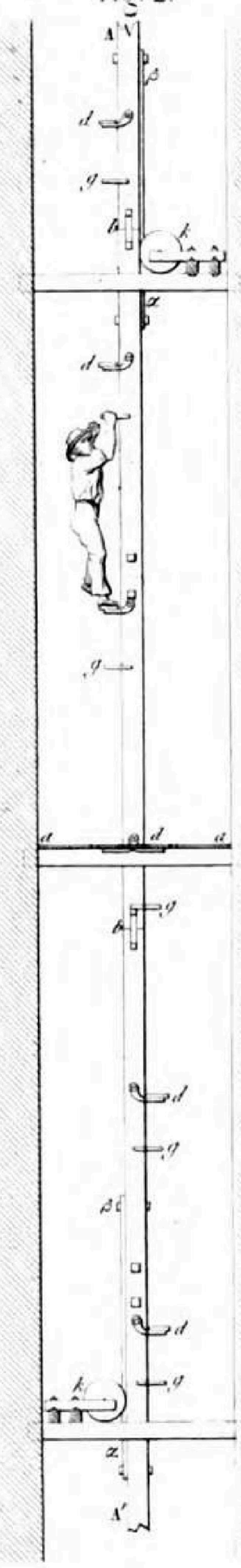


Fig. 3.

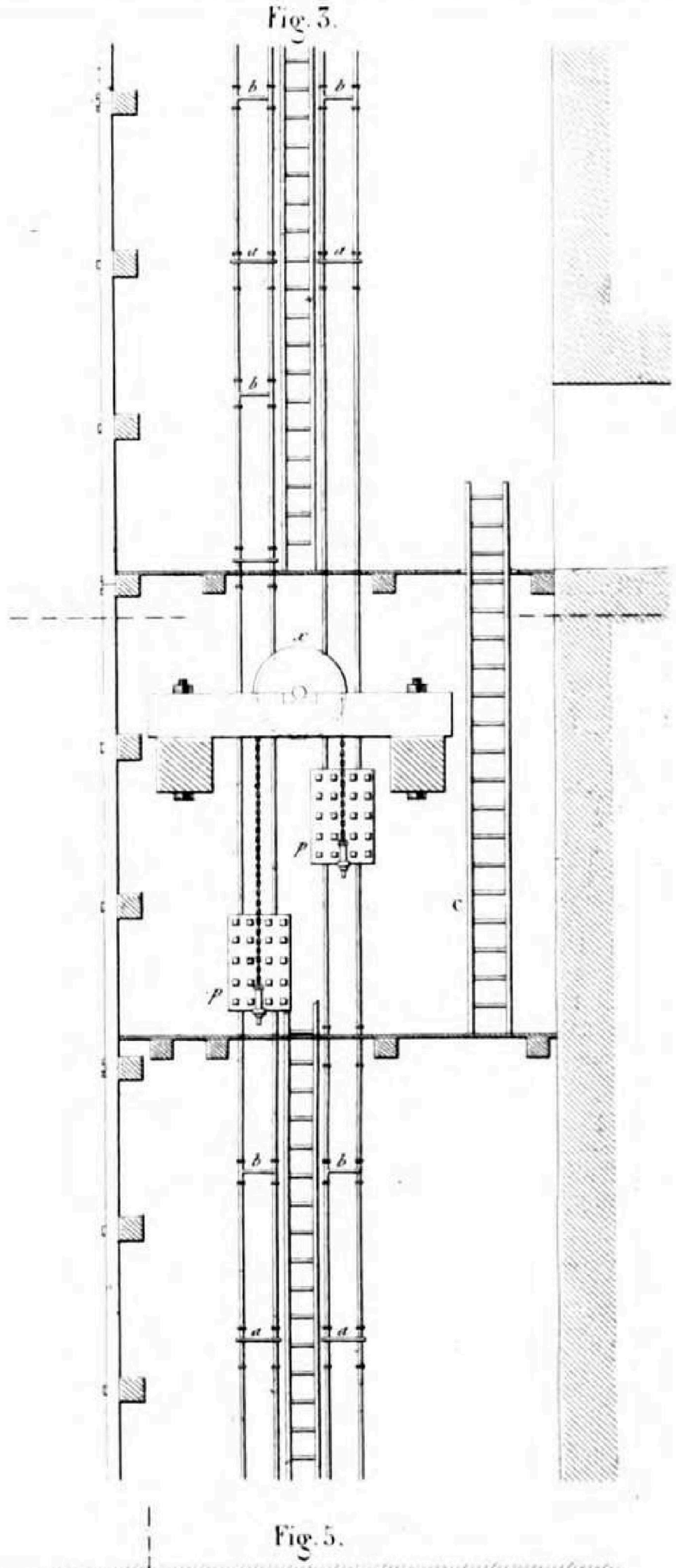
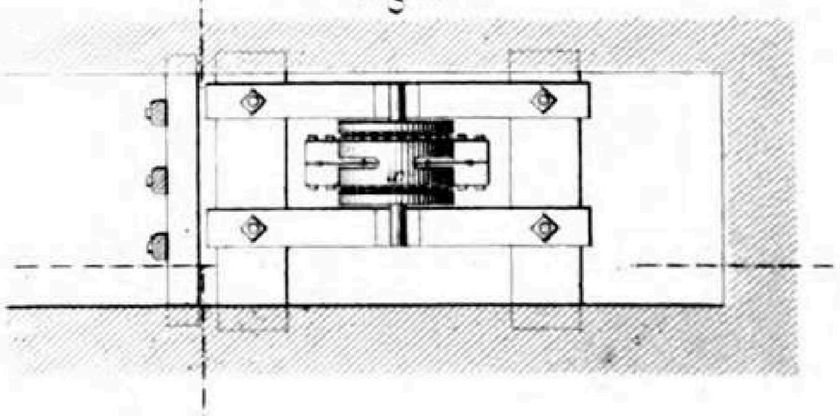


Fig. 5.



Echelle des Fig. 1 à 3.

1 mètre — 2 — 3 — 4 — 5 — 6 mètres

Fig. 4.

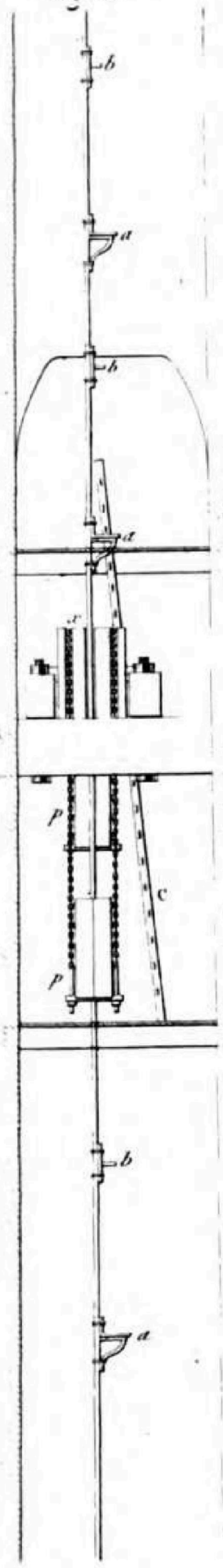


Fig. 6.

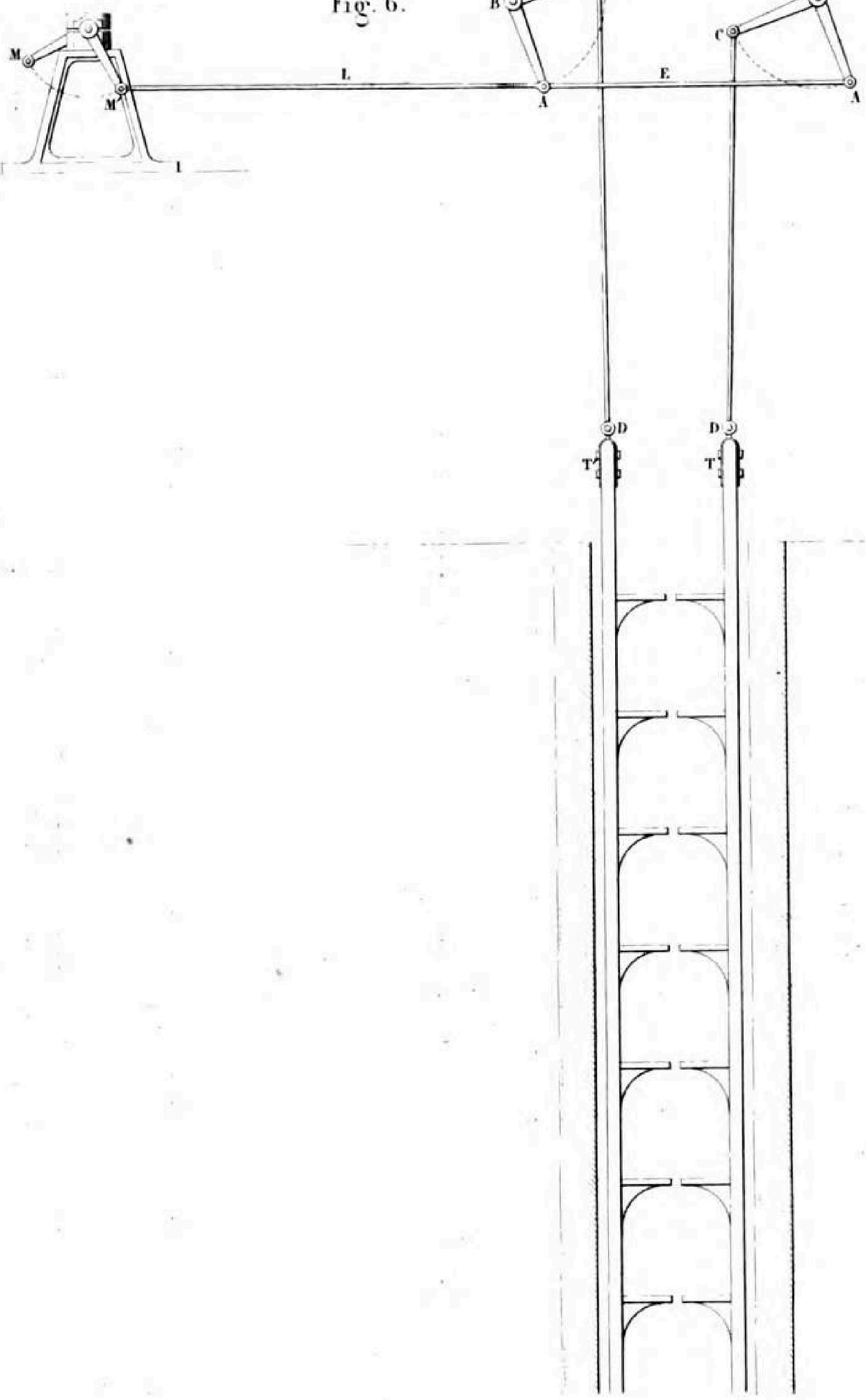
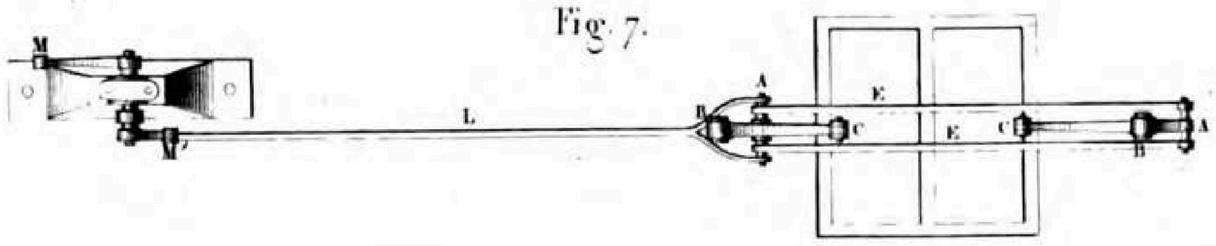


Fig. 7.



Lemaitre sc

MACHINE DE M. ABEL WAROCQUÉ.

PL. LII.

Fig. 1.

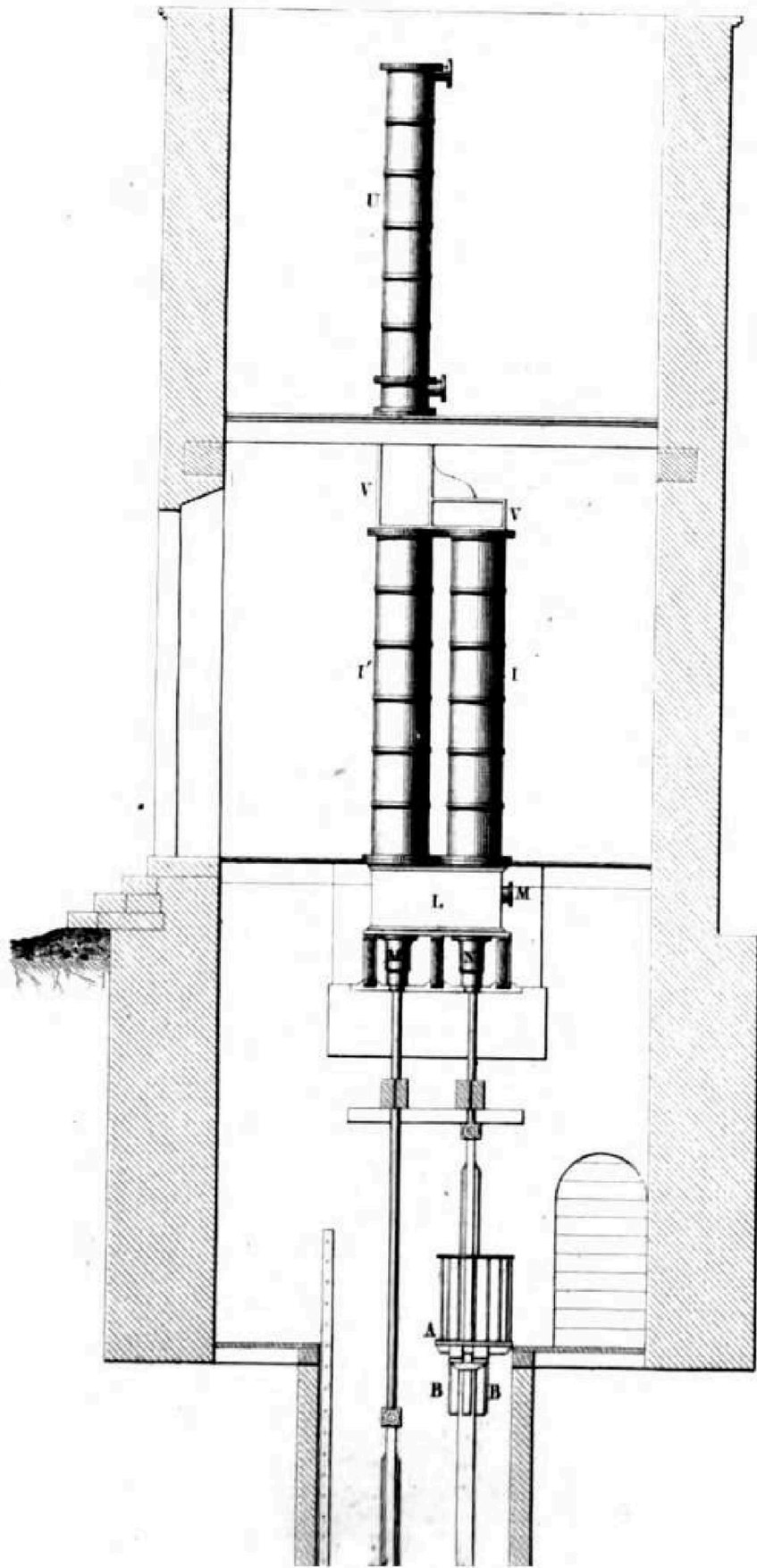


Fig. 6.

Coupe verticale passant par l'axe des deux cylindres de la fig. 1.

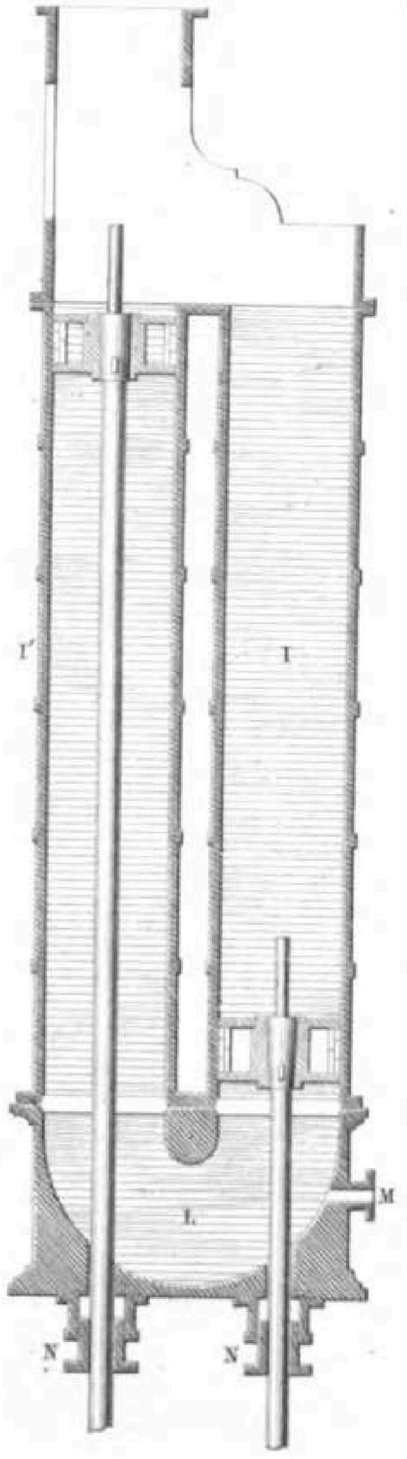
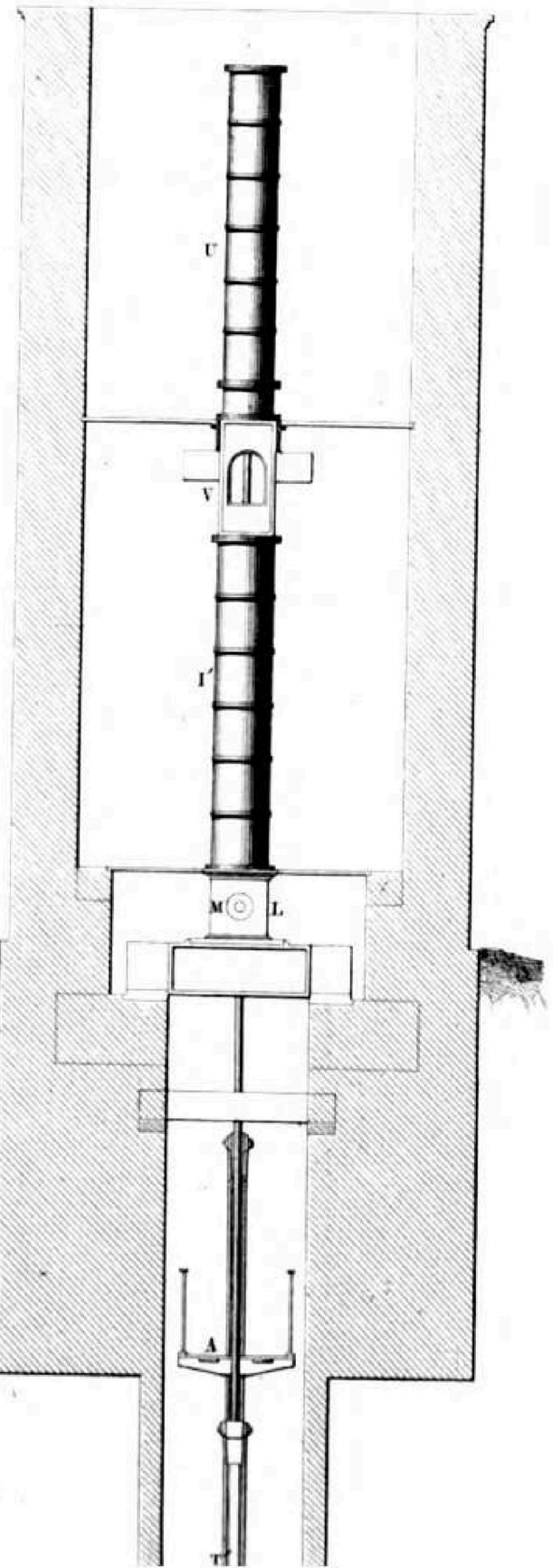


Fig. 2.



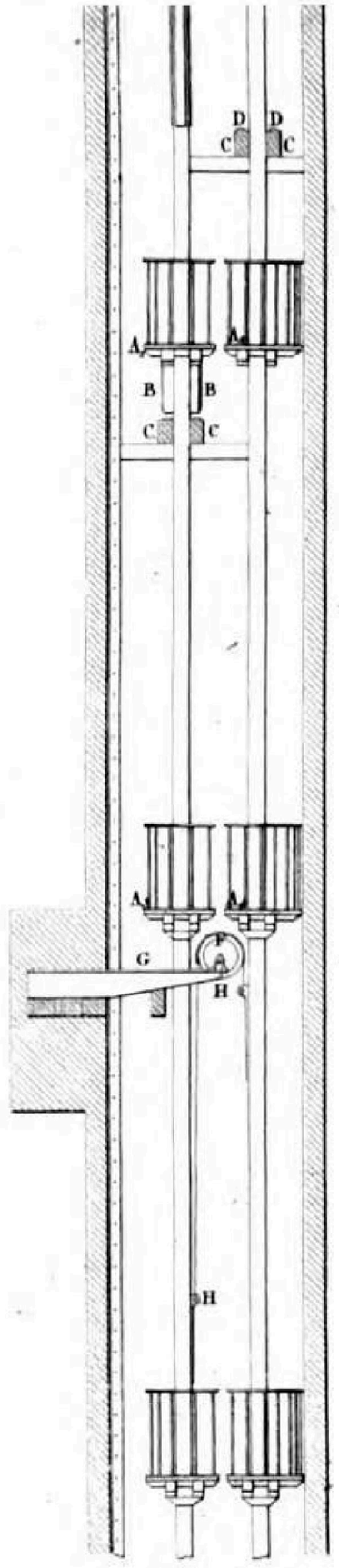


Fig. 3.

Projection verticale des plates-formes.

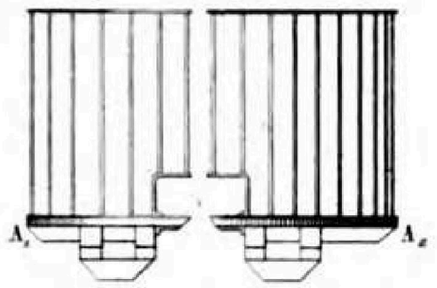
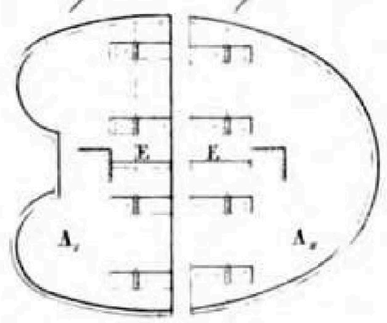


Fig. 5.

Projection horizontale des plates-formes.



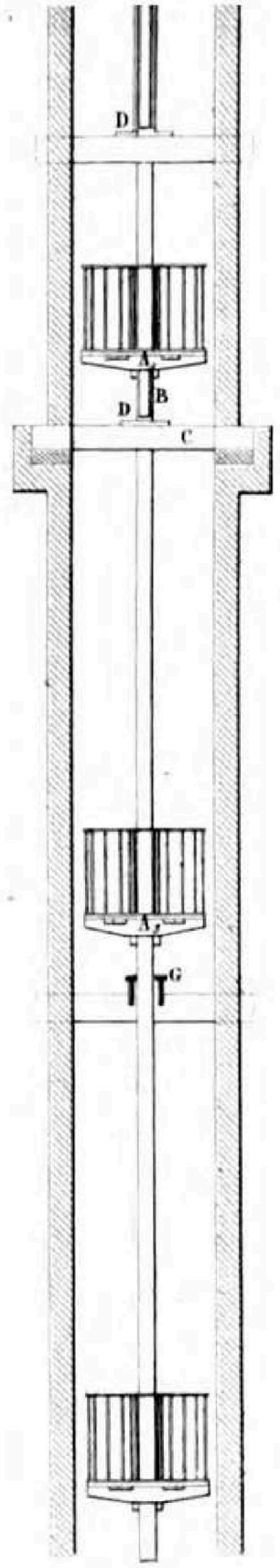
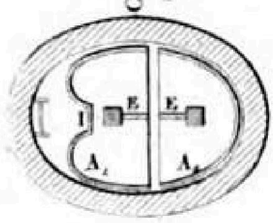


Fig. 4.



Lemaitre sc.

10226132

SEAUX ET POMPES

Fig. 1.

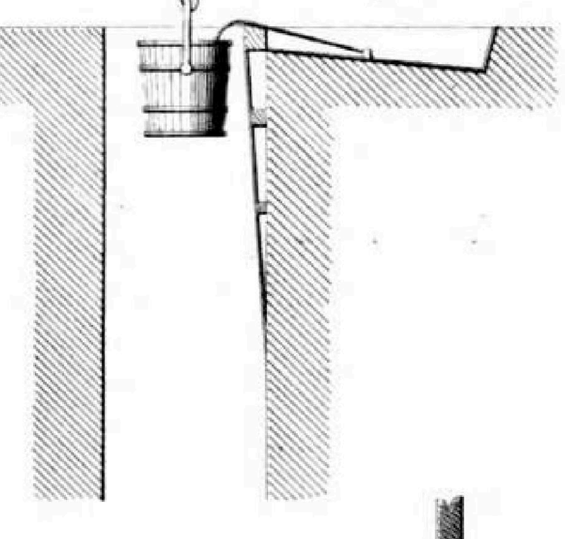


Fig. 2.

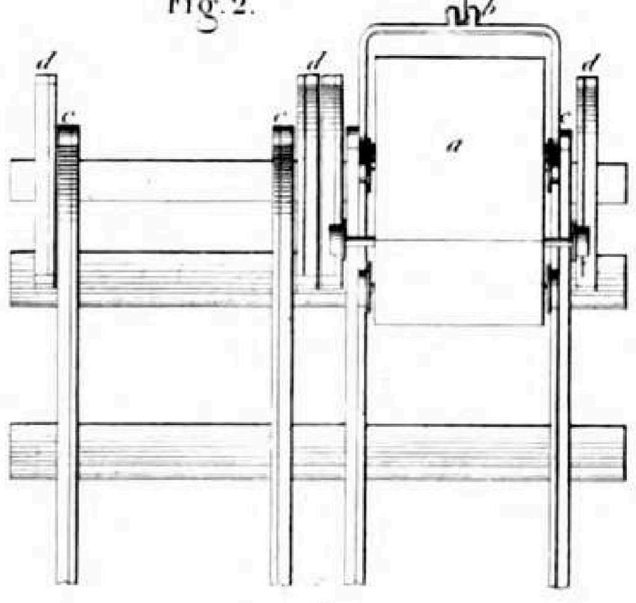


Fig. 3.

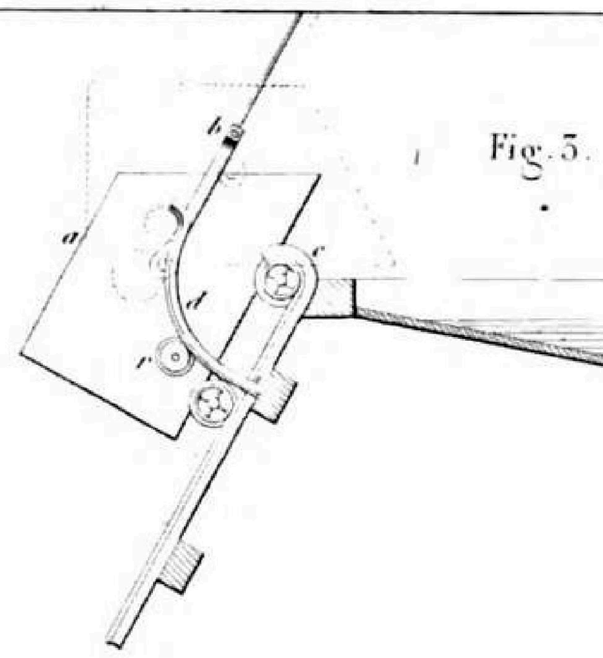


Fig. 4.

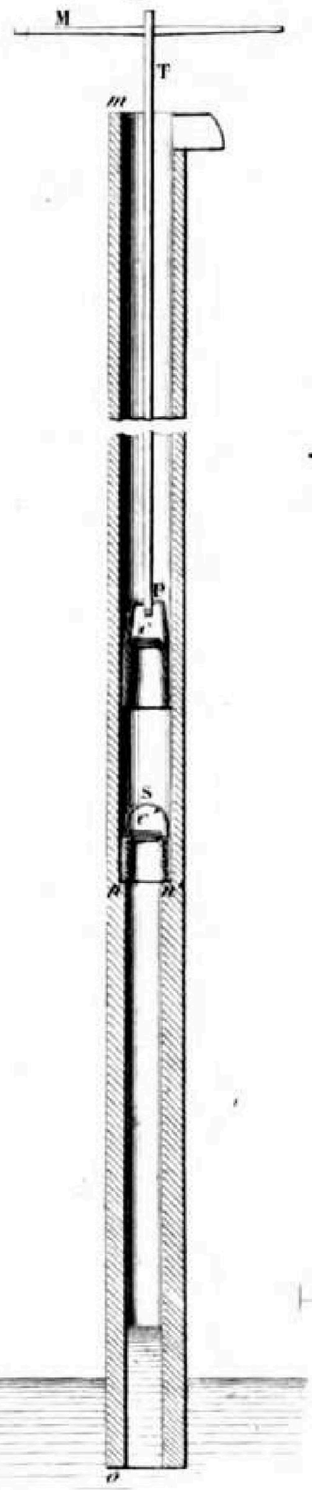


Fig. 5.

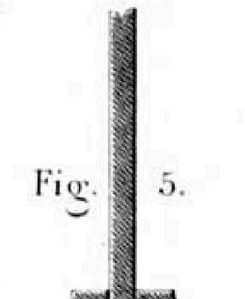


Fig. 6.

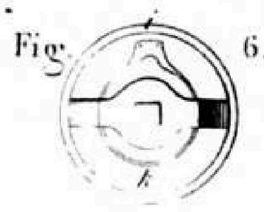


Fig. 7.

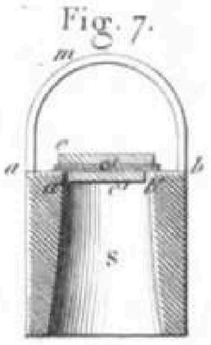


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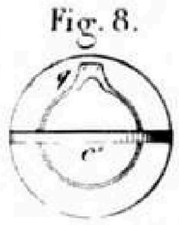


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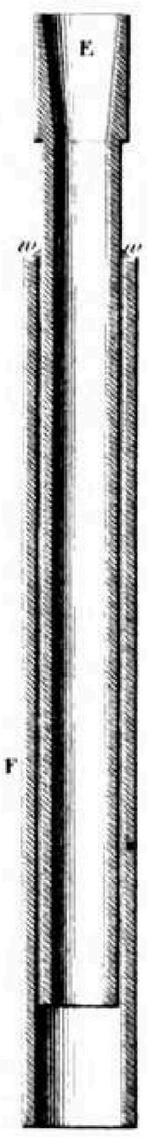


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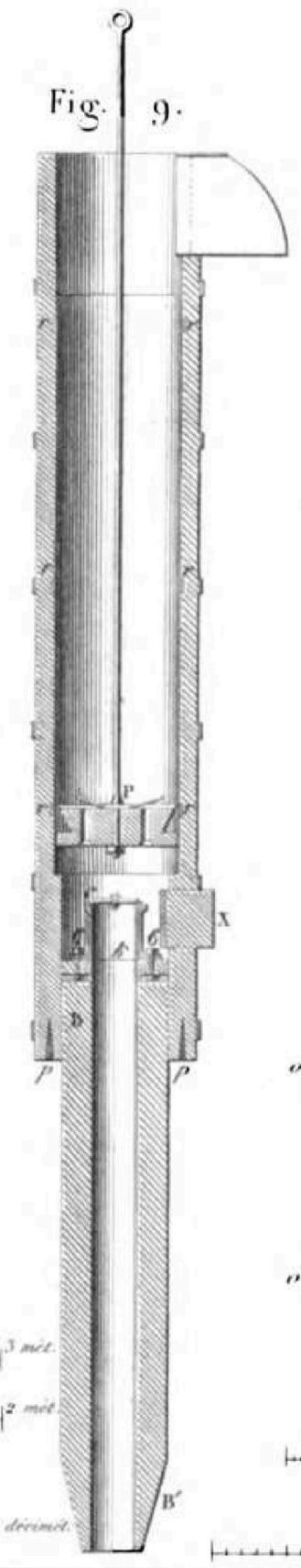


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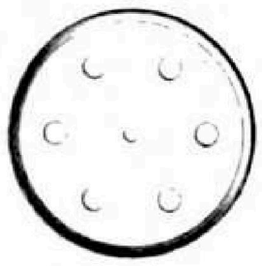


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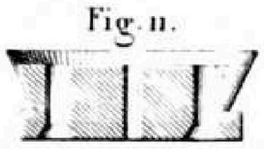


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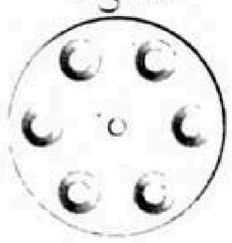


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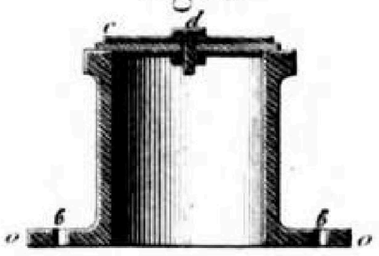


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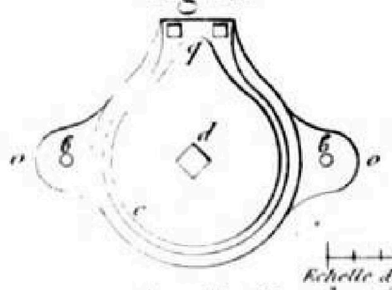


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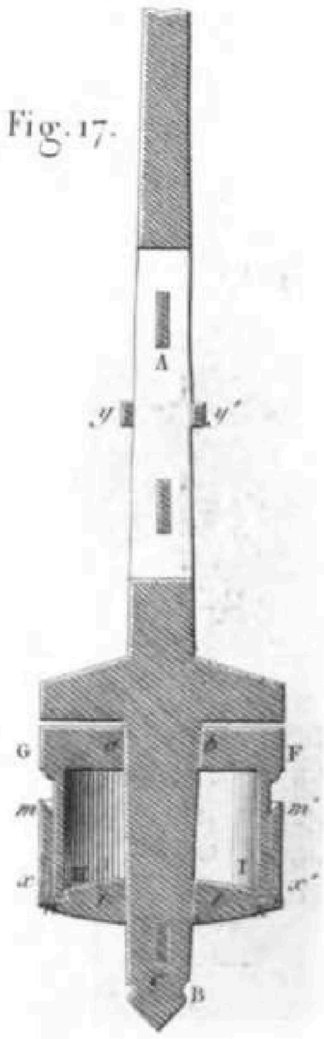
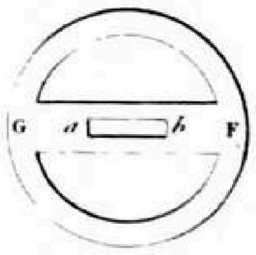


Fig. 19.



Echelle de la Fig. 1. 3 mèt.

Echelle des Fig. 2 et 3. 2 mèt.

Echelle de la Fig. 4. 1 mètre

Echelle des Fig. 5 à 8. 0,4 décimèt.

Echelle des Fig. 9 et 10.

Echelle des Fig. 11 à 13. 0,1 0,2 0,3 0,4 0,5 0,6 0,7 0,8 0,9 1 mètre.

Echelle des Fig. 14 et 15. 0,1 0,2 0,3 0,4 0,5 0,6 0,7 0,8 0,9 1

Echelle de la Fig. 16. 1 2 mètres

Echelle des Fig. 17 à 26. 0,1 0,2 0,3 0,4 0,5

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D'ÉPUISEMENT.

Fig. 16.

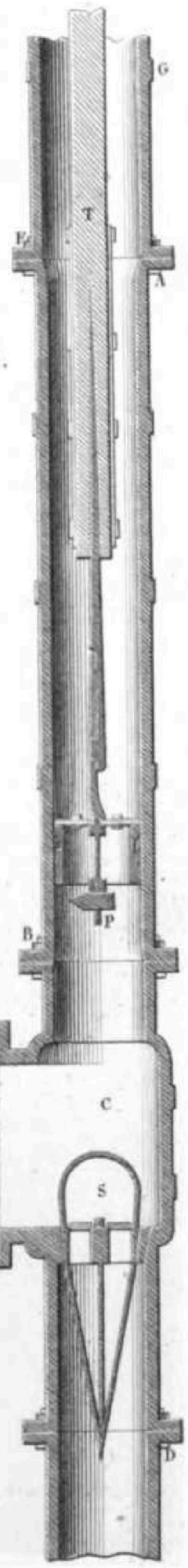


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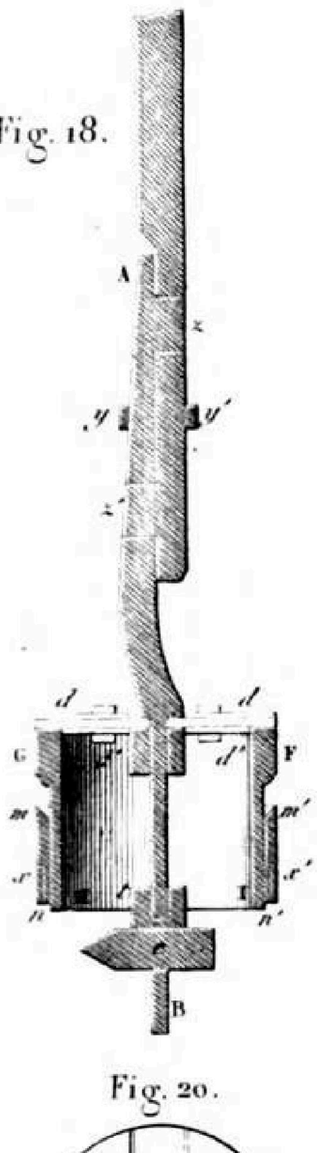


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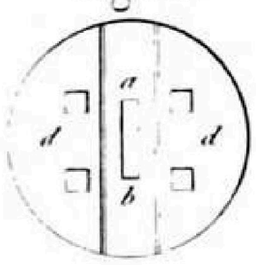
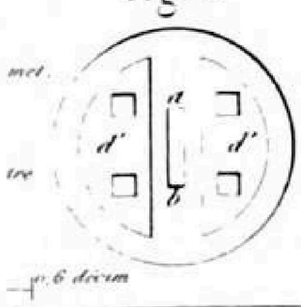


Fig. 21.



gr. 6 décim

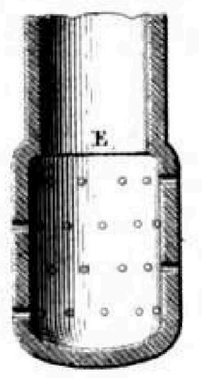


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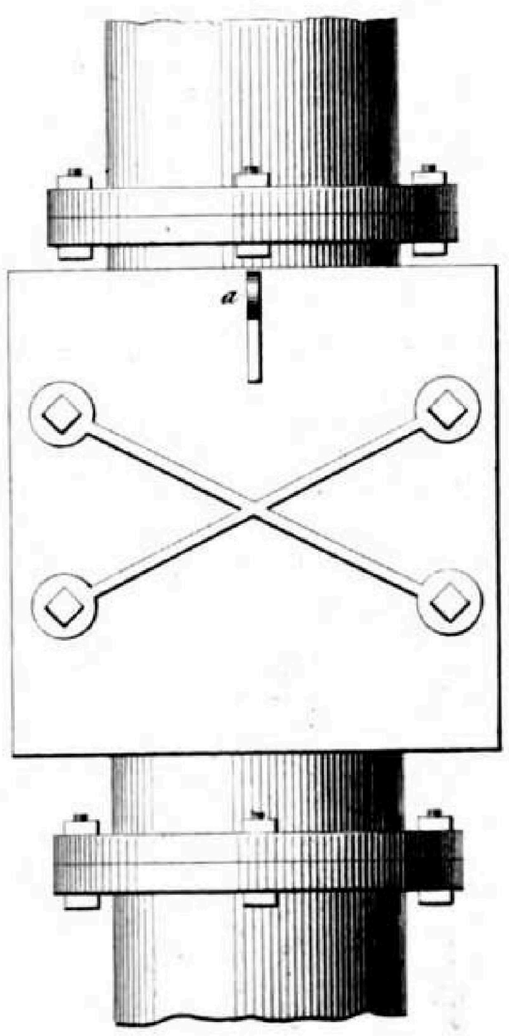


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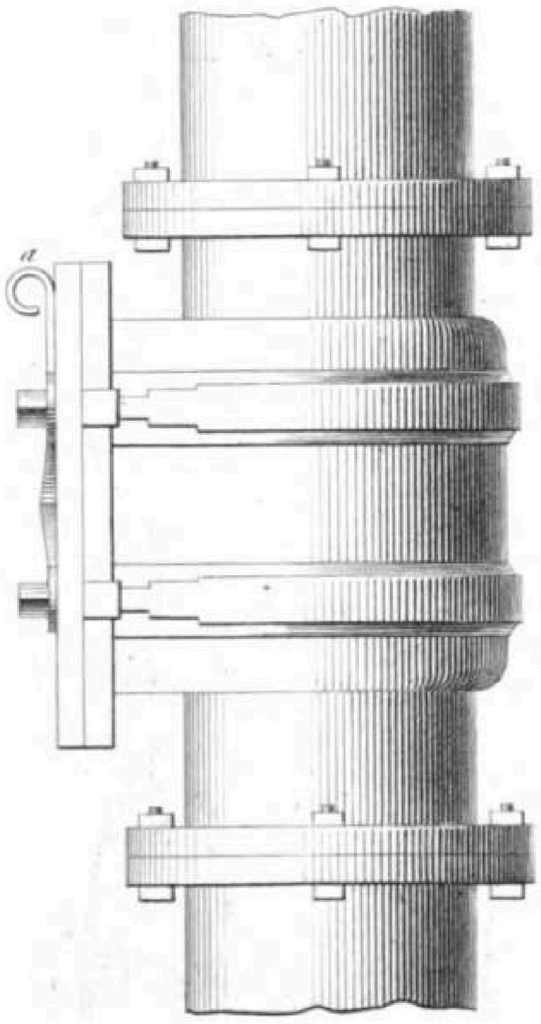


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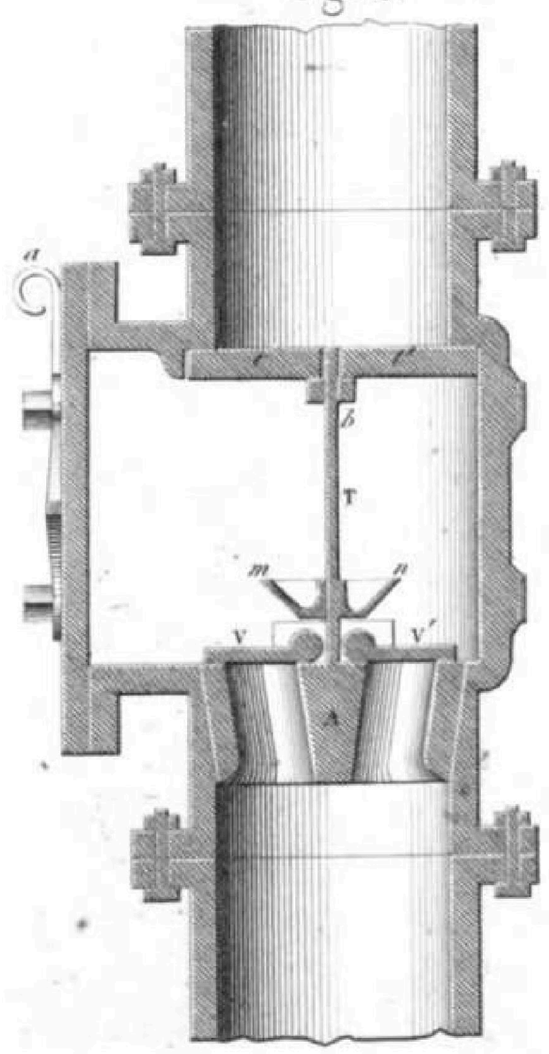


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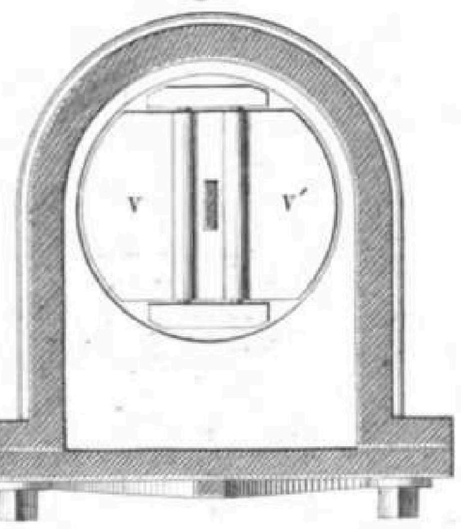
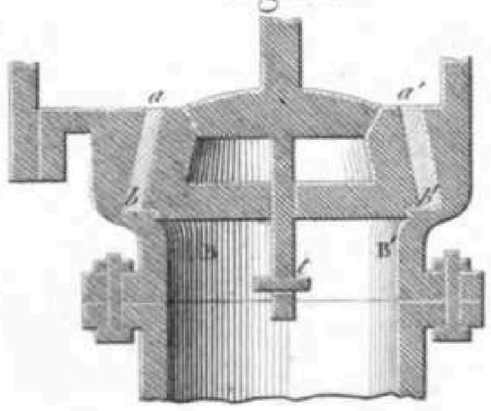


Fig. 26.



Lemaitre sc.

10226132

Fig. 1.

Echelle de la Fig. 1.

1 mètre.

Fig. 2.

Fig. 9.

Fig. 3.

Fig. 4.

Fig. 5

Fig. 6.

Fig. 7.

Fig. 8.

Fig.

Fig.

Fig.

Echelle des Fig. 2, 9, 10 et 11.

1 2 mètre.

Echelle des Fig. 3 à 8 et 12 à 14.

0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 mètre.

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.PUISEMENT.

PL. LIV.

Fig 10.

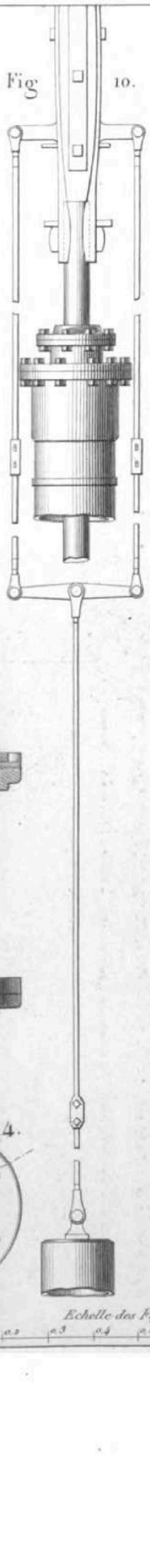


Fig. 11.



Fig. 15.

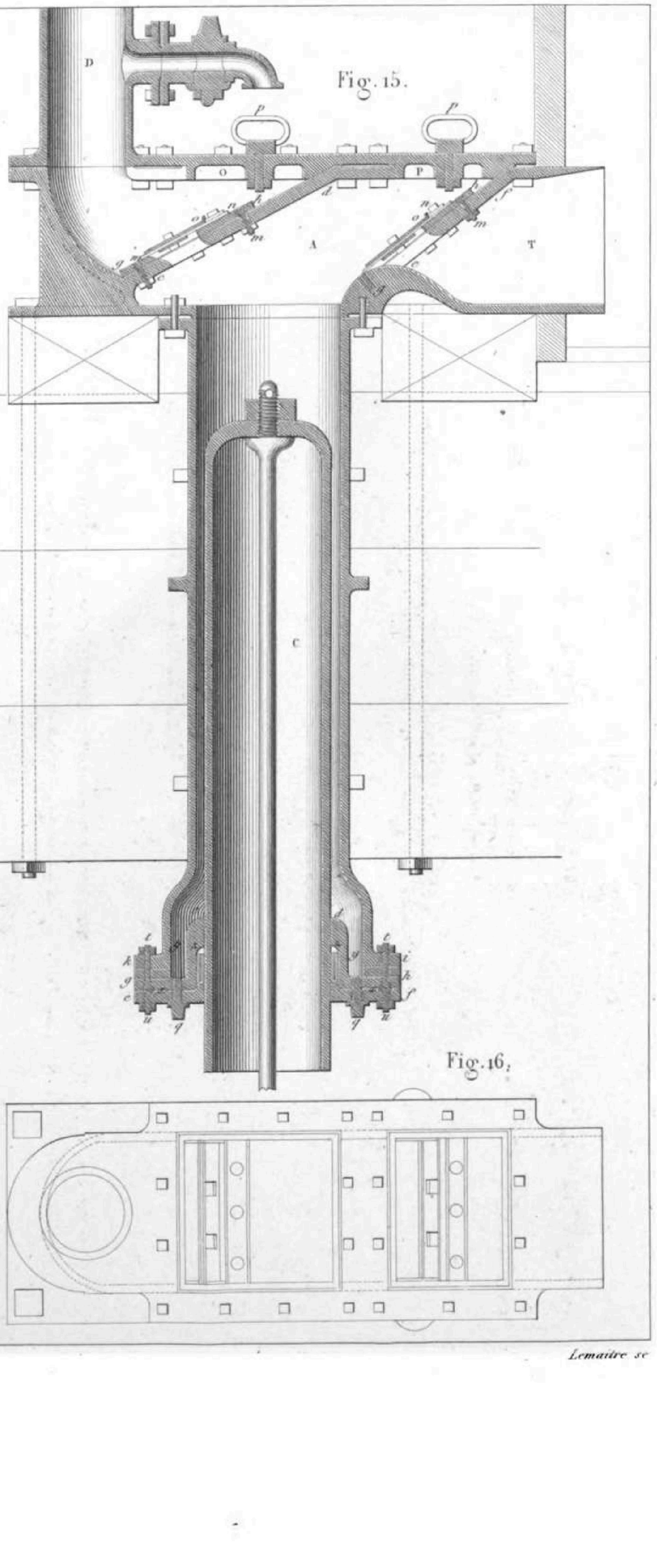
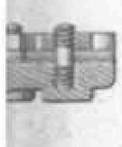
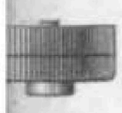


Fig. 16.

12.



13.



14.



Echelle des Fig. 15 et 16.

0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 mètre.

Lemaitre sc

10226132

Fig. 1.

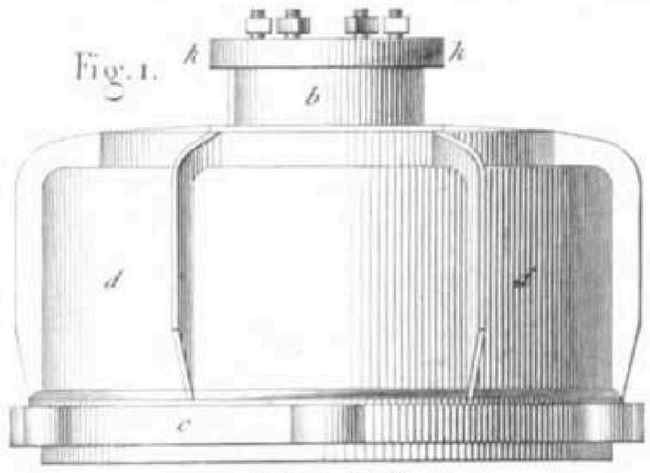


Fig. 3.

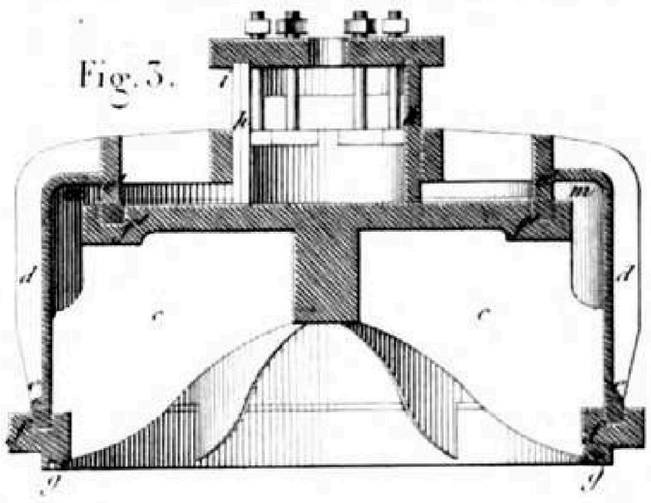


Fig. 4.

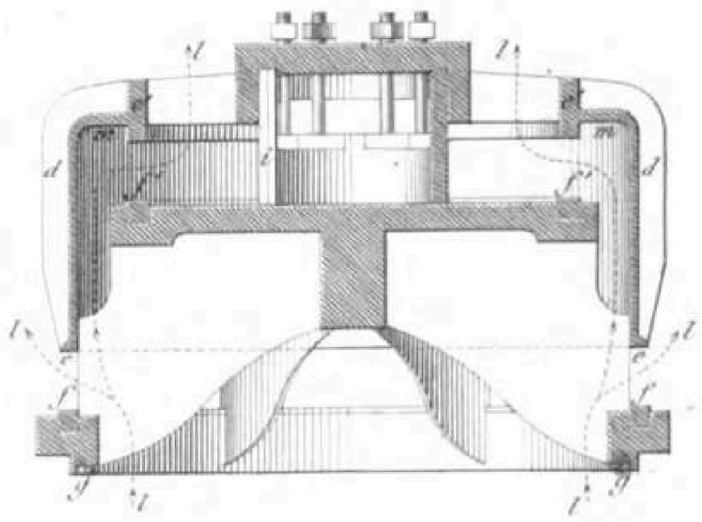


Fig. 2.

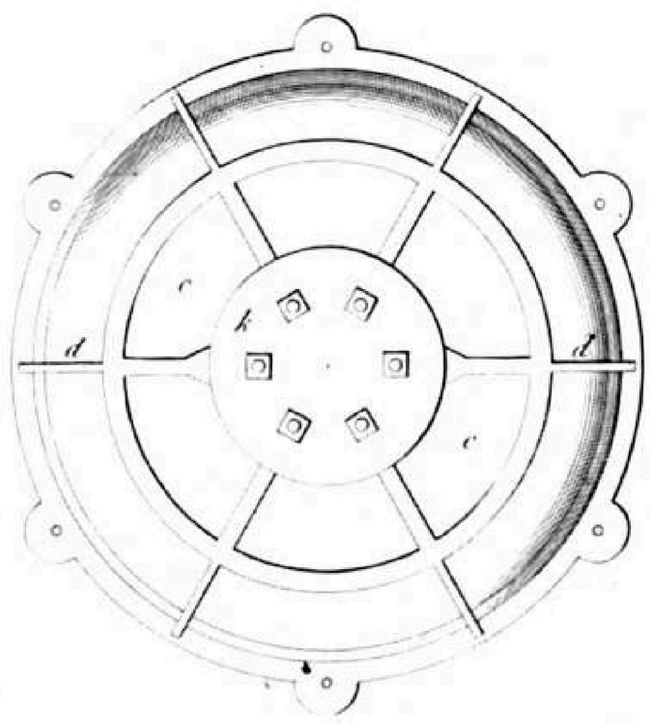


Fig. 5.

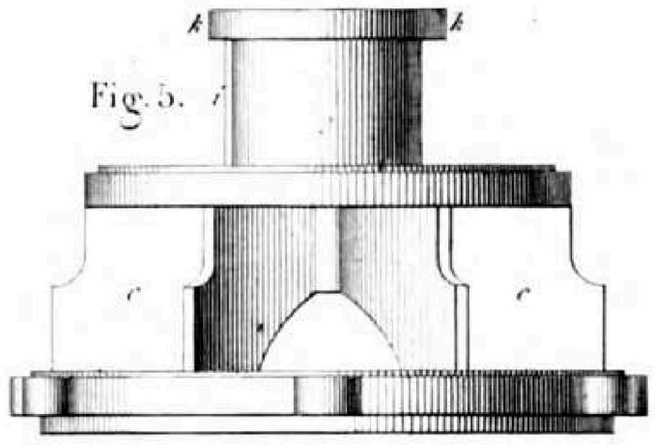


Fig. 7.

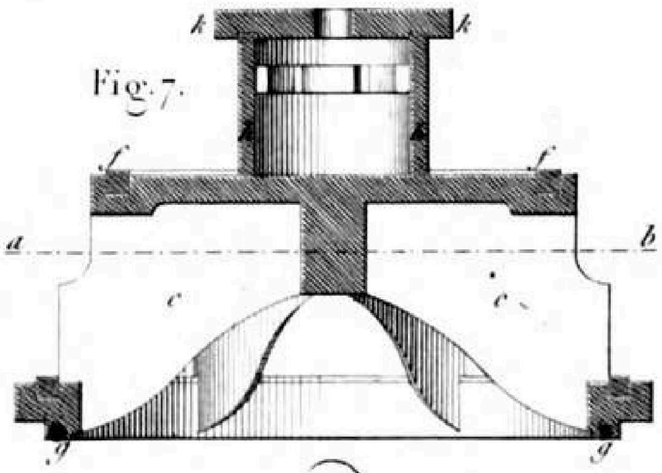


Fig. 6.

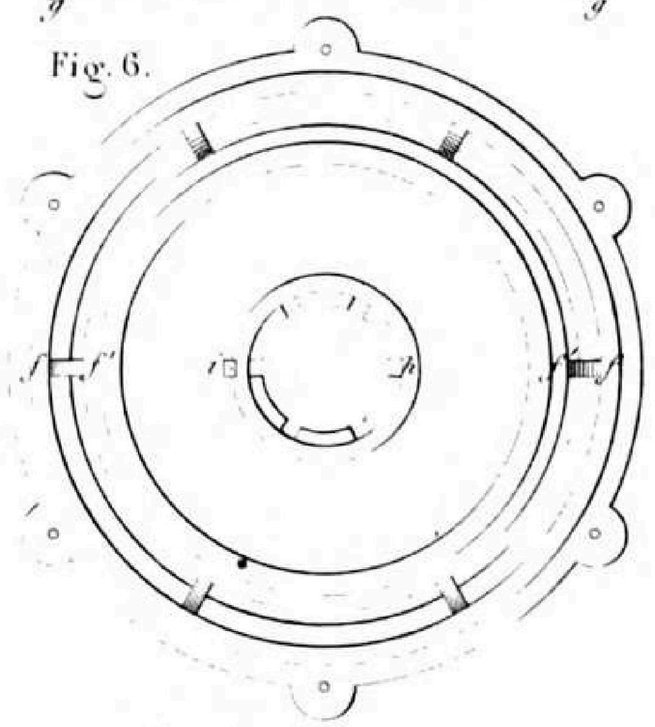


Fig. 8.

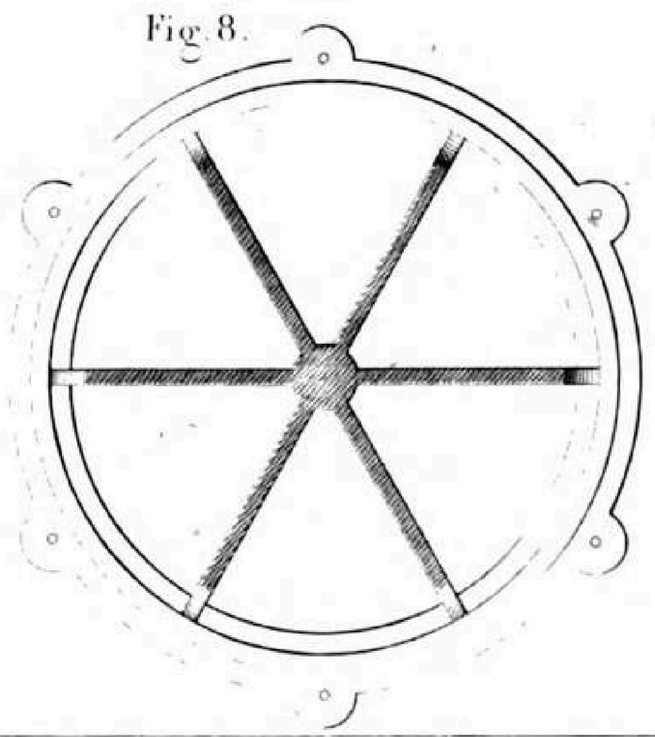


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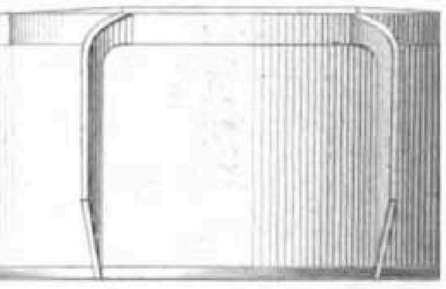


Fig. 11.

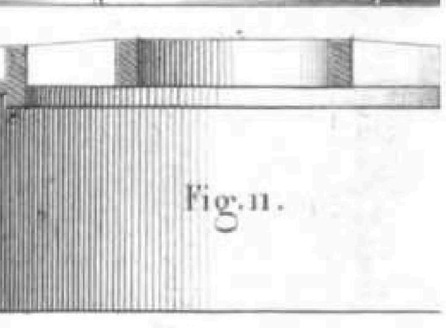
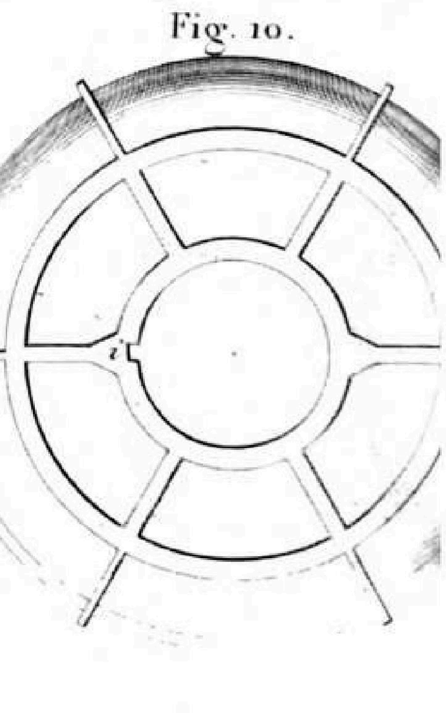


Fig. 10.



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ES D'ÉPUISEMENT.

PL. IV.

Fig. 12.

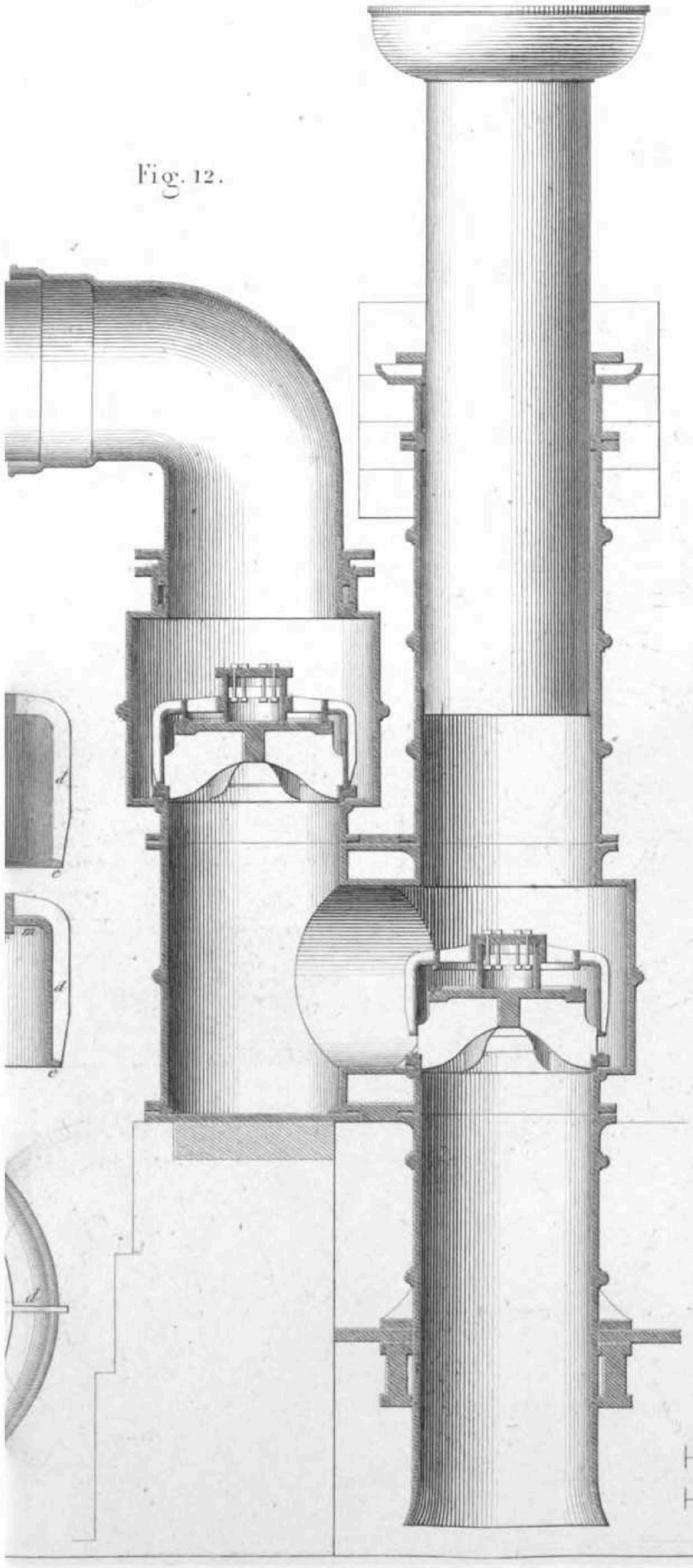


Fig. 13.

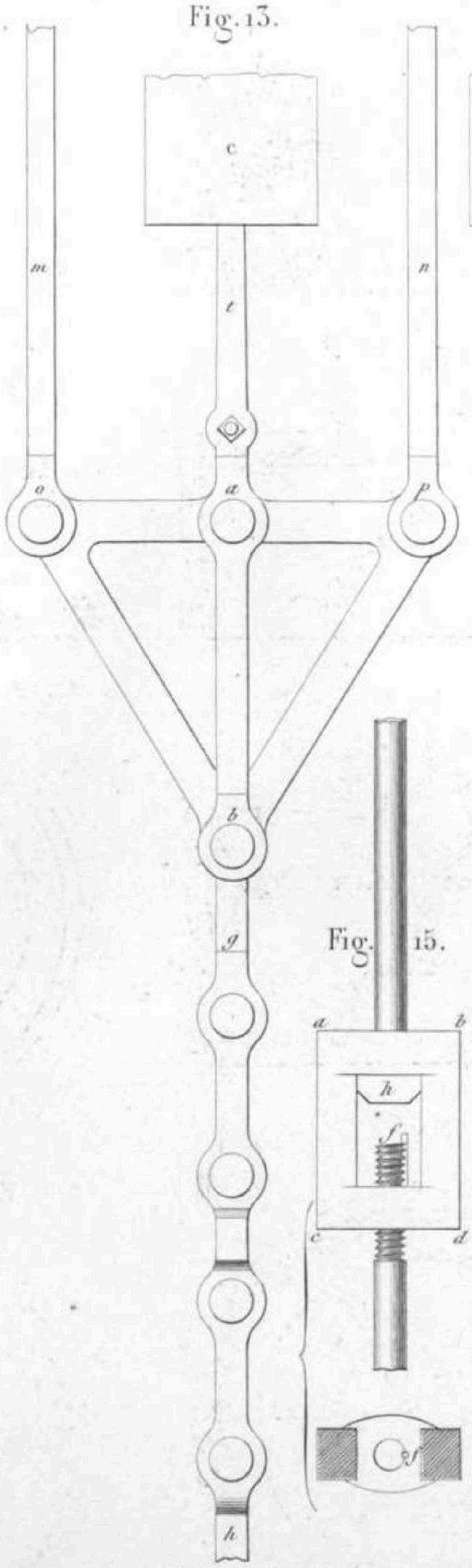


Fig. 14.

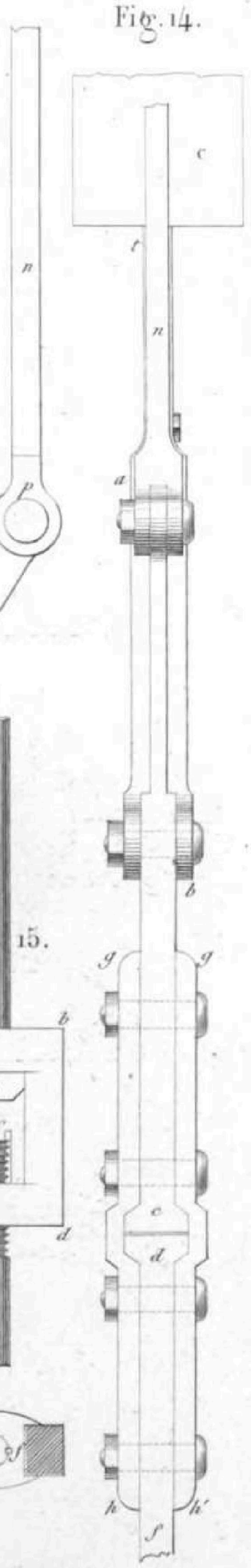


Fig. 15.

Echelle des Fig. 1 à 11.

0,1 0,2 0,3 0,4 0,5 0,6 0,7 0,8 0,9 1 mètre.

Echelle de la Fig. 12.

1 2 mètres.

Echelle des Fig. 13 à 15.

Lemaître sc.

ÉTABLISSEMENT DES POMPES DANS LES PUITS PROFONDS. MACHINE A COLONNE D'EAU.

PL. LVI.

Fig. 1.

Fig. 2.

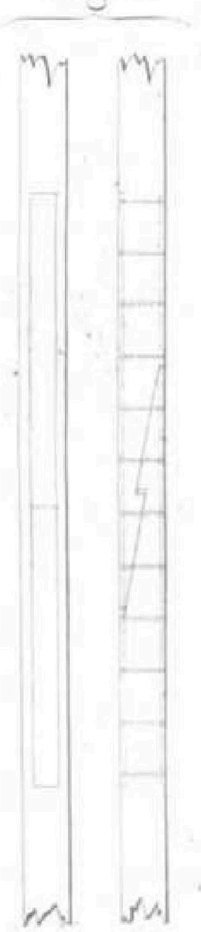


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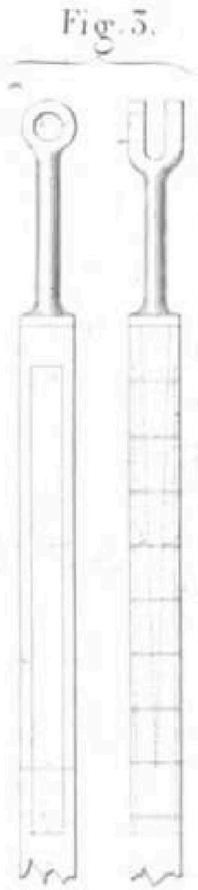


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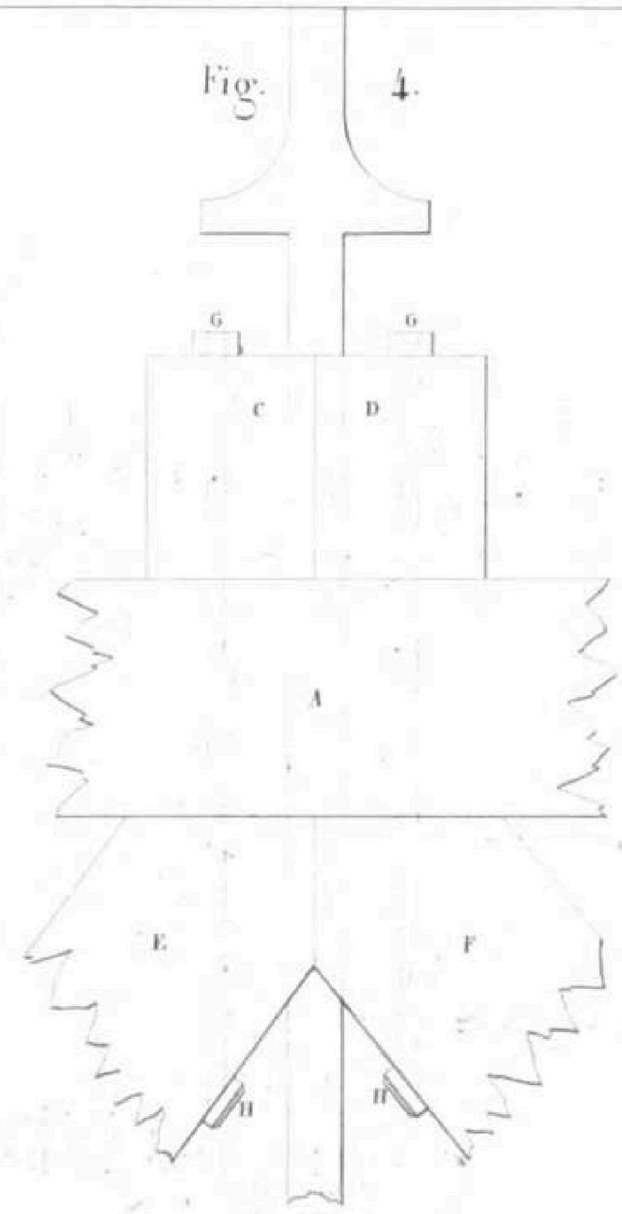


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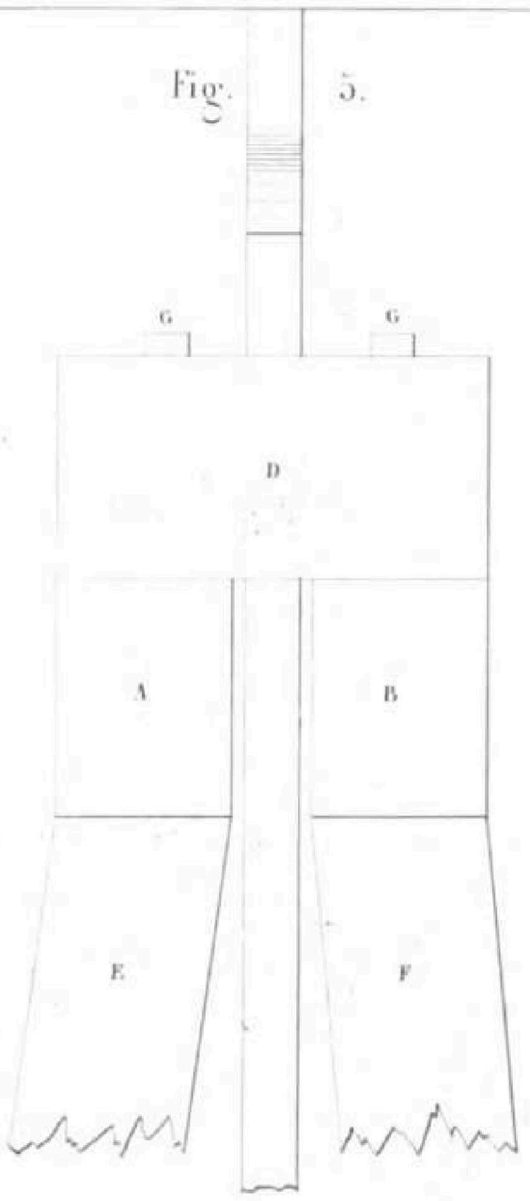


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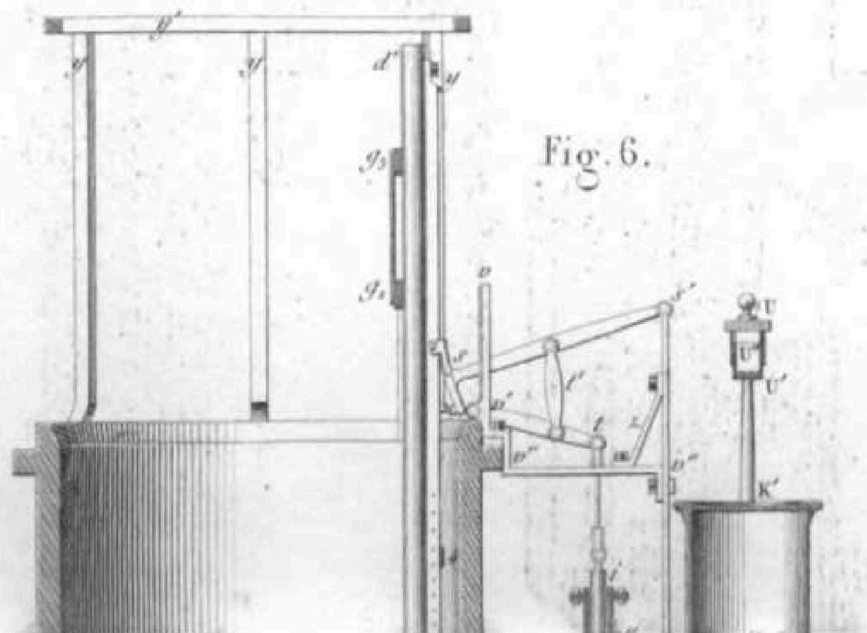
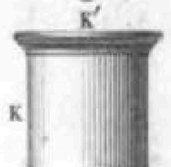


Fig. 8.



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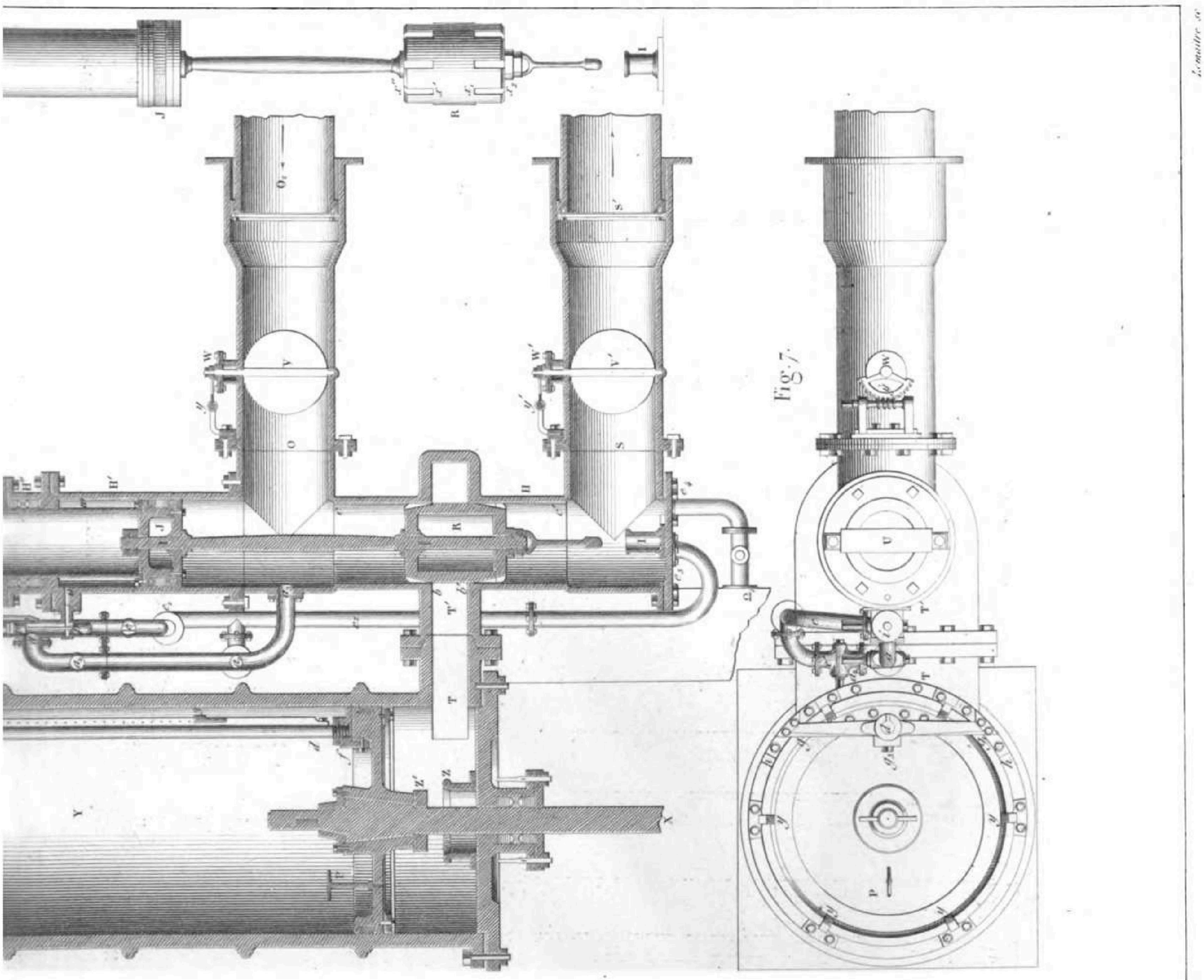
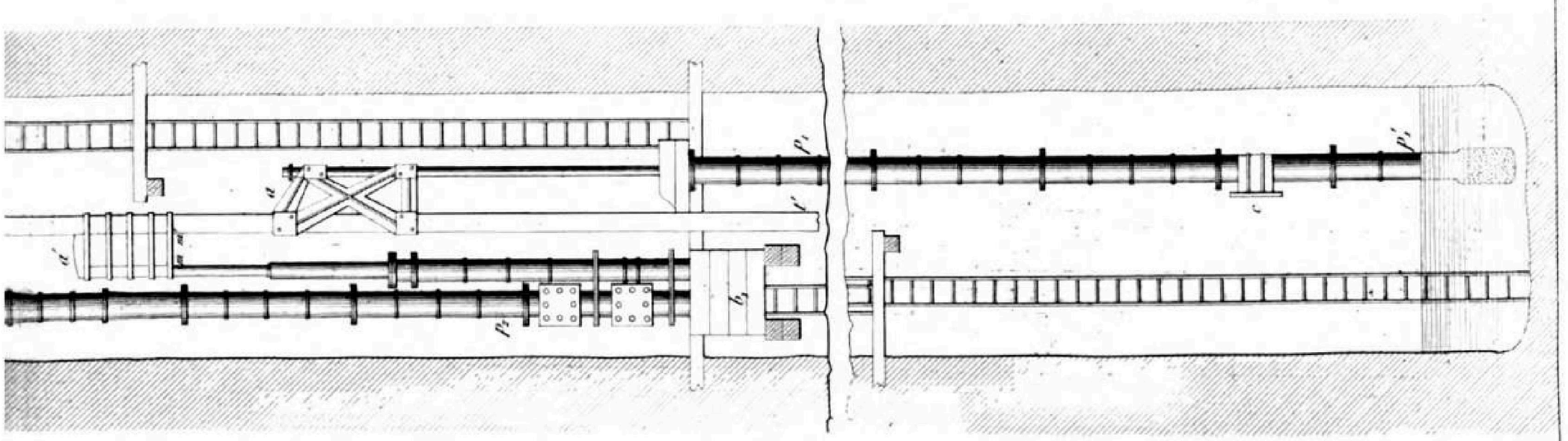


Fig. 7.



10226132

INSTALLATION DES POMPES DAN

Fig. 1.

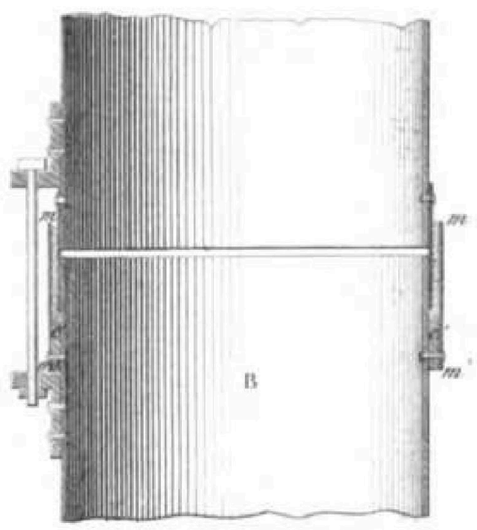


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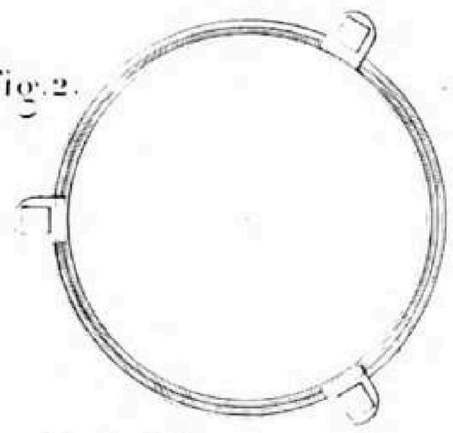


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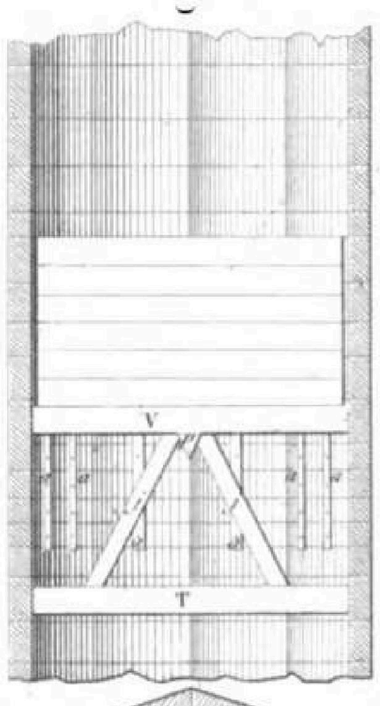


Fig. 6.

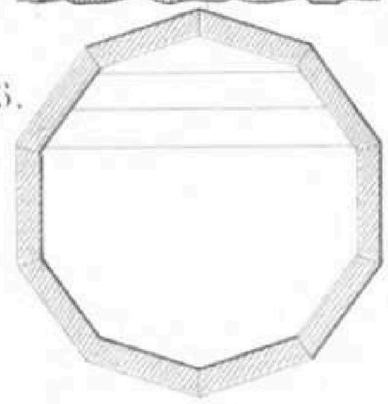


Fig. 7.

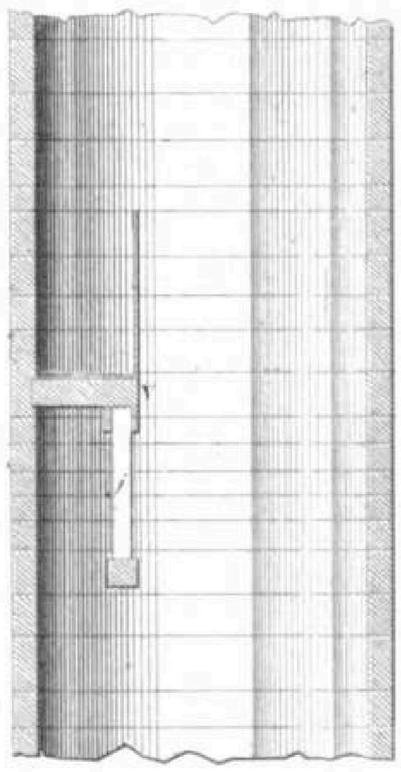


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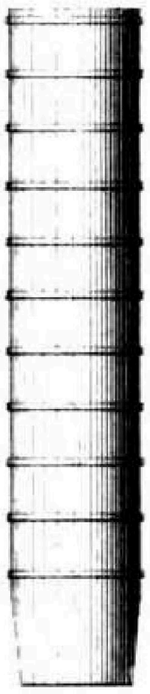


Fig. 11.

Fig. 12.

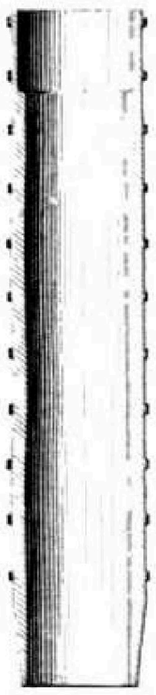


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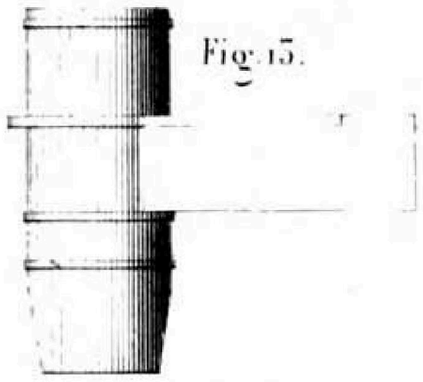


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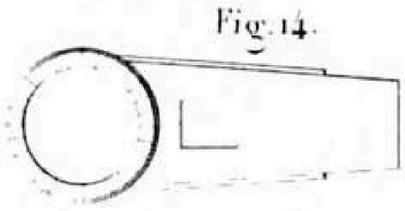
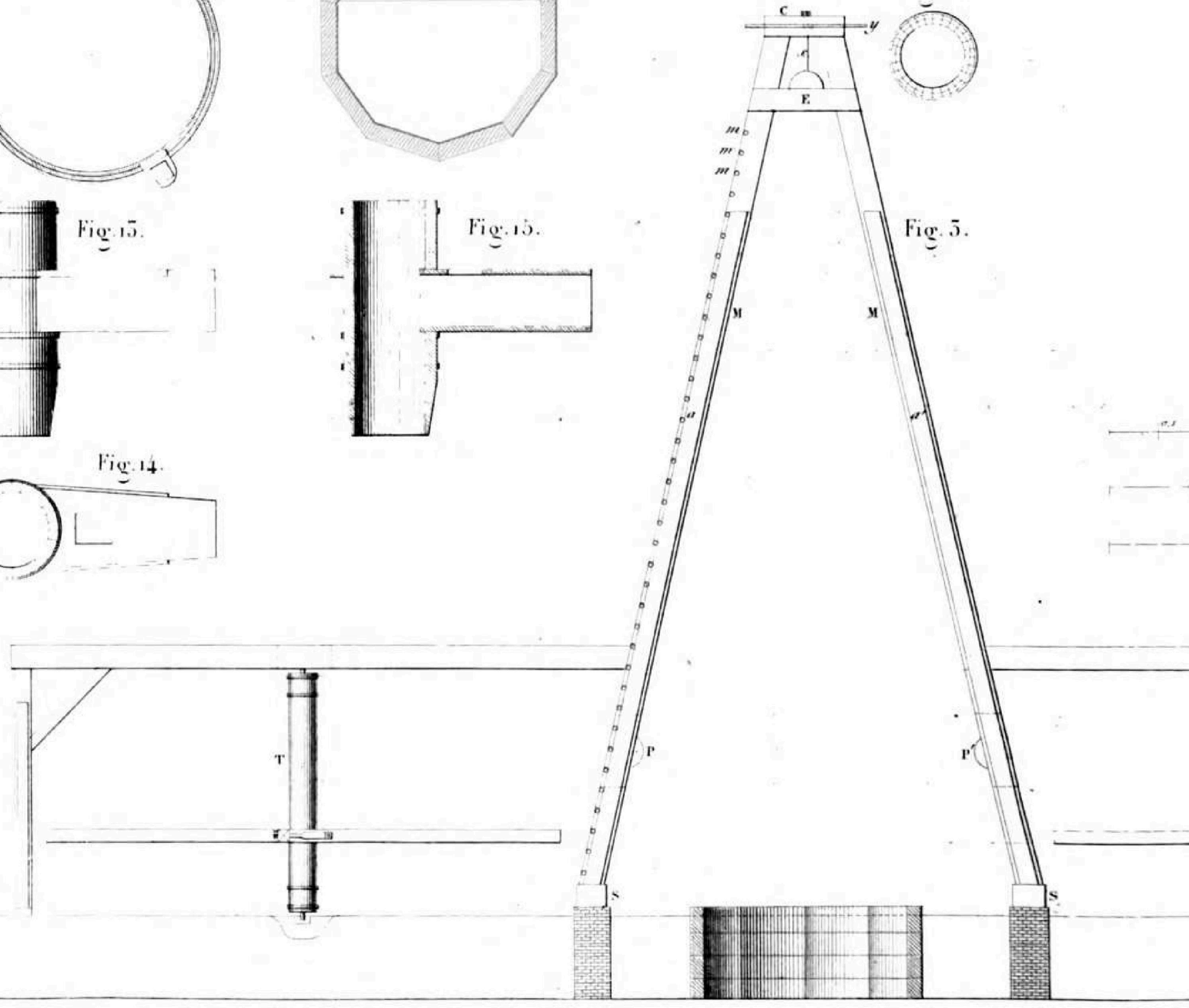


Fig. 15.

Fig. 5.



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MS LES PUITS EN CREUSEMENT.

PL. LVII.

Fig. 8.

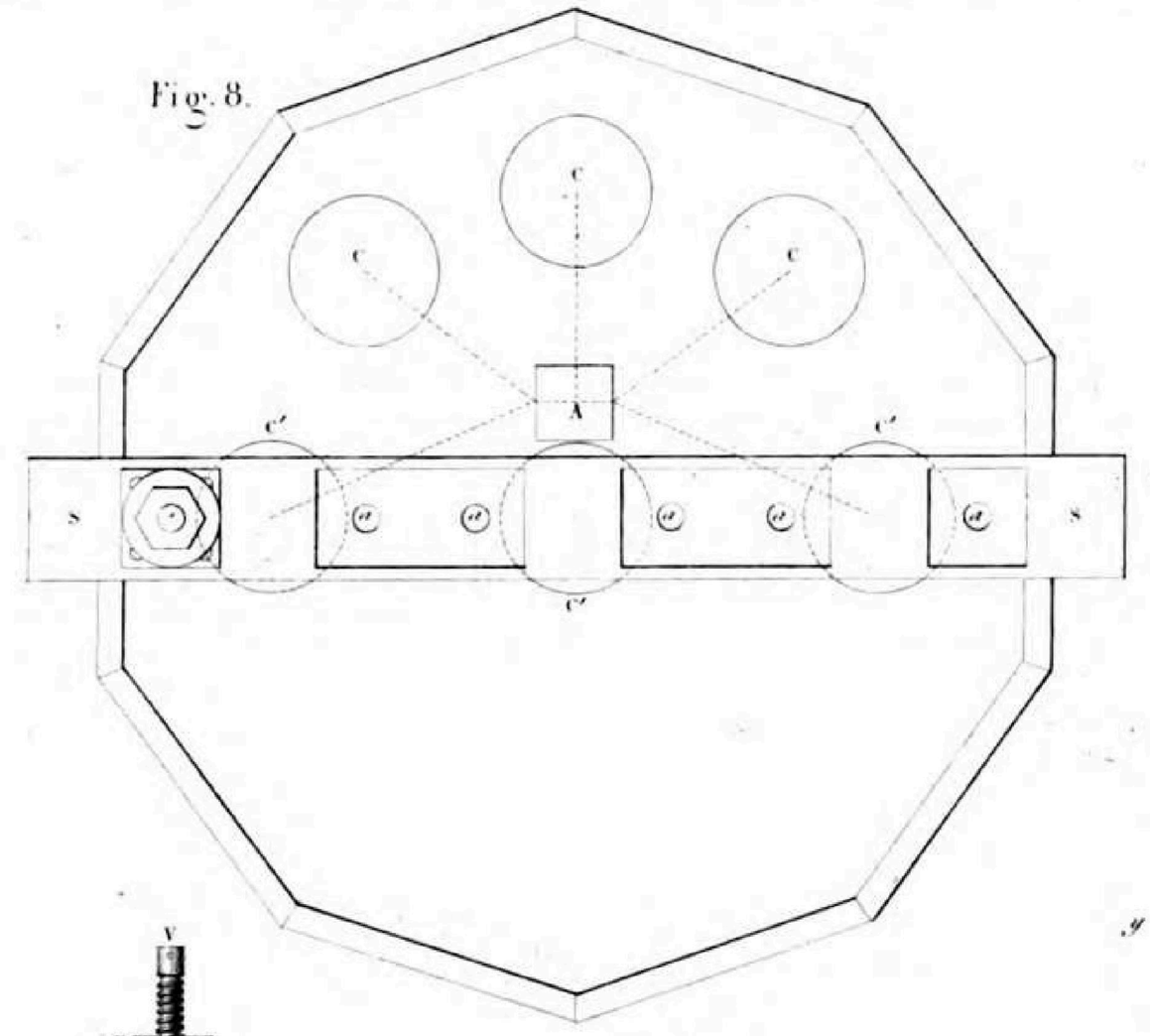


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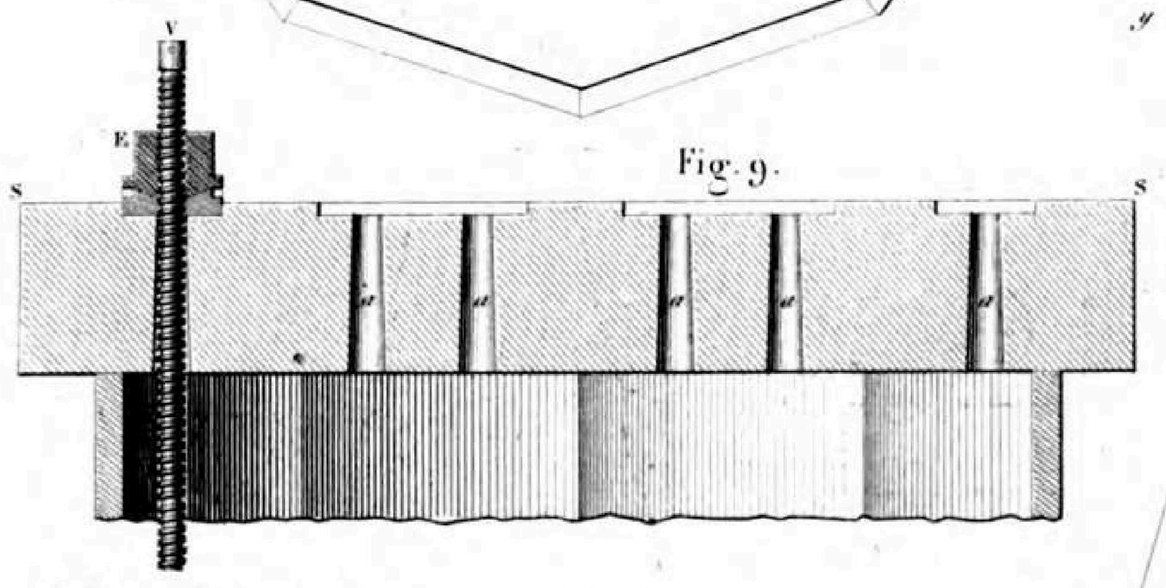


Fig. 16.



Fig. 17.



Fig. 4.

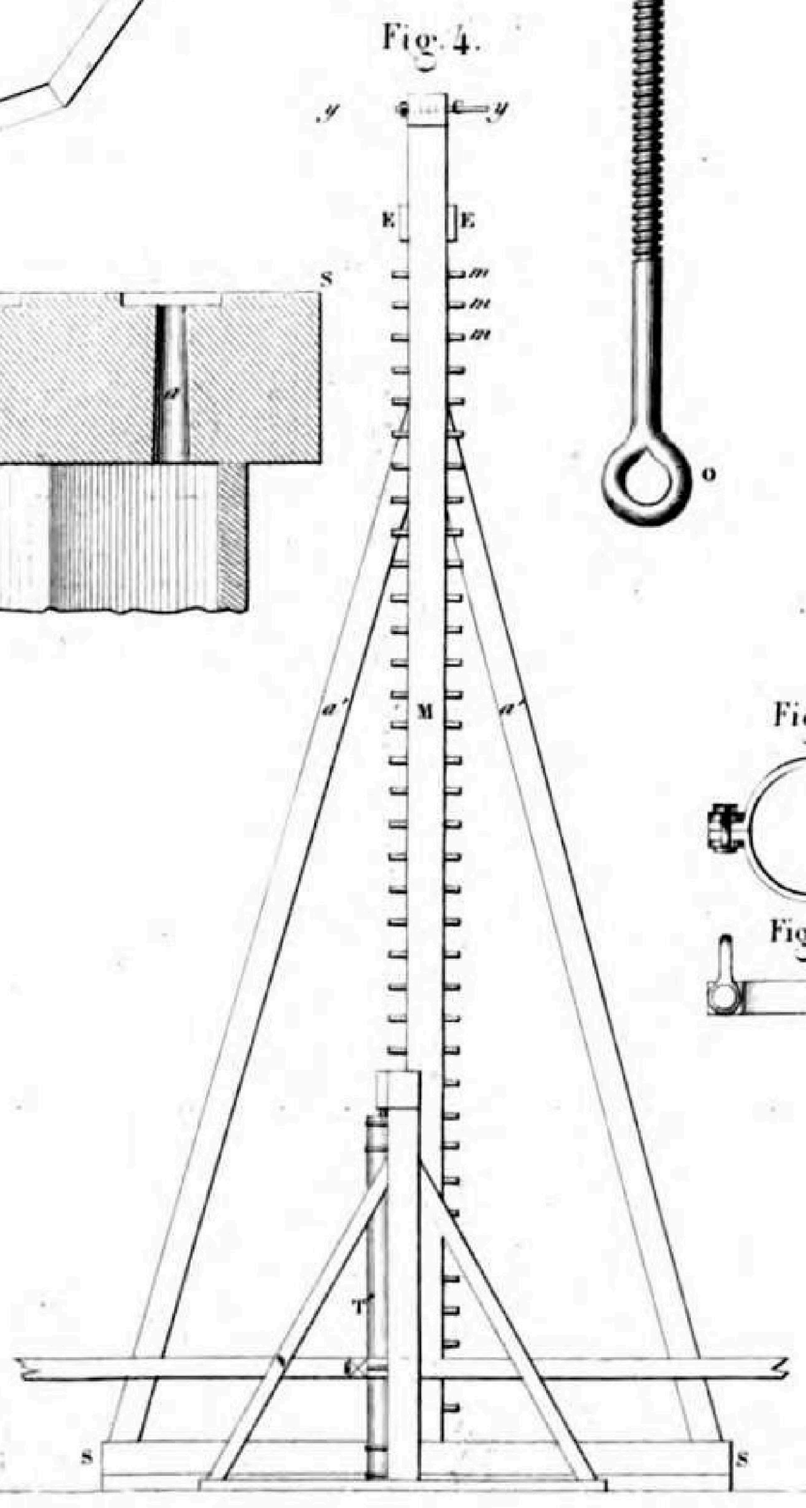


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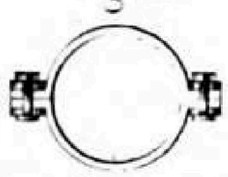
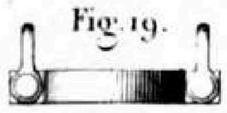
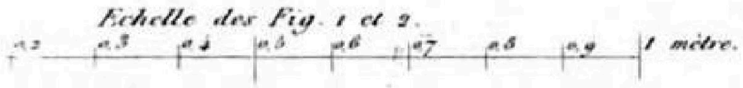


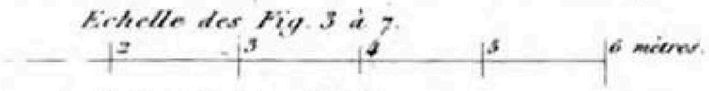
Fig. 19.



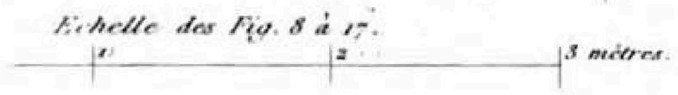
Echelle des Fig. 1 et 2.

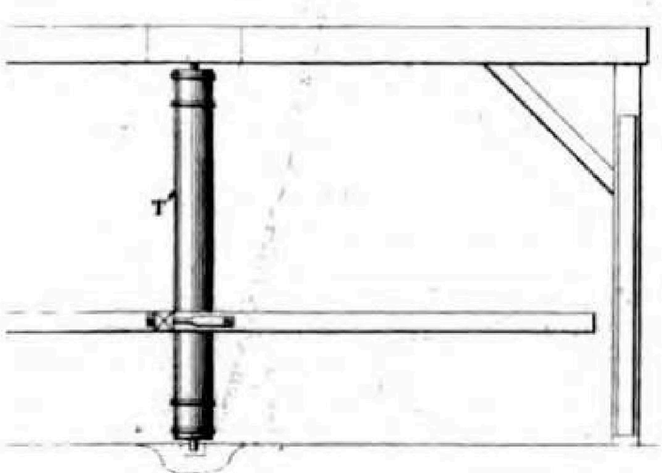


Echelle des Fig. 3 à 7.



Echelle des Fig. 8 à 17.



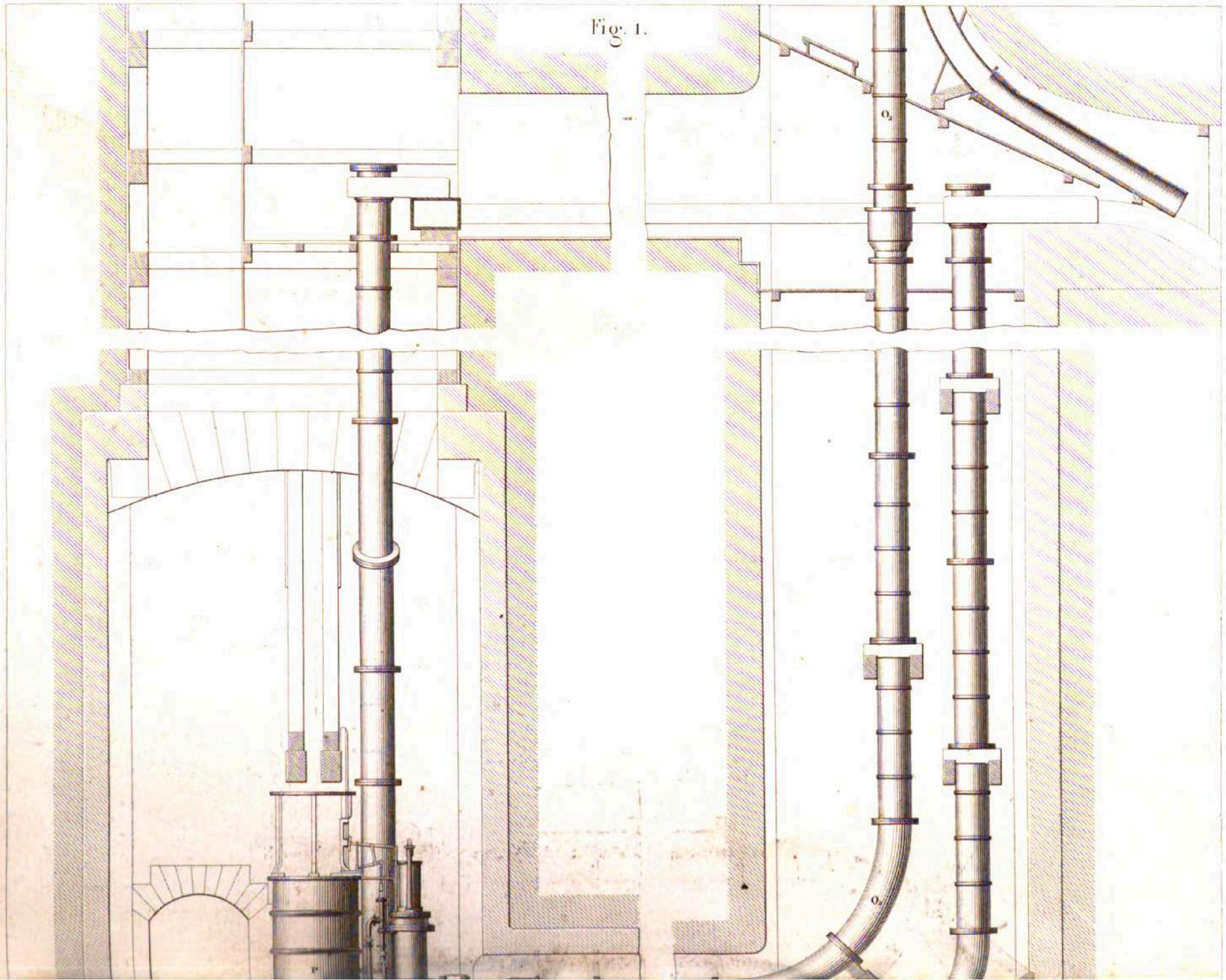


Lemaitre sc

MACHINE A COLONNE D'EAU DU HUELGOAT.

PL. LVIII.

Fig. 1.



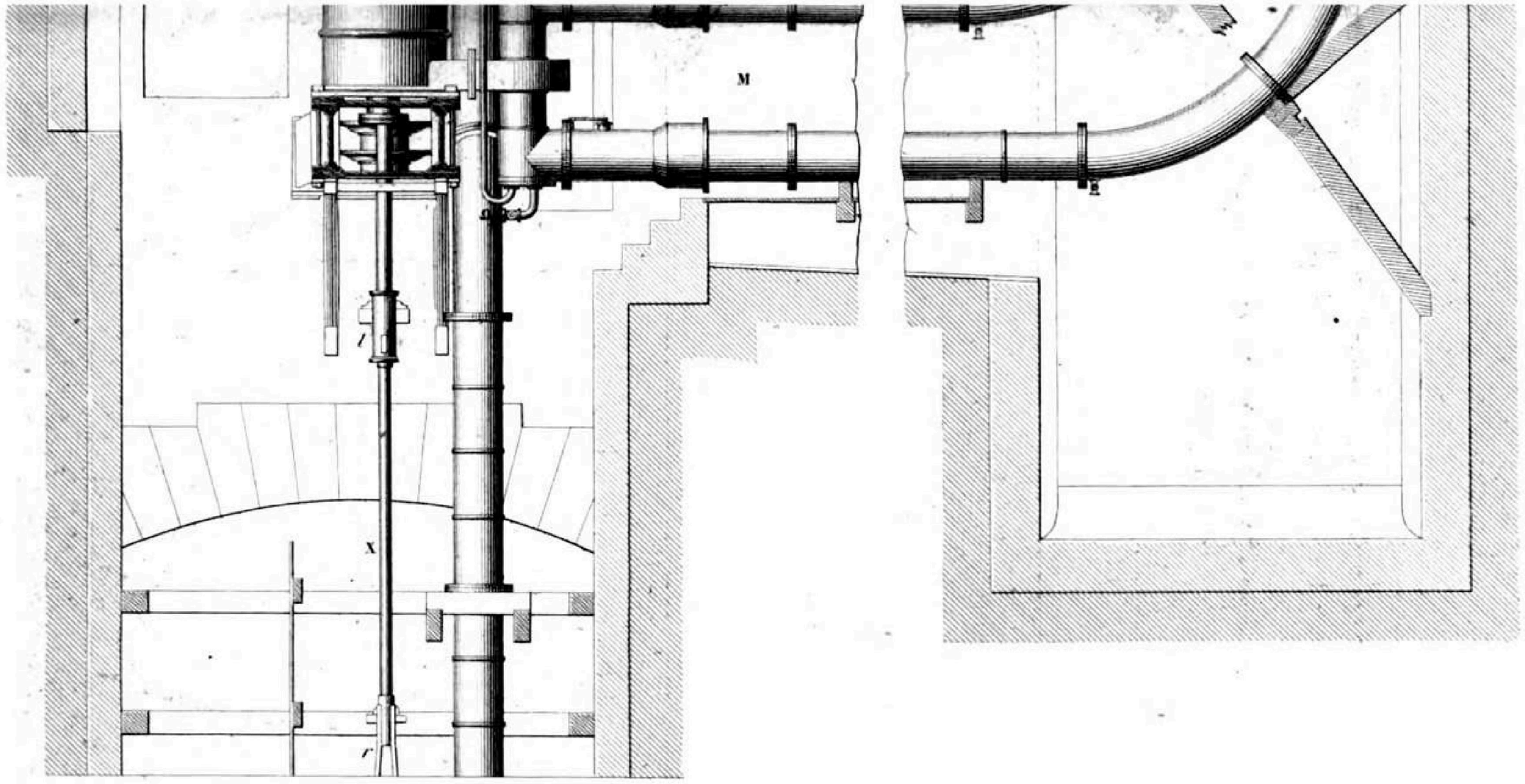


Fig. 2.

Lemaître sc

MACHINE A VAPEUR DU CORNWALL (CONSOLIDATED MINES).

PL. LIX.

Fig. 1.

Élévation de la Machine.

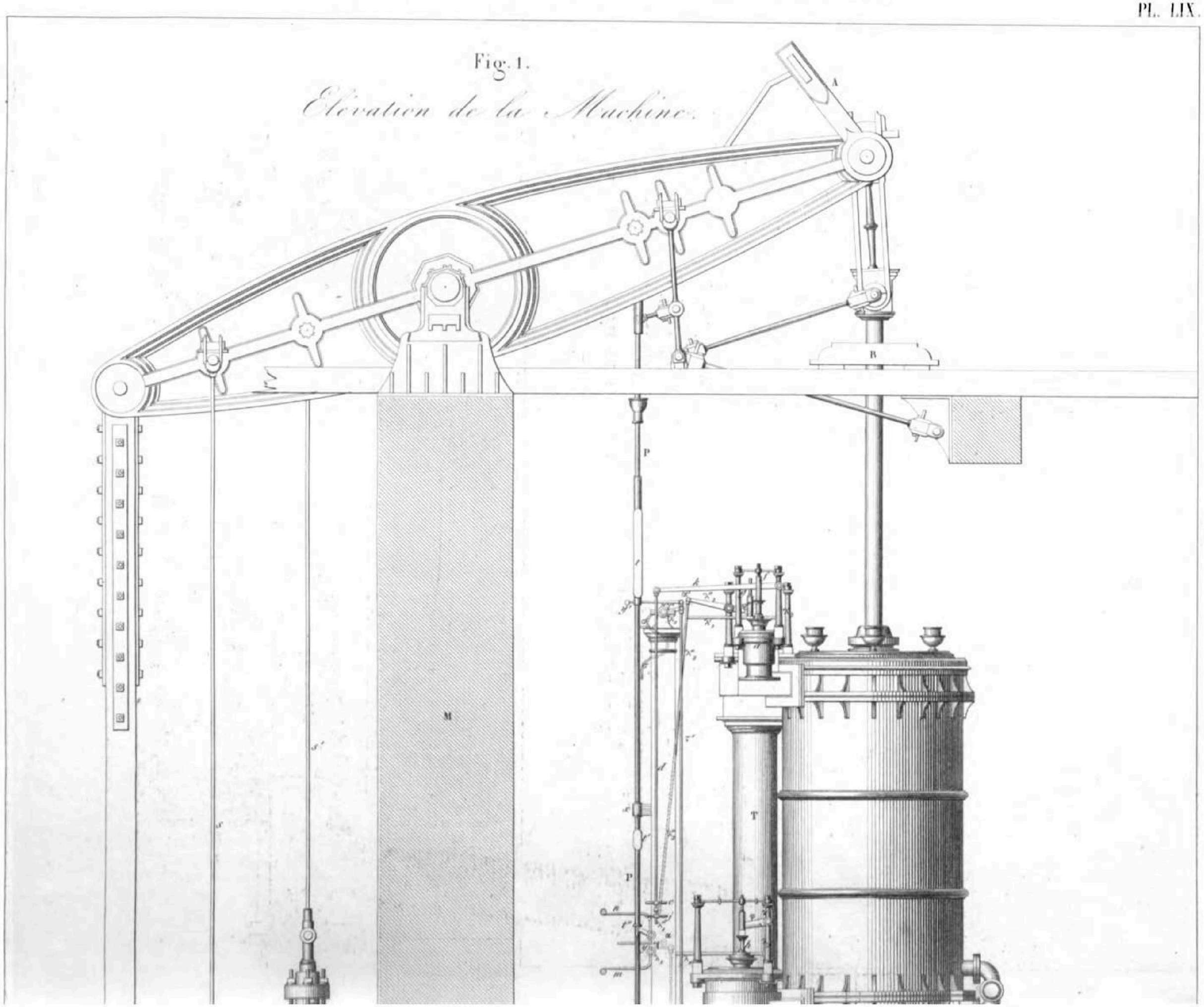
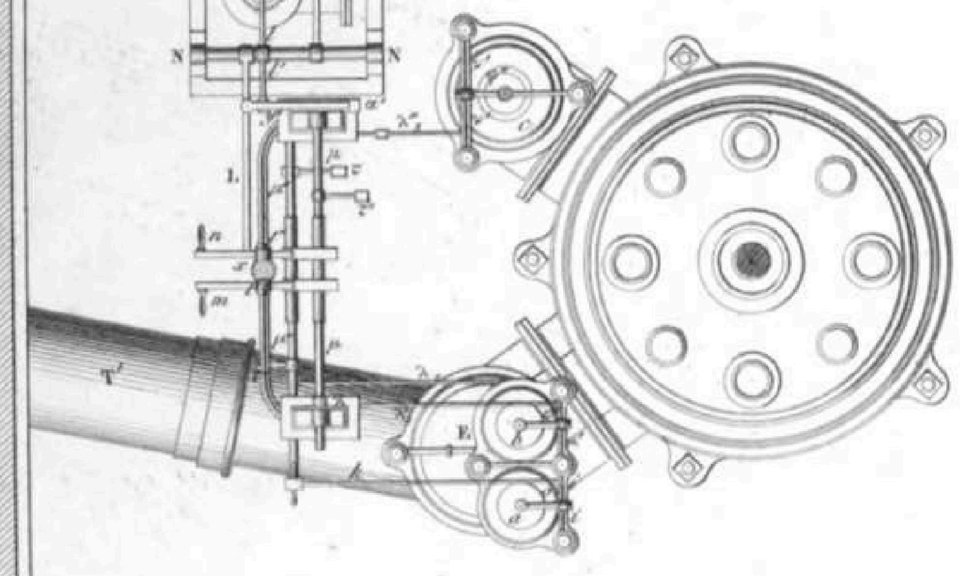
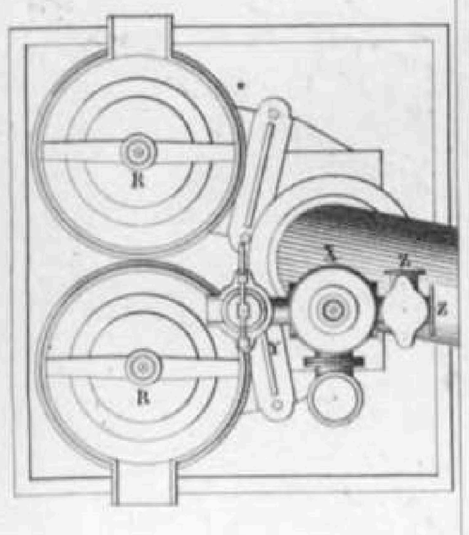


Fig. 2.

Plan de la Machine.





Lemaitre sc.

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DÉTAILS DE LA MACHINE A VAPE

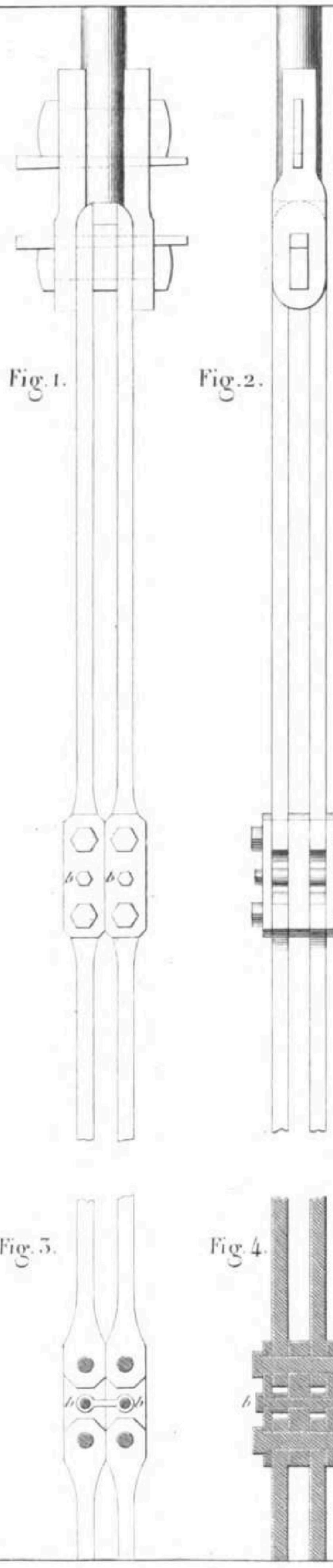


Fig. 1.

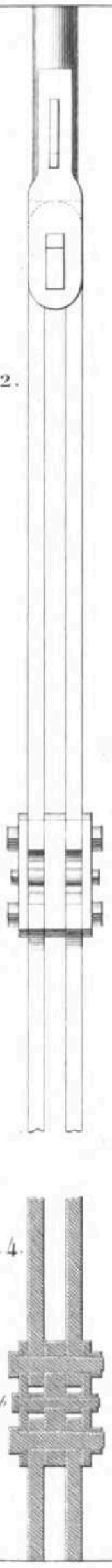


Fig. 2.

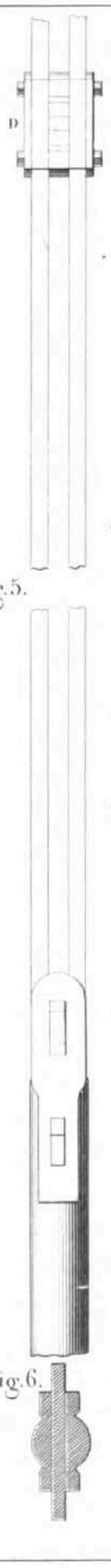


Fig. 5.

Fig. 3.

Fig. 4.

Fig. 6.

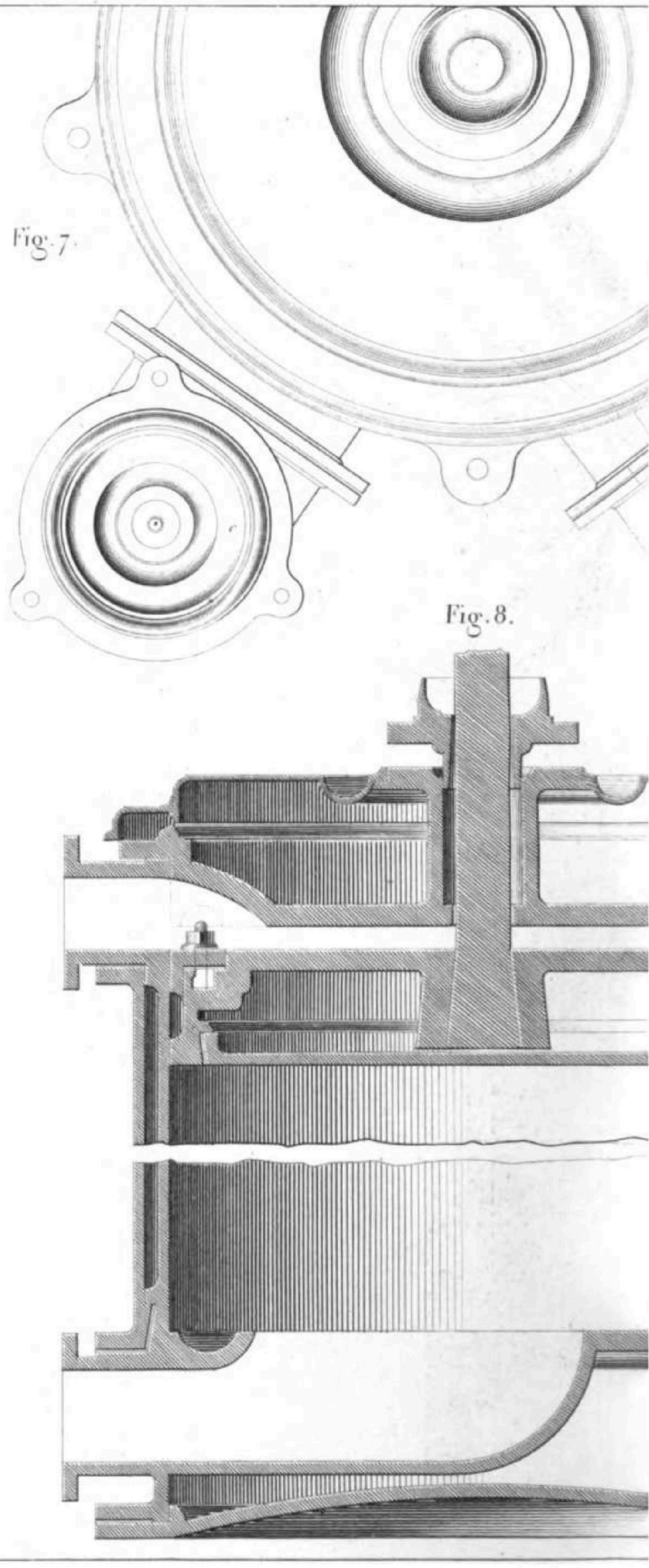


Fig. 7.

Fig. 8.

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R D'ÉPUISEMENT DU CORNWALL.

PL. IX.

Fig. 9.

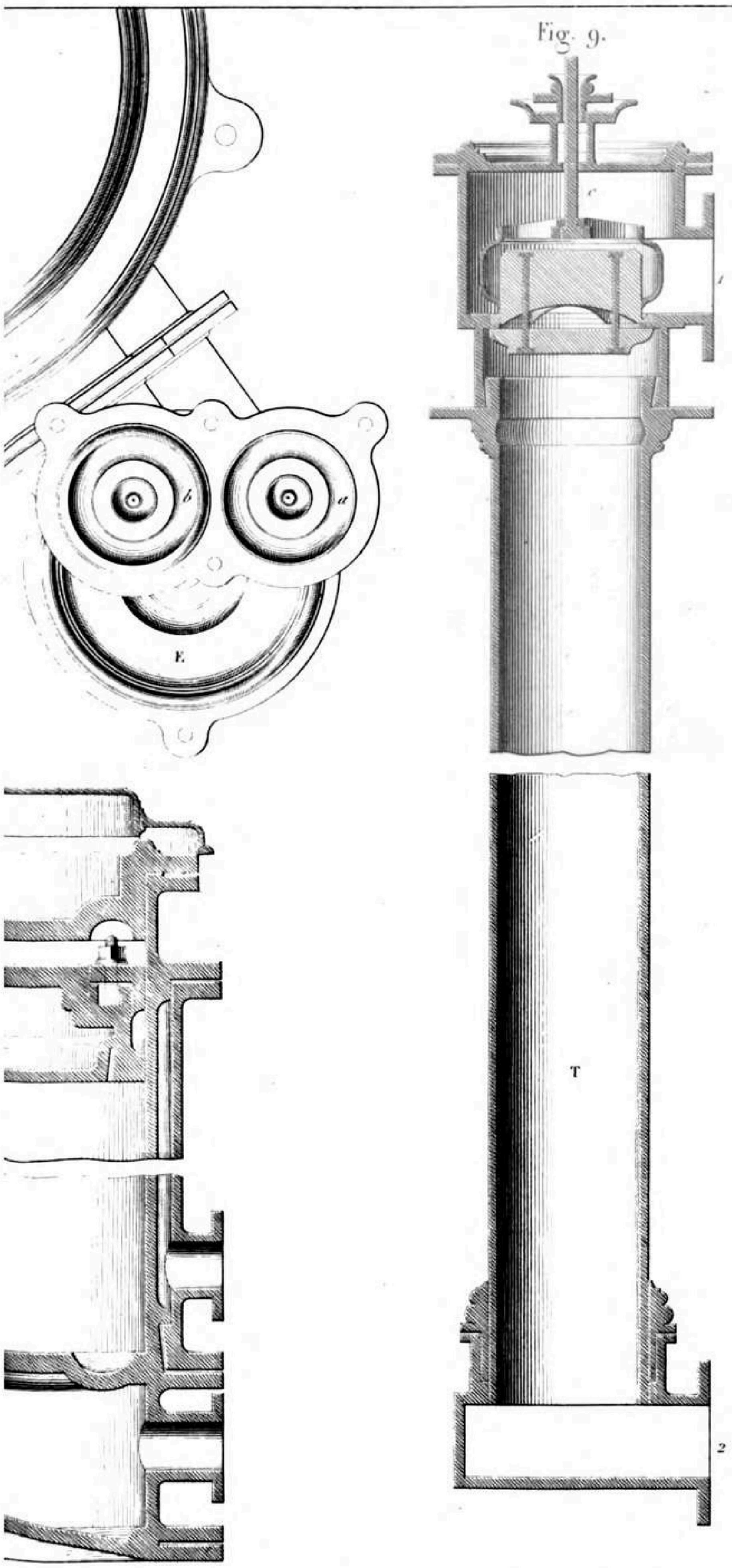


Fig. 10.

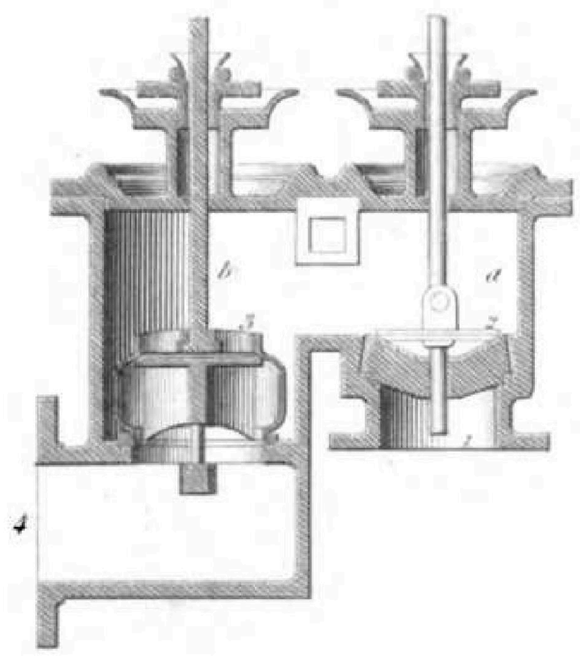


Fig. 11

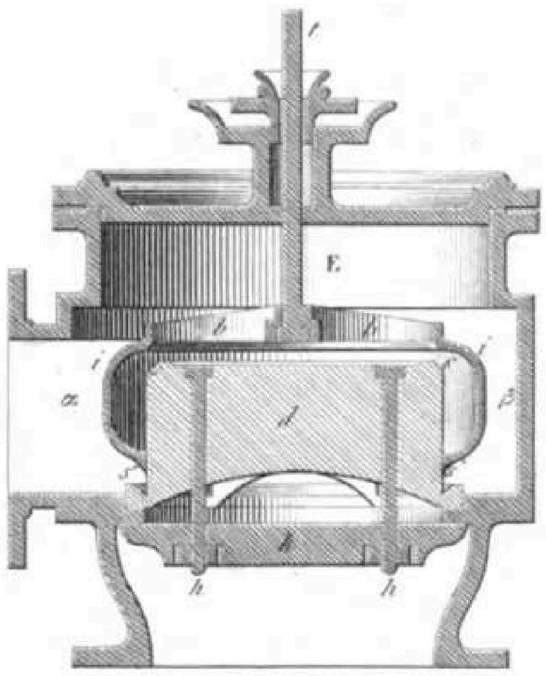
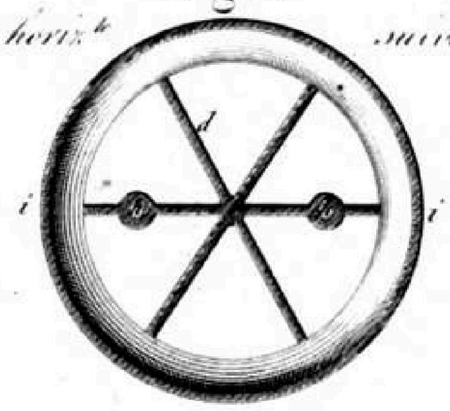


Fig 12.

Section horiz^le suivant α. β



Lemaitre sc

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INDICATEUR A RESSORT POU

Fig. 1.

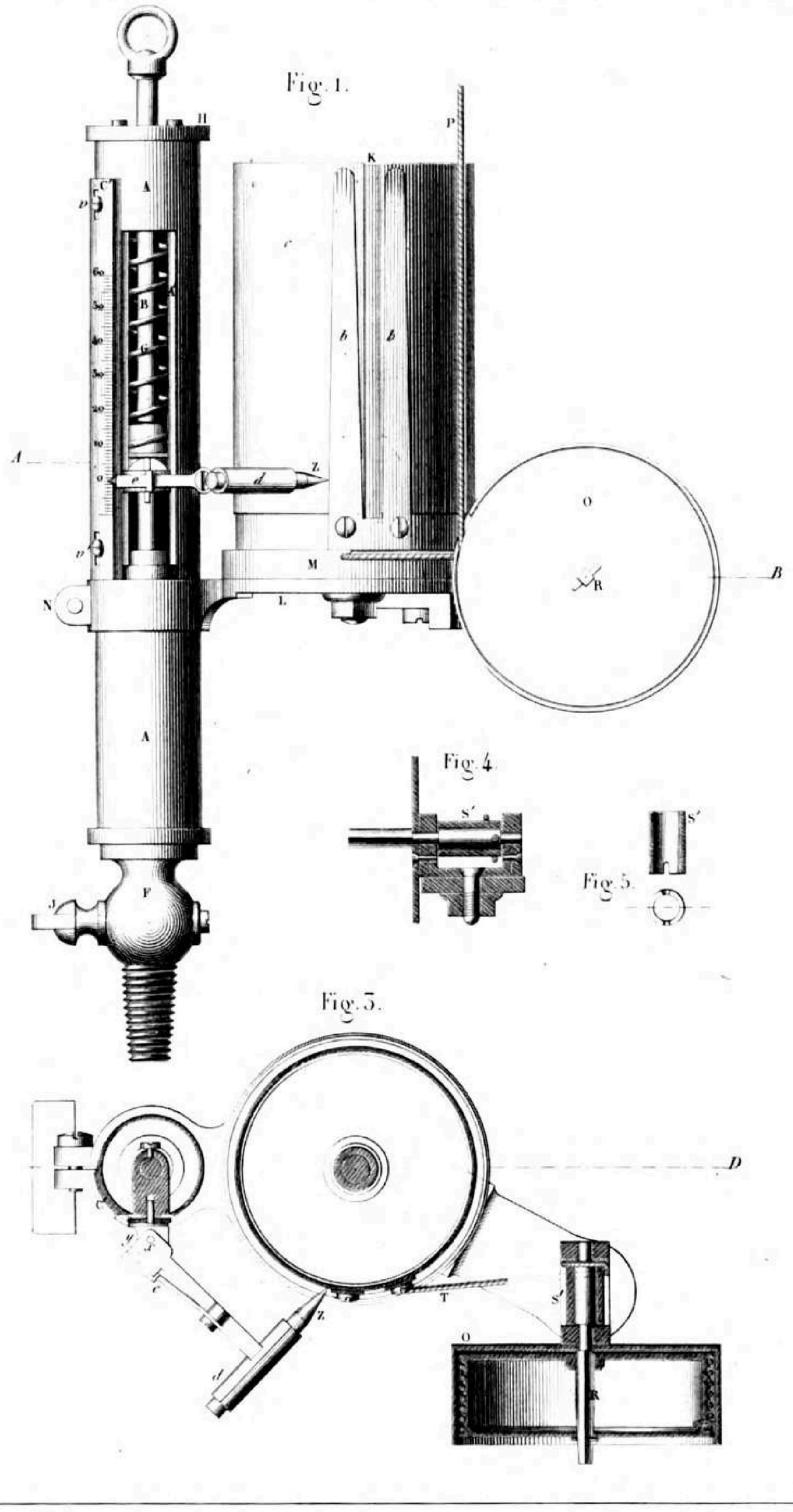
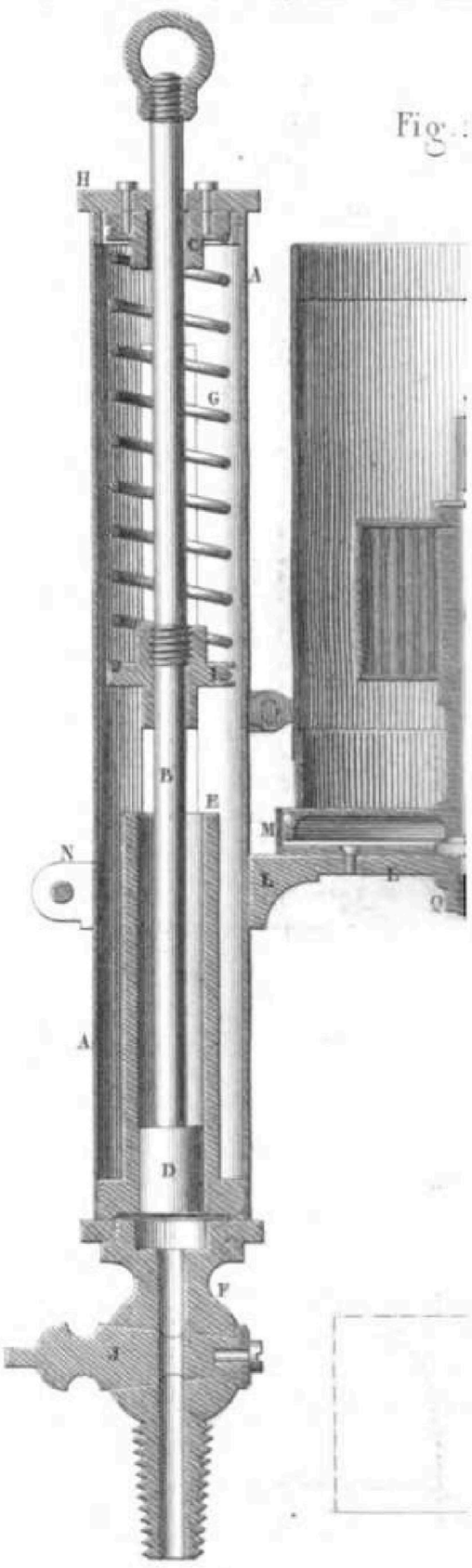


Fig. 4.

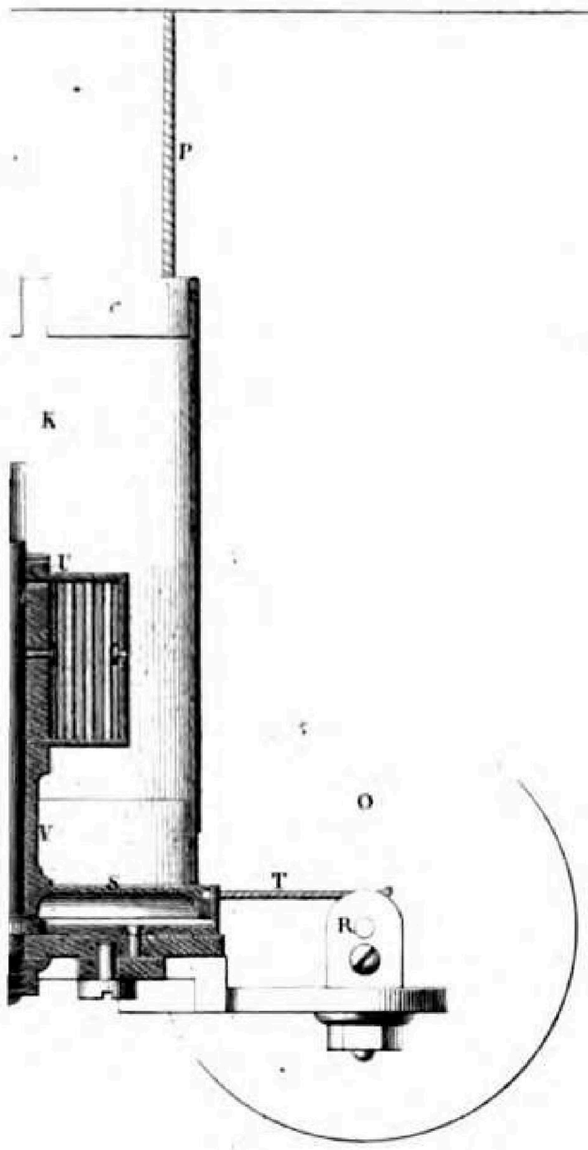
Fig. 5.

Fig. 3.

Fig. 2.



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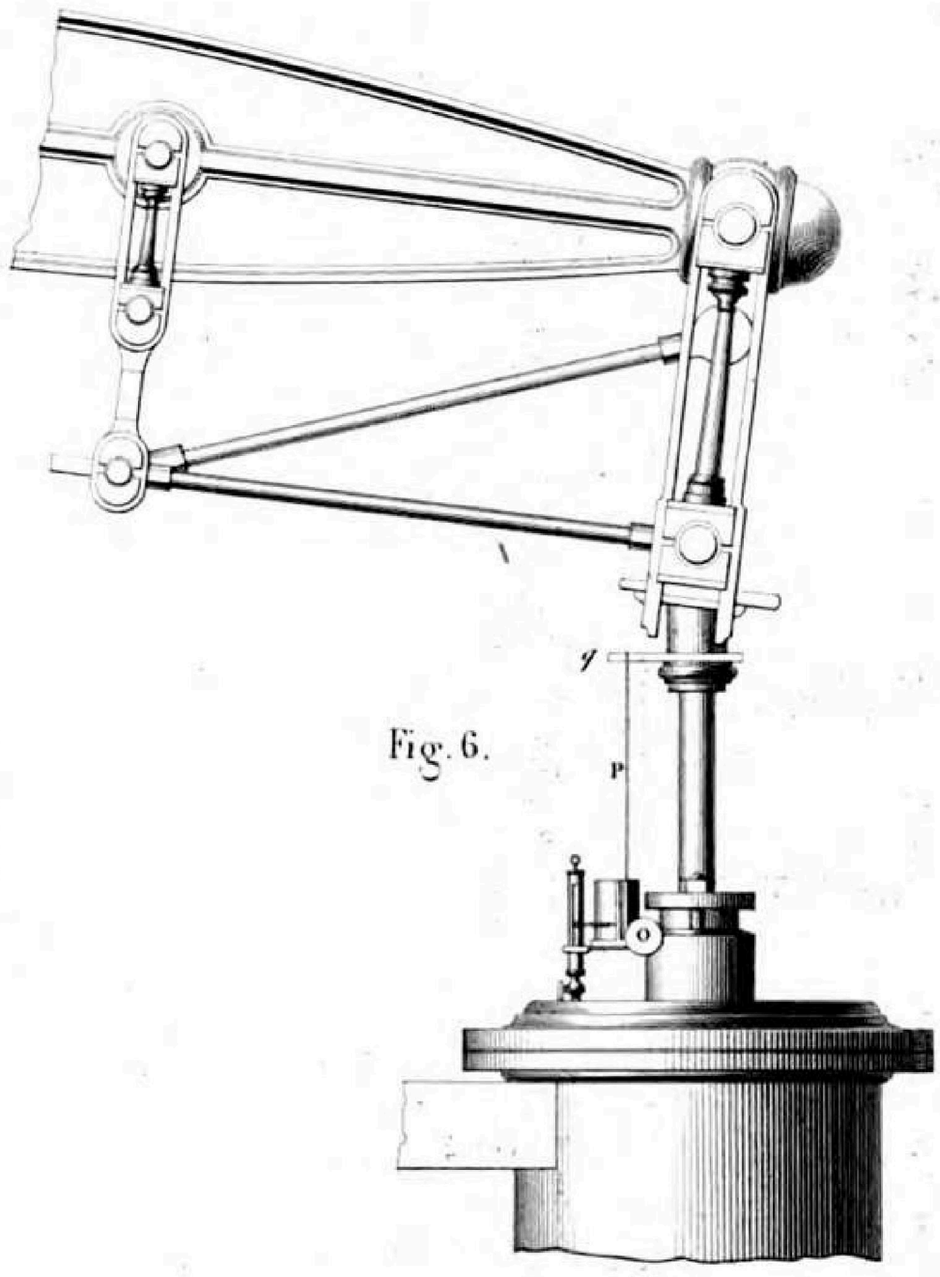


Fig. 6.

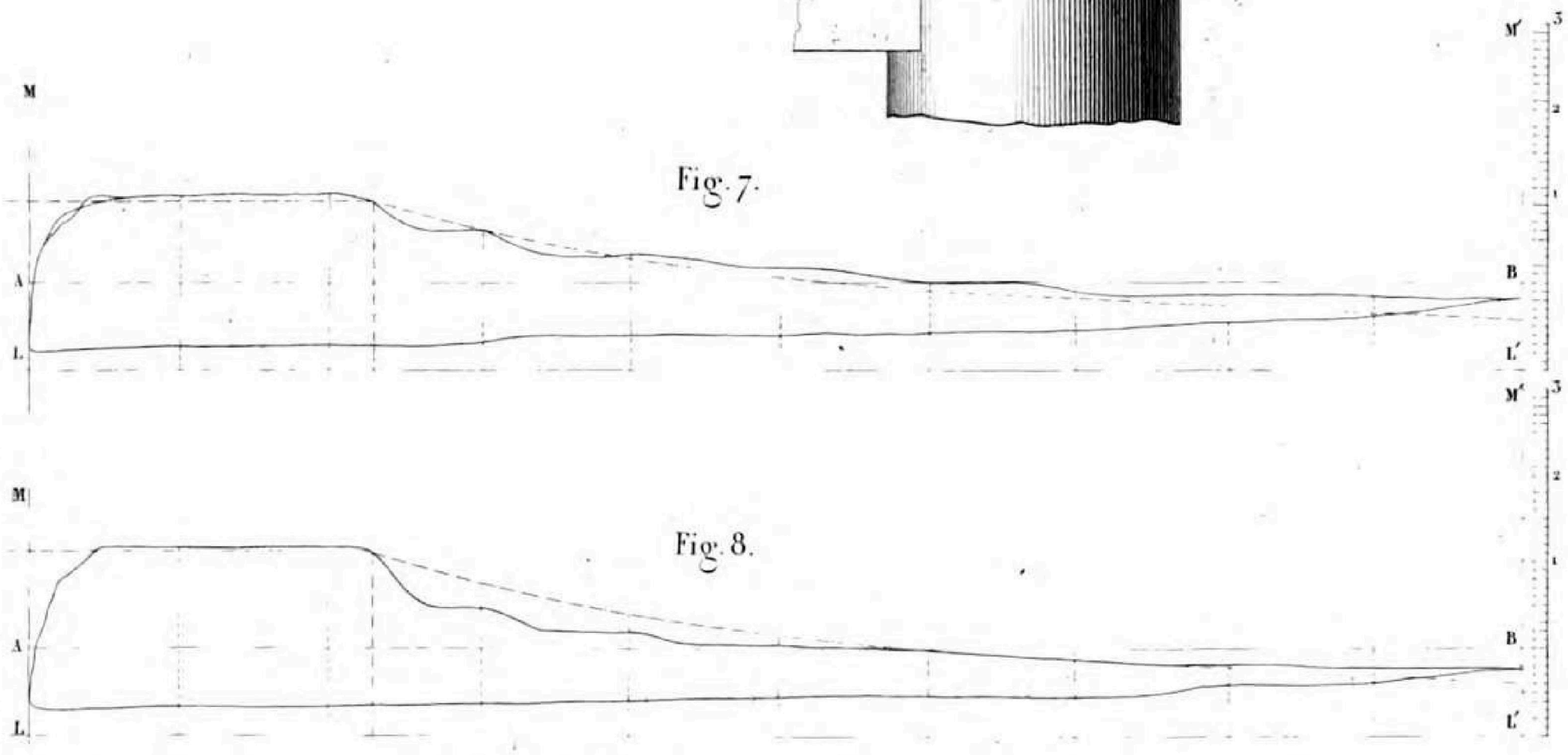


Fig. 7.

Fig. 8.

Echelle des Fig. 1 à 5.

0,03 0,04 0,05 0,06 0,07 0,08 0,09 01 02 03 décimètres.

Echelle de la Fig. 6.

1 2 3 mètres

Lemaître sc

Fig. 1. — *Machine de Taylor.*

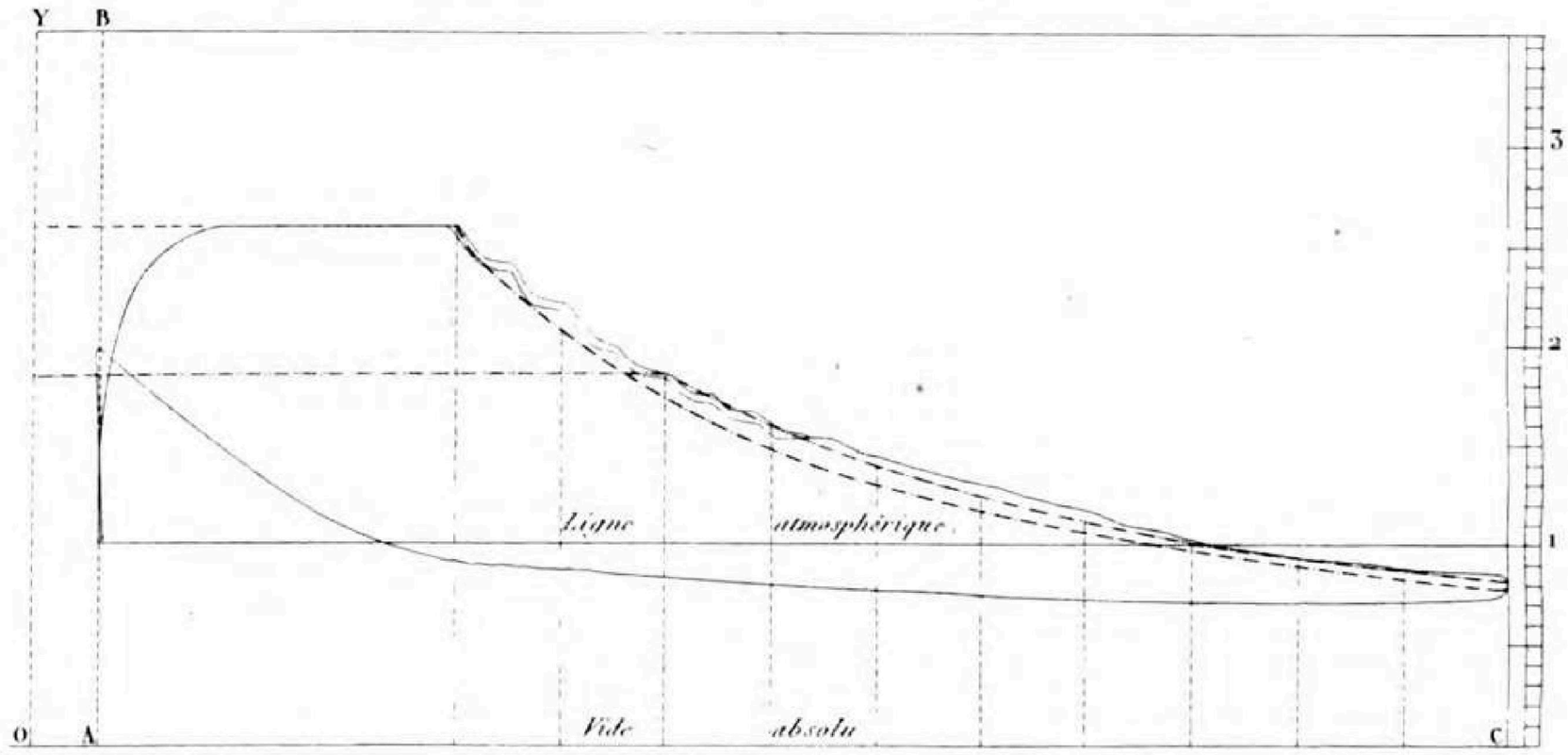
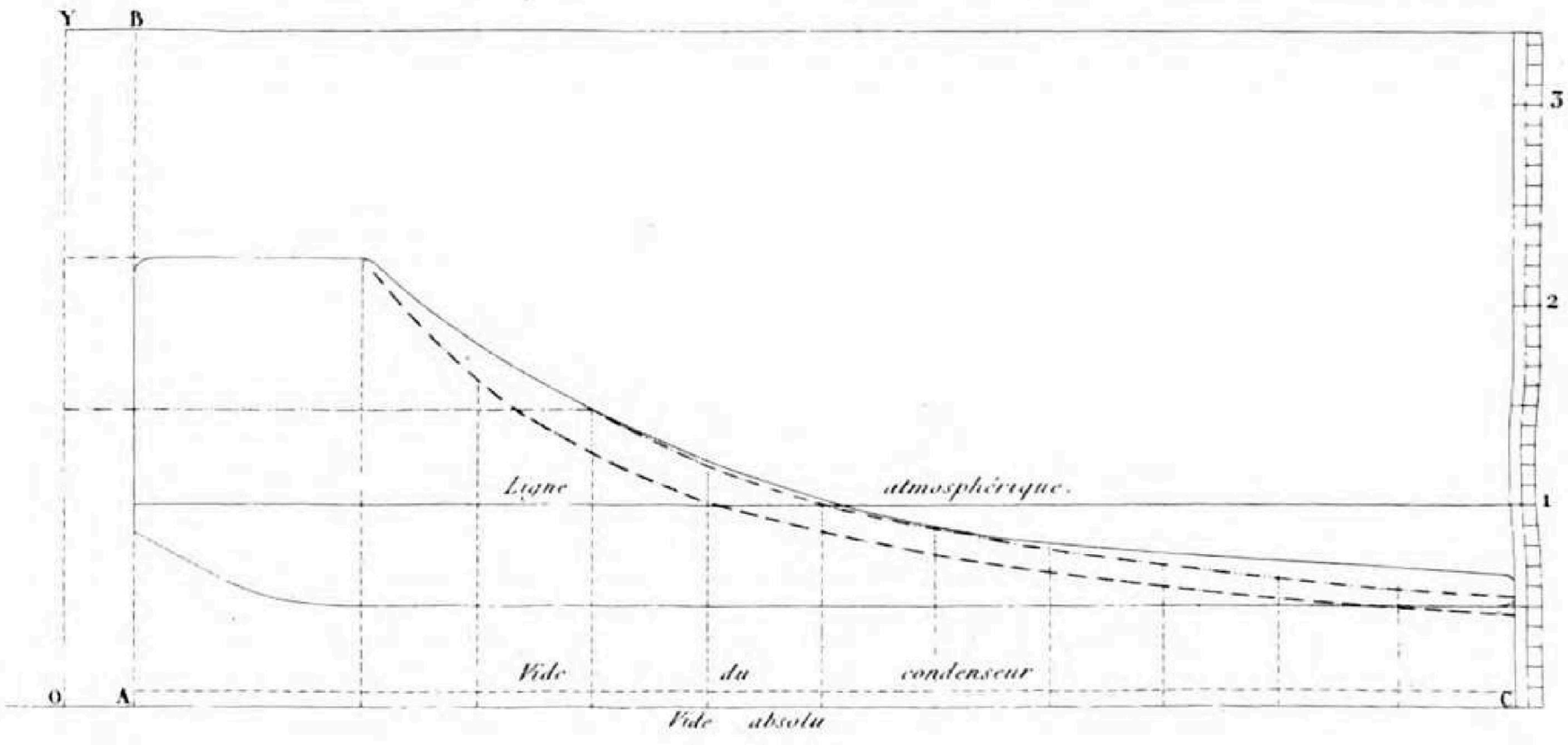


Fig. 3. — *Machine de Hocking.*



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Fig. 2. *Machine de Davy.*

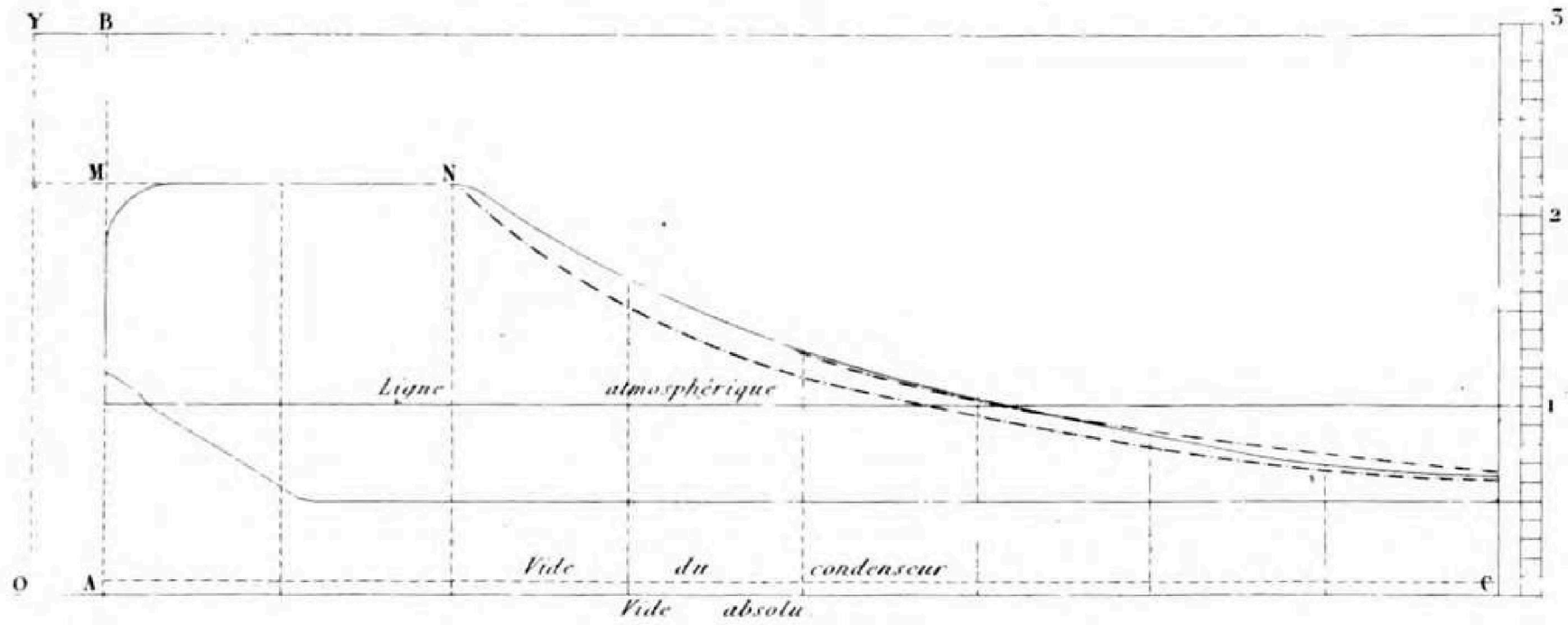


Fig. 4.

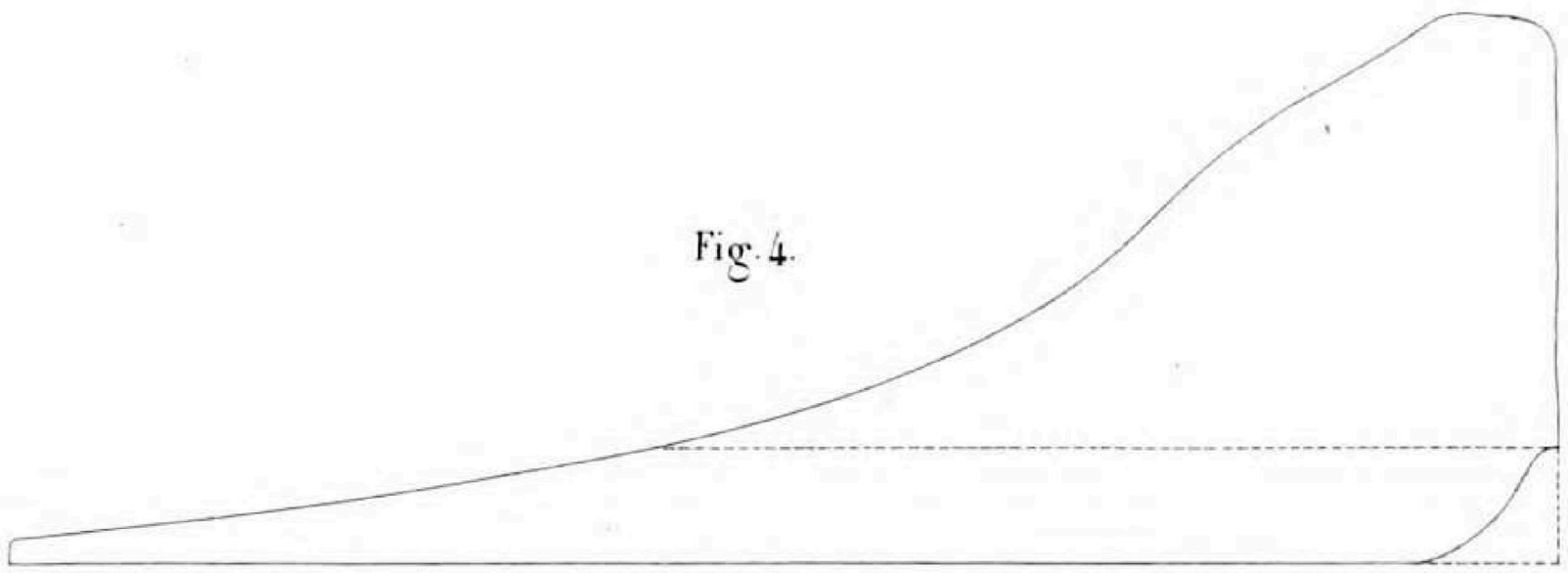


Fig. 6.

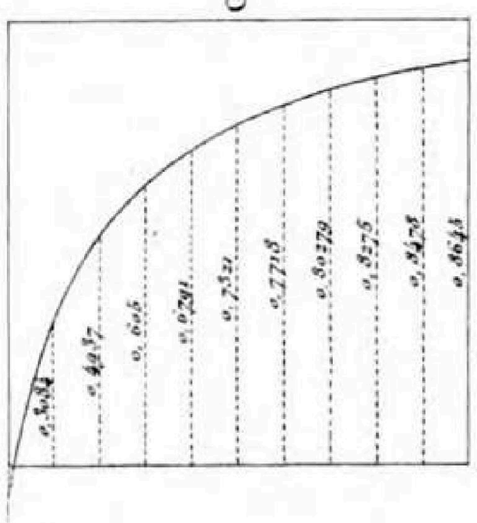
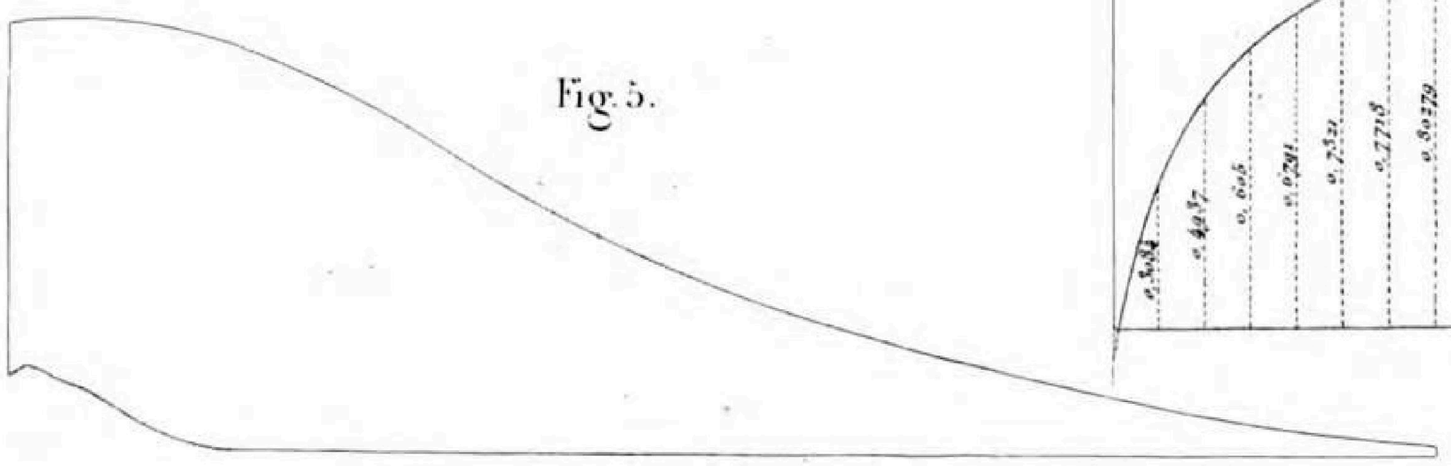


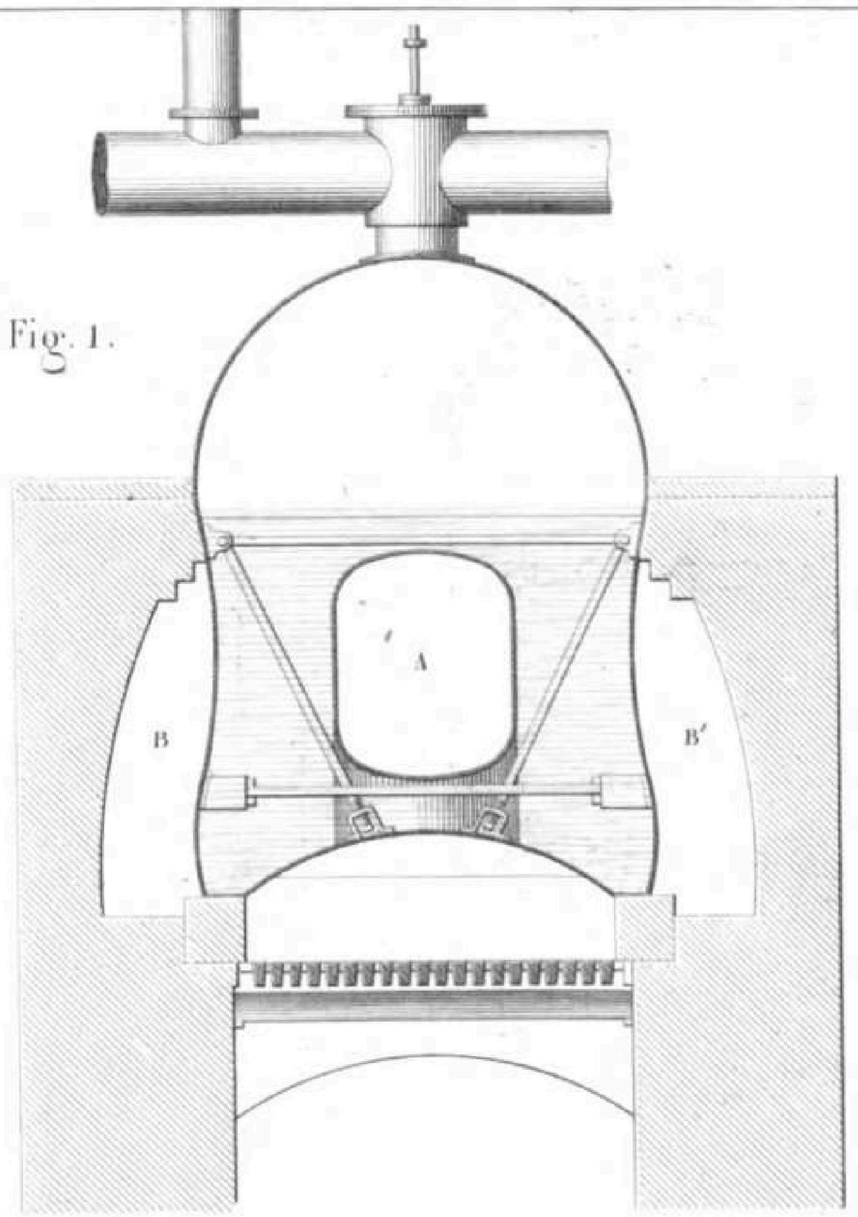
Fig. 5.



Lemaître sc.

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Fig. 1.



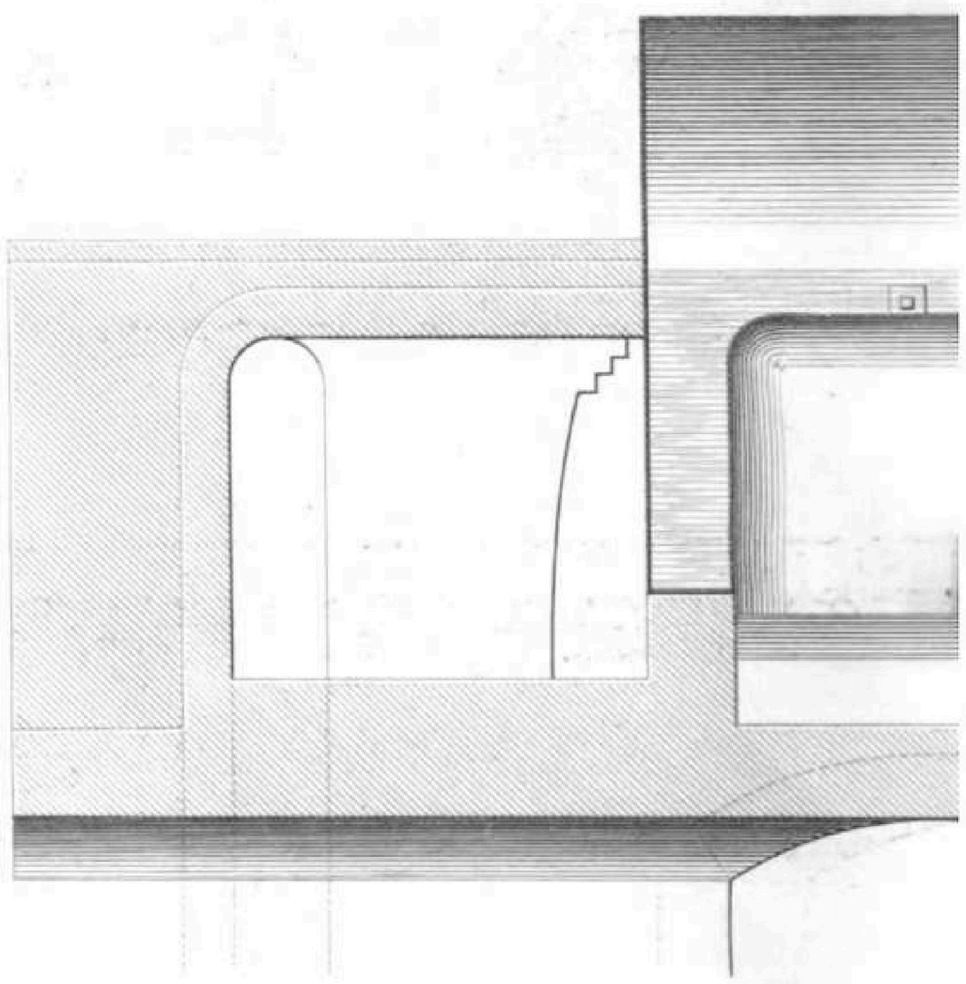
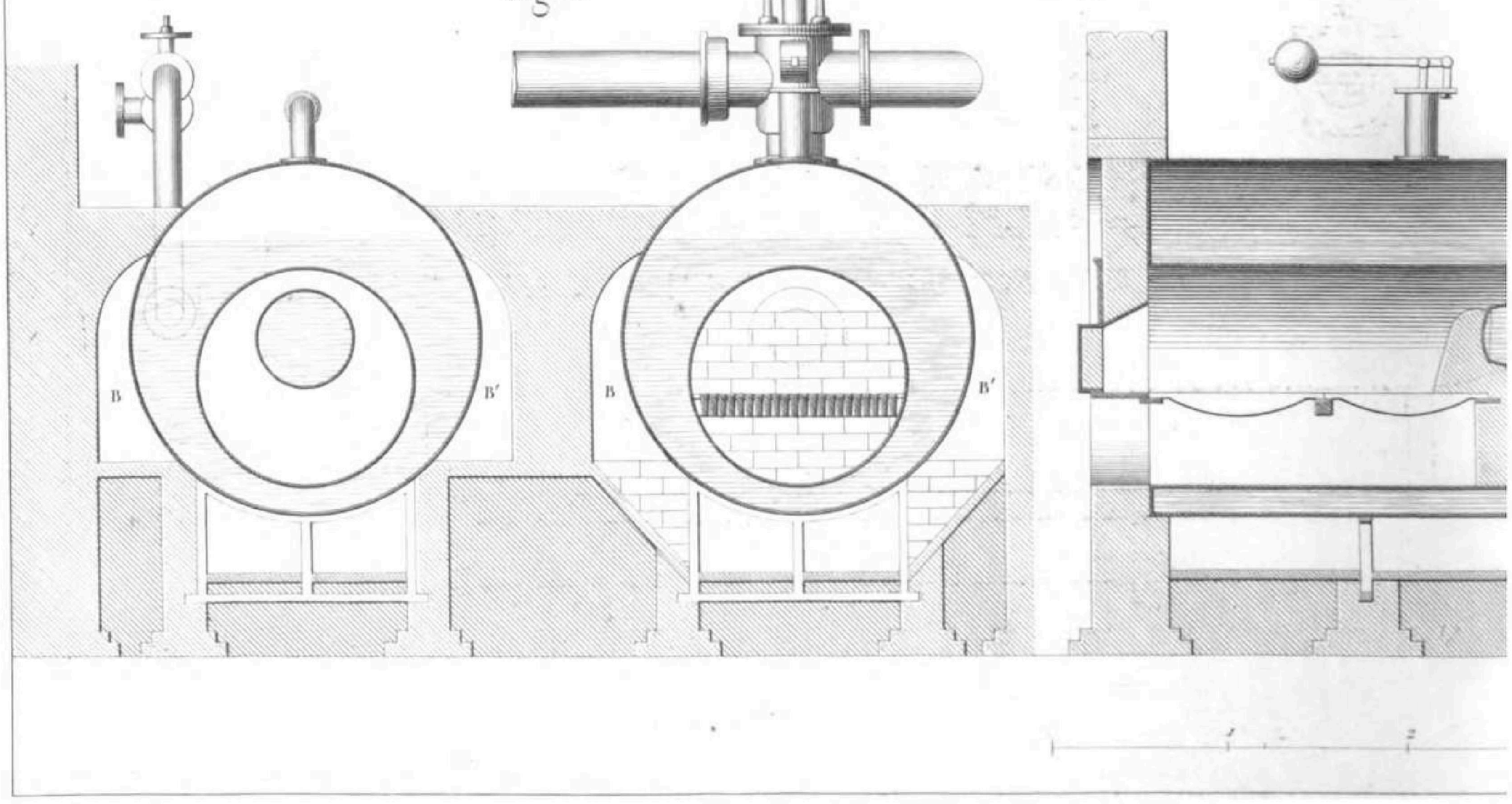


Fig. 3.



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MACHINES A VAPEUR.

PL. LXIII.

Fig. 2.

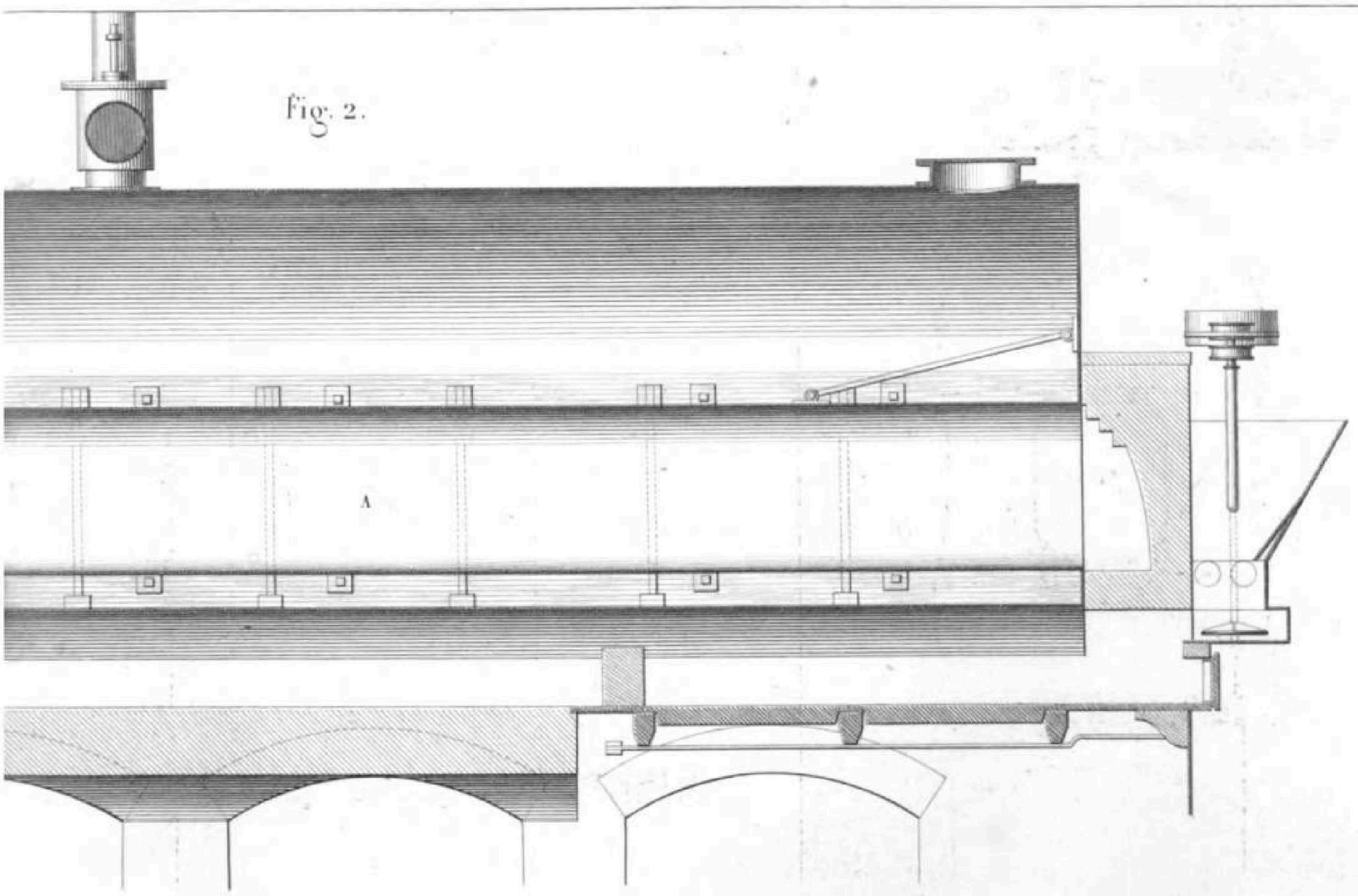
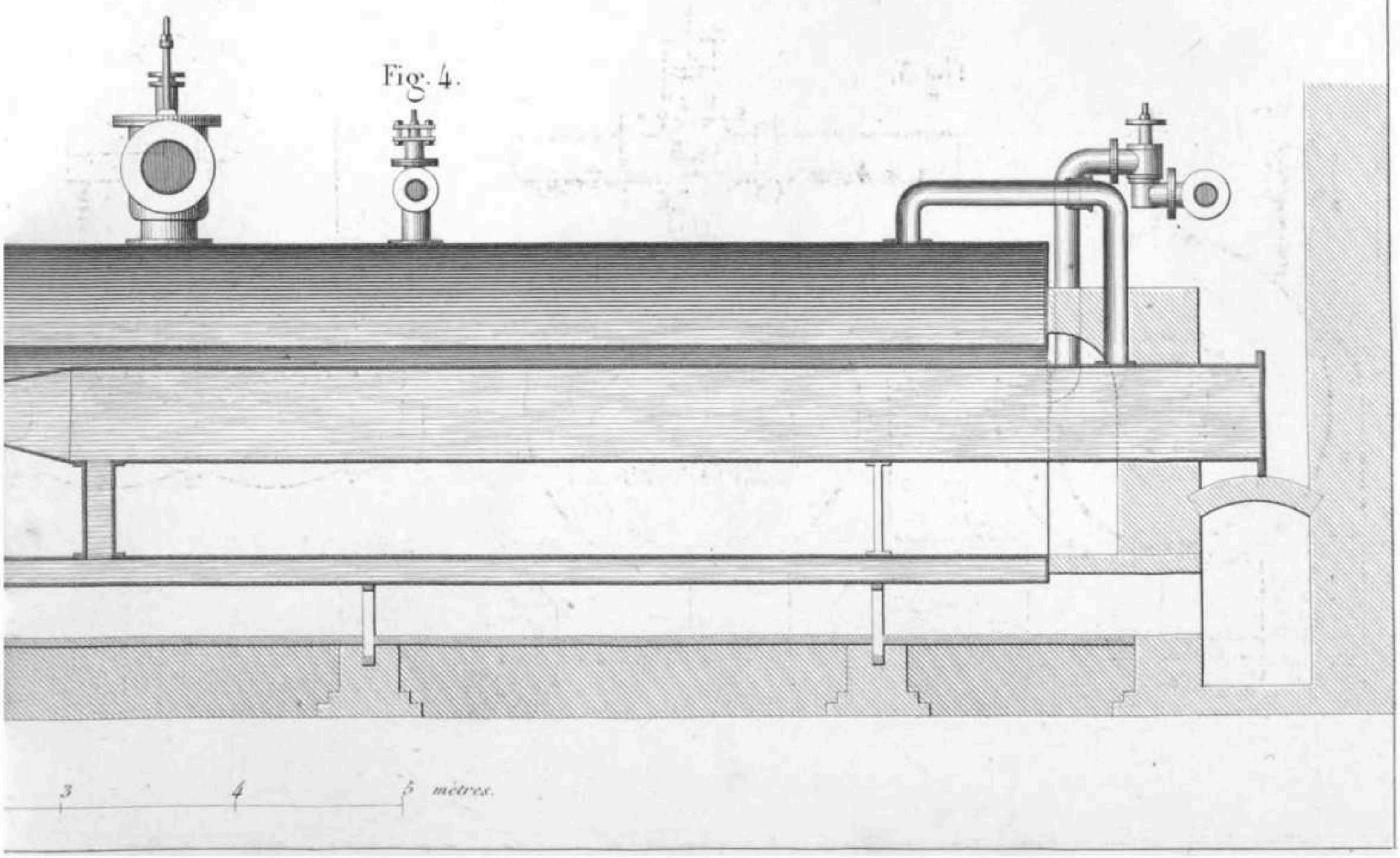


Fig. 4.



Lemaître sc

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Fig. 1. *Boussole suspendue.*

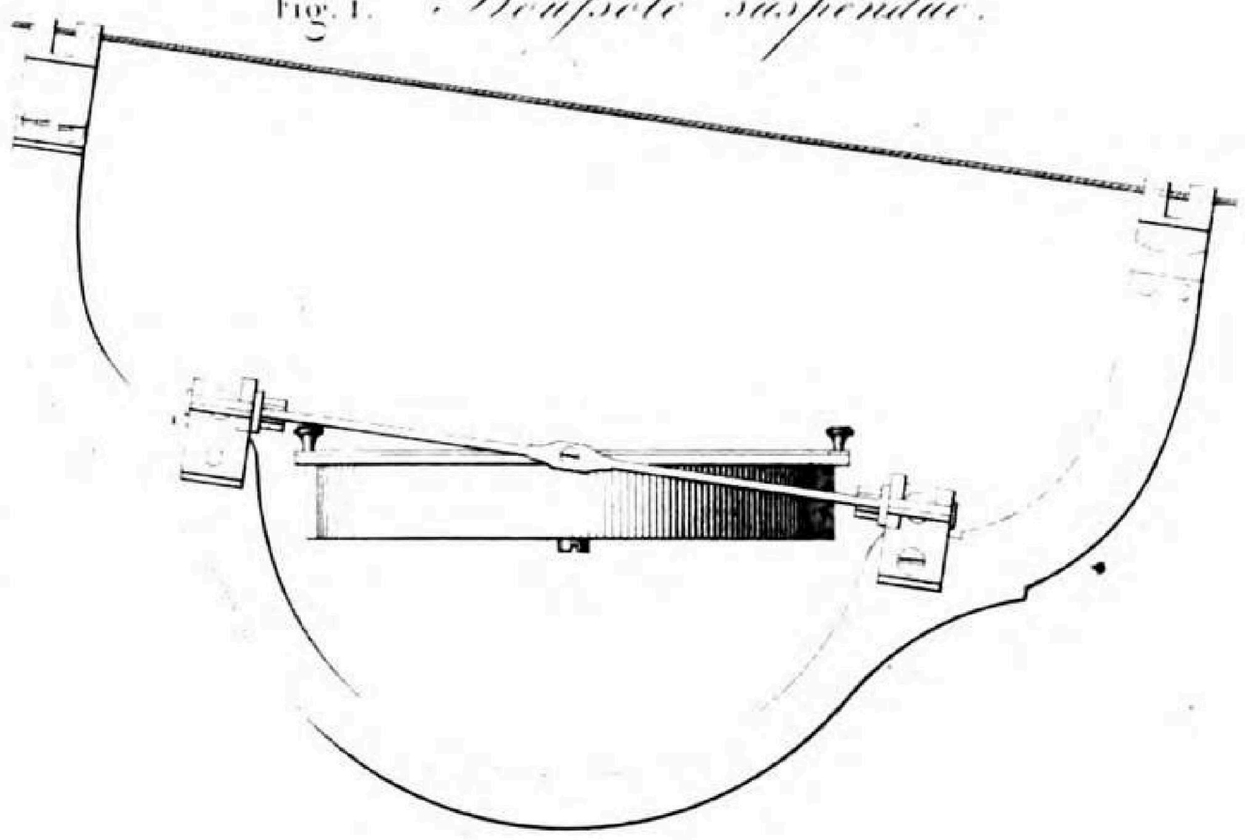


Fig. 2. *Boussole enchassée dans son rapporteur.*

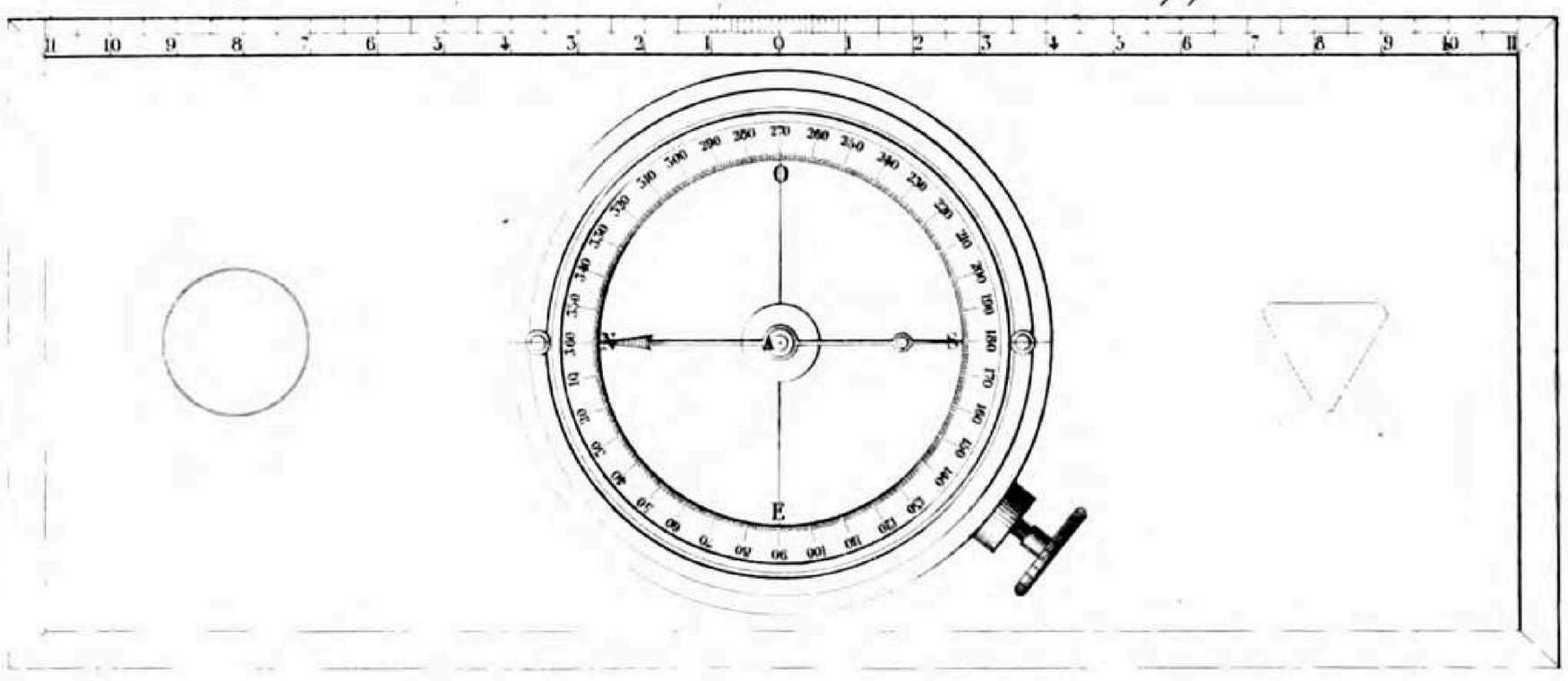
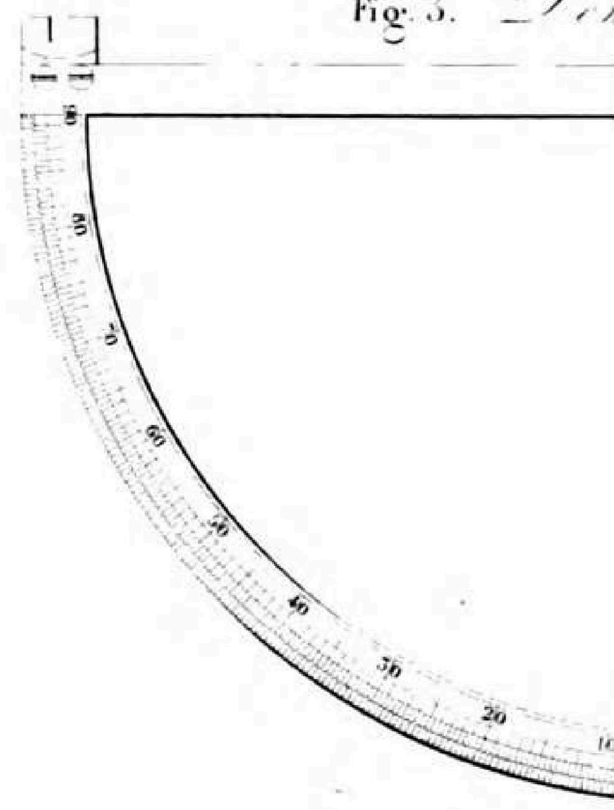


Fig. 3. *Le*





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cercle gradué.

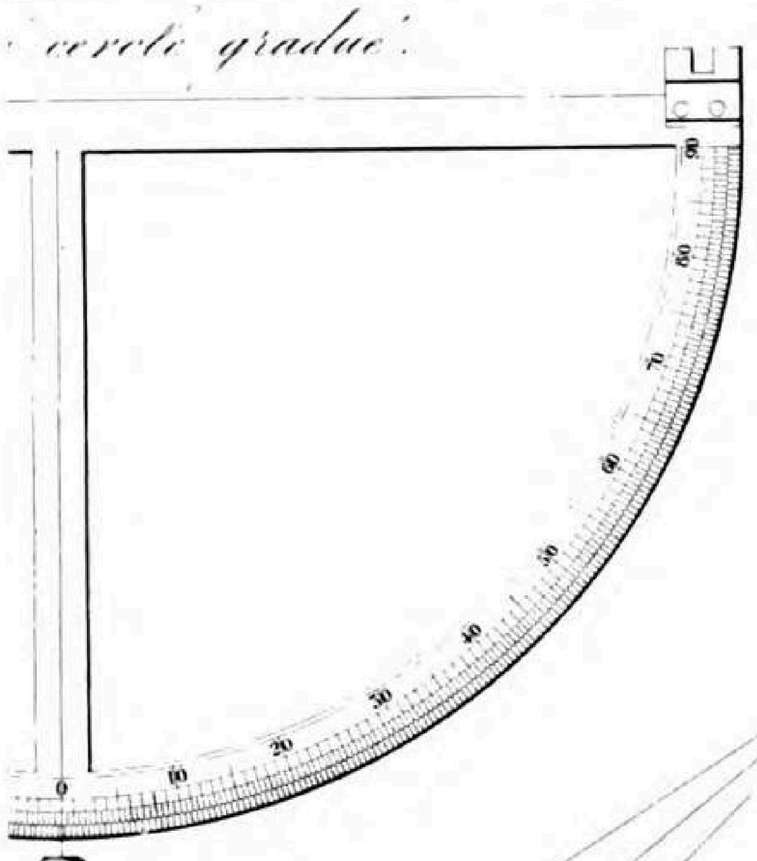
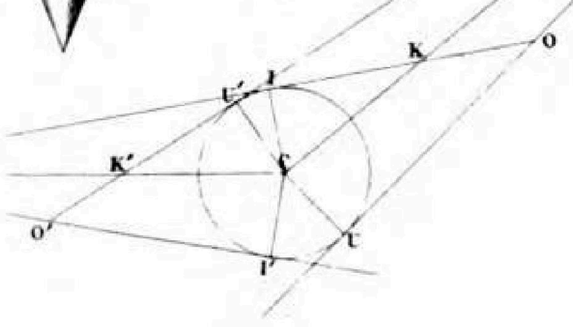


Fig. 4.



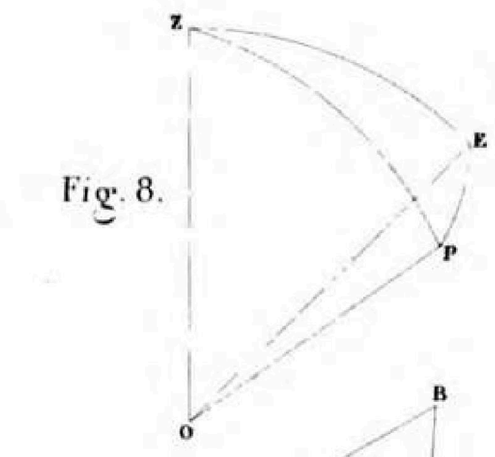


Fig. 8.

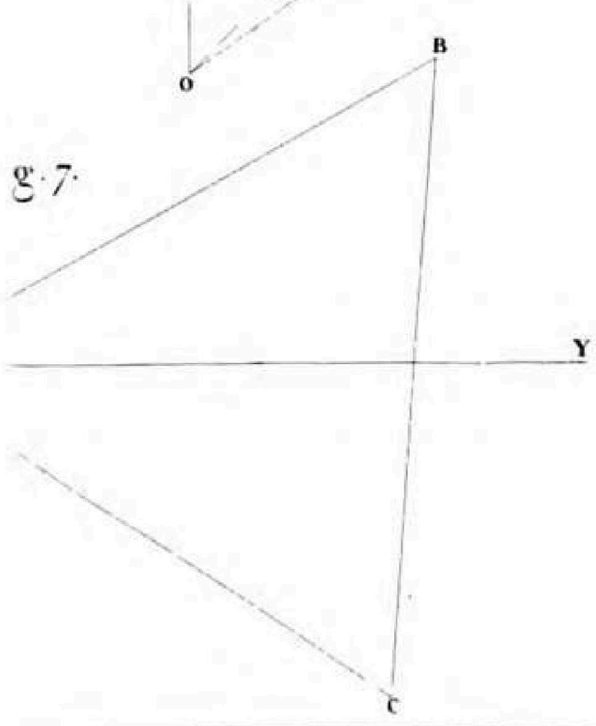


Fig. 7.

Fig. 5.

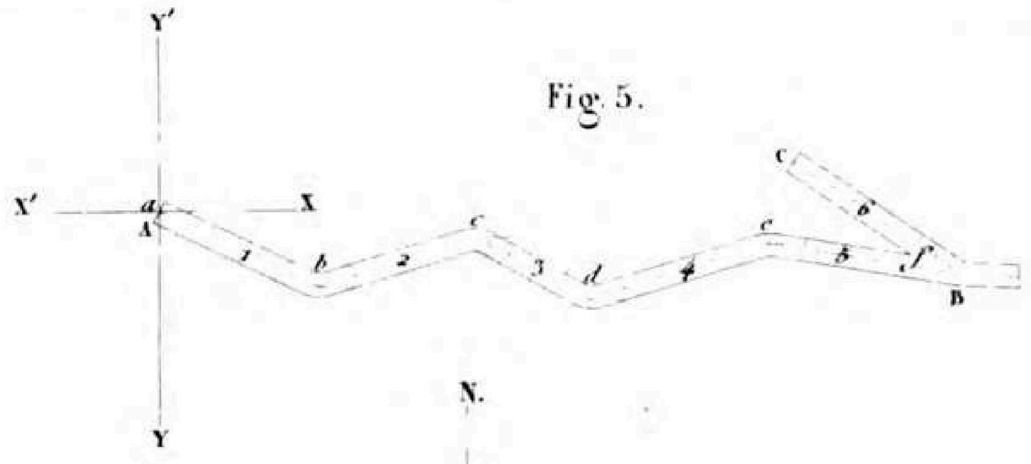


Fig. 6.

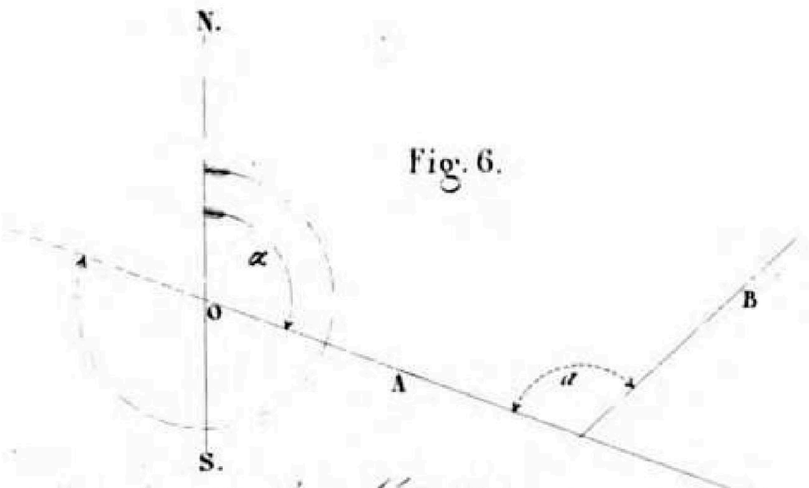
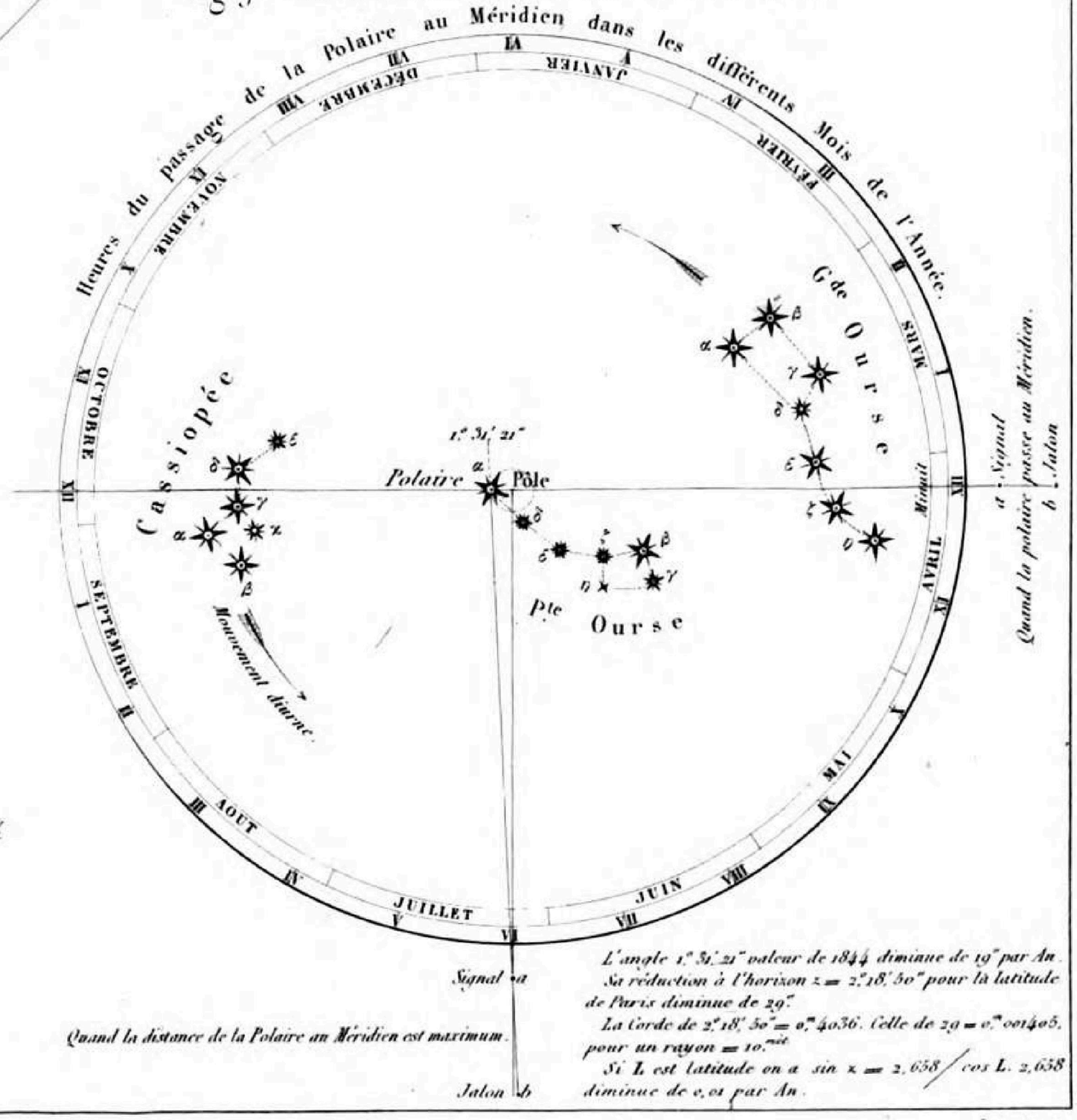


Fig. 9. *Détermination de la Méridienne.*



L'angle 1°.31'.21" valeur de 1844 diminue de 19" par An.
Sa réduction à l'horizon z = 2°.18'.30" pour la latitude de Paris diminue de 29".
La corde de 2°.18'.30" = 0,m4036. Celle de 29 = 0,m001405. pour un rayon = 10,mèt.
Si L est latitude on a sin z = 2,658 / cos L. 2,658 diminue de 0,01 par An.

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Fig. 1. *Élévation suivant AB.*

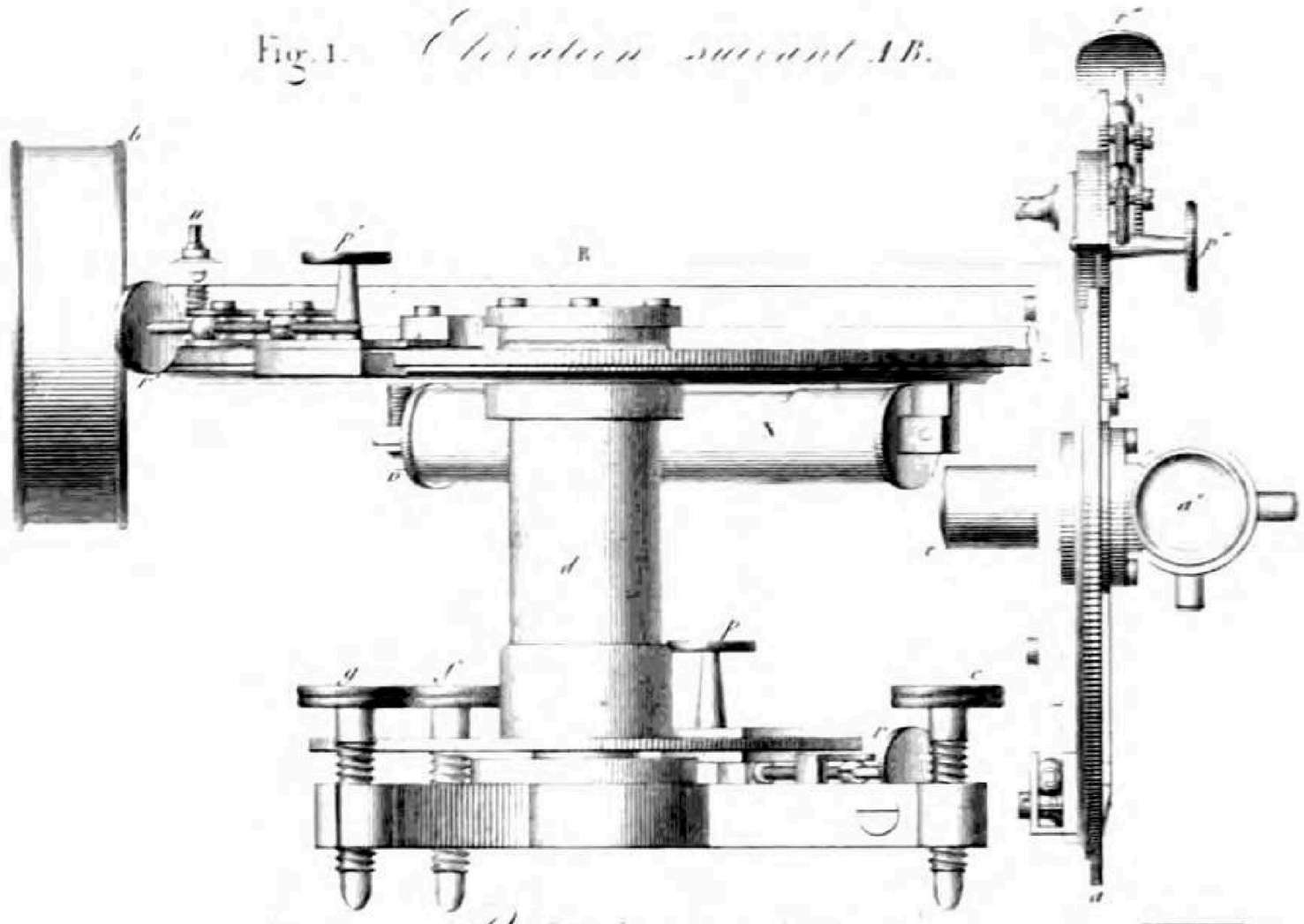
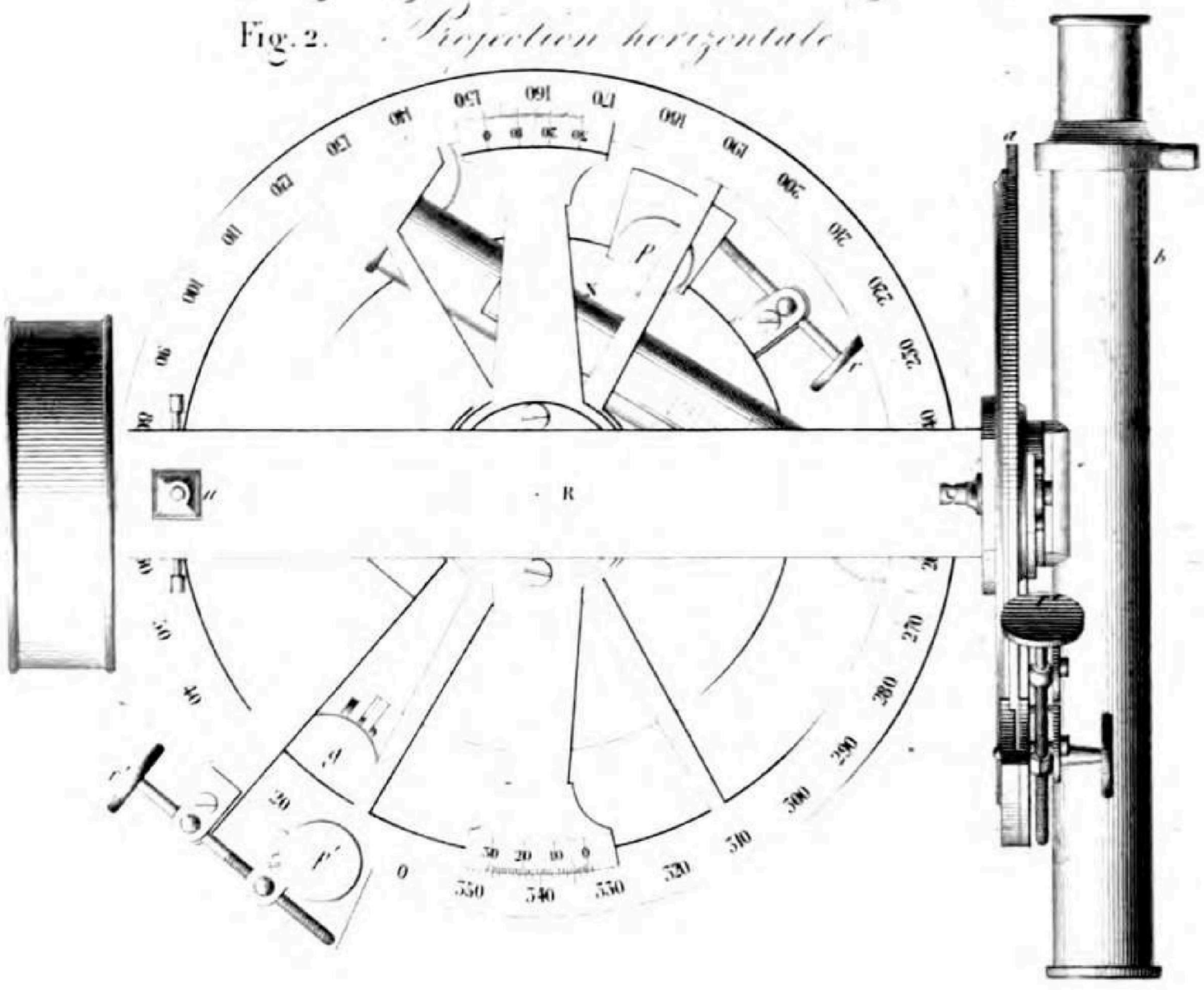
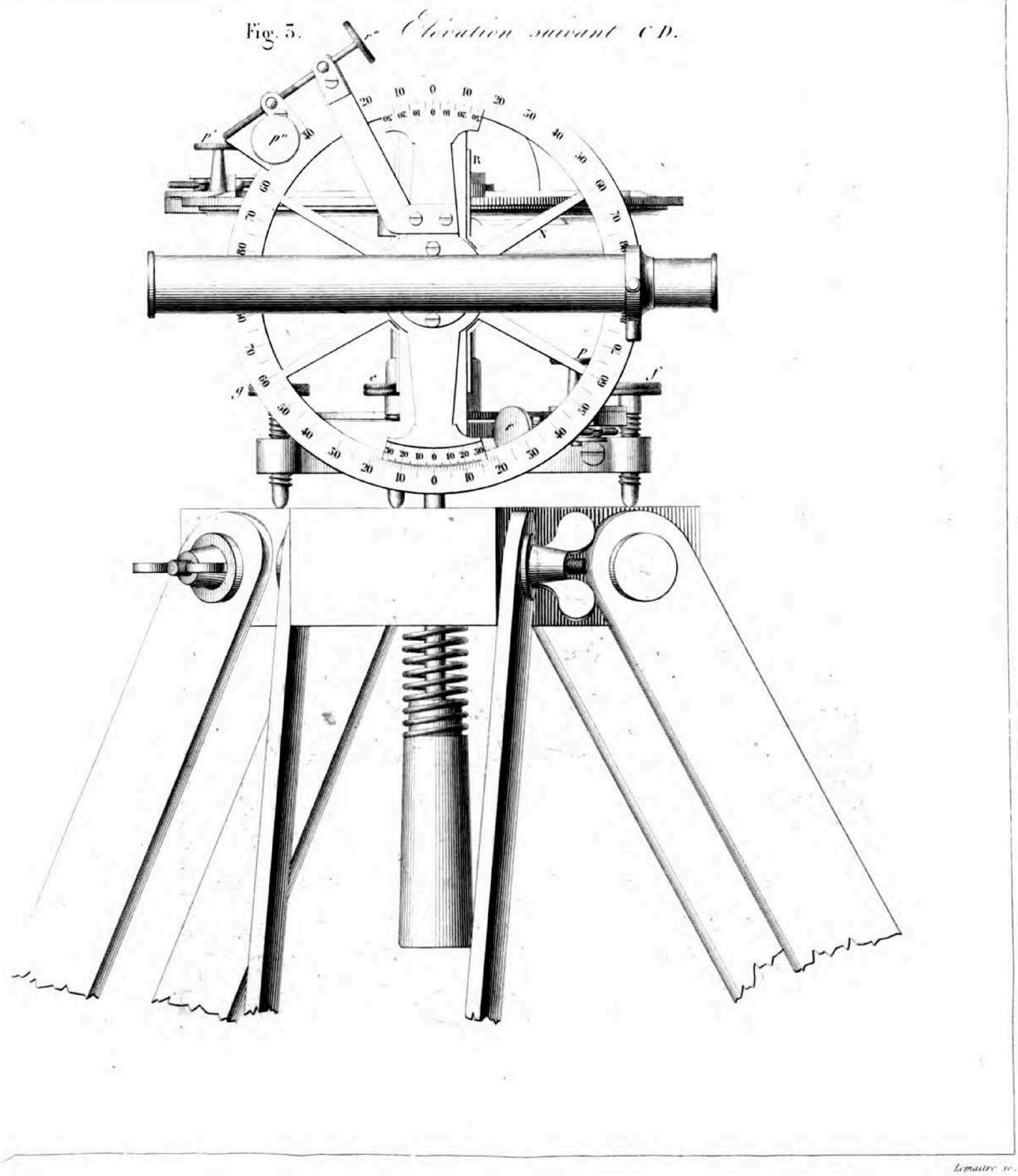


Fig. 2. *Projection horizontale*



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Fig. 3. *Élévation suivant CD.*



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NOUVEAUX OUTILS DE SONDAGE DE Mr KIND.

PL. LXVI.

Fig. 1.

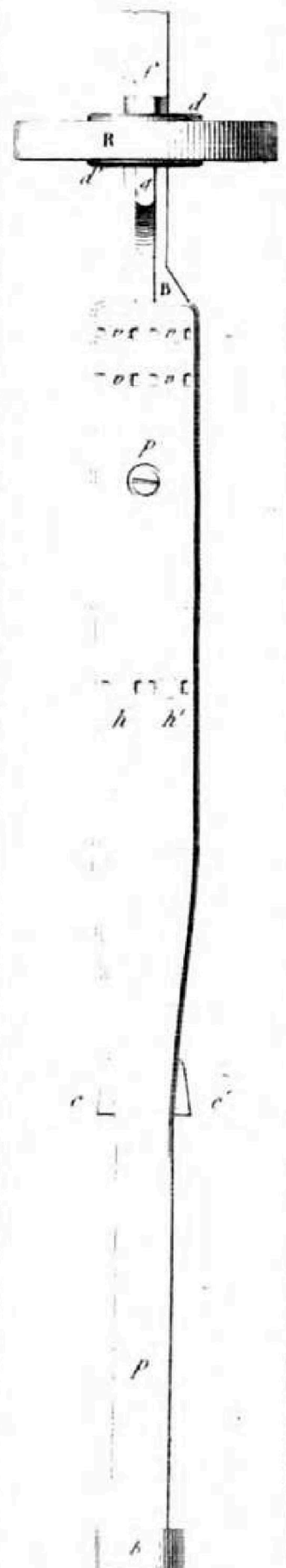


Fig. 2.

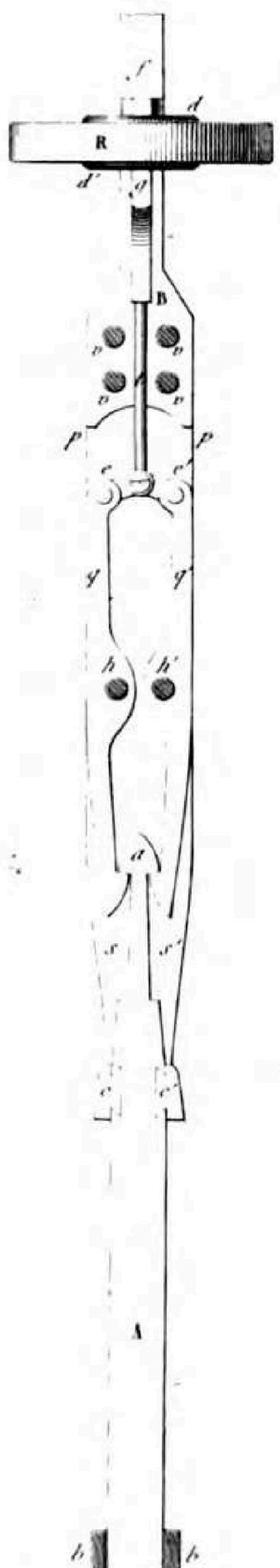


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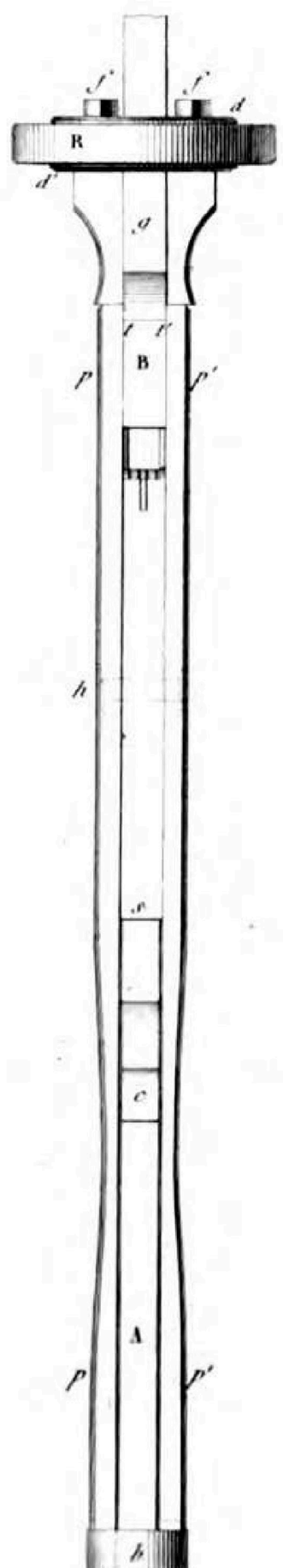


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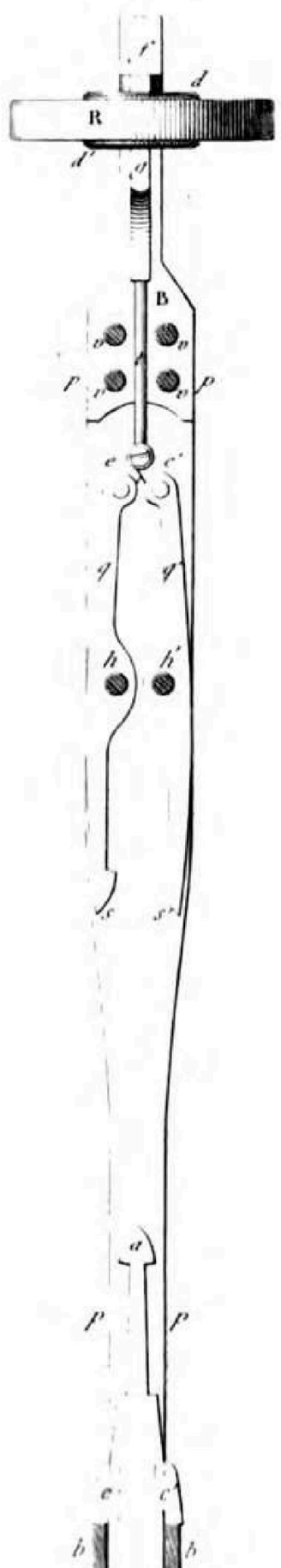
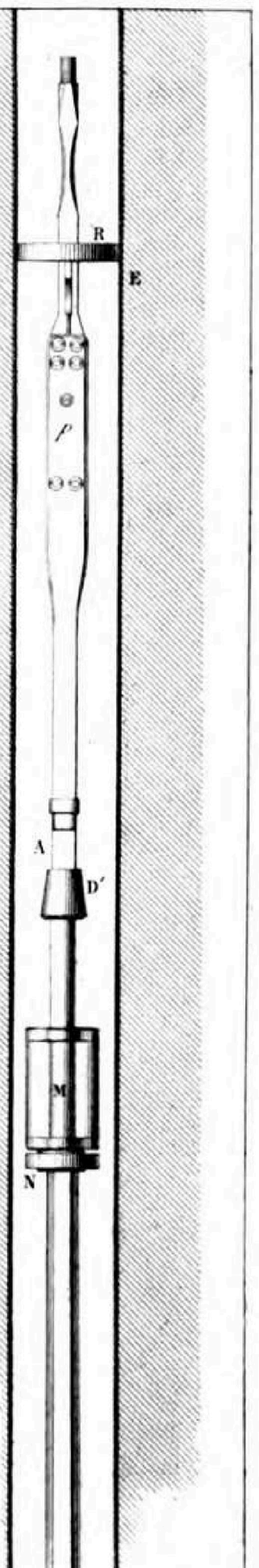
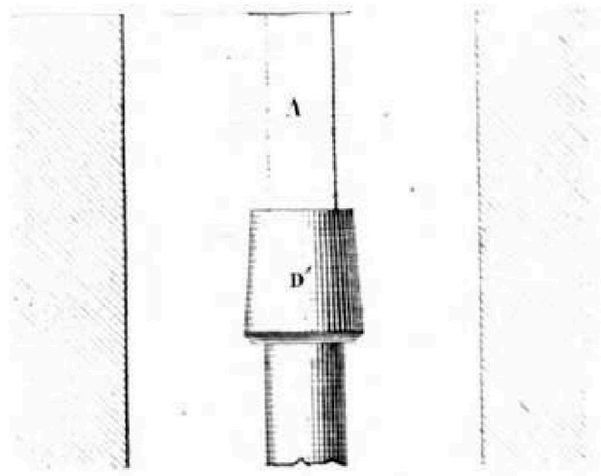
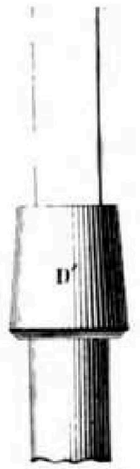


Fig. 11.







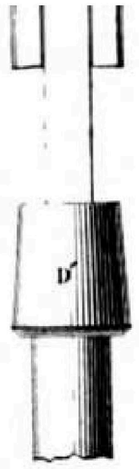




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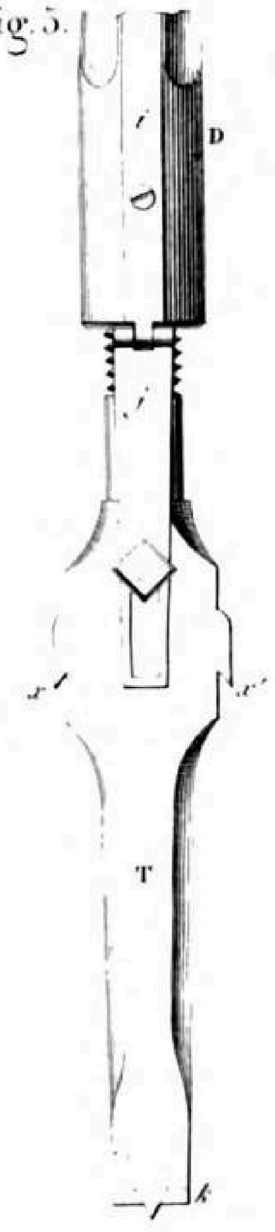


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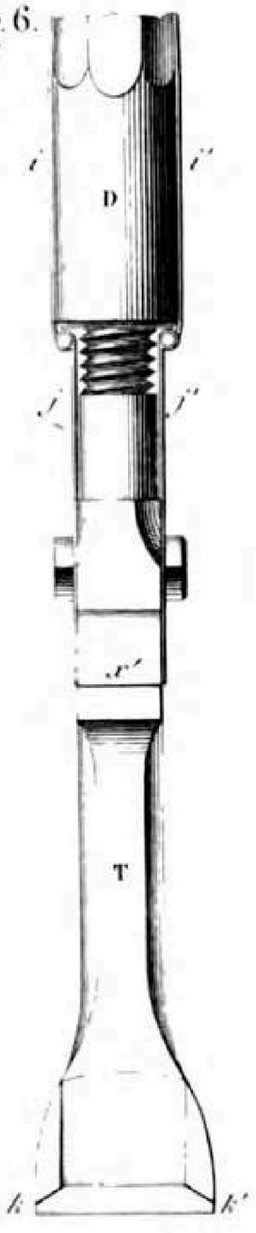


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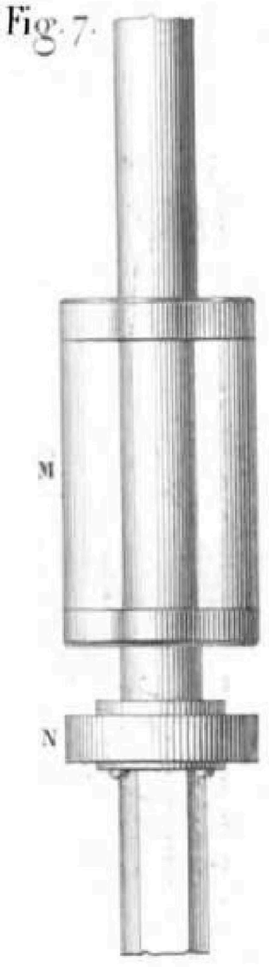


Fig. 7 bis

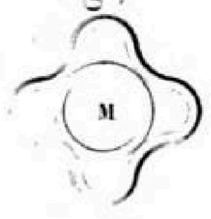


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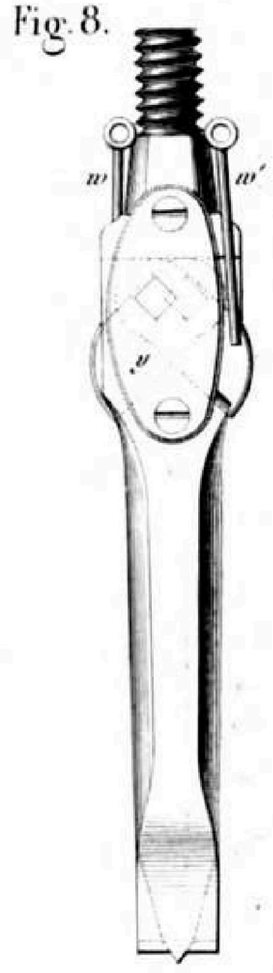


Fig. 9

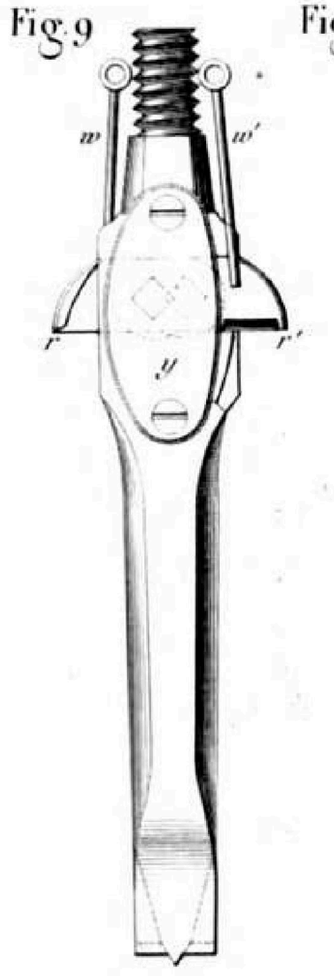
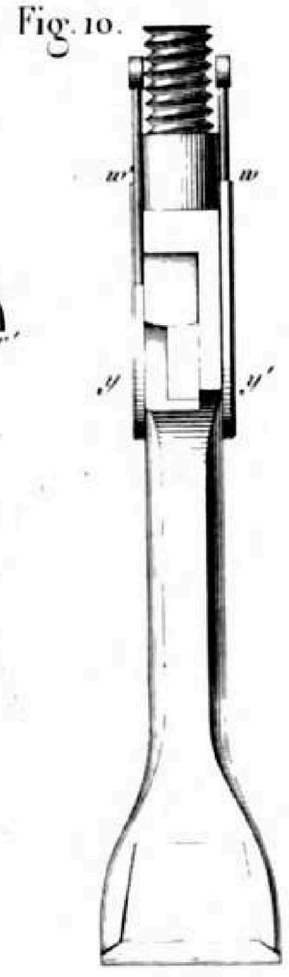
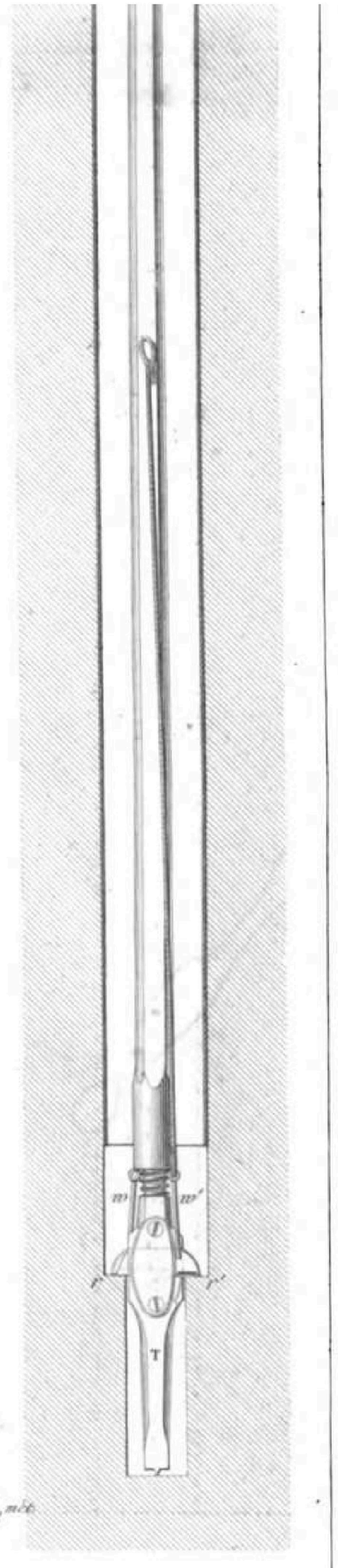


Fig. 10.





Echelle de la Fig. 11.

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Echelle des Fig. 1 à 10.

0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 — 2 mètres

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Königliches Polytechnisches Institut Augsburg