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PUBLICATION INDUSTRIELLE

DES

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LES PLUS PERFECTIONNÉS ET LES PLUS RÉCENTS

EMPLOYÉS

DANS LES DIFFÉRENTES BRANCHES DE L'INDUSTRIE FRANÇAISE ET ÉTRANGÈRE

PAR

ARMENGAUD AINÉ

INGÉNIEUR, ANCIEN PROFESSEUR AU CONSERVATOIRE IMPÉRIAL DES ARTS ET MÉTIERS

MEMBRE HONORAIRE DE LA SOCIÉTÉ PHILOMATIQUE DE BORDEAUX ET DE LA SOCIÉTÉ INDUSTRIELLE DE MULHOUSE; MEMBRE DE LA SOCIÉTÉ D'ENCOURAGEMENT, DE LA SOCIÉTÉ DES INGÉNIEURS CIVILS, ETC.

TOME QUATORZIÈME



PLANCHES

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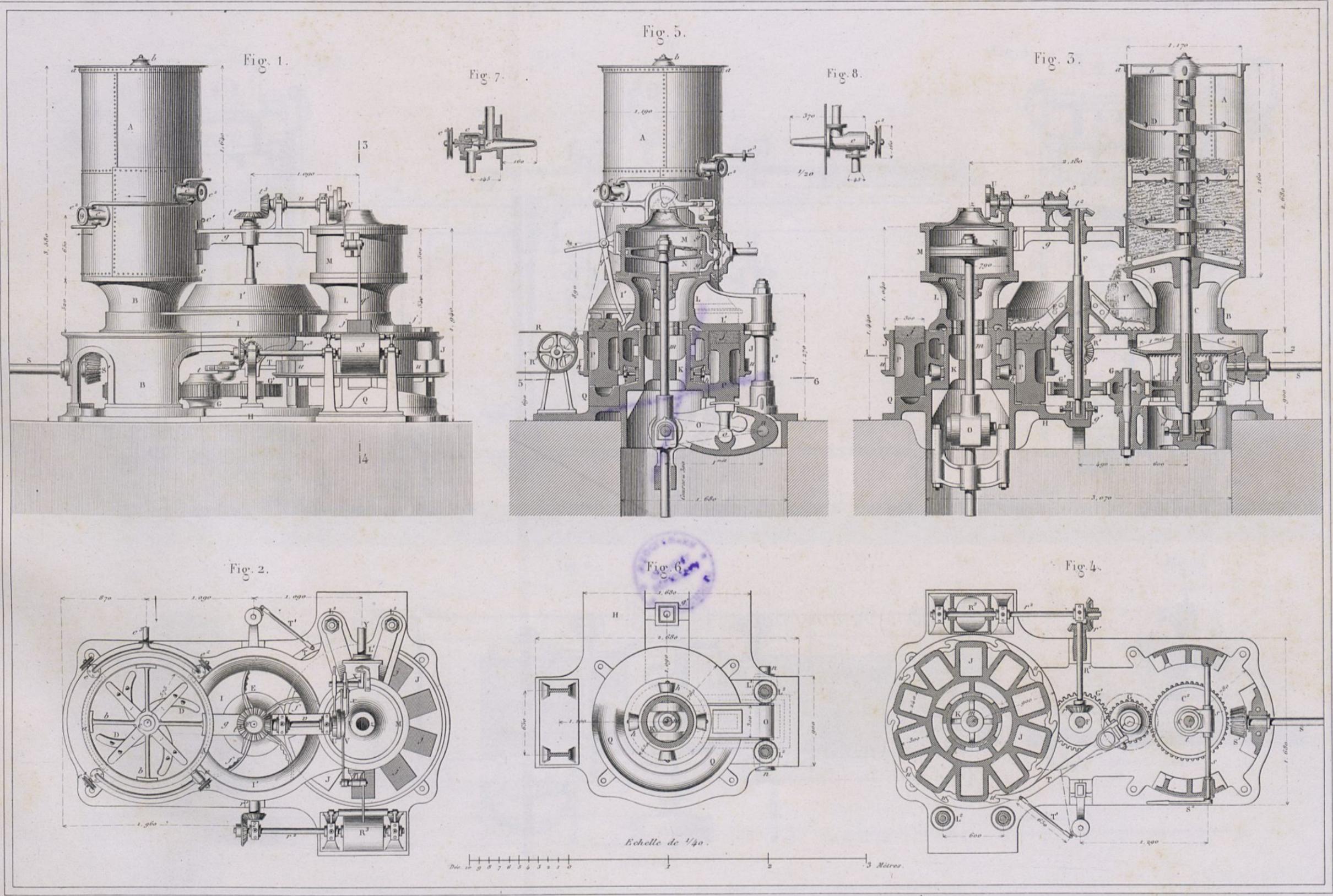
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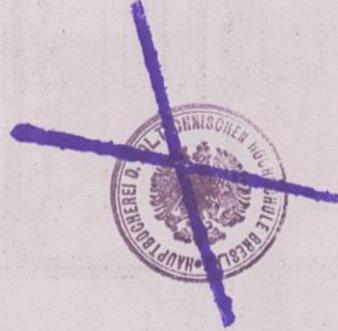
TABLE DES PLANCHES

DU TOME QUATORZIÈME DE LA PUBLICATION INDUSTRIELLE

PLANCHES	1 ^{re} LIVRAISON.	PAGES.	PLANCHES.	6 ^e LIVRAISON.	PAGES.
1	Fabrication des combustibles agglomérés. — Machine à mouler en briquettes, par MM. MAZELINE et COUILLARD.....	3	21	Nouvelles machines de Marly pour l'élévation des eaux, construites sous la direction de M. DUFRAYER (<i>Suite</i>).....	246
2	Machine à pousser les moulures droites, par MM. BERNIER aîné et ARBEY.	38	22	Machines à laver les matières textiles et les tissus.....	263
3	Expériences sur les générateurs à vapeur, par MM. BURNAT et DUBIED.	46	23	} Machines du Semmering. — Locomotive pour fortes rampes, système Engerth, modifiée par M. DESGRANGES.....	284
4	Manchons fixes pour l'accouplement des arbres.....	69	24		
2 ^e LIVRAISON.			7 ^e LIVRAISON.		
5	Scierie pour débiter les bois en grume, à une ou plusieurs lames, n'exigeant ni fosse ni fondation, par M. A. COCHOT.....	93	25	Filature du coton. — Machine de préparation, dite épurateur, par M. G.-A. RISLER, de Cernay.....	313
6	Machine à vapeur locomobile de huit chevaux, par MM. CAIL et C ^{ie} ..	100	26	Machine à trancher les bois de placage, par MM. BERNIER aîné et ARBEY.	329
7	Machines à vapeur locomobiles de M. GACHE et de M. GARGAN.....	108	27	Fabrication de l'acier par les procédés de M. BESSEMER.....	337
8	Appareils perforateurs propres à percer les trous de mines dans la roche.	115	28	Fabrication des tabacs. — Torréfacteur mécanique, par M. ROLLAND.	357
3 ^e LIVRAISON.			8 ^e LIVRAISON.		
9	Machine soufflante à disques rotatifs, par M. FOSSEY.....	134	29	Fabrication des tabacs. — Torréfacteur mécanique, par M. E. ROLLAND, directeur général des tabacs (<i>Suite</i>).....	357
10	Machine à mortaiser à plate-forme mobile verticalement, construite par M. L. PÉRARD.....	143	30	Presse typographique, dite à réaction, pour labeurs, par M. VOIRIN.	378
11	Bateau toueur à vapeur, par M. DIETZ.....	147	31	Disposition générale d'une sucrerie de canne, par MM. BRISSONNEAU frères.	392
12	Apprêts des tissus. — Séchoir à sept cylindres, par M. TULPIN aîné.	169	32	Sucrerie de canne (<i>Suite</i>). — Détails des principaux appareils.....	392
4 ^e LIVRAISON.			9 ^e LIVRAISON.		
13	Apprêts des tissus. — Séchoir à quinze cylindres, par M. TULPIN aîné.	169	33	Scierie de pierre à traction directe par deux machines à vapeur accouplées, établie par la Société du Grand-Hornu.....	413
14	Machines aspirantes, à pistons et à trois cylindres, destinées à l'extraction du gaz des cornues de distillation.....	186	34	Filature de la laine peignée. — Défeuteur simple, par M. BRUNEAUX.	427
15	Scierie mécanique à cylindres et à une seule lame, par M. COCHOT...	195	35	Filature de la laine peignée. — Défeuteur à deux étirages et défeuteur réunisseur, par M. BRUNEAUX.....	427
16	Réservoirs et appareils de distribution d'eau pour alimenter les locomotives, par MM. NEUSTADT et BONNEFOND.....	201	36	Manèges de divers systèmes fixes et portatifs.....	449
5 ^e LIVRAISON.			10 ^e LIVRAISON.		
17	Grues hydrauliques pour alimentation des locomotives dans les pays tempérés, par MM. NEUSTADT et BONNEFOND.....	201	37	Manèges de divers systèmes fixes et portatifs (<i>Suite</i>).....	449
18	Appareils pour l'alimentation des locomotives dans les pays froids....	201	38	Fabrication des briques. — Machine à mouler, dite Laminoir-Jardin, perfectionnée par MM. CAZENAVE et C ^{ie}	478
19	Laminoir universel pour la fabrication des fers plats et des tôles.....	230	39	Machine à flamber et griller les tissus, par M. TULPIN aîné.....	504
20	Nouvelles machines de Marly, construites sous la direction de M. DUFRAYER.	246	40	Scierie locomobile à débiter les bois, par M. FREY.....	515







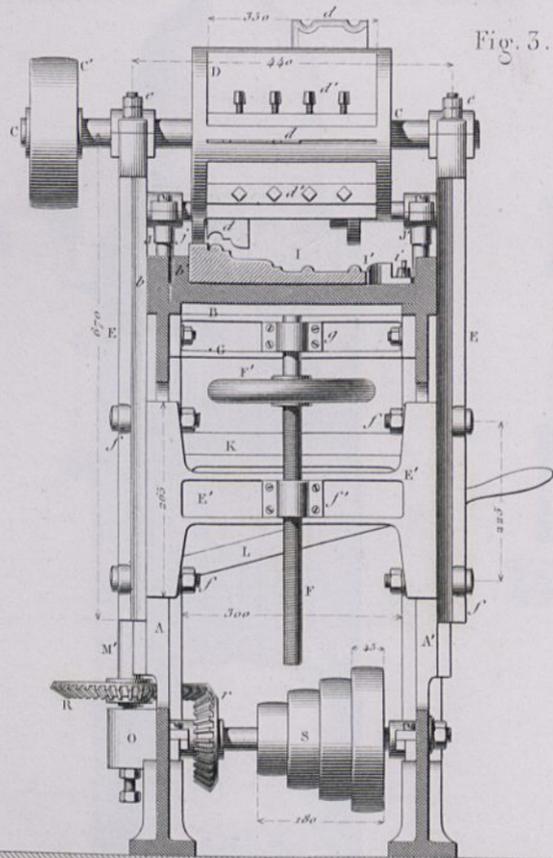


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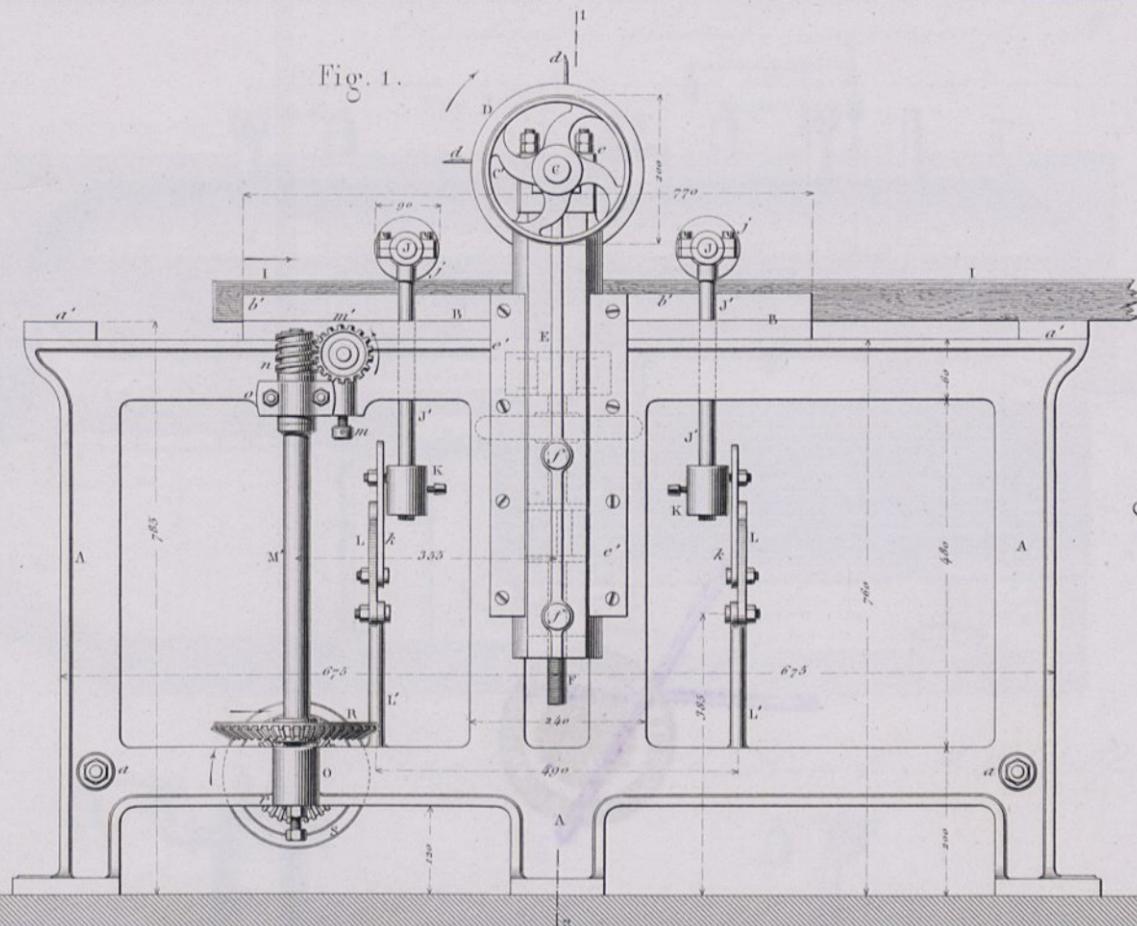


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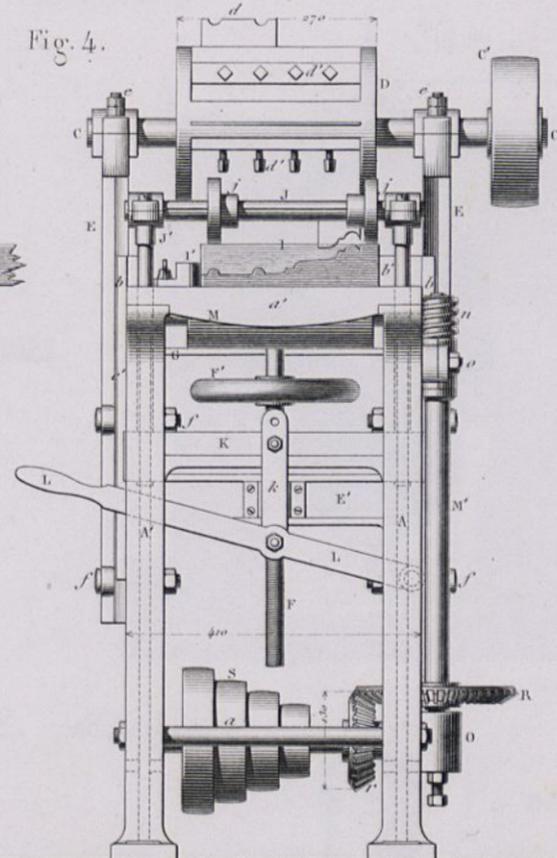


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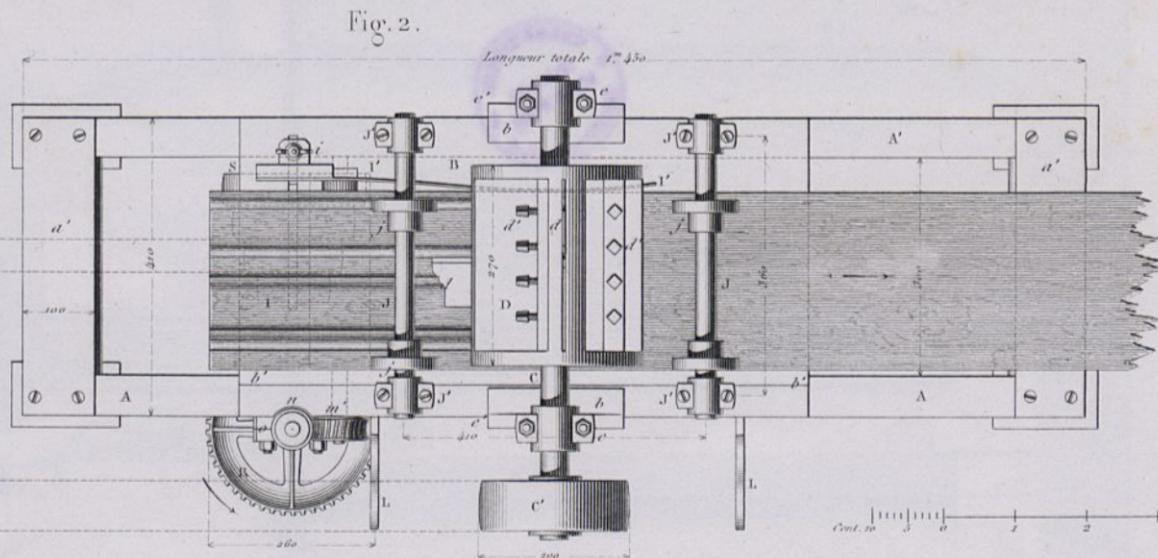
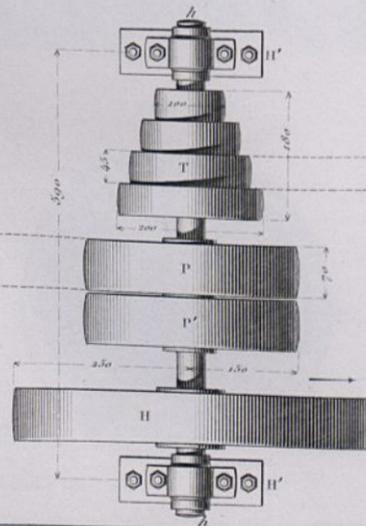


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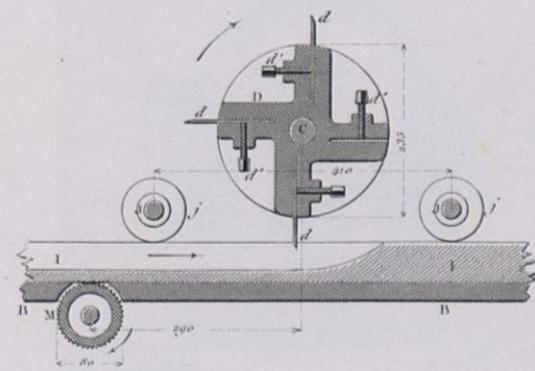
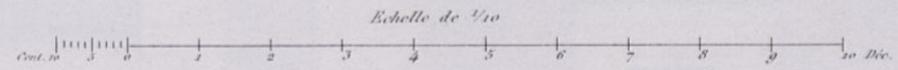


Fig. 5.





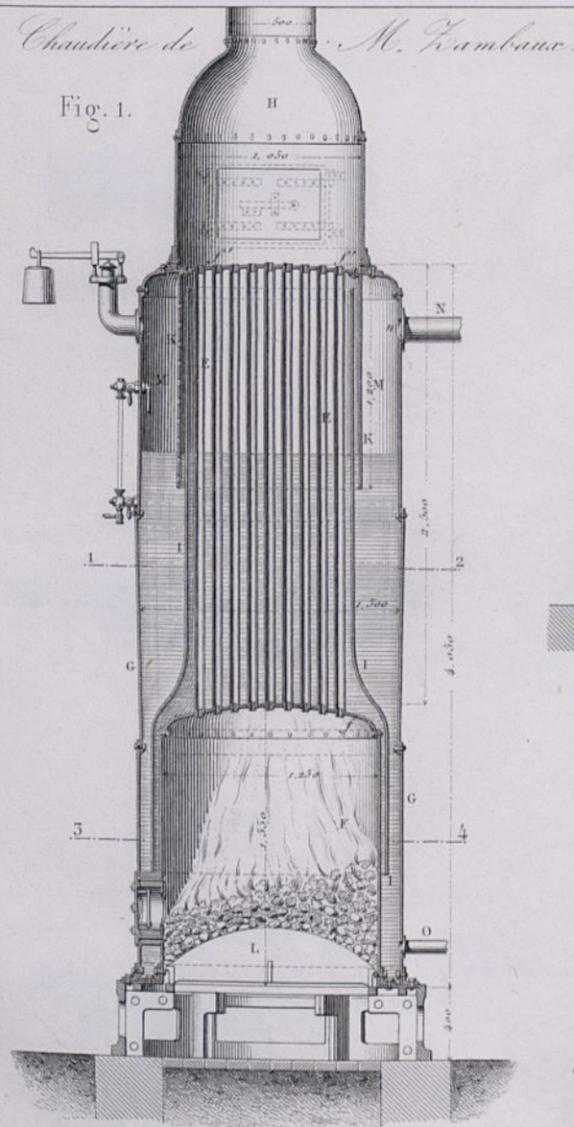


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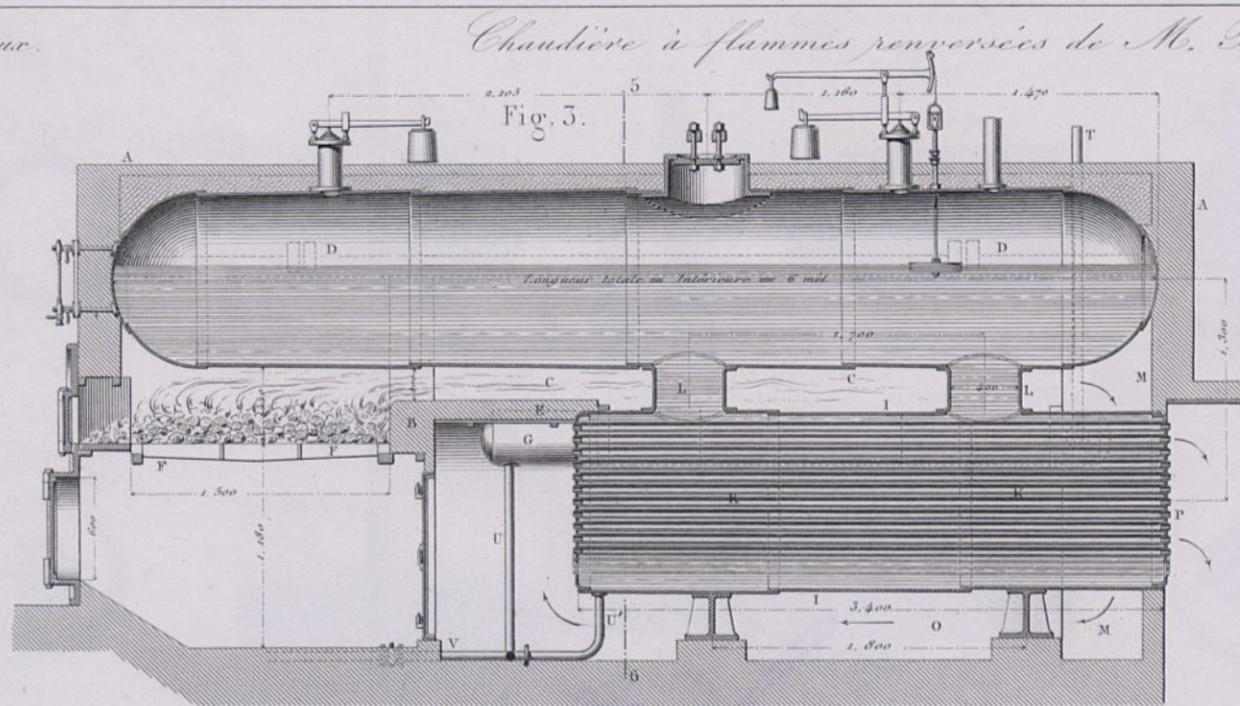


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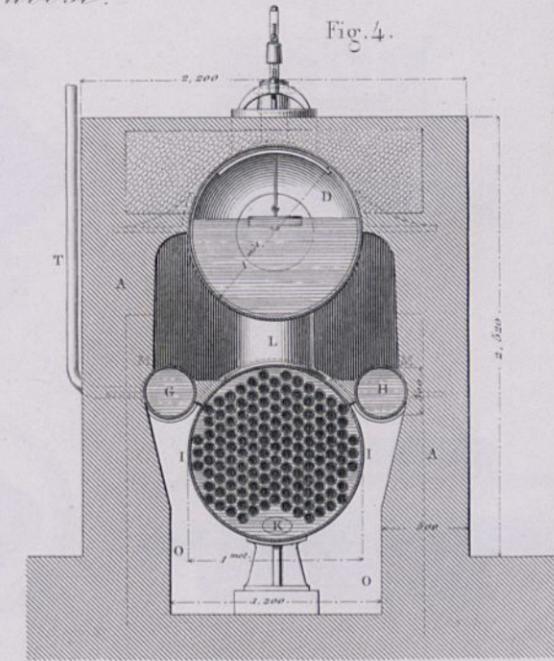


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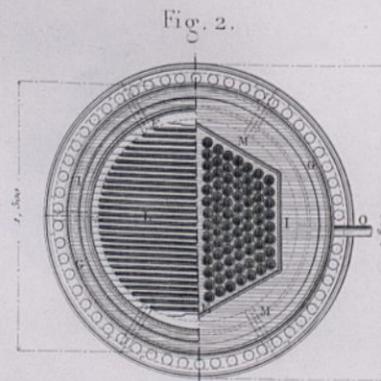


Fig. 2.

Echelle de 1/40

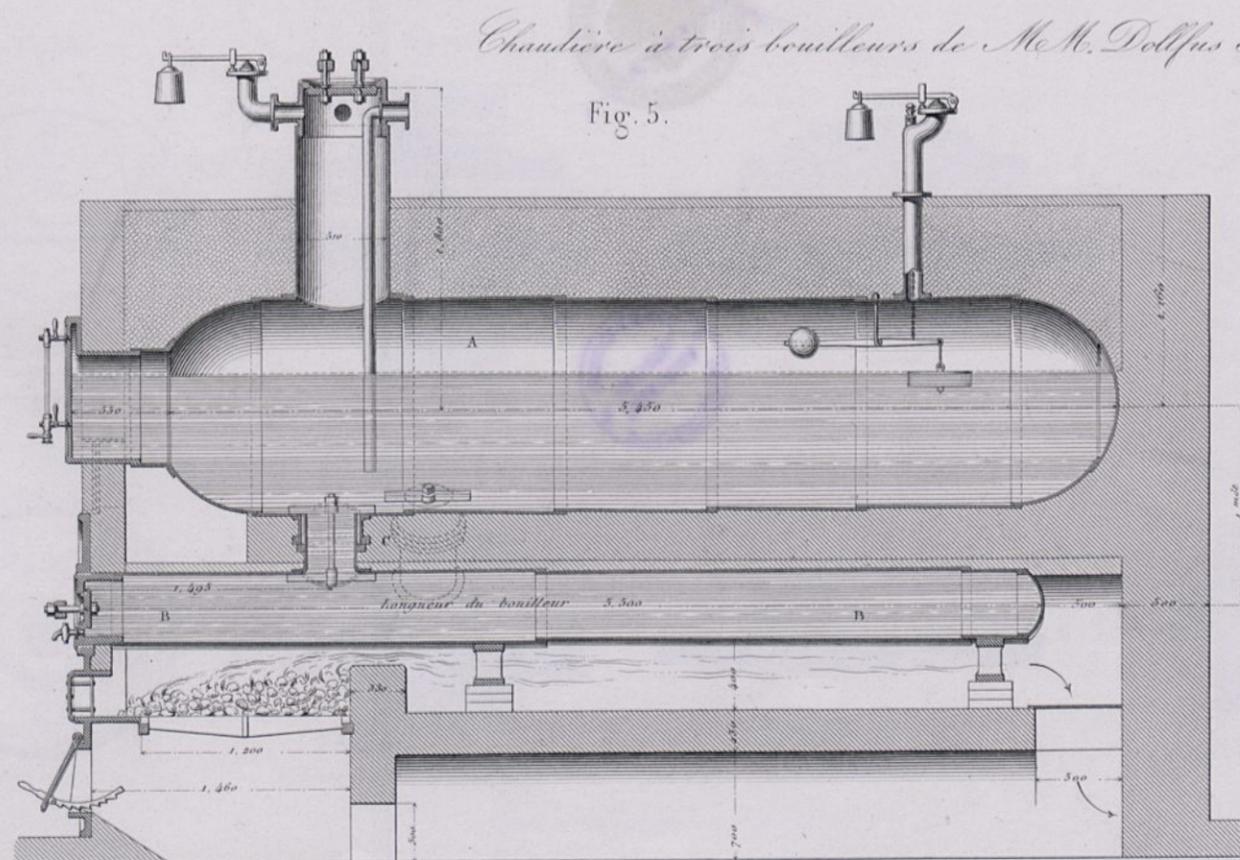


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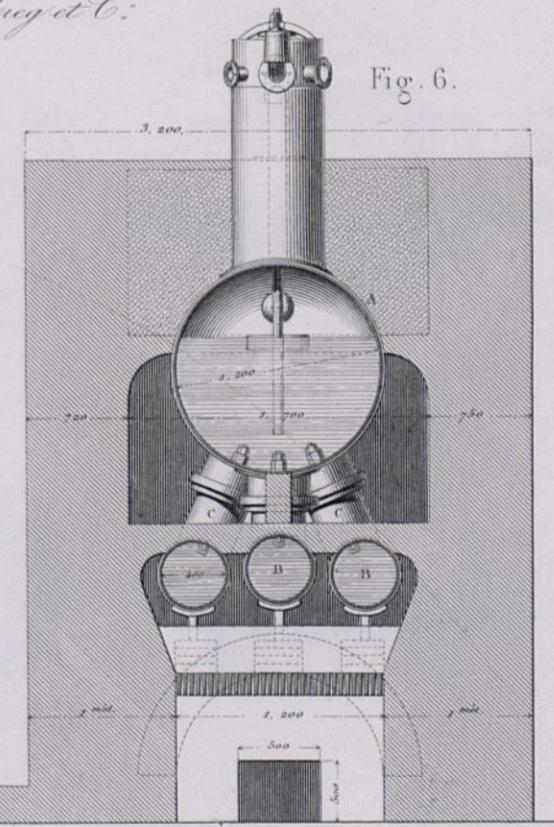
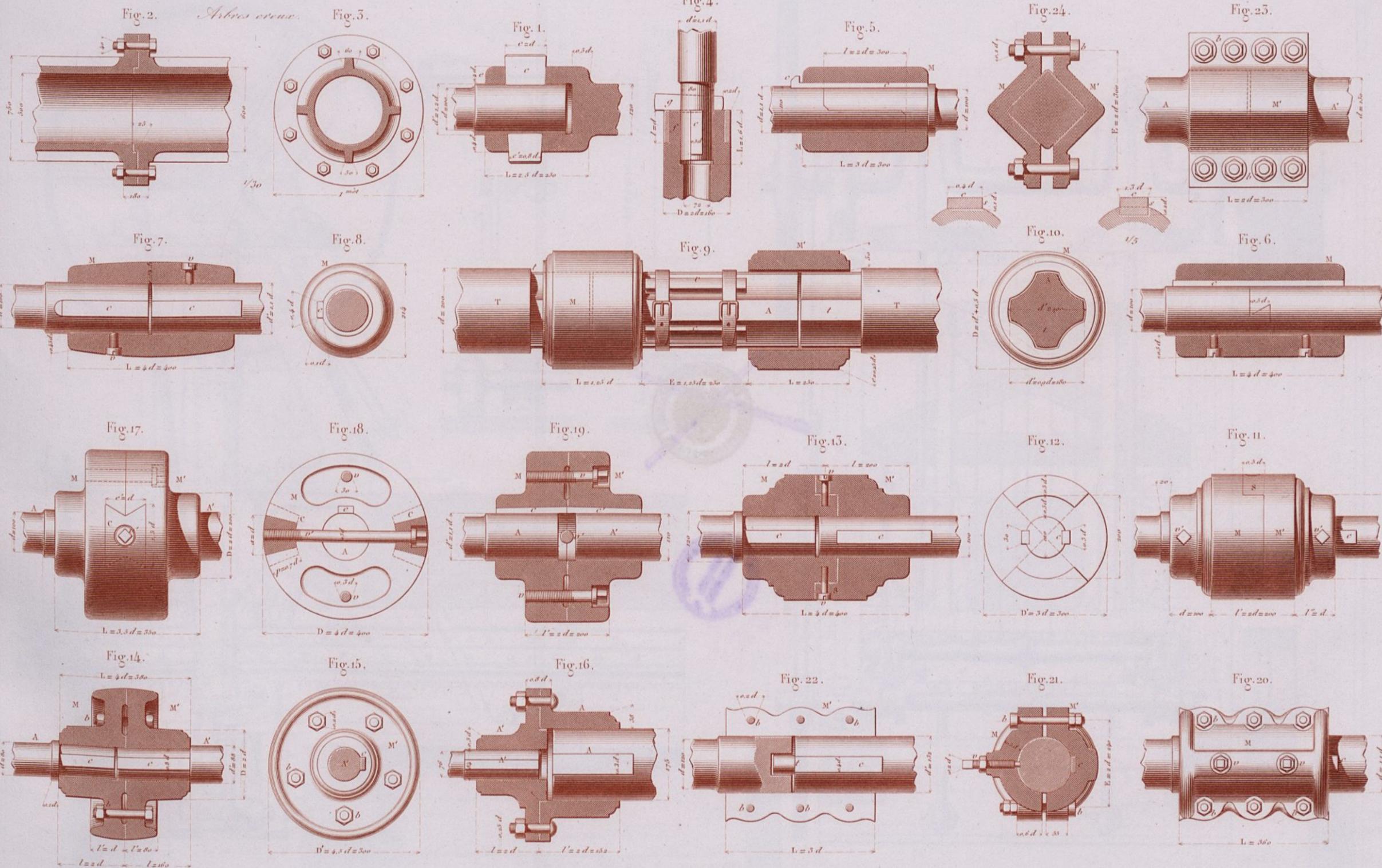


Fig. 6.



Arbres creux.



Echelle de 1/10 pour les Fig. 1. 4 à 24.



Fig. 2.

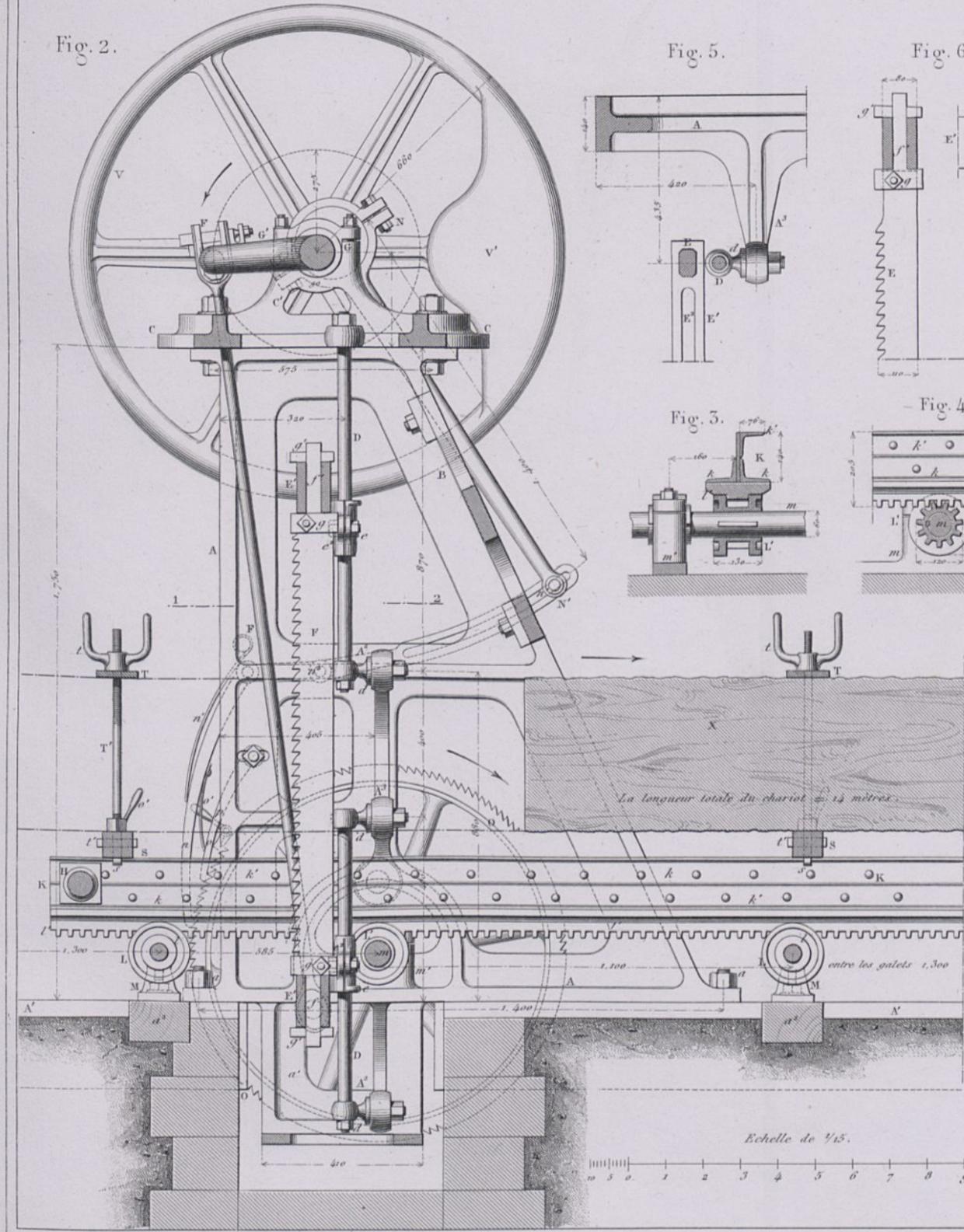


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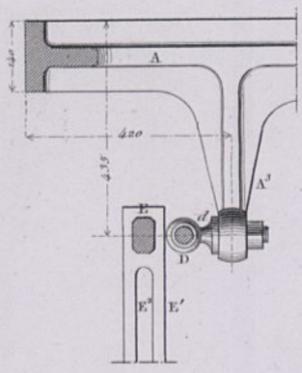


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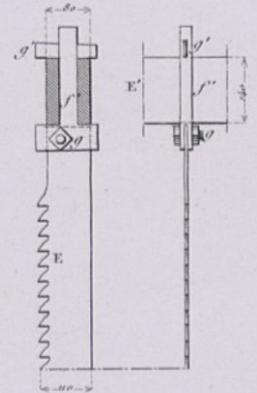


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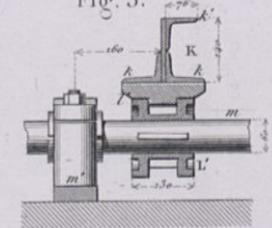


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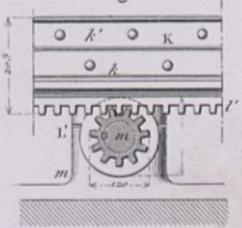
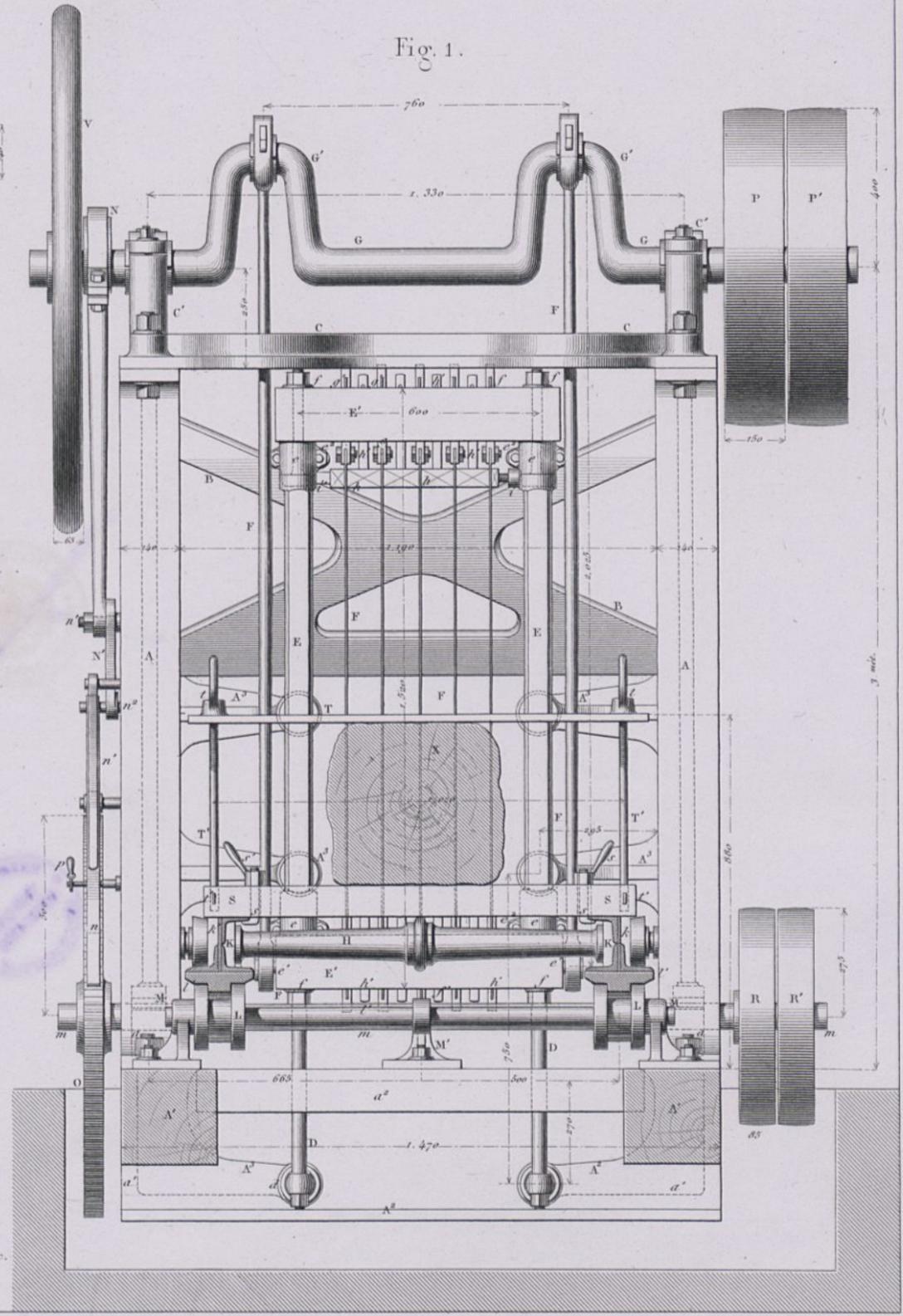


Fig. 1.





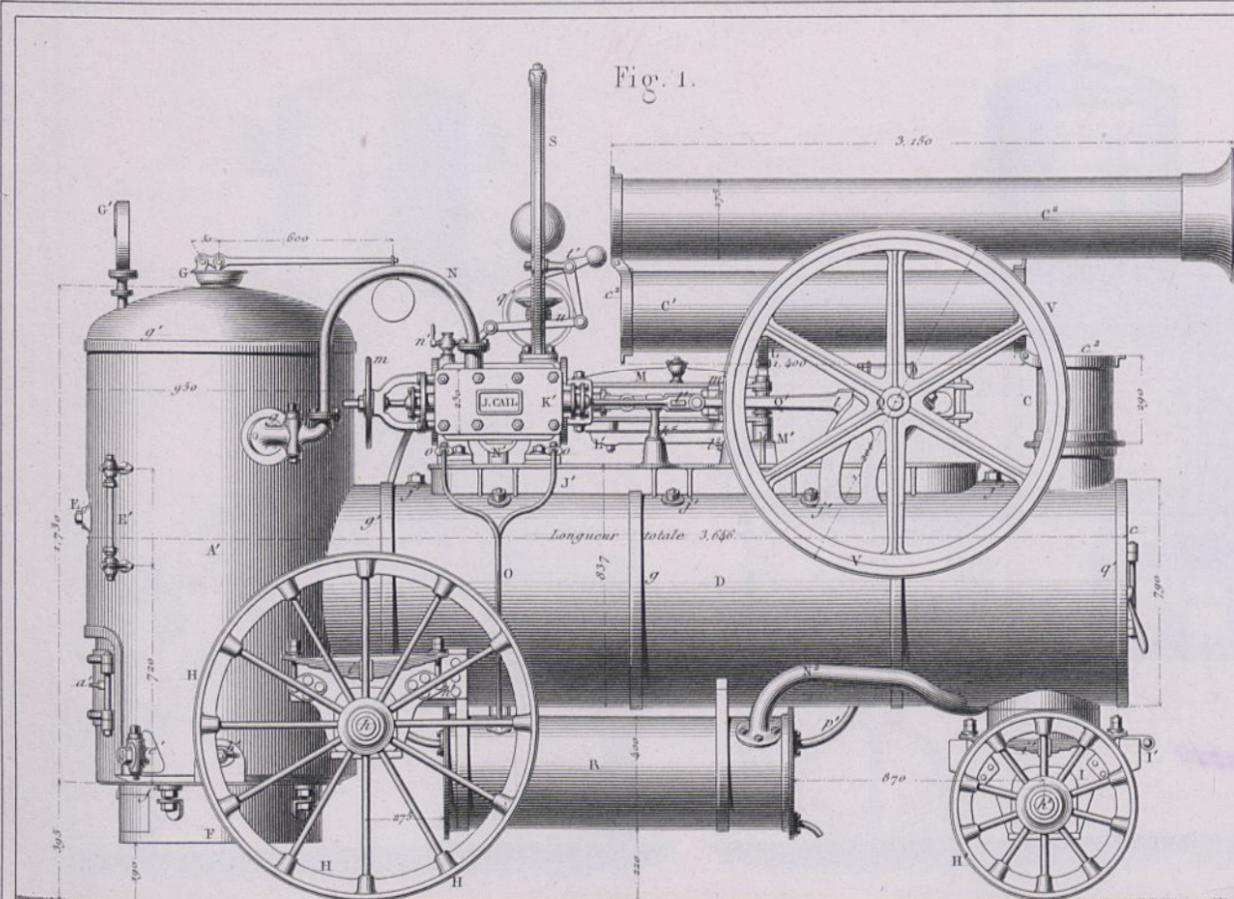


Fig. 1.

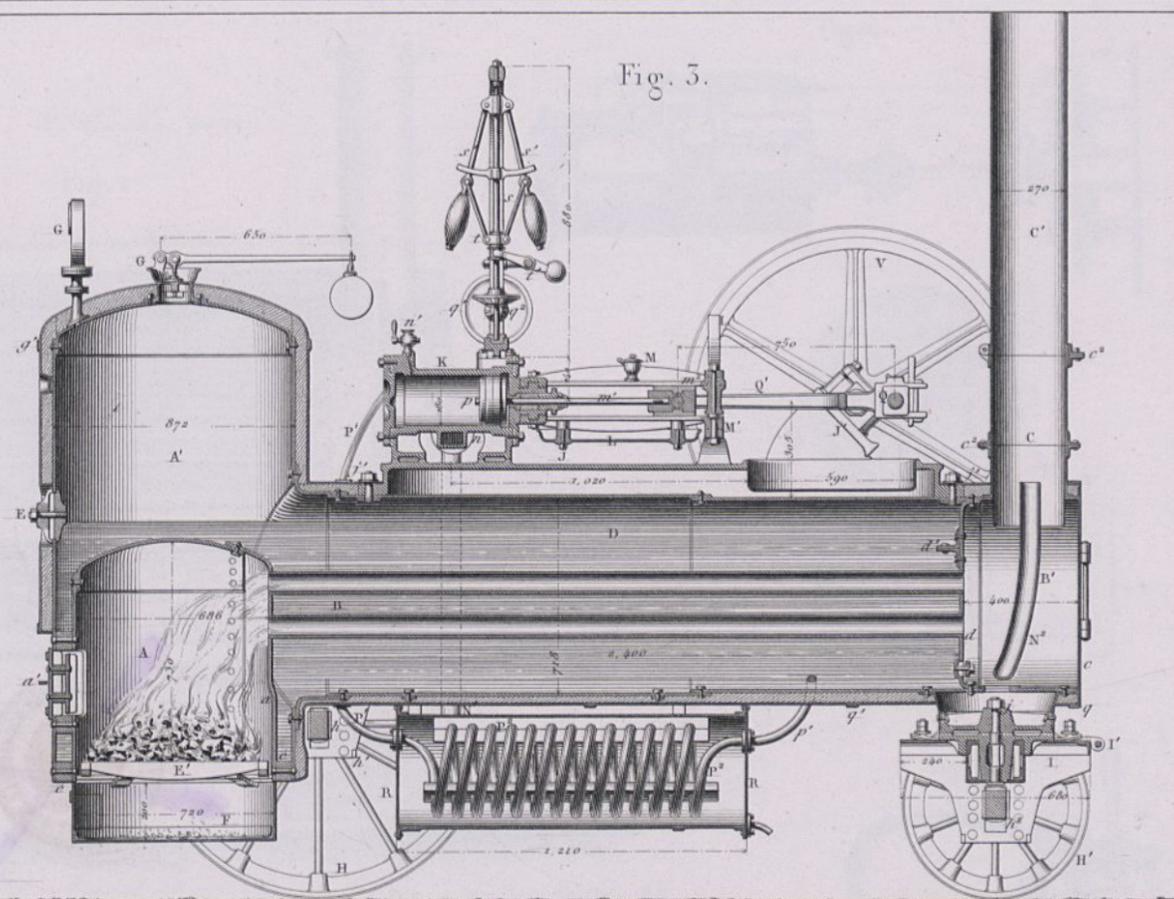


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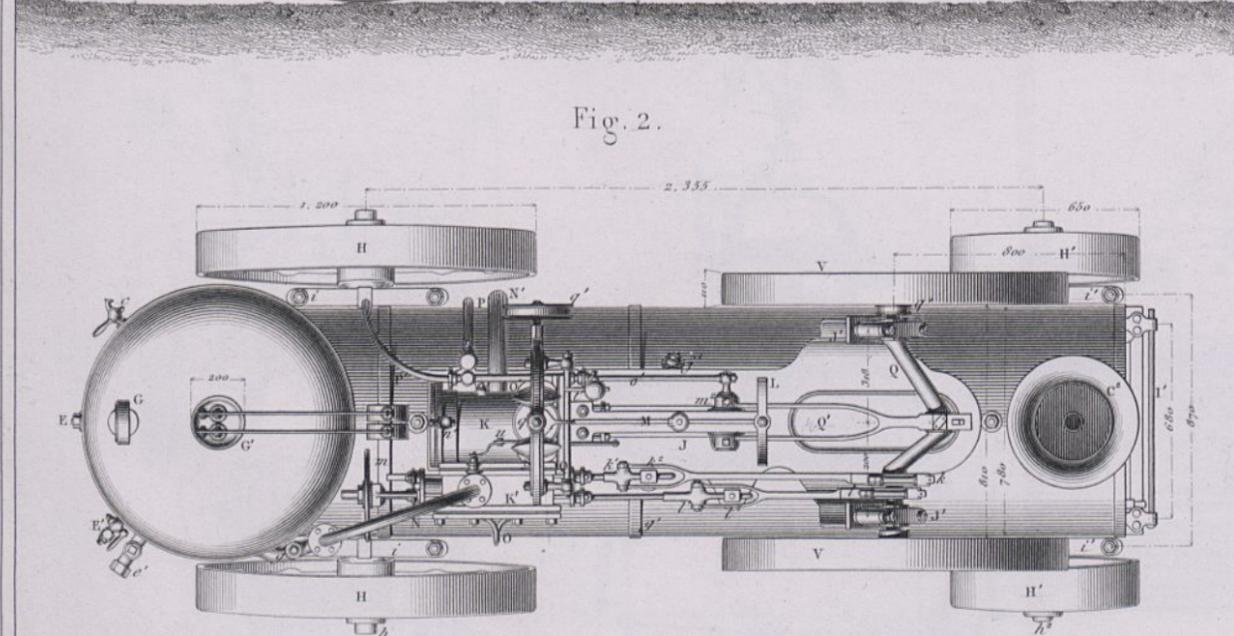


Fig. 2.

Système Fulgureux.

Réchauffeur de Wasserkling — Système de M. Hirn.

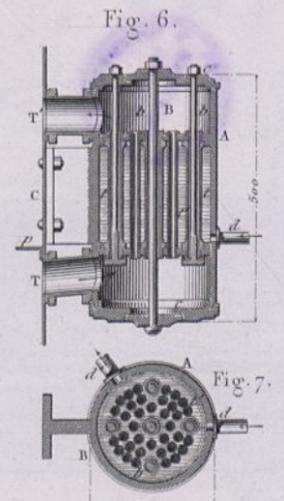


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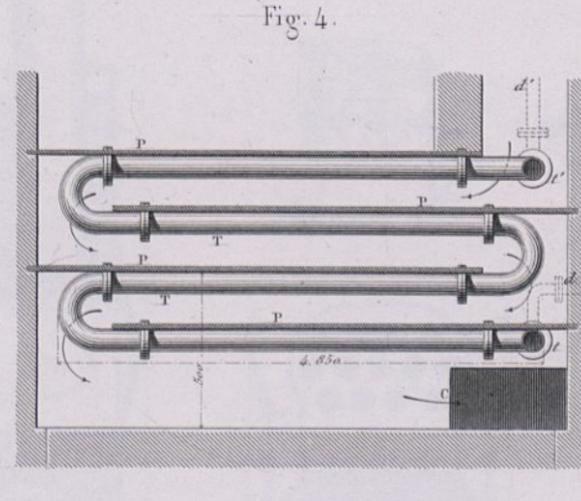


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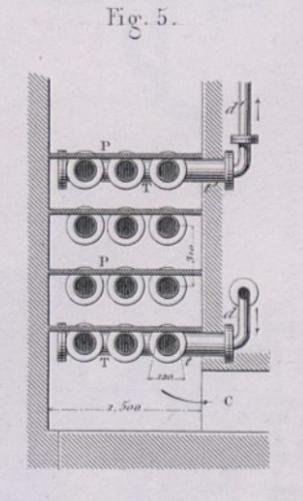


Fig. 5.

Echelle de 1/25 pour les Fig. 2 à 3.

Cent. 10 9 8 7 6 5 4 3 2 1 0

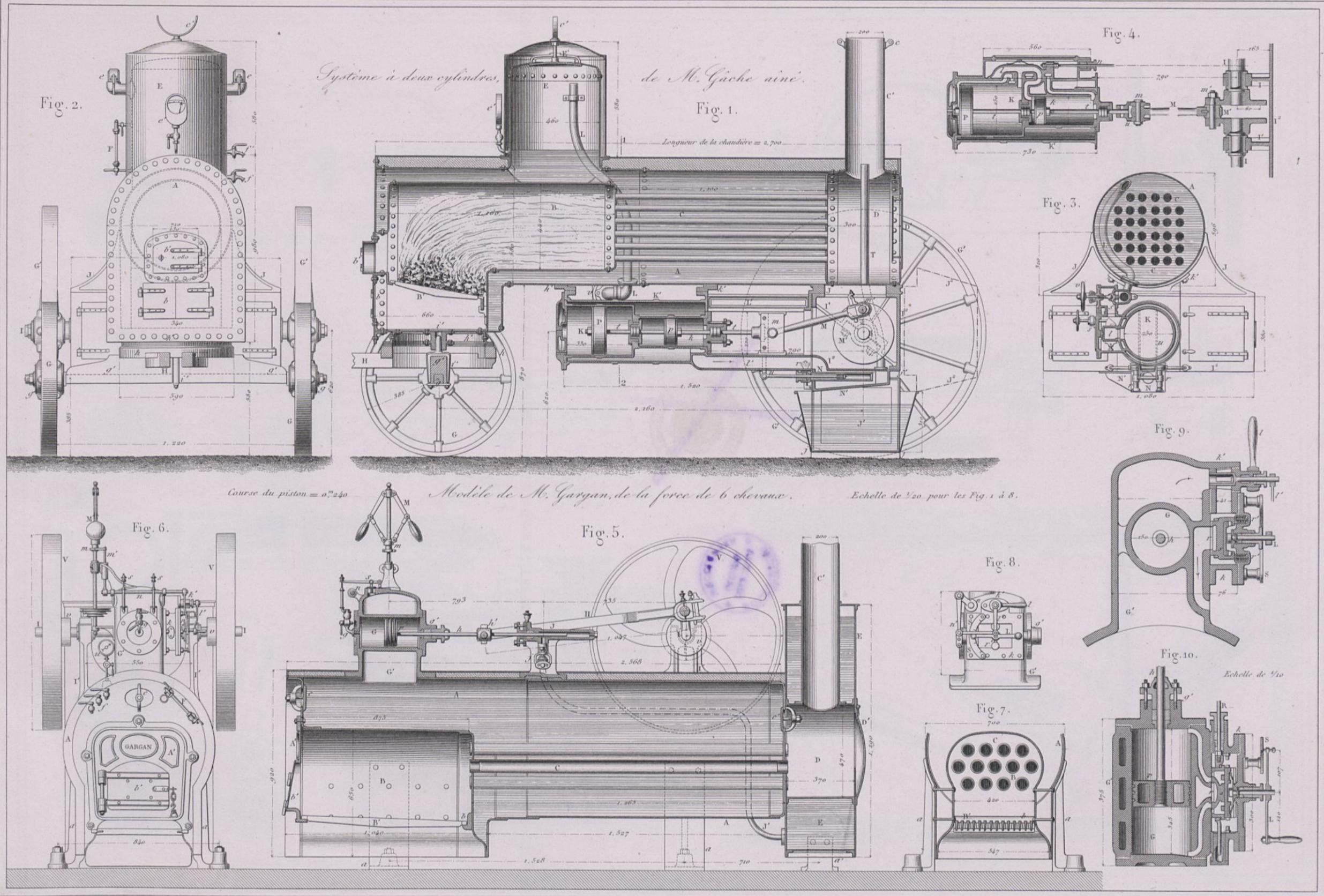
2 Mètres.

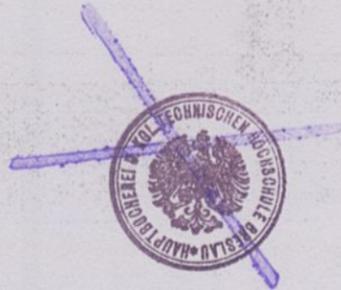
Echelle de 1/15 pour les Fig. 6 et 7.

Echelle de 1/40 pour les Fig. 4 et 5.

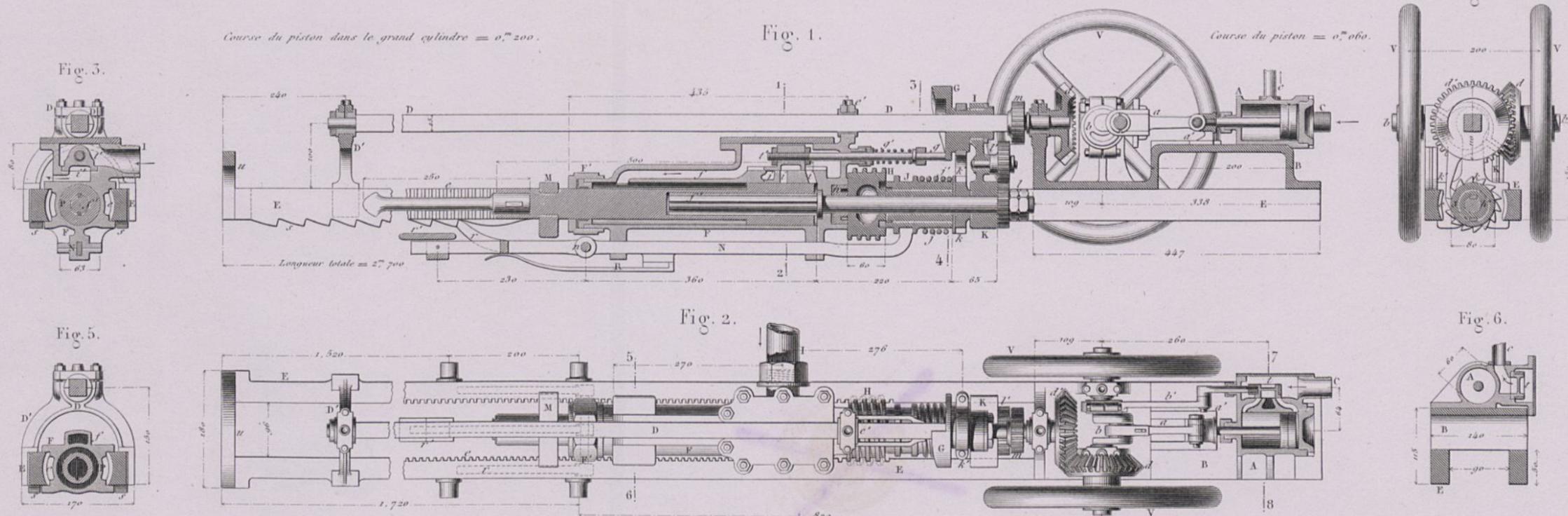


Plac. 108.





Perforateur à percussion, par M. Sommeiller.

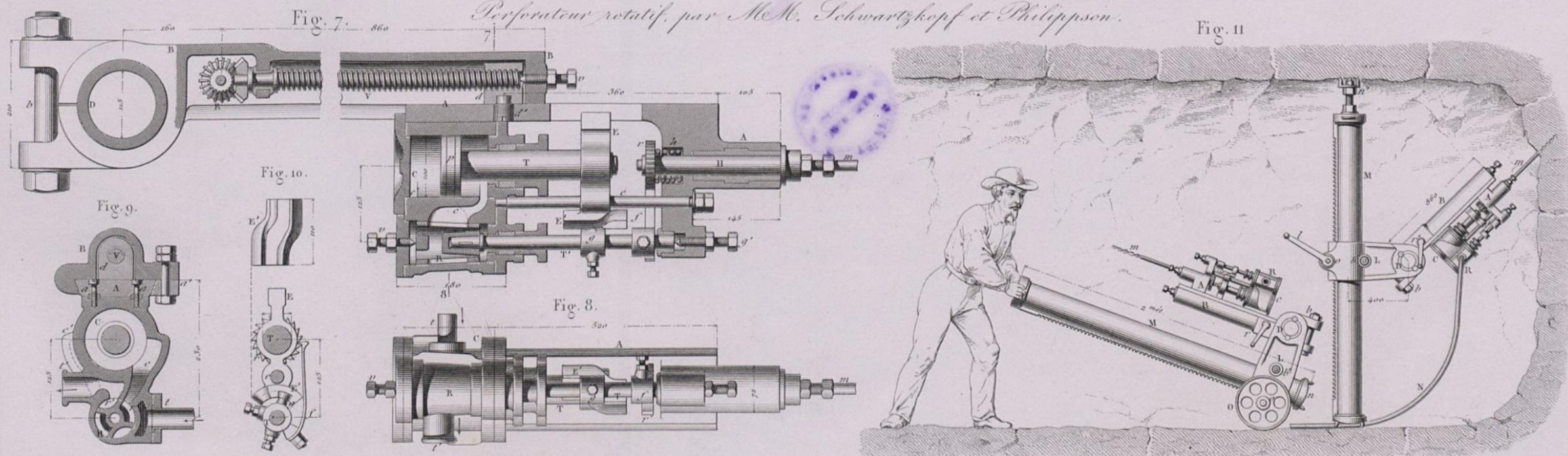


Course du piston dans le grand cylindre = 0,200.

Course du piston = 0,060.

Longueur totale = 2700

Perforateur rotatif, par M. Schwartzkopf et Philippson.



Echelle de 1/8 pour les Fig. 1 à 10.

Echelle de 1/32.



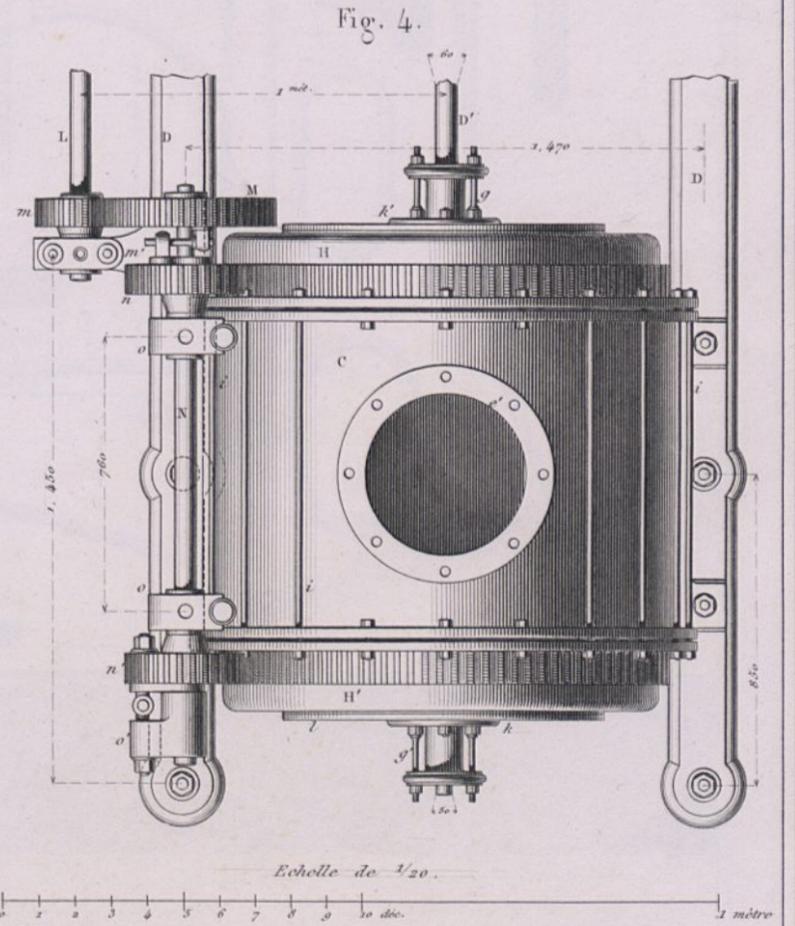
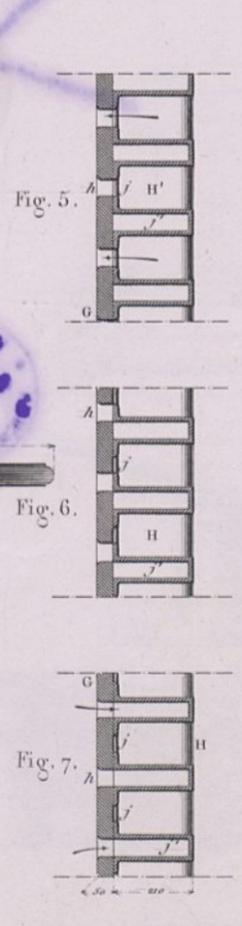
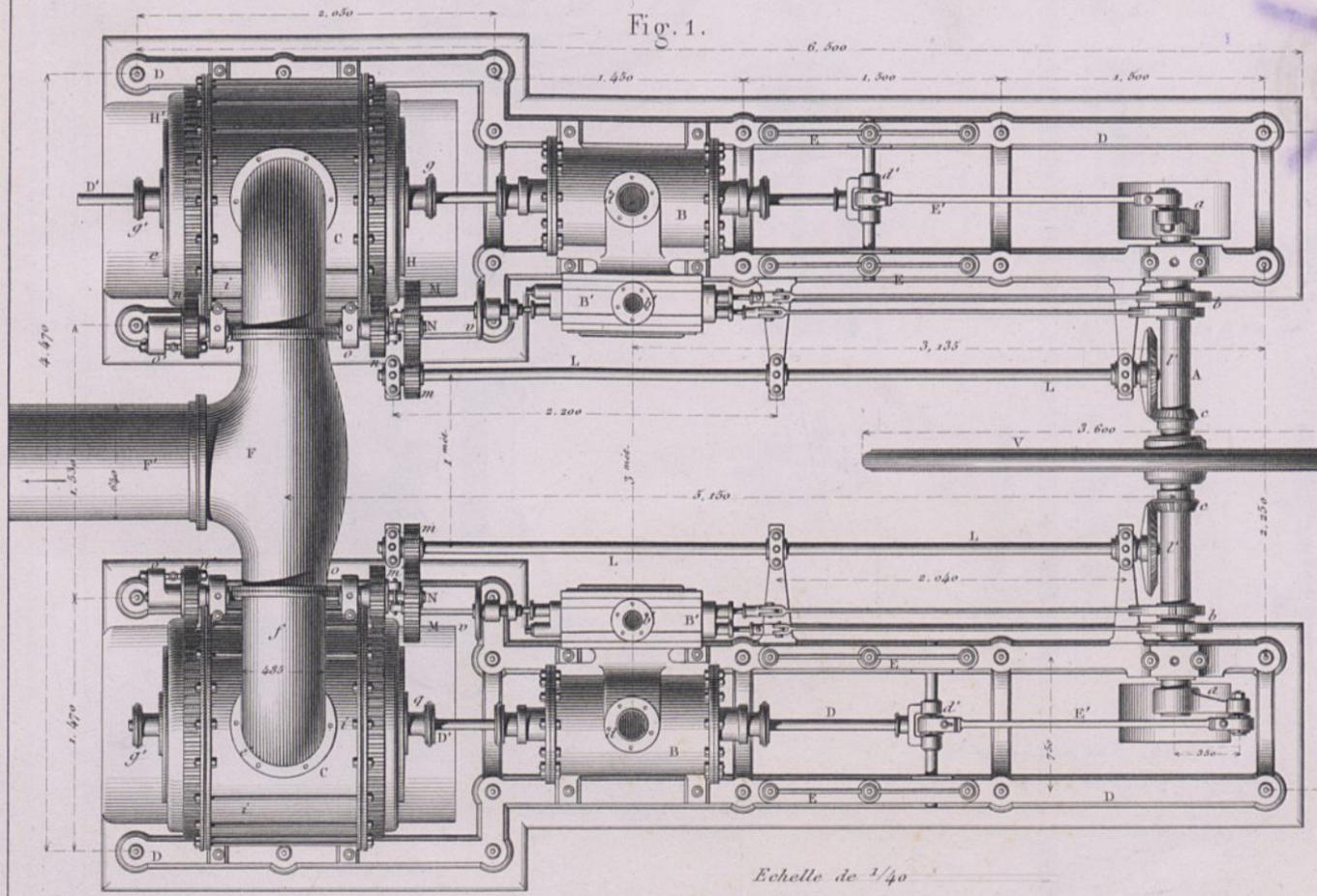
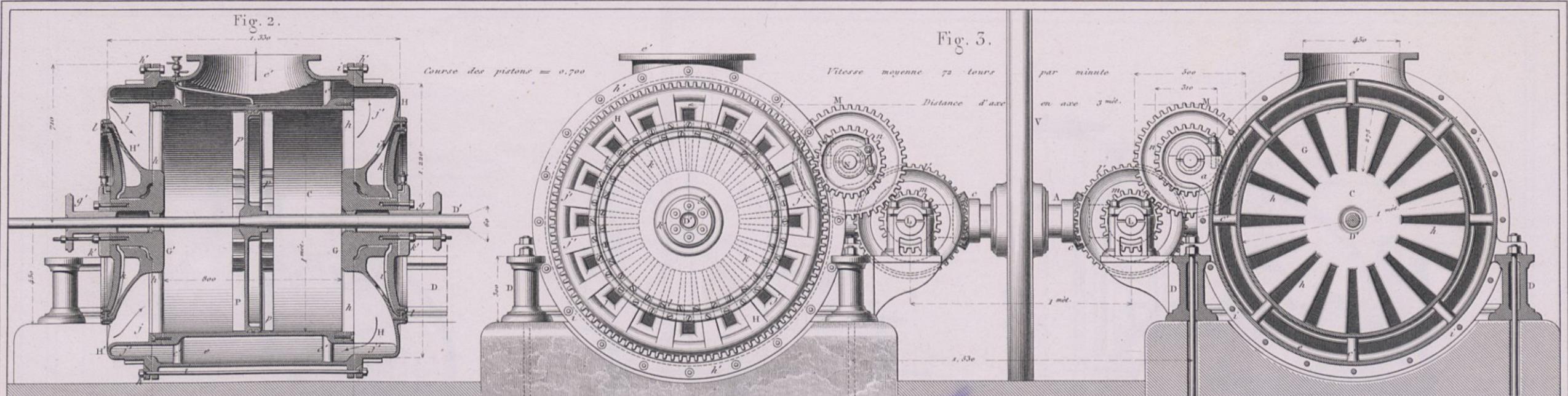




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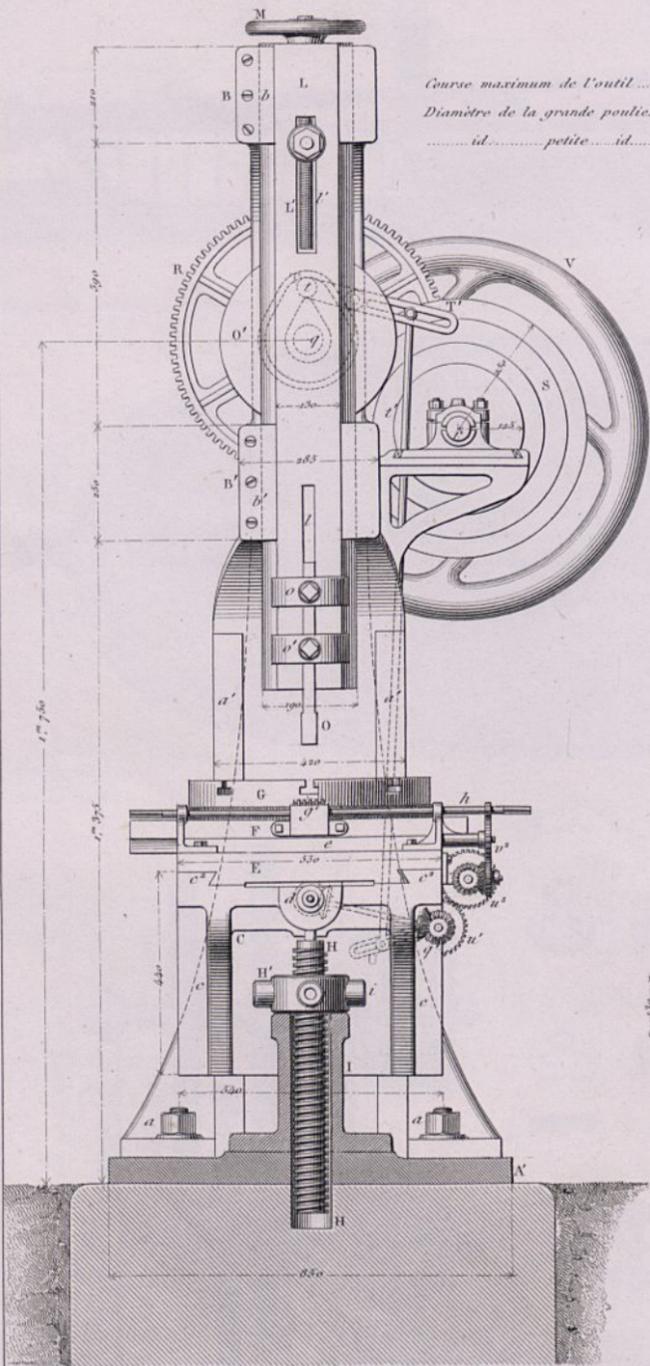


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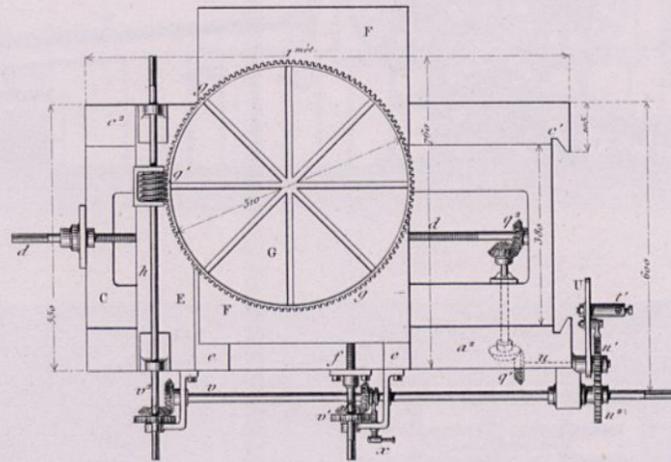


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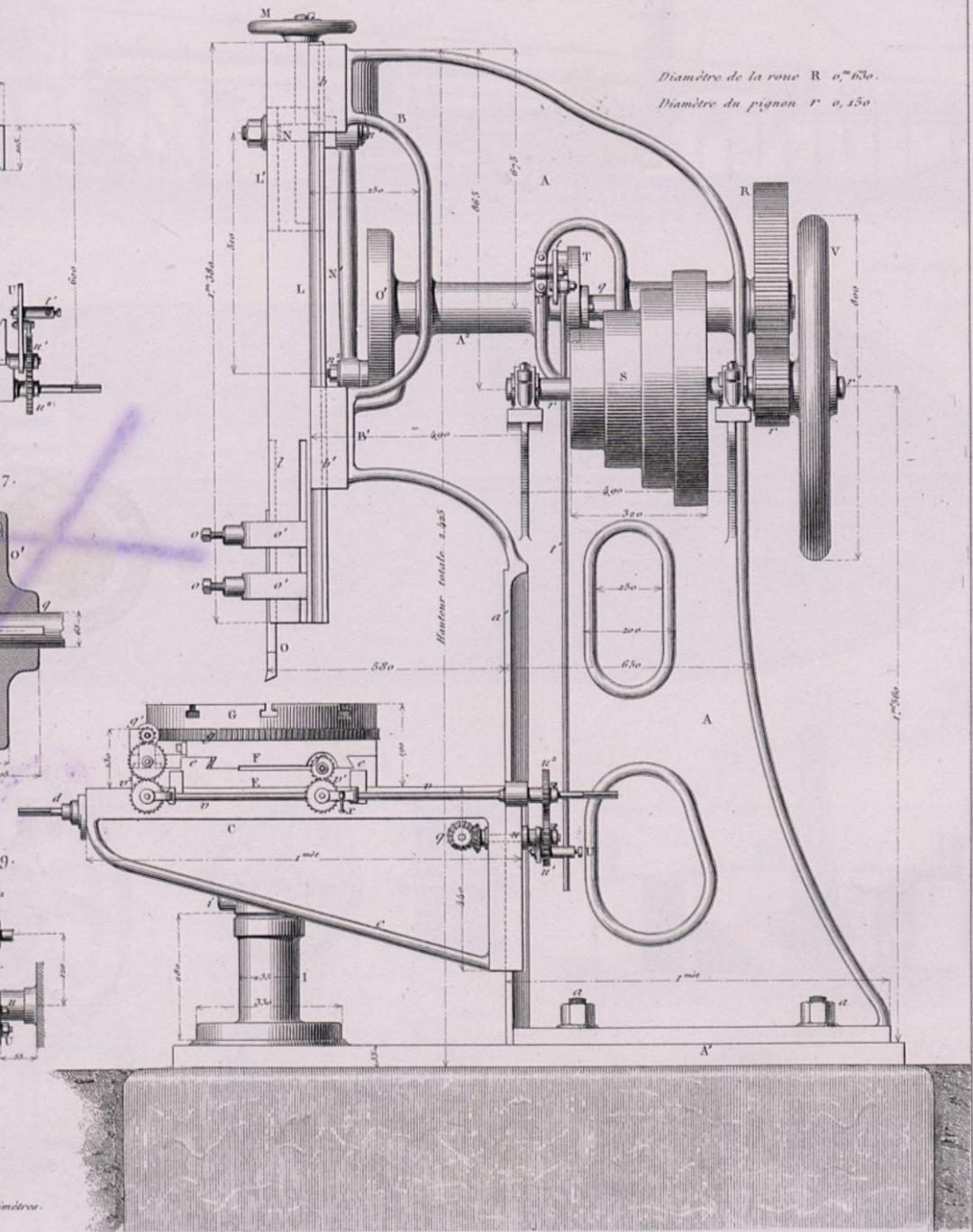


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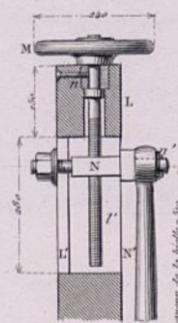


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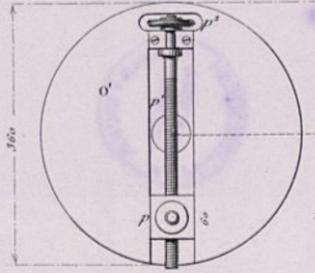


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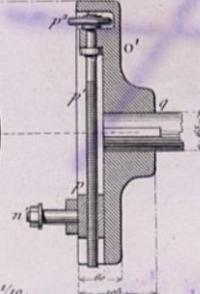


Fig. 5.

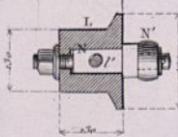


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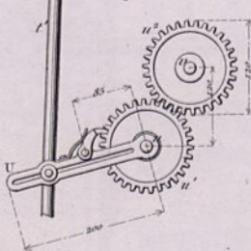
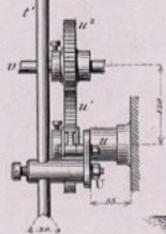
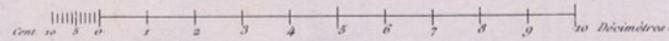


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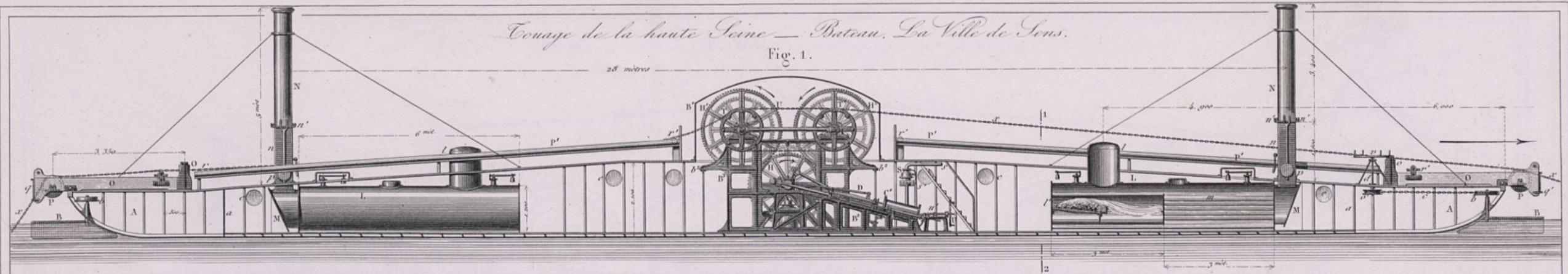


Echelle de 1/15 pour les Fig. 1 à 5.

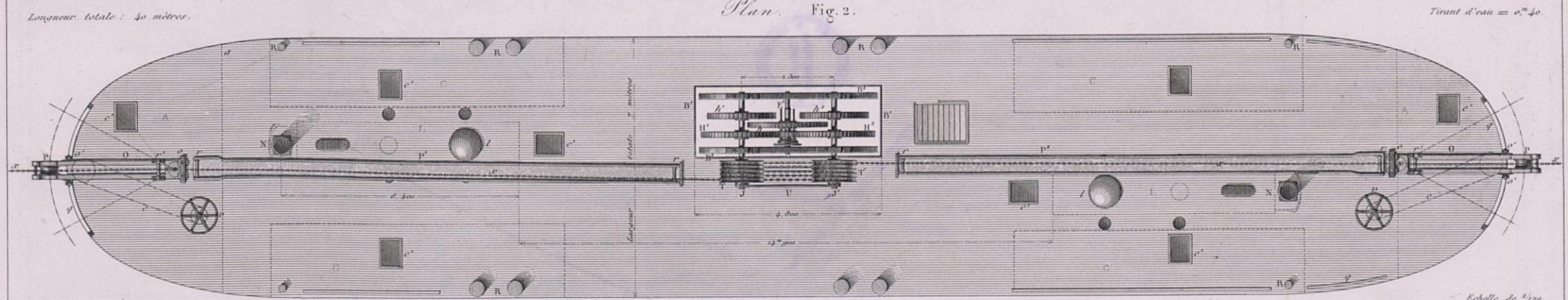




Couage de la haute Seine — Bateau, La Ville de Sens.
Fig. 1.



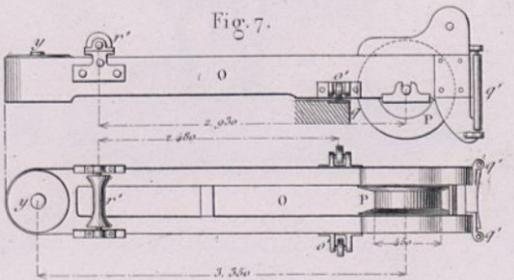
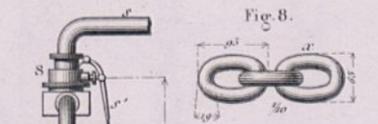
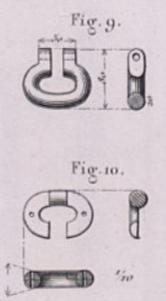
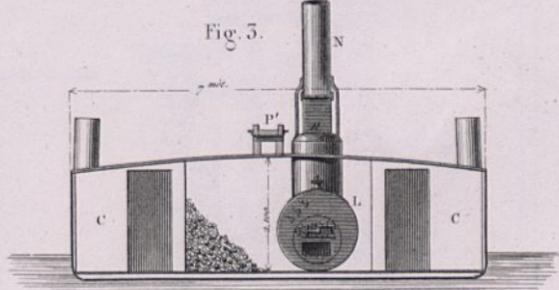
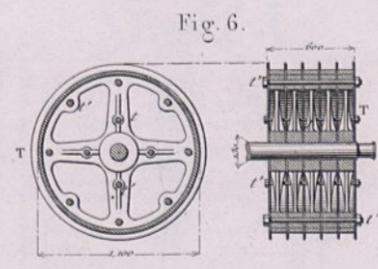
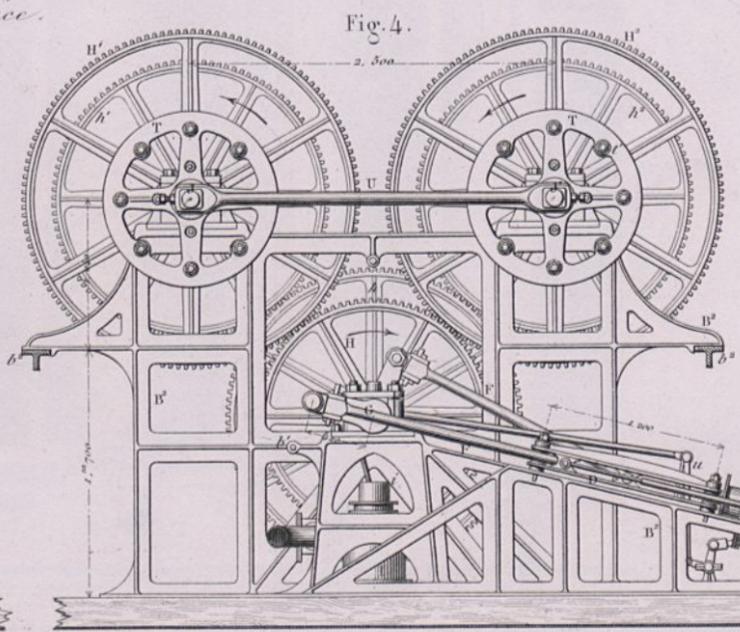
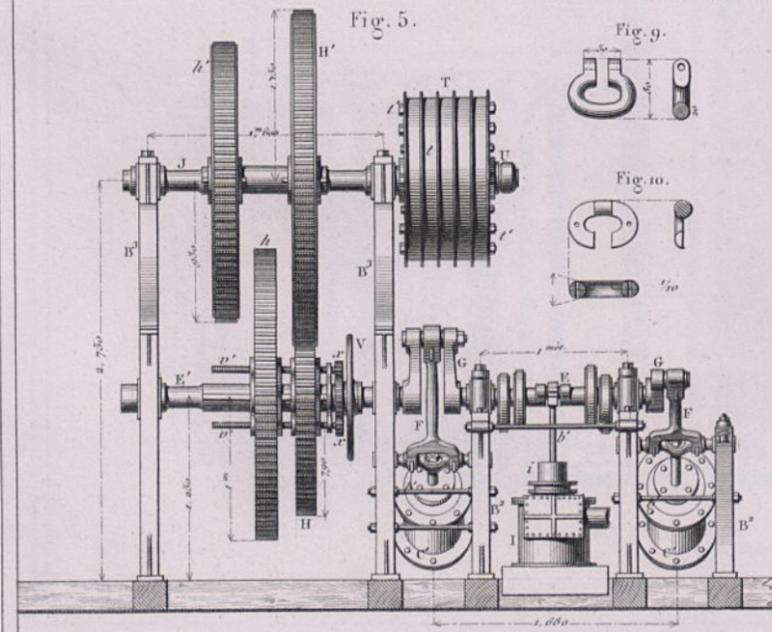
Plan. Fig. 2.



Echelle de 1/30 pour les Figs. 4 à 7.

Echelle de 1/100 pour les Figs. 1 à 3.

Machine motrice.





Séchoir avec foulard, enroulage et pliage.

Fig. 1.

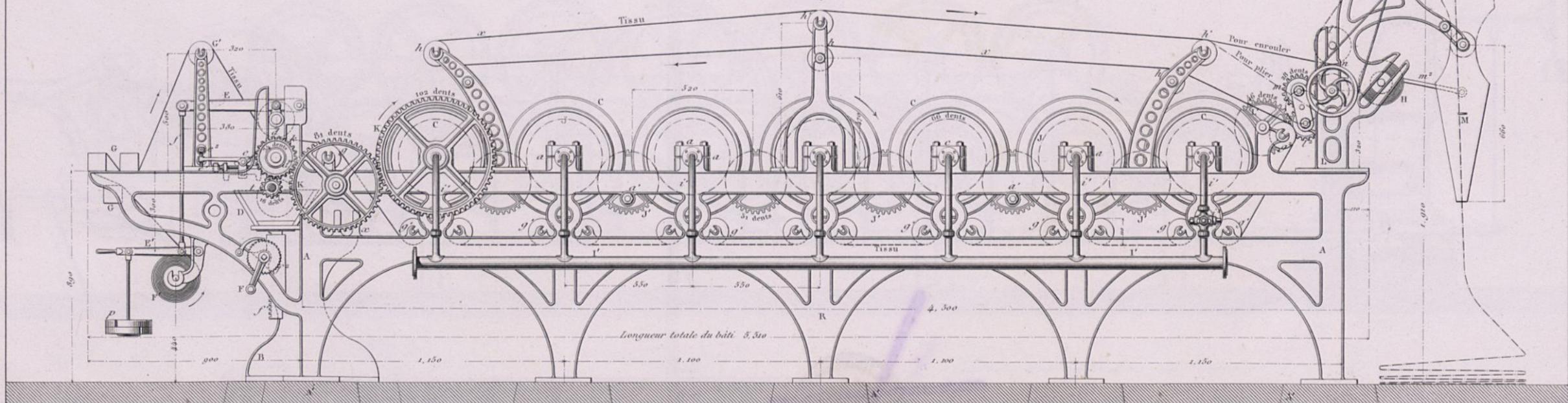


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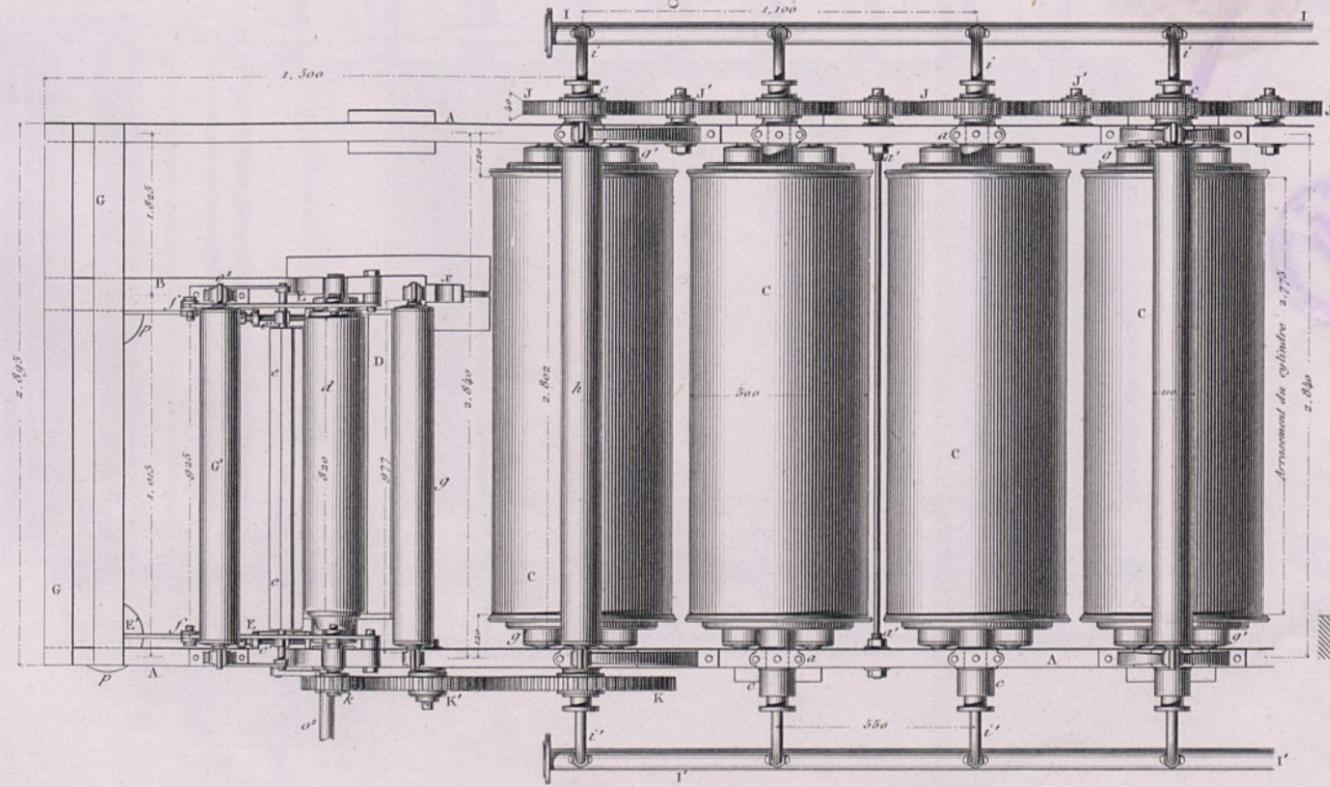
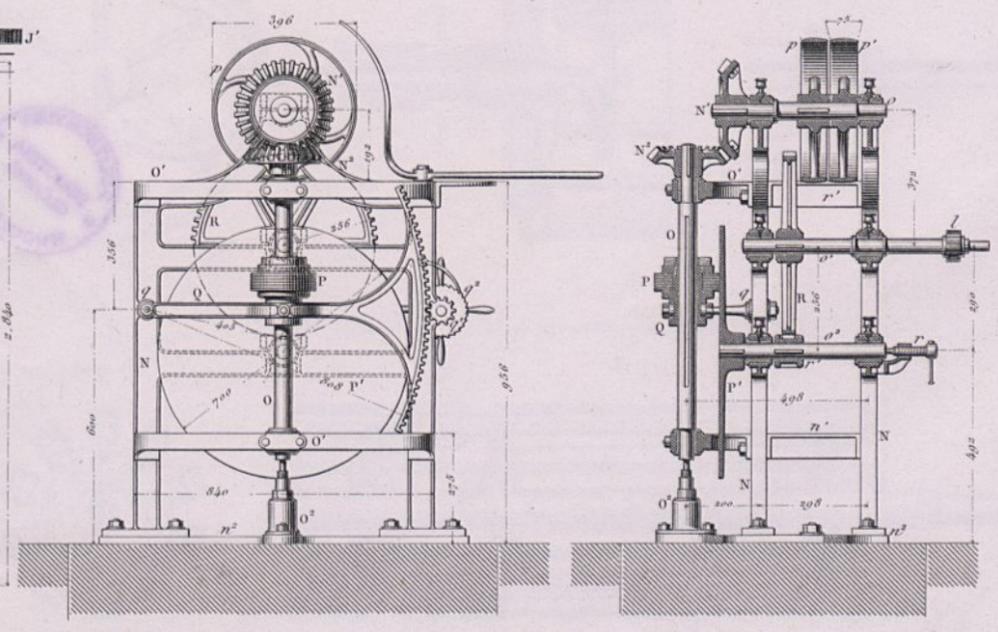


Fig. 3. *Commande à friction.*

Fig. 4.



Echelle de 1/20.



Séchoir pour les apprêteurs.

Fig. 1.

Extracteur à vapeur condensée.

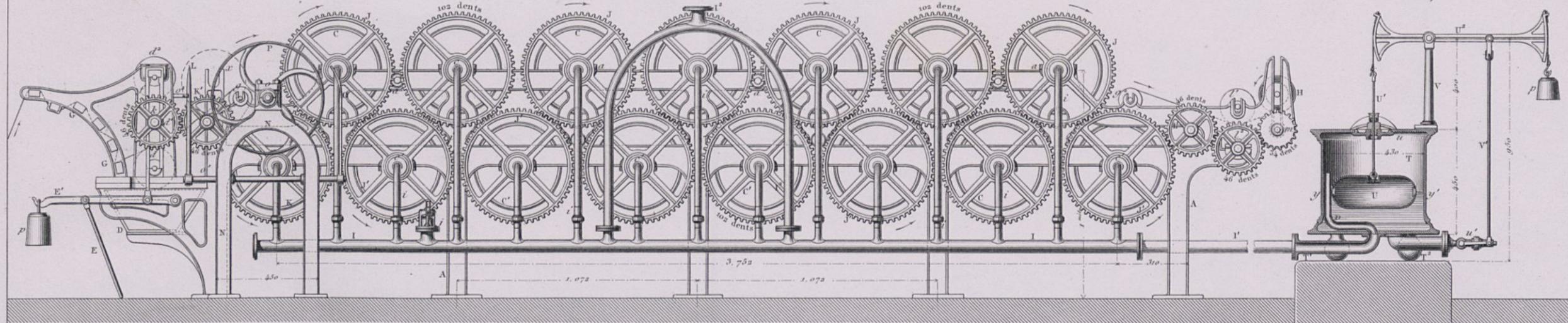


Fig. 2.

Plaqueau des cylindres sécheurs.

Fig. 3.

Fig. 4.

Fig. 7.

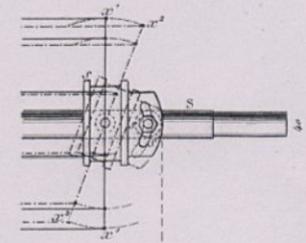
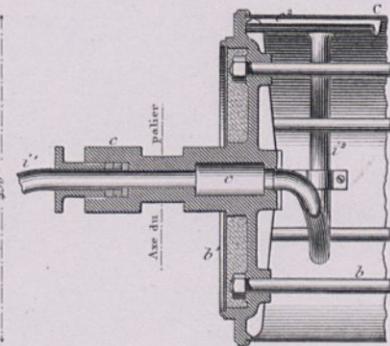
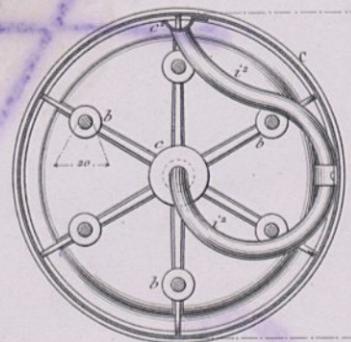
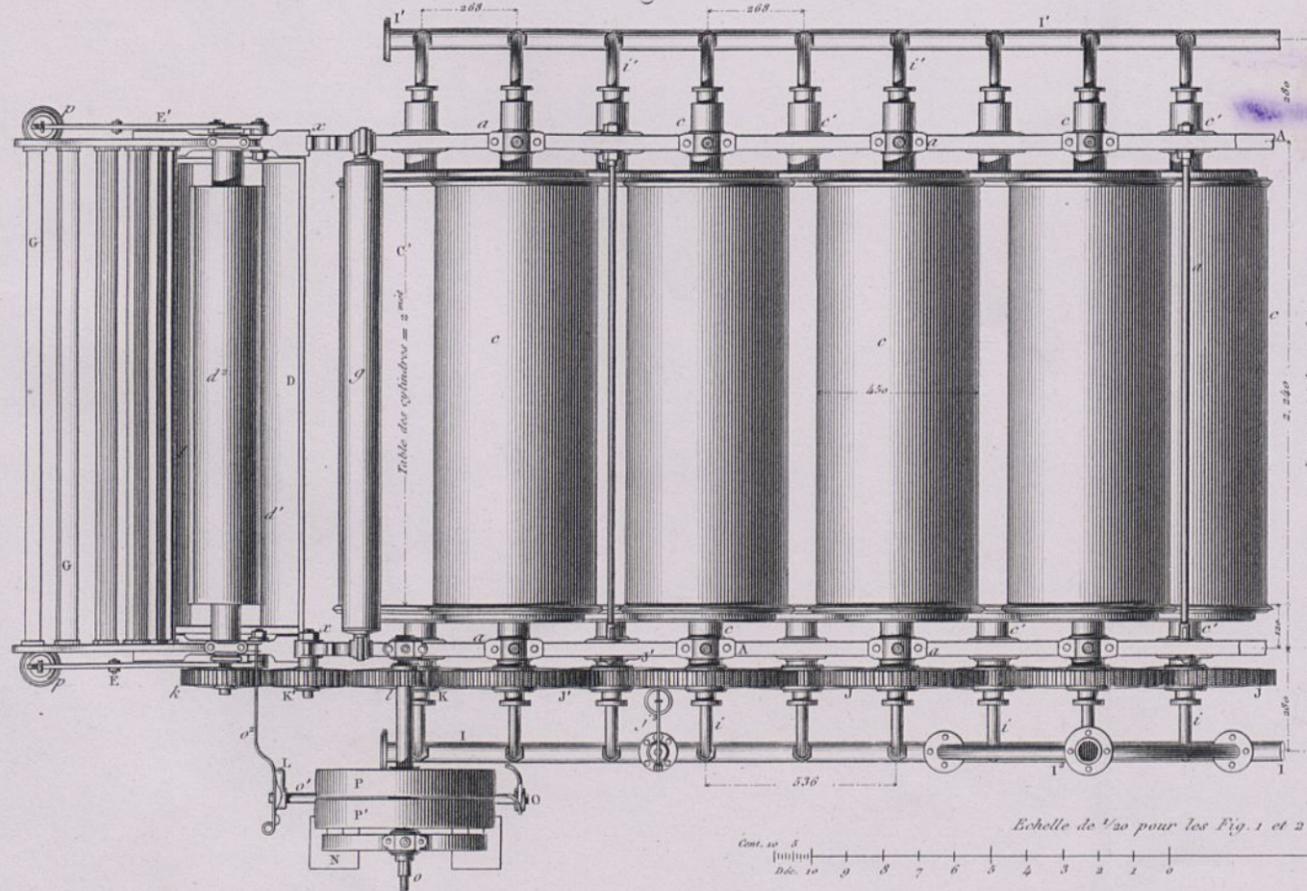
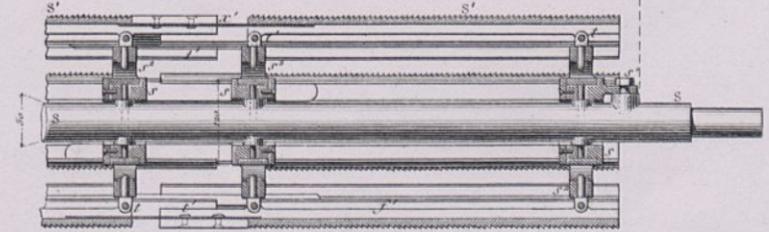
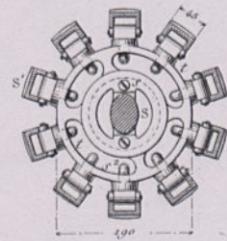


Fig. 6.

Vis à élargir à segments mobiles.

Fig. 5.

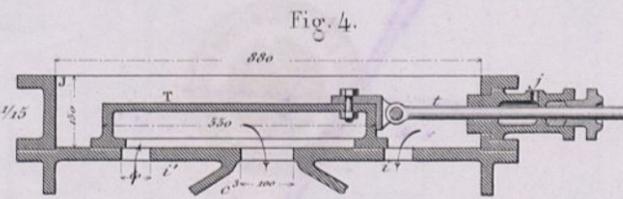
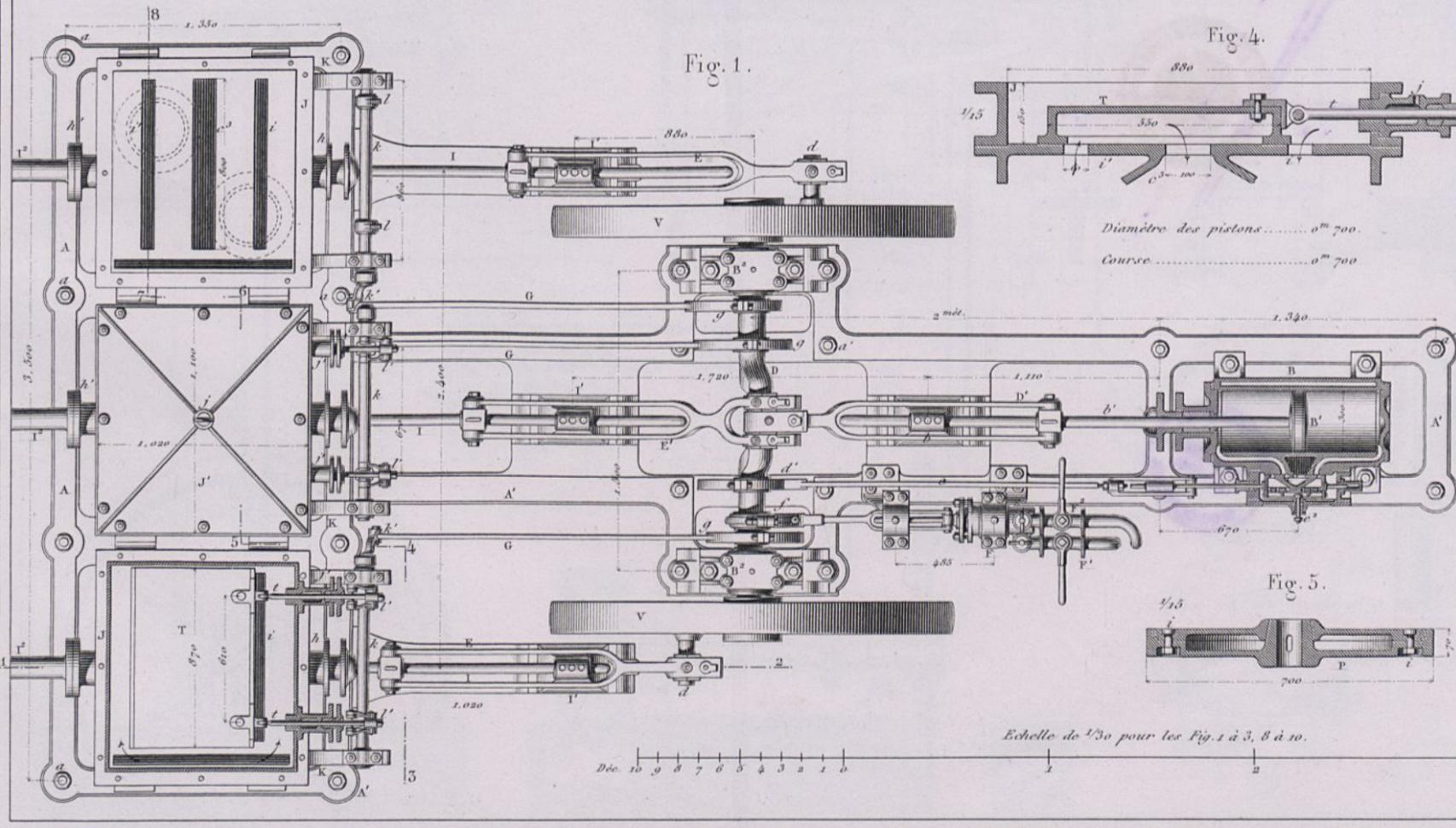
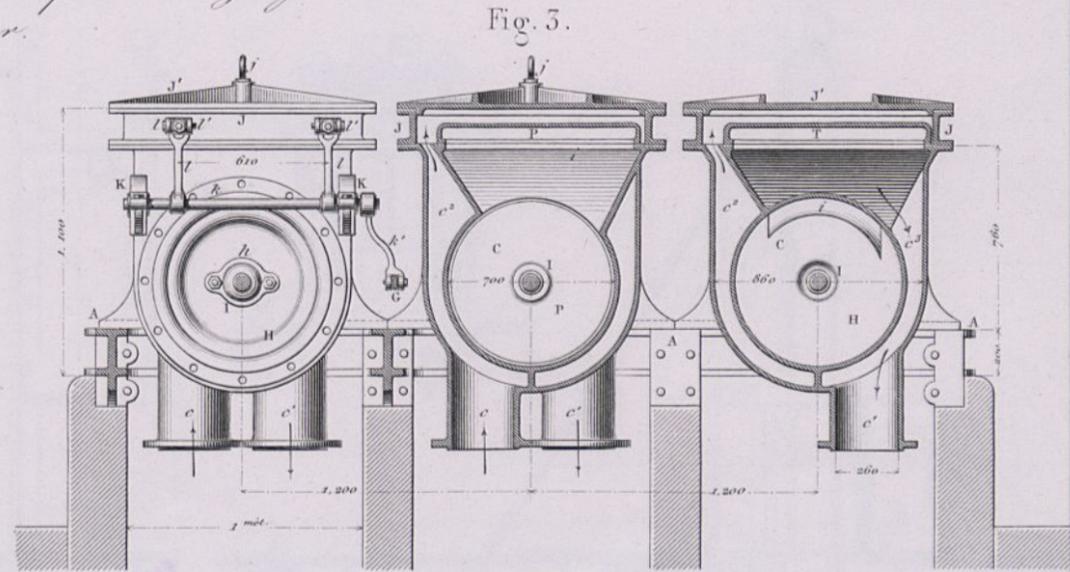
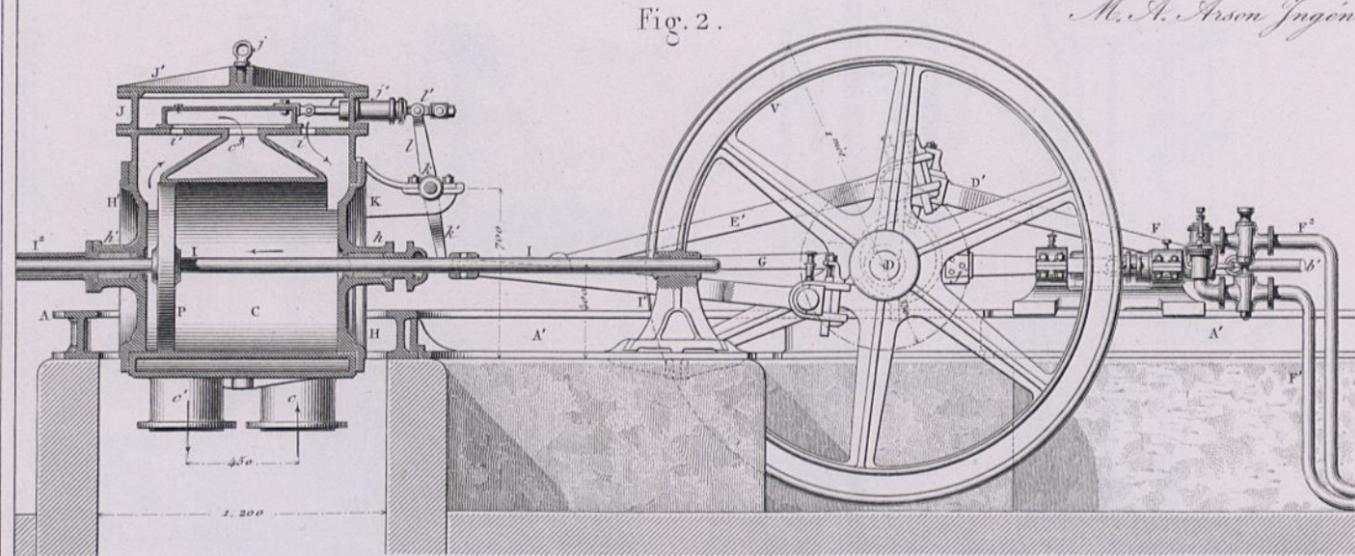


Echelle de 1/20 pour les Fig. 1 et 2.
 0 1 2 3 4 5 6 7 8 9 10
 Cent. 10

1 Mètre.

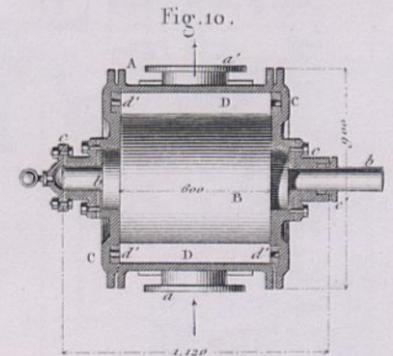
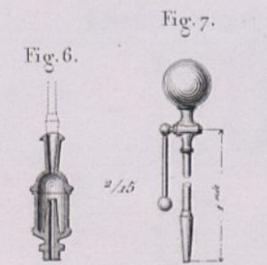
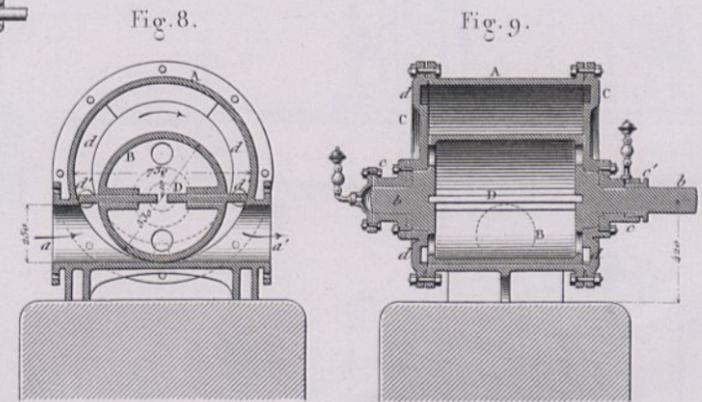


*Extracteur à pistons et à trois cylindres, par M. Gargan.
M. A. Anson Ingénieur.*

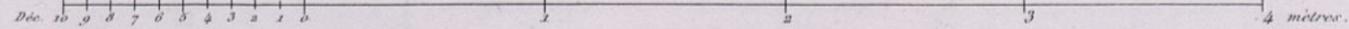


Diamètre des pistons..... 0^m 700.
Course..... 0^m 700

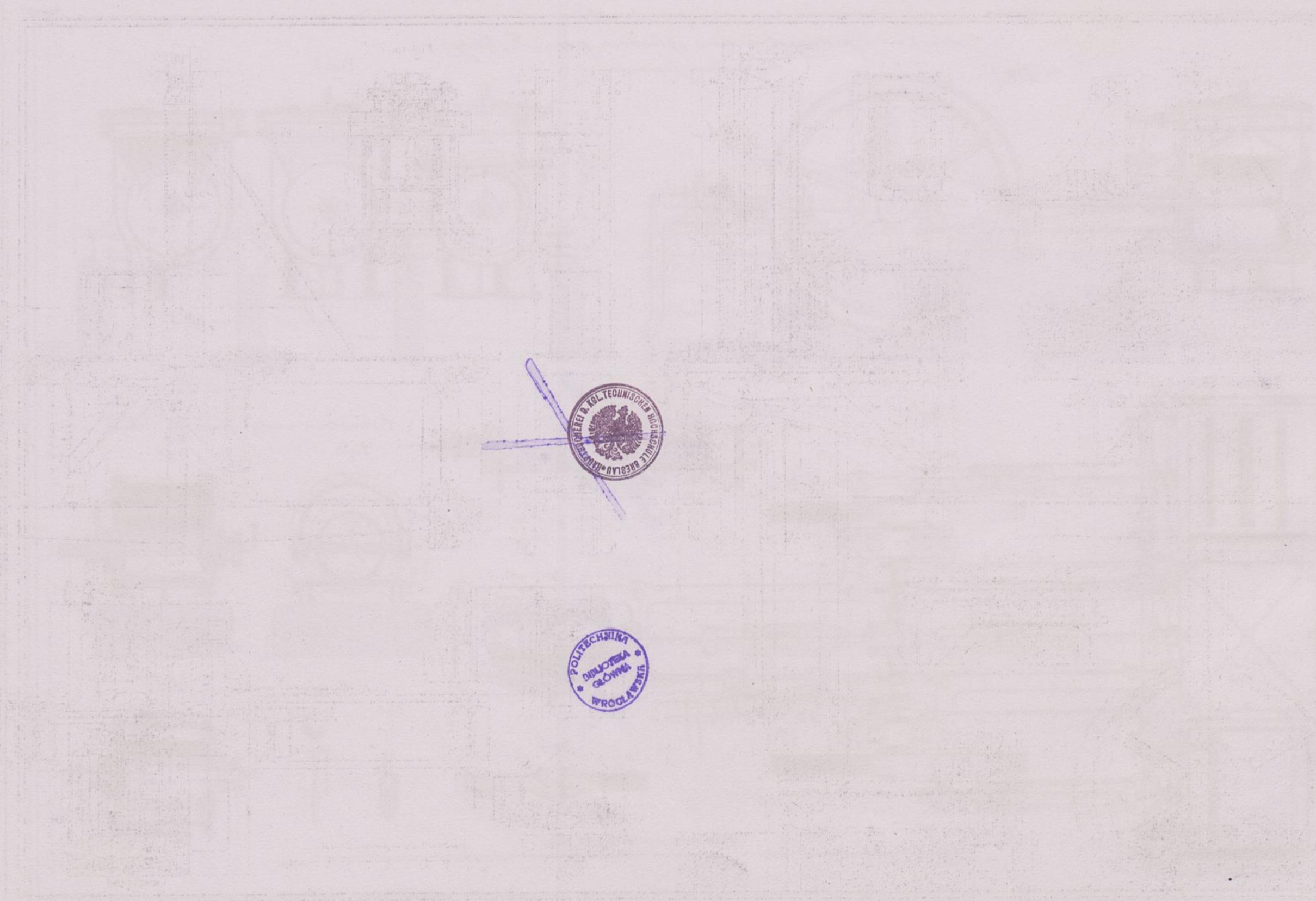
Extracteur rotatif, par M. Beale.

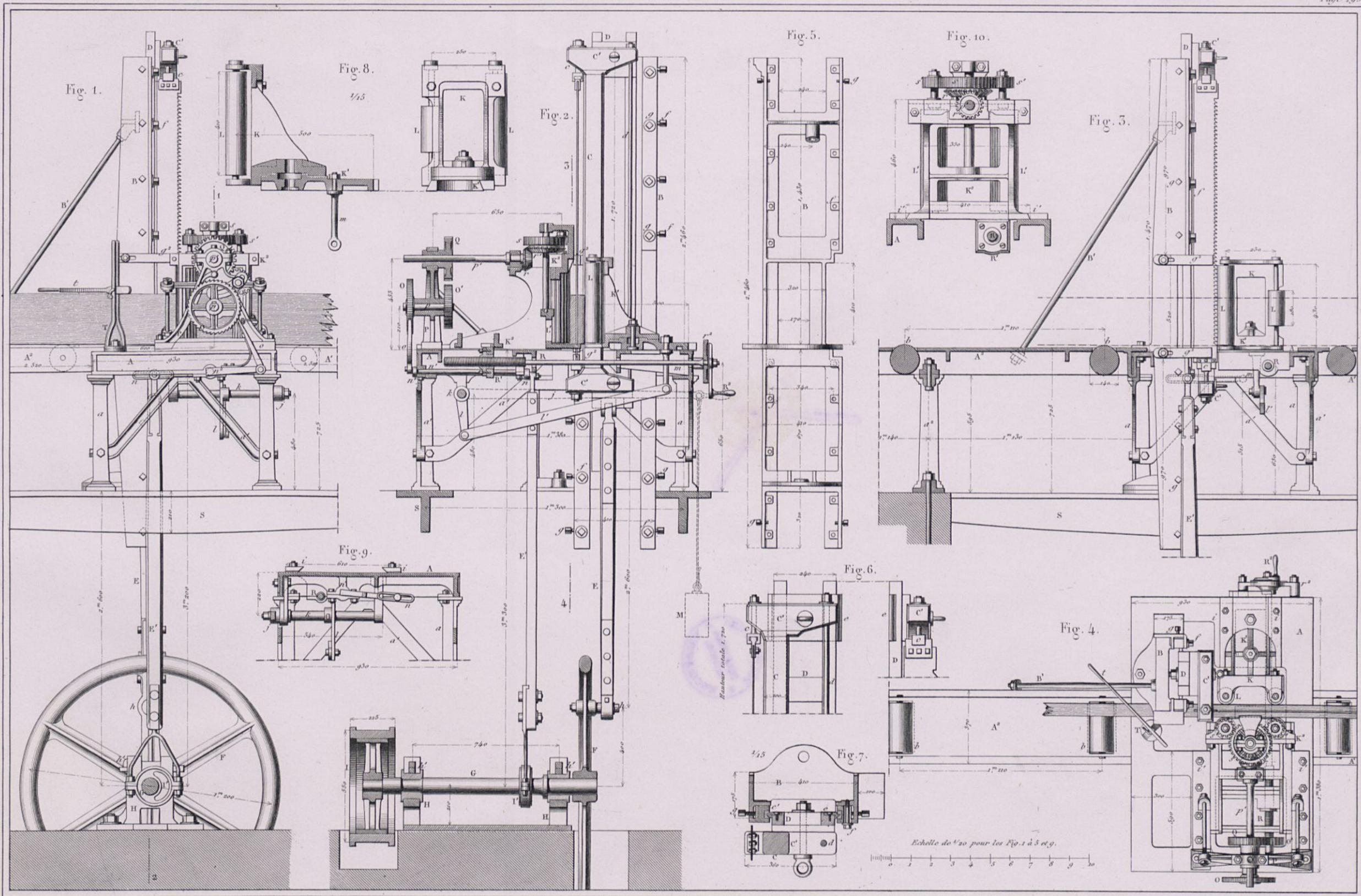


Echelle de 1/30 pour les Fig. 1 à 3, 8 à 10.



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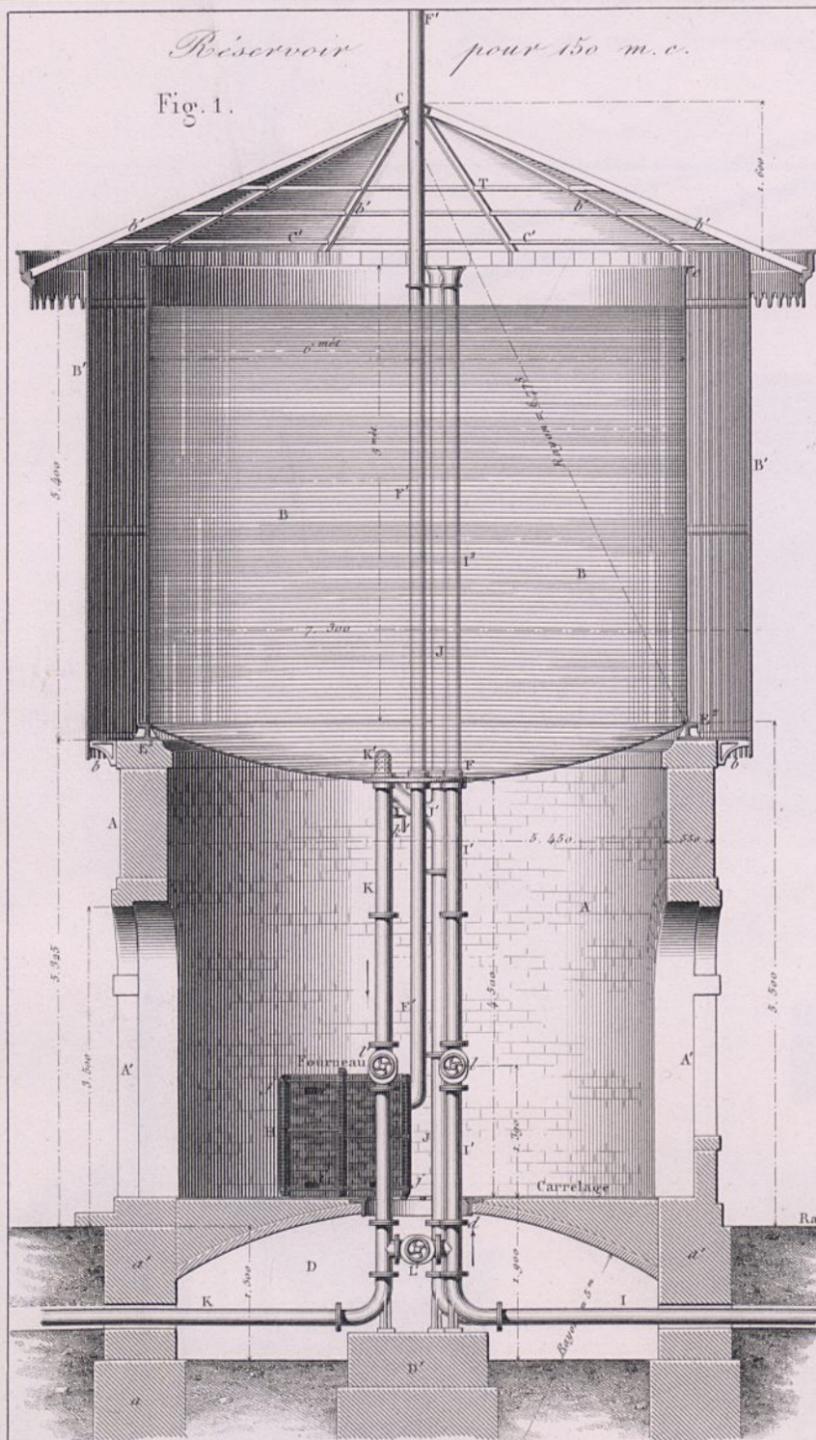


Fig. 1.

Réservoir pour 150 m.c.

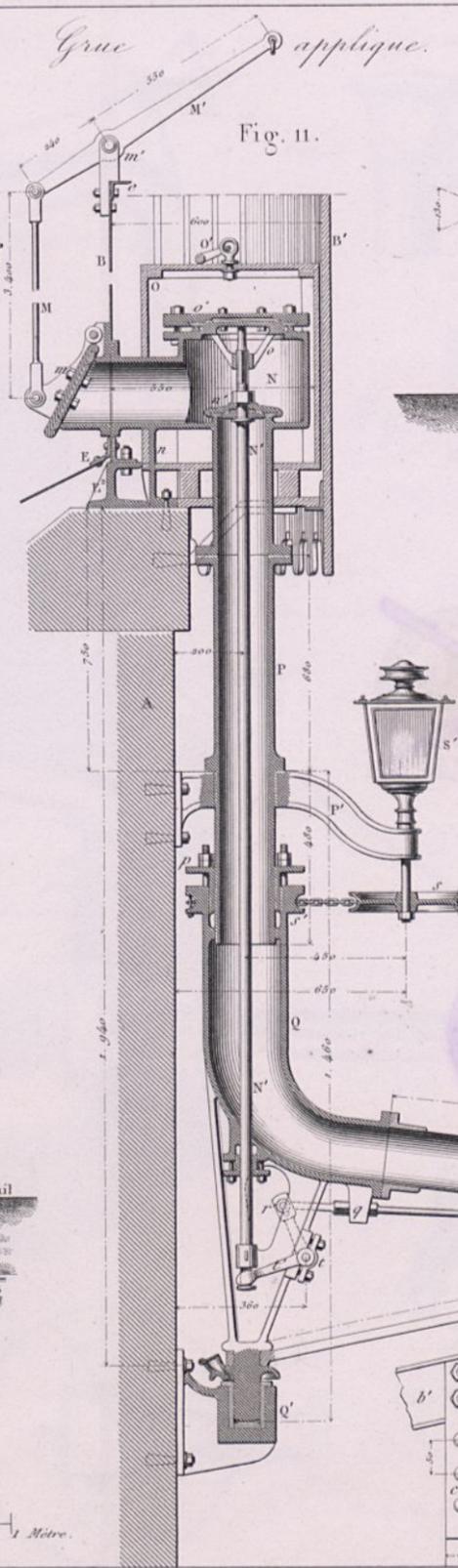


Fig. 11.

Grue appliquée.

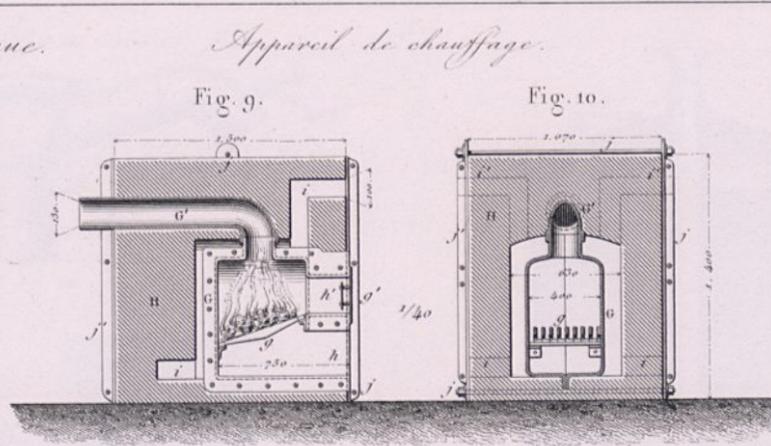


Fig. 9.

Fig. 10.

Appareil de chauffage.

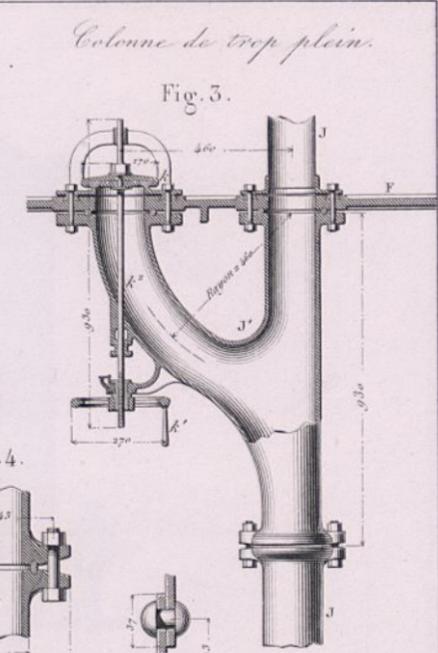


Fig. 3.

Colonne de trop plein.

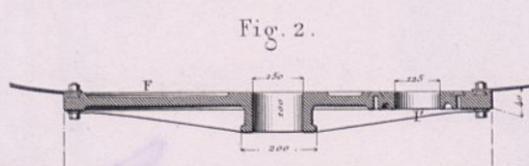


Fig. 2.

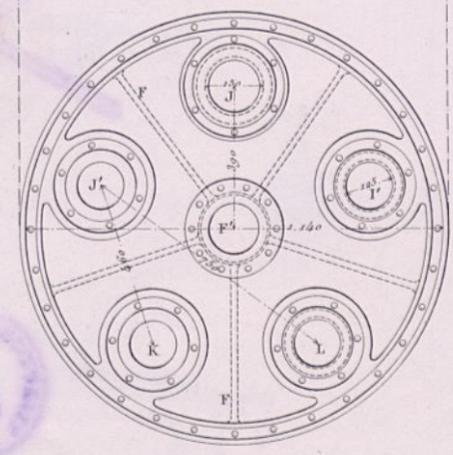
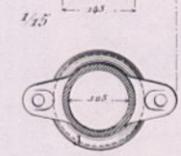
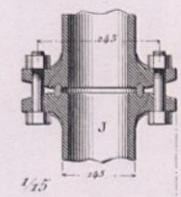


Fig. 4.



Echelle de 1/5

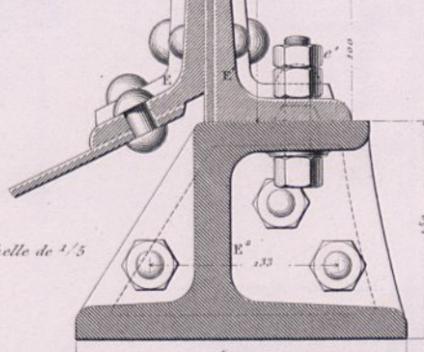
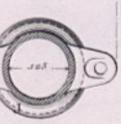


Fig. 5.

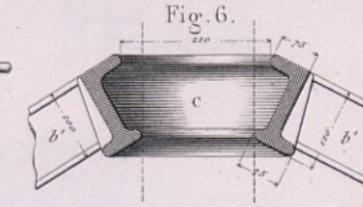


Fig. 6.

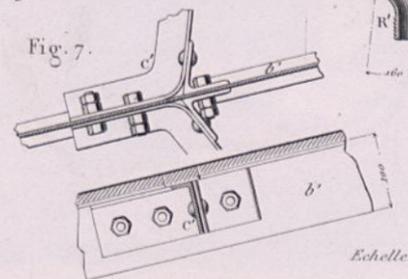
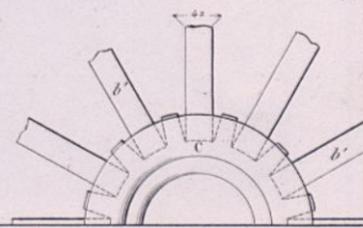


Fig. 7.

Echelle de 1/10

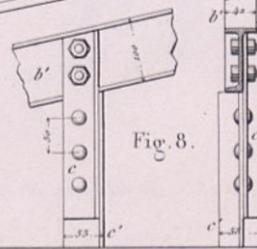


Fig. 8.

Echelle de 1/80 pour la Fig. 1.
 Echelle de 1/20 pour les Fig. 2, 3 et 11.
 1 Mètre.



Grue à col tournant.

Fig. 3.

Grue à col fixe.

Fig. 4.

Grue-réservoir.

Fig. 5.

Réservoir.

Grue appliquée à col tournant.

Fig. 1.

Fig. 6.

Fig. 8.

Fig. 7.

Fig. 2.

Echelle de 1/20 pour les Fig. 1 à 6 et 7.

Capacité = 6 mètres cubes.

Echelle de 1/40

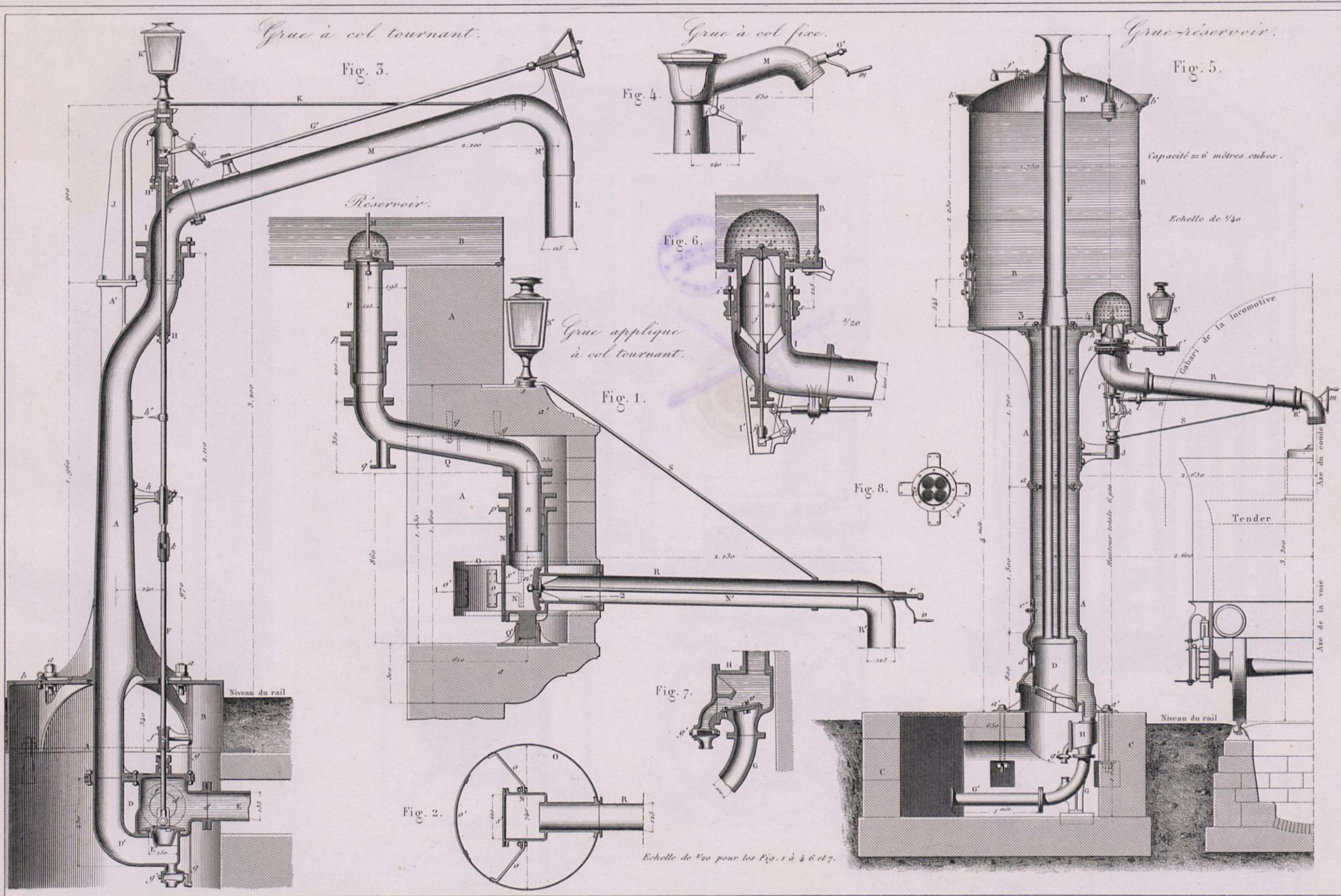
Tender

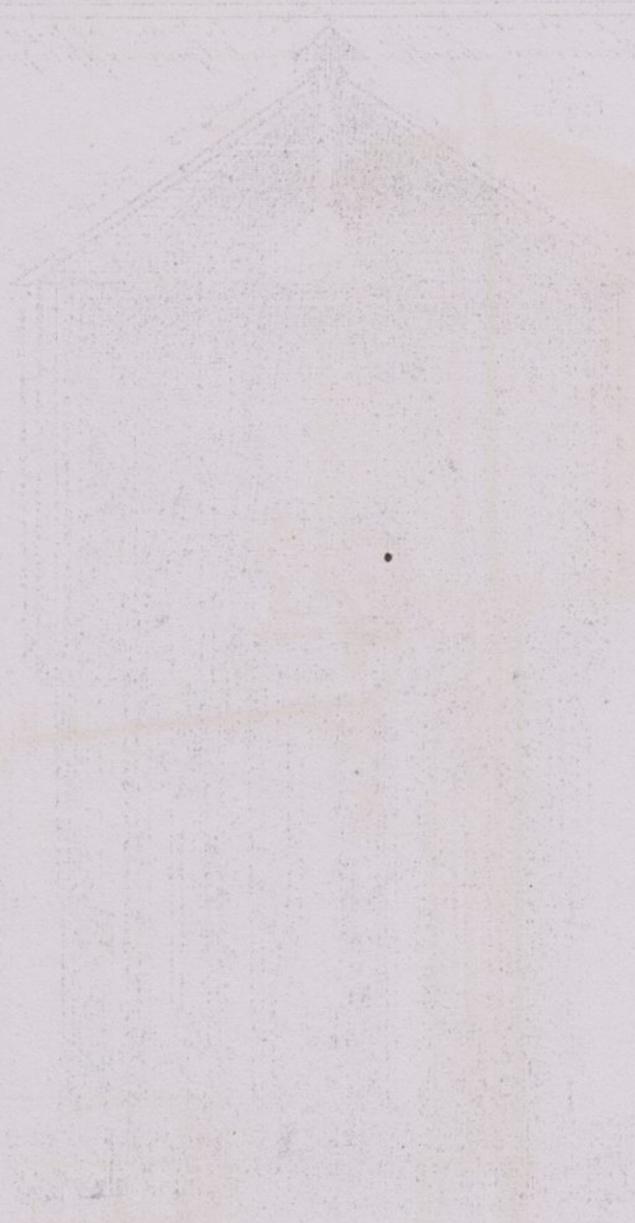
Niveau du rail

Axe de la voie

Garant de la locomotive

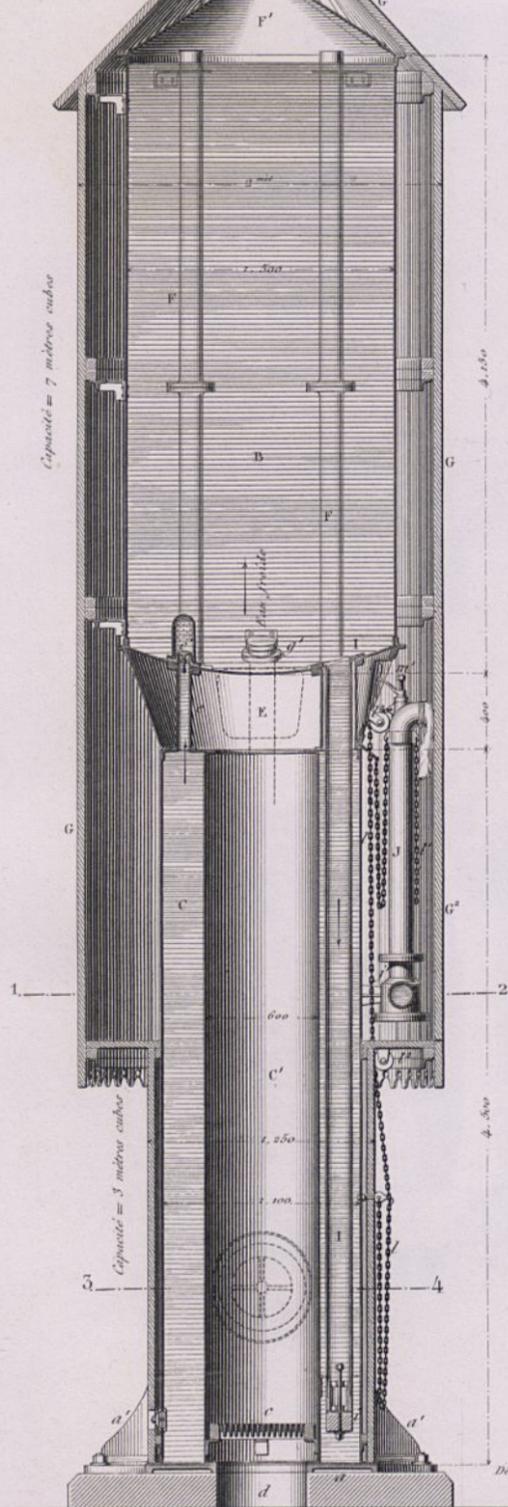
Hauteur totale 6,900





Grue-réservoir à réchauffeur.

Fig. 4.



Château-d'eau à double réservoirs chauffés.

Fig. 1.

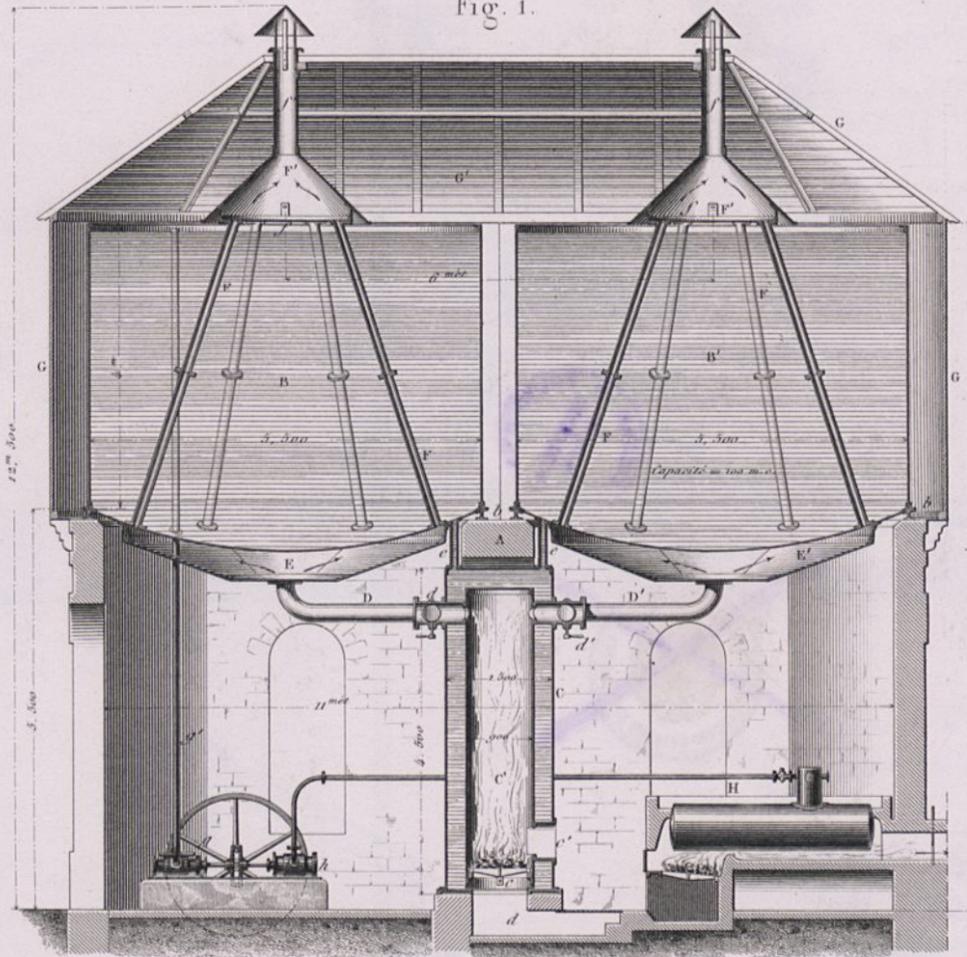
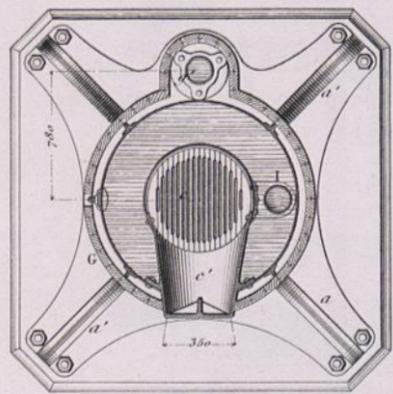


Fig. 6.



Echelle de 1/50 pour les Fig. 4 à 6.

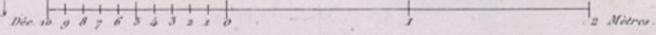
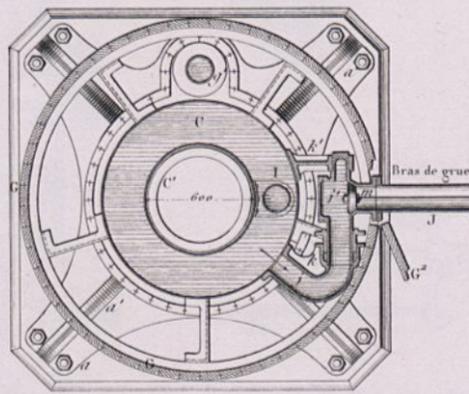
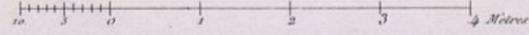


Fig. 5.



Echelle de 1/80 pour les Fig. 2 et 3.



Réservoir chauffé et Grue-applique.

Fig. 2.

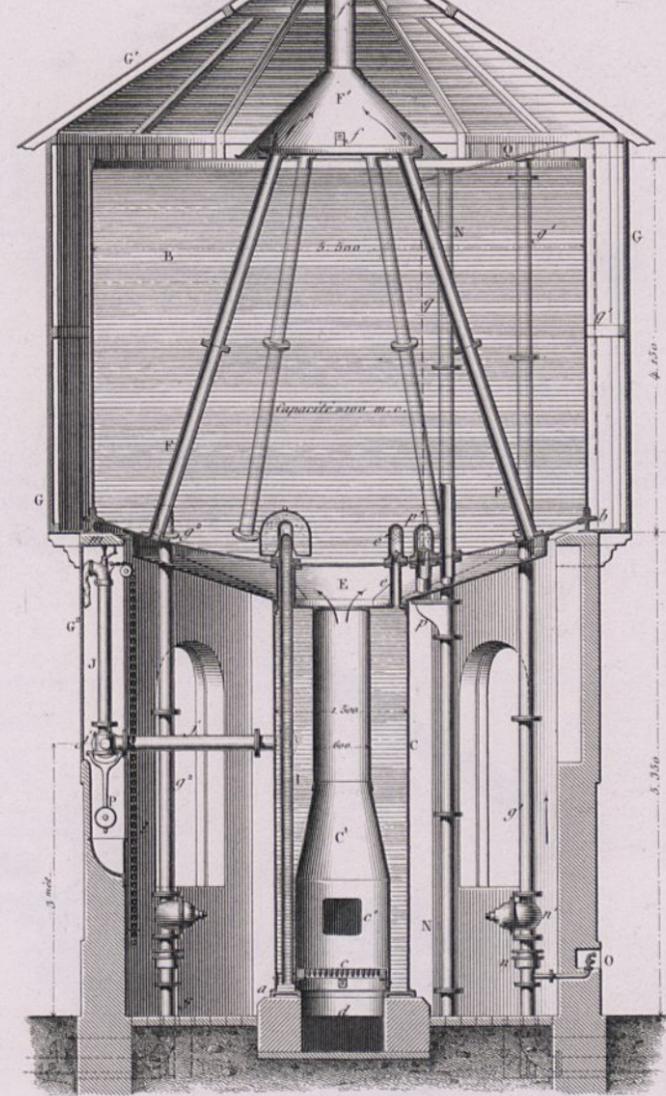
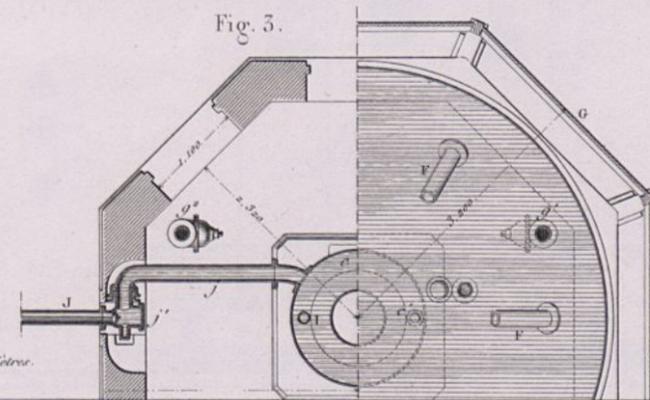


Fig. 3.





*Laminoir universel.
du système Dealeu.*

*Construction modifiée
par M. Langenheim.*

Fig. 2.

Fig. 1.

Fig. 3.

Fig. 5.

Fig. 6.

Fig. 4.

Fig. 7.

Fig. 9.

Fig. 8.

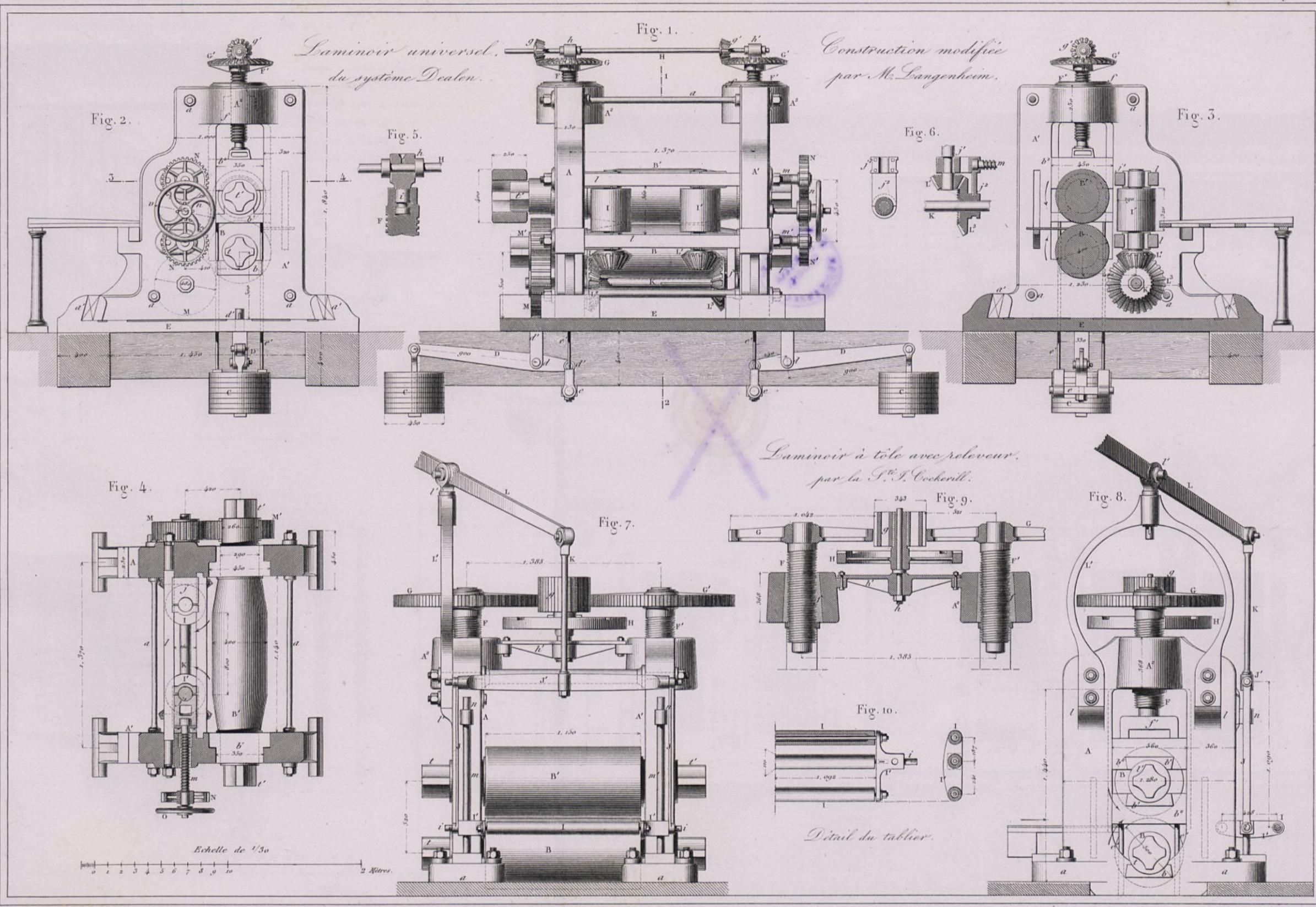
*Laminoir à tôle avec releveur.
par la S.^{te} J. Cochard.*

Fig. 10.

Détail du tablier.

Echelle de 1/30

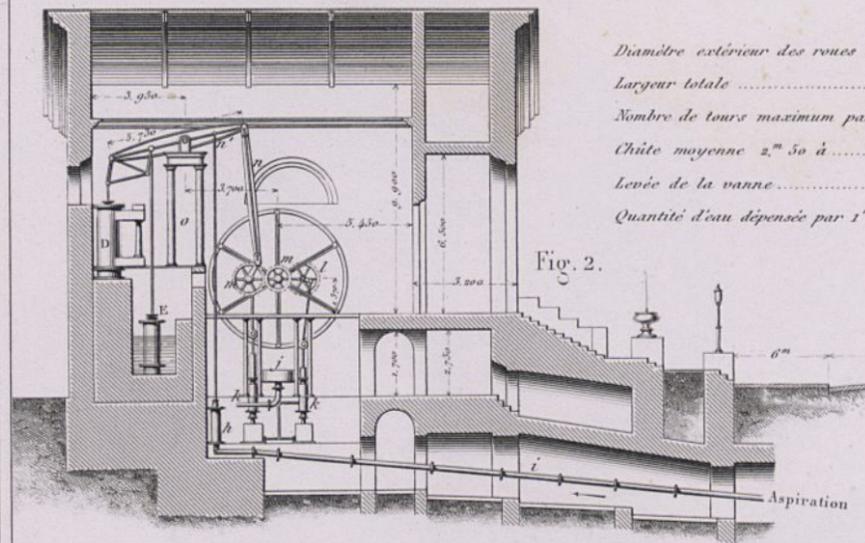
2 Mètres.



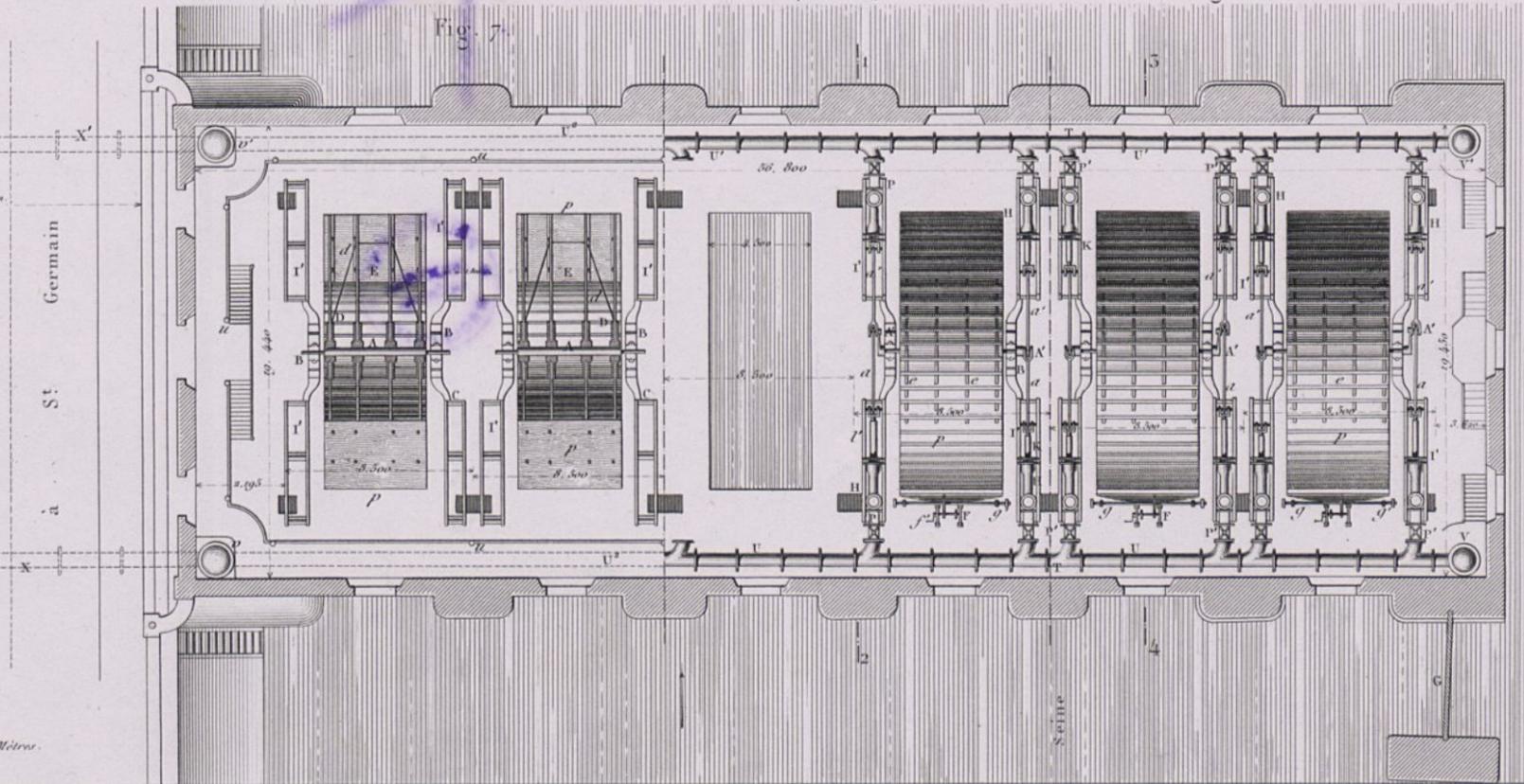
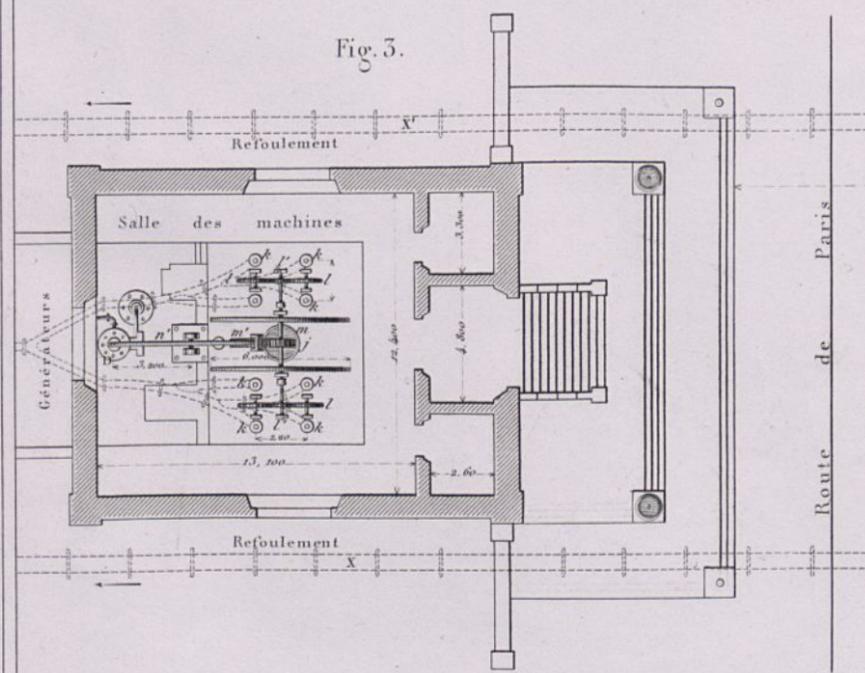
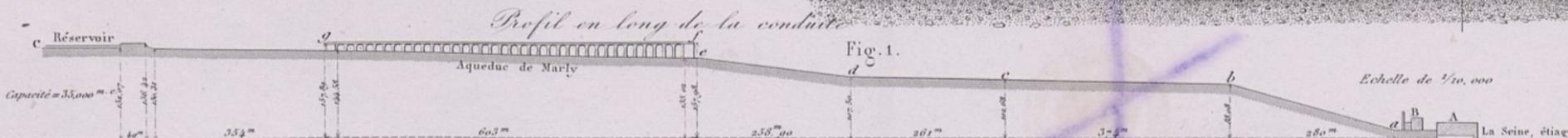
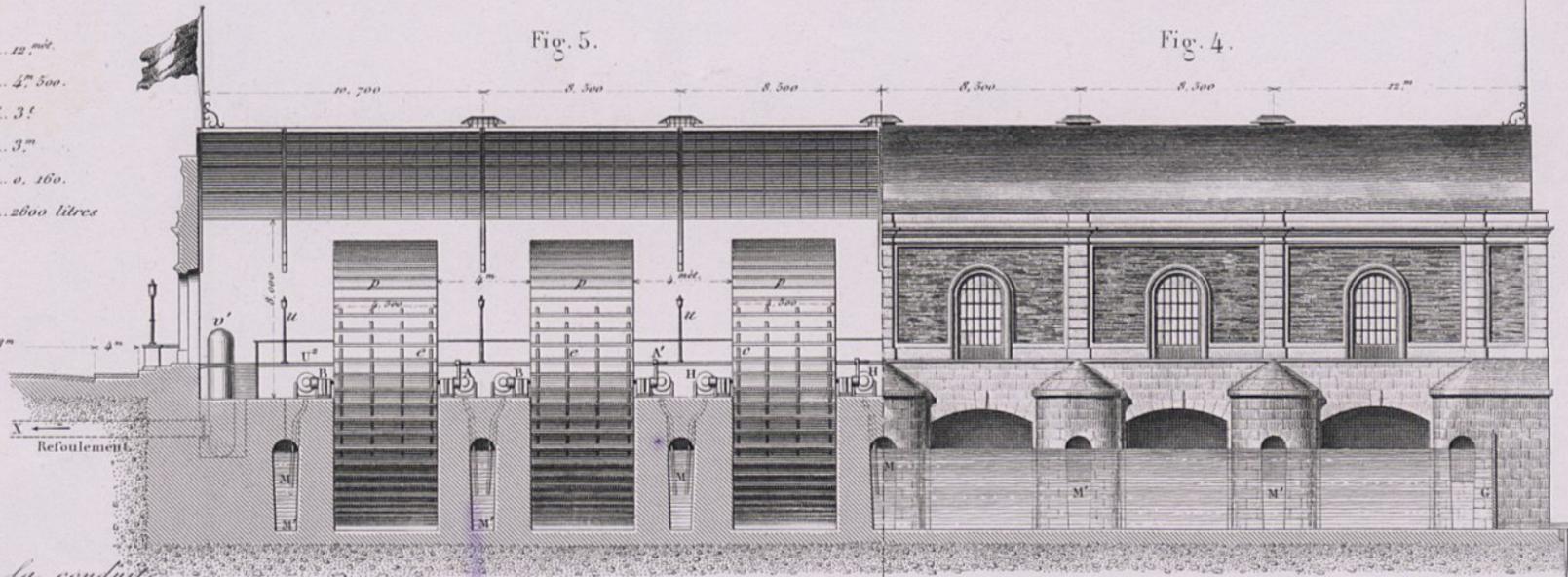


Ancienne construction de 1811 à 1826.

Nouvelle construction de 1855 à 1858.



Diamètre extérieur des roues 12^m.
 Largeur totale 4^m 500.
 Nombre de tours maximum par 1^e 3^e!
 Chûte moyenne 2^m 50 à 3^m.
 Levée de la vanne 0. 160.
 Quantité d'eau dépensée par 1^e 2600 litres



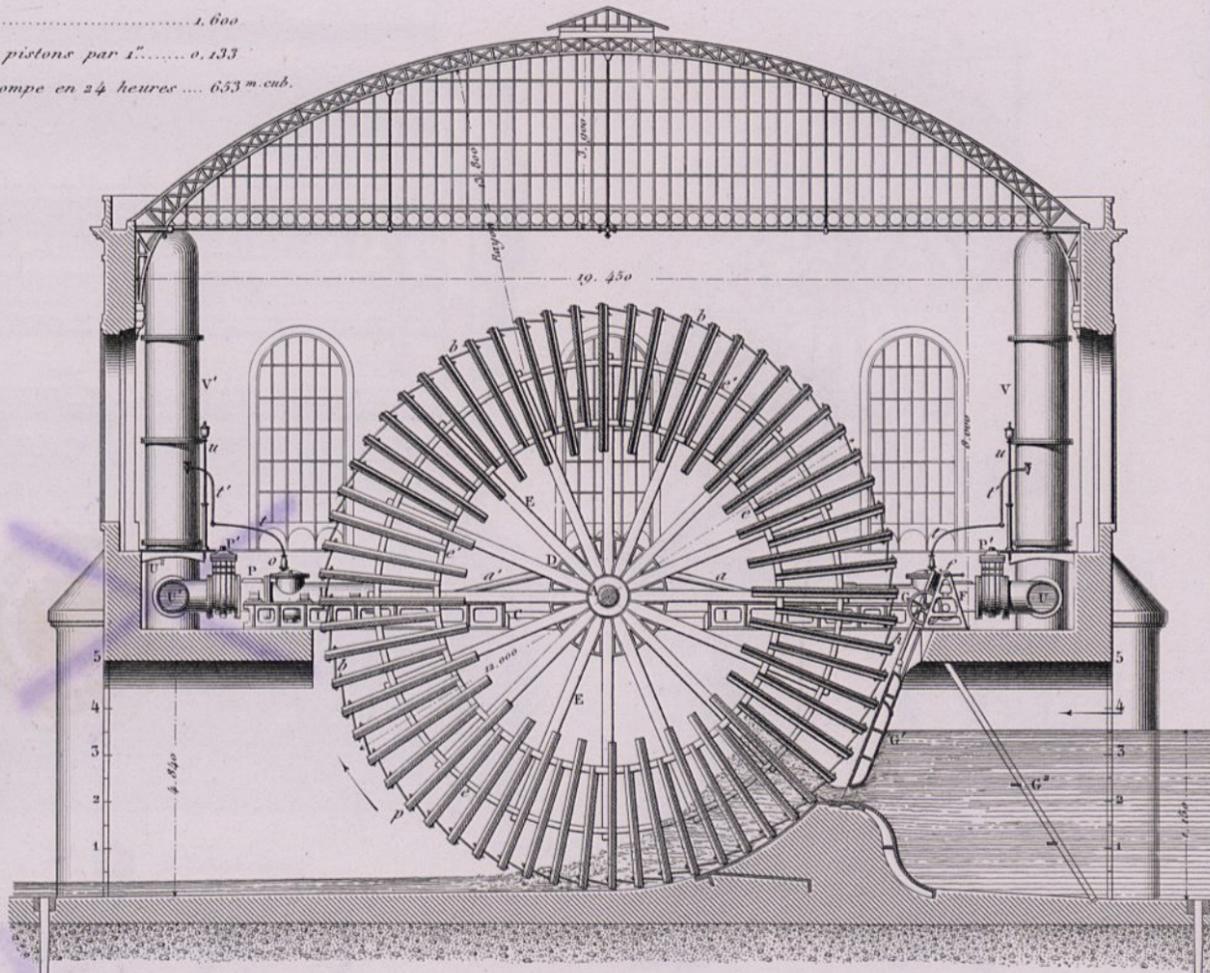
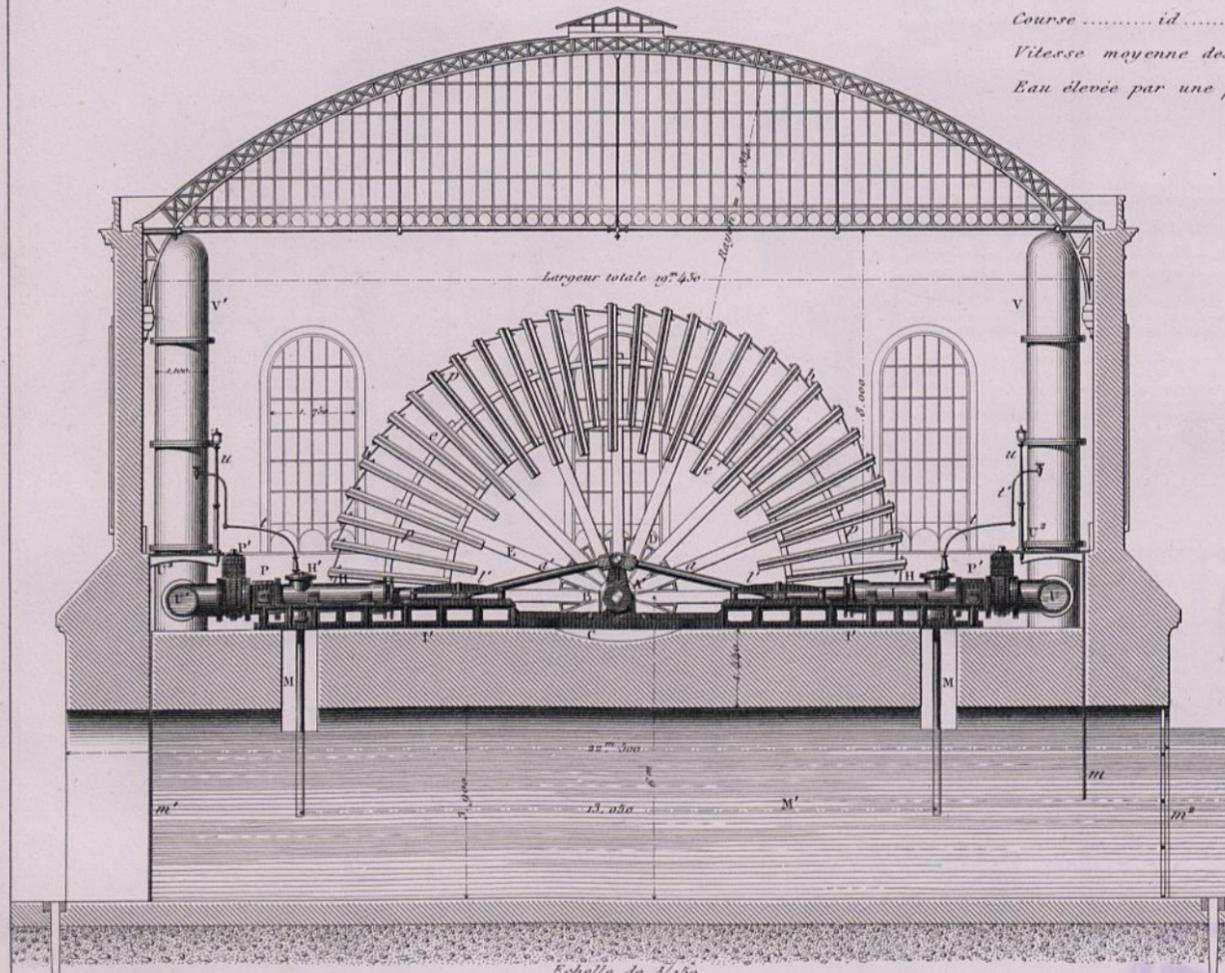
Echelle de 1/300 pour les Fig. 2 à 7.
 1 2 3 4 5 6 7 8 9 10 20 30 Mètres.



Fig. 8.

Fig. 9.

Diamètre des pistons des pompes 0,380
 Course id 1,600
 Vitesse moyenne des pistons par l'..... 0,133
 Eau élevée par une pompe en 24 heures 653 m. cub.



Echelle de 1/150.

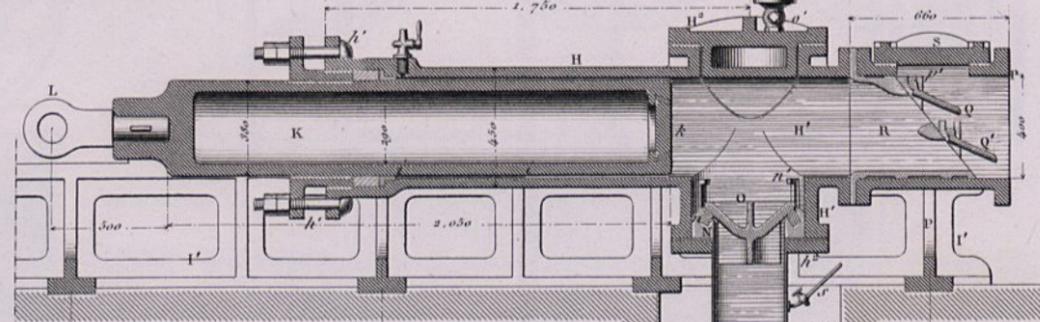
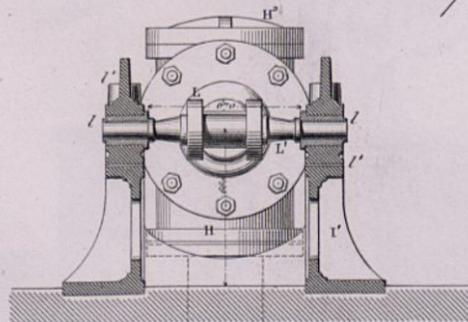
Fig. 12.

Pompe élévatrice.

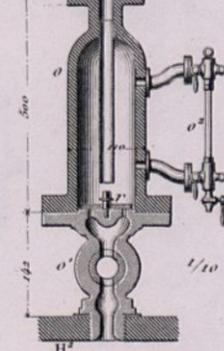
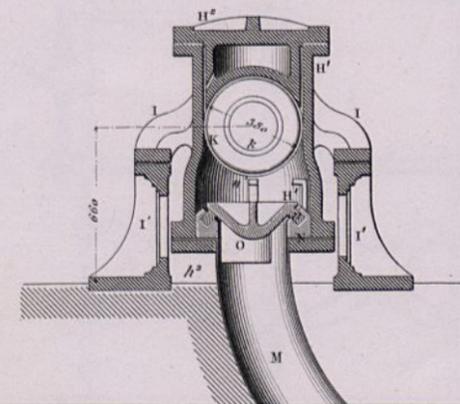
Fig. 10.

Fig. 11.

Fig. 13.

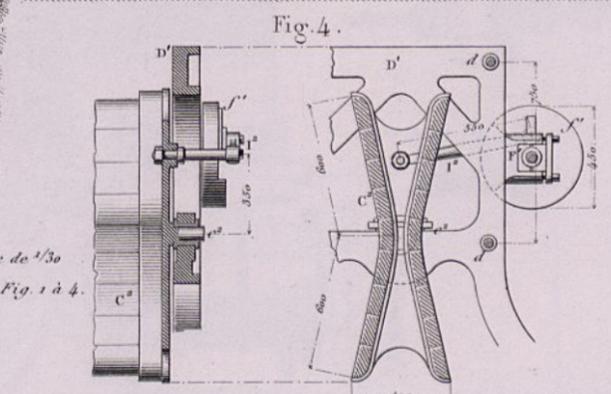
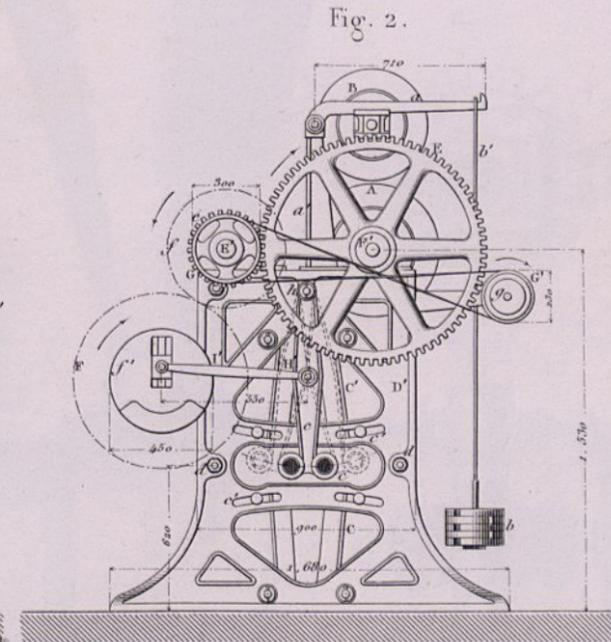
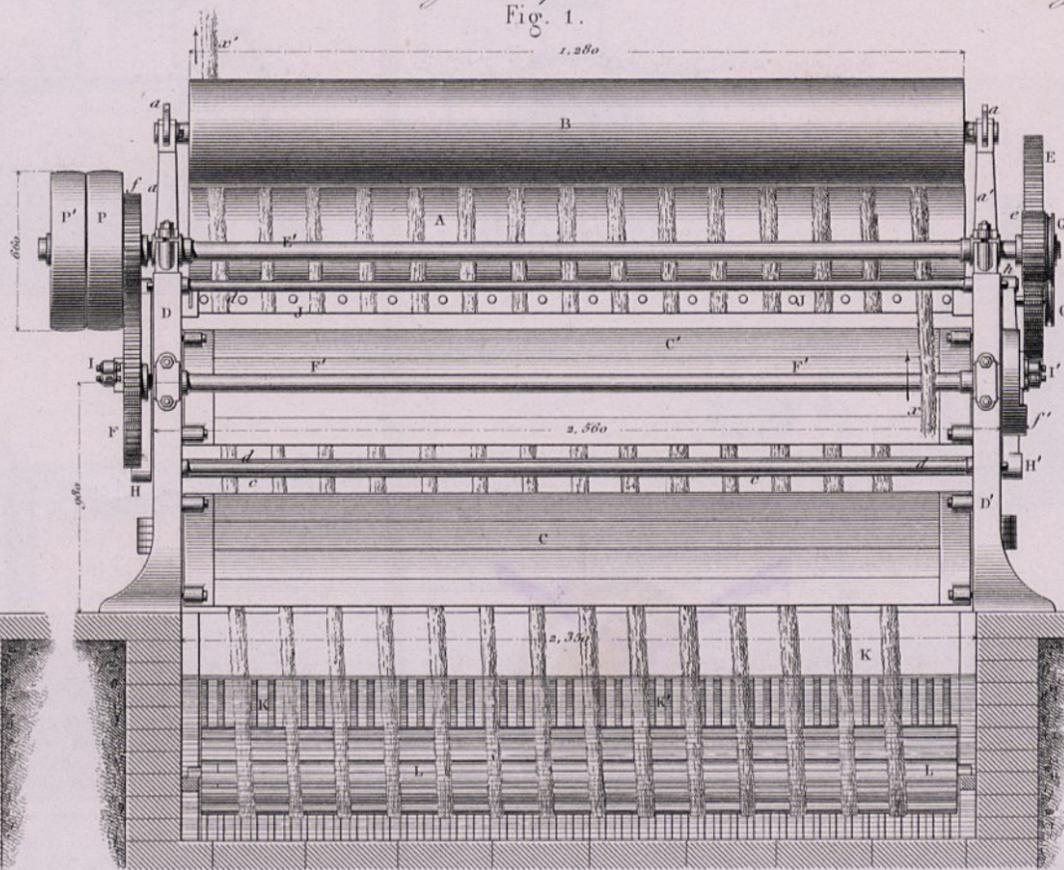
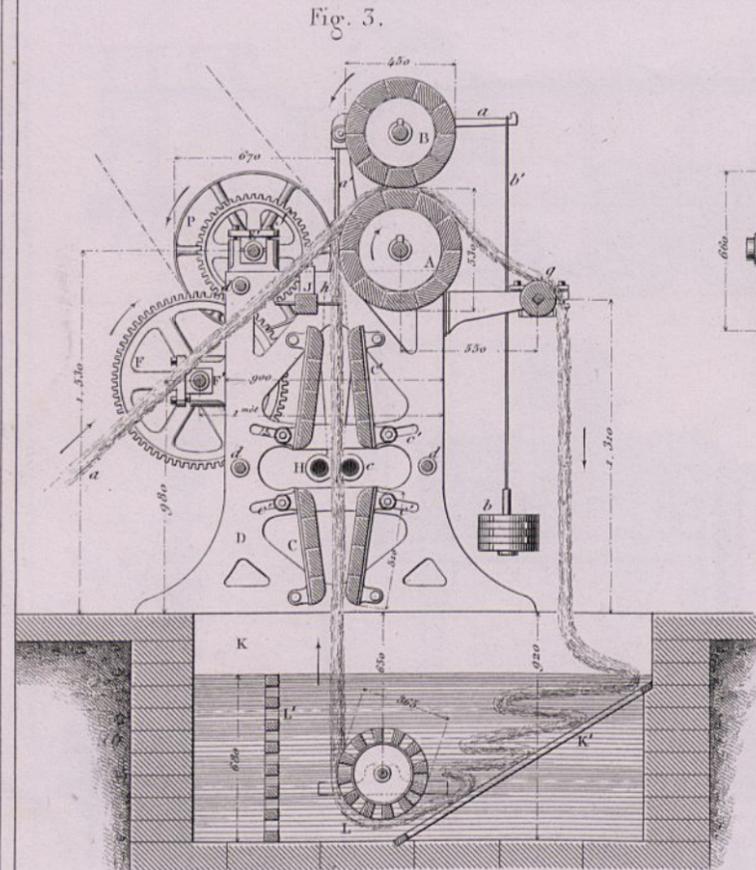


Echelle de 1/30.



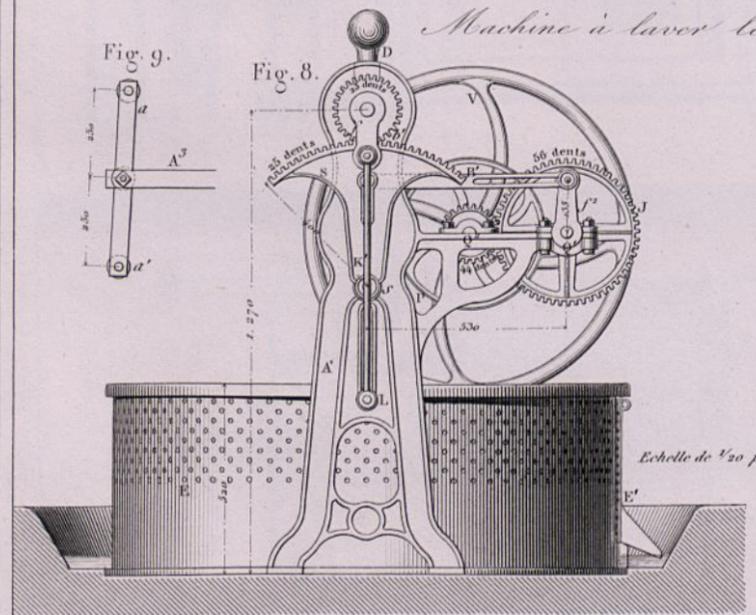


Machine à laver les tissus, par M. M. Brown et Witz.

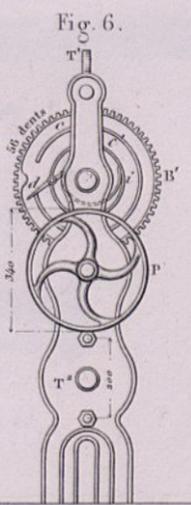
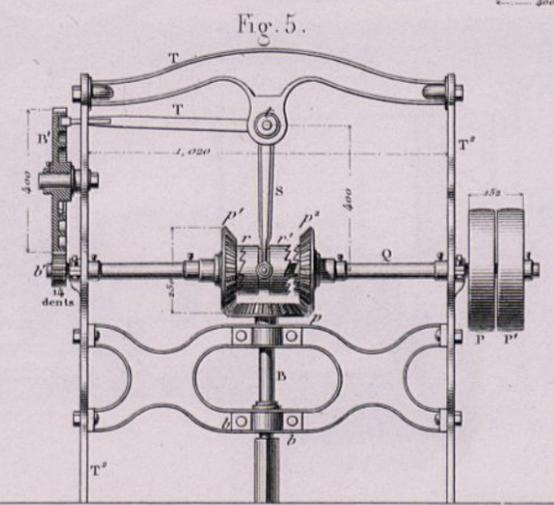
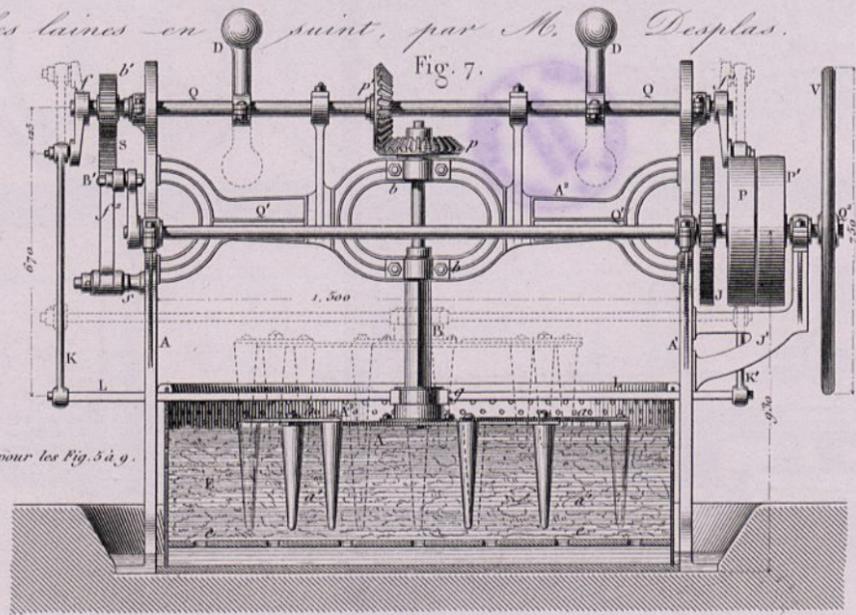


Echelle de 1/30 pour les Fig. 1 à 4.

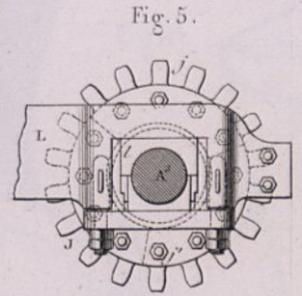
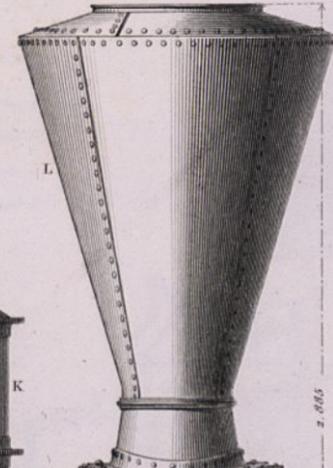
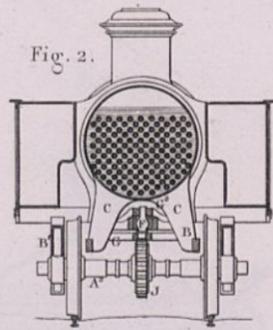
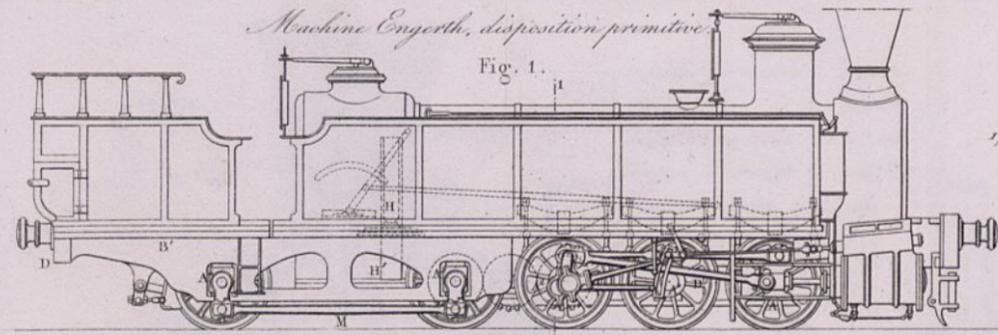
Machine à laver les laines en suint, par M. Desplas.



Echelle de 1/20 pour les Fig. 5 à 9.







Machine à marchandises.

Fig. 7.

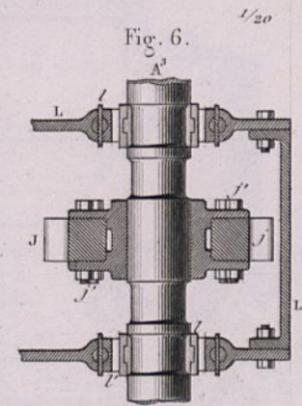
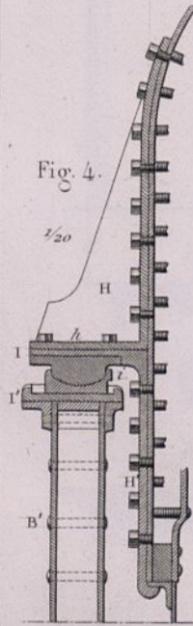
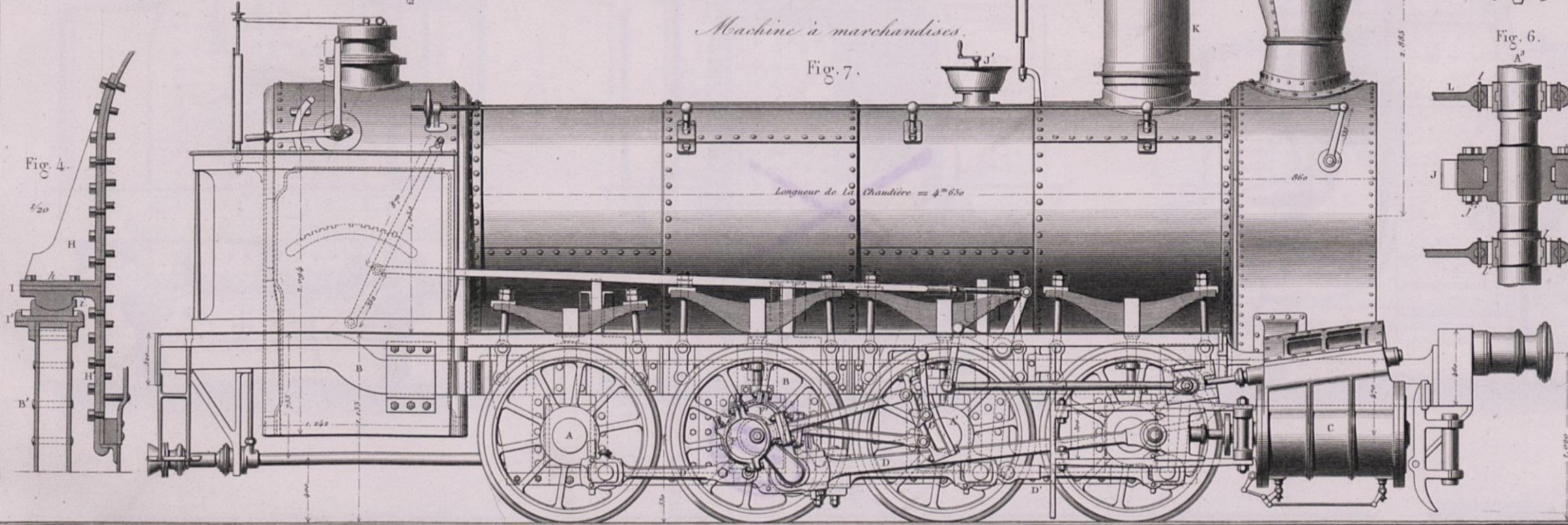
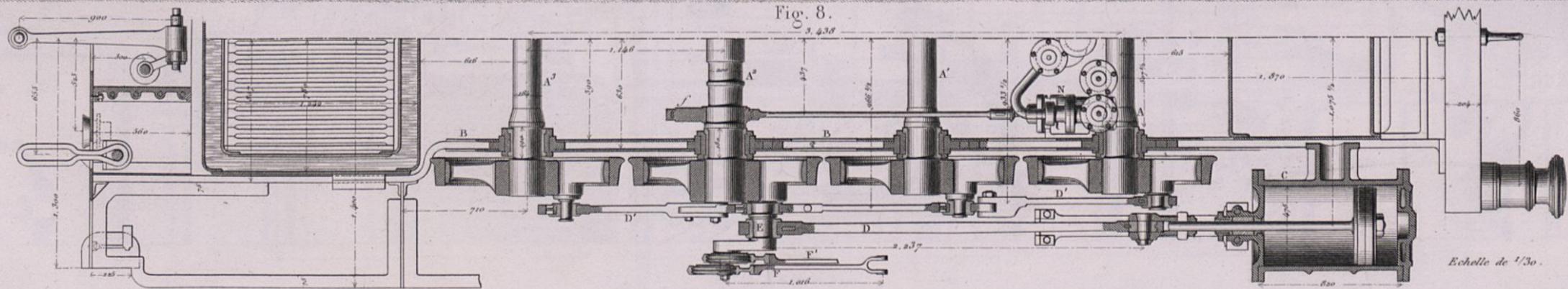


Fig. 8.





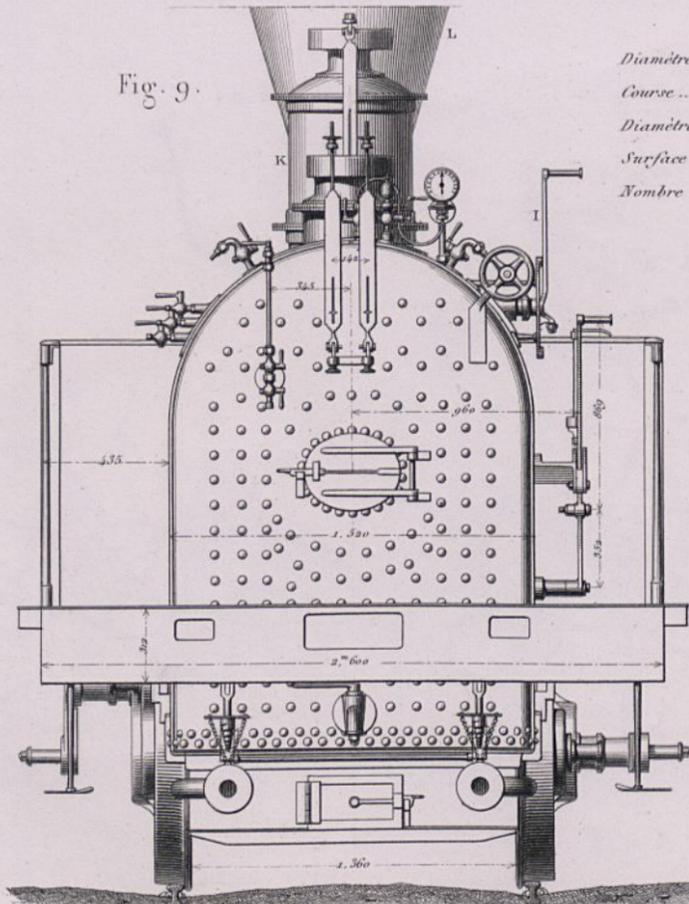


Fig. 9.

Diamètre des Pistons 475^m/_m
 Course 610^m/_m
 Diamètre des Roues 1^m 060
 Surface de chauffe 134^m 713.
 Nombre de Tubes 189

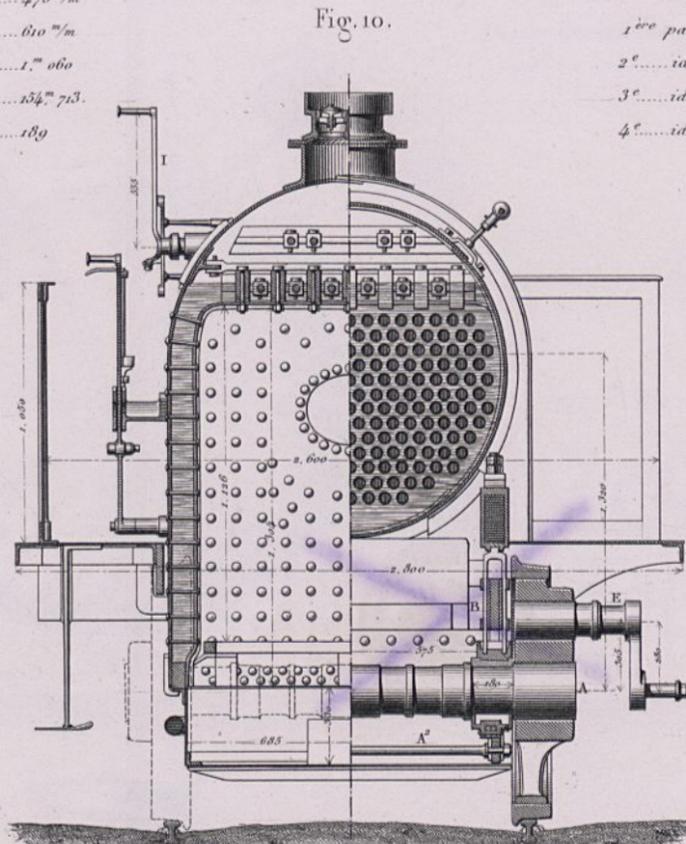


Fig. 10.

Répartition de la charge sur les huit roues.

- 1^{ère} paire 10, 750 k.
- 2^e id 10, 850 k.
- 3^e id 11, 100 k.
- 4^e id 11, 000 k.

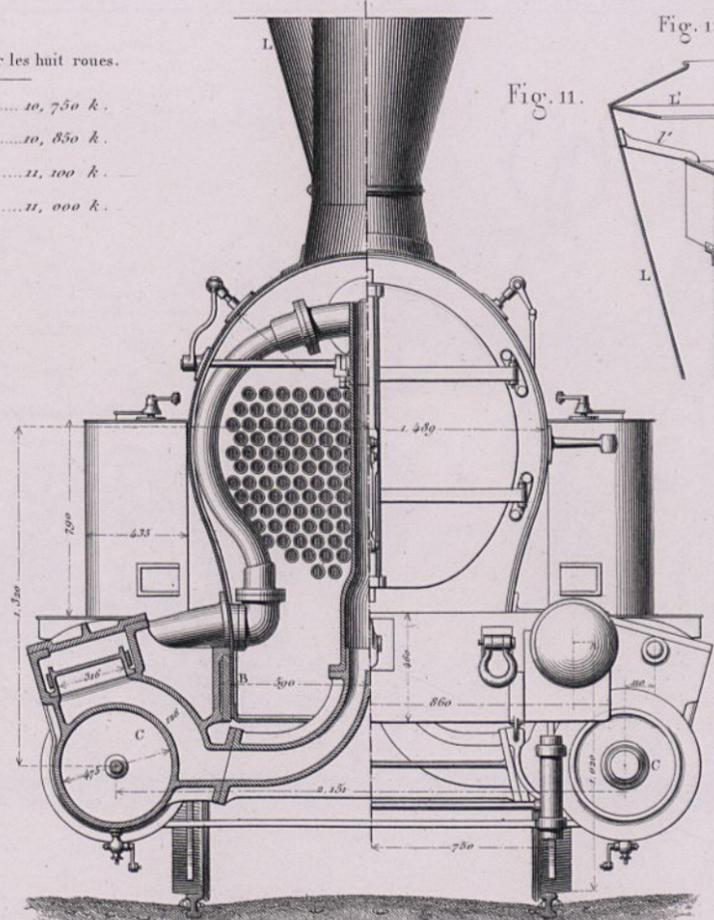
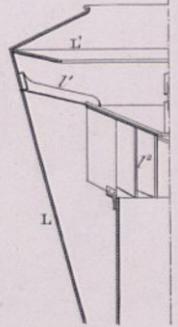


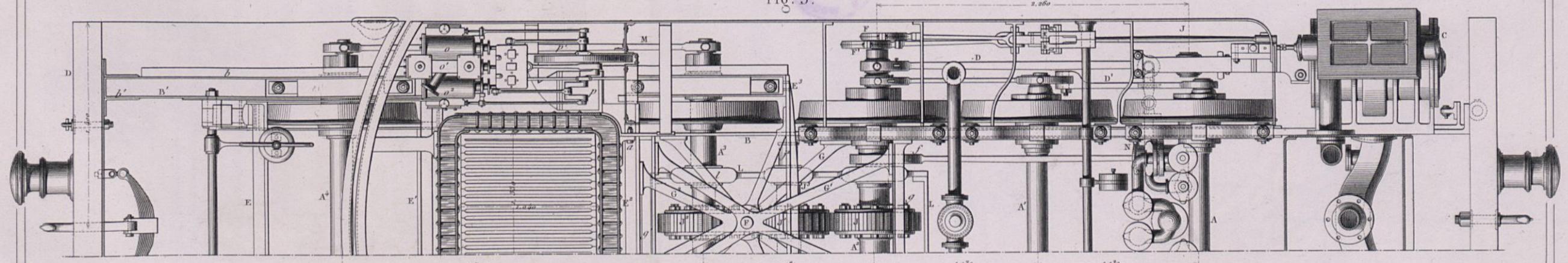
Fig. 11.

Fig. 12.



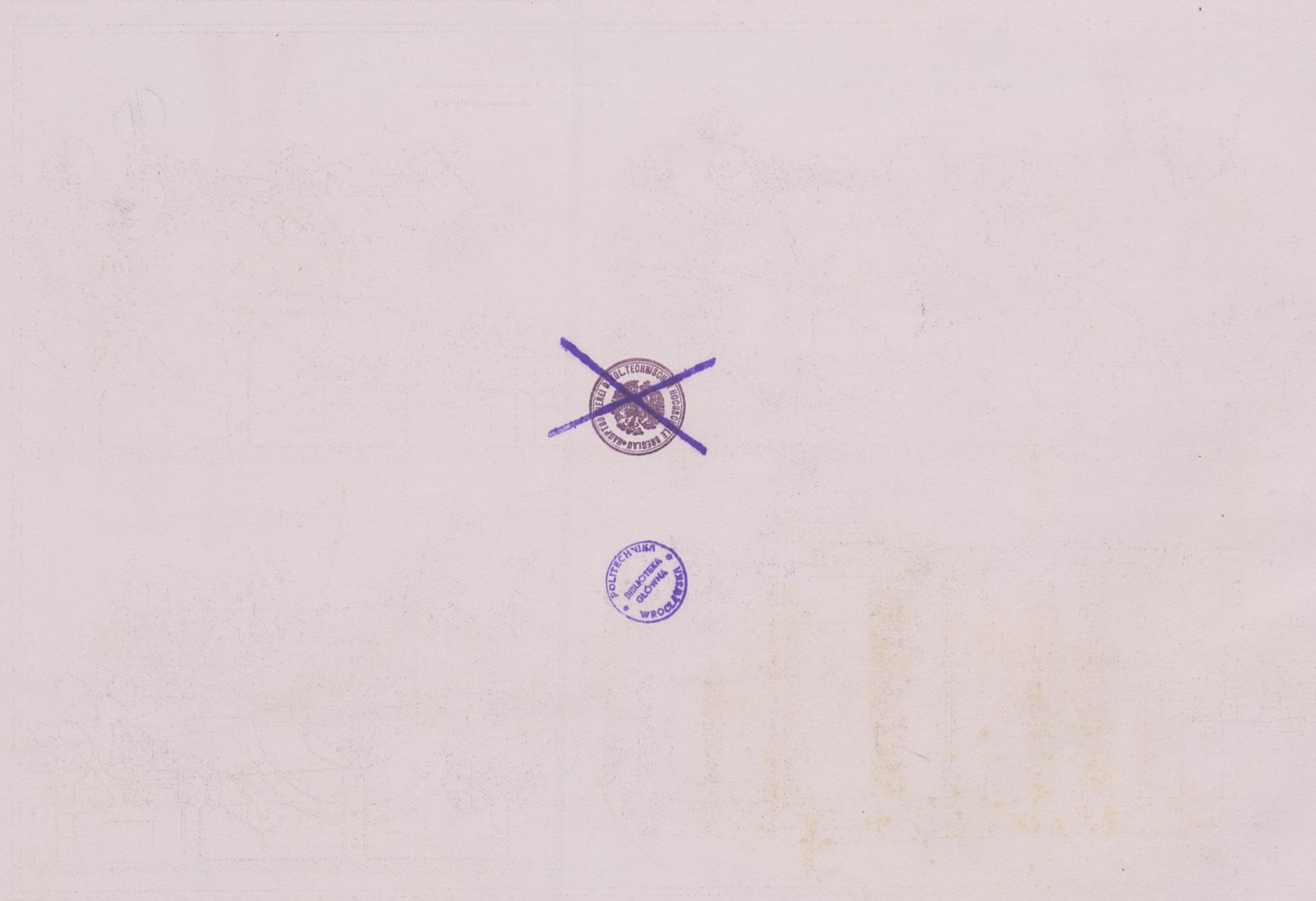
Plan de la Machine Engerth primitive.

Fig. 3.

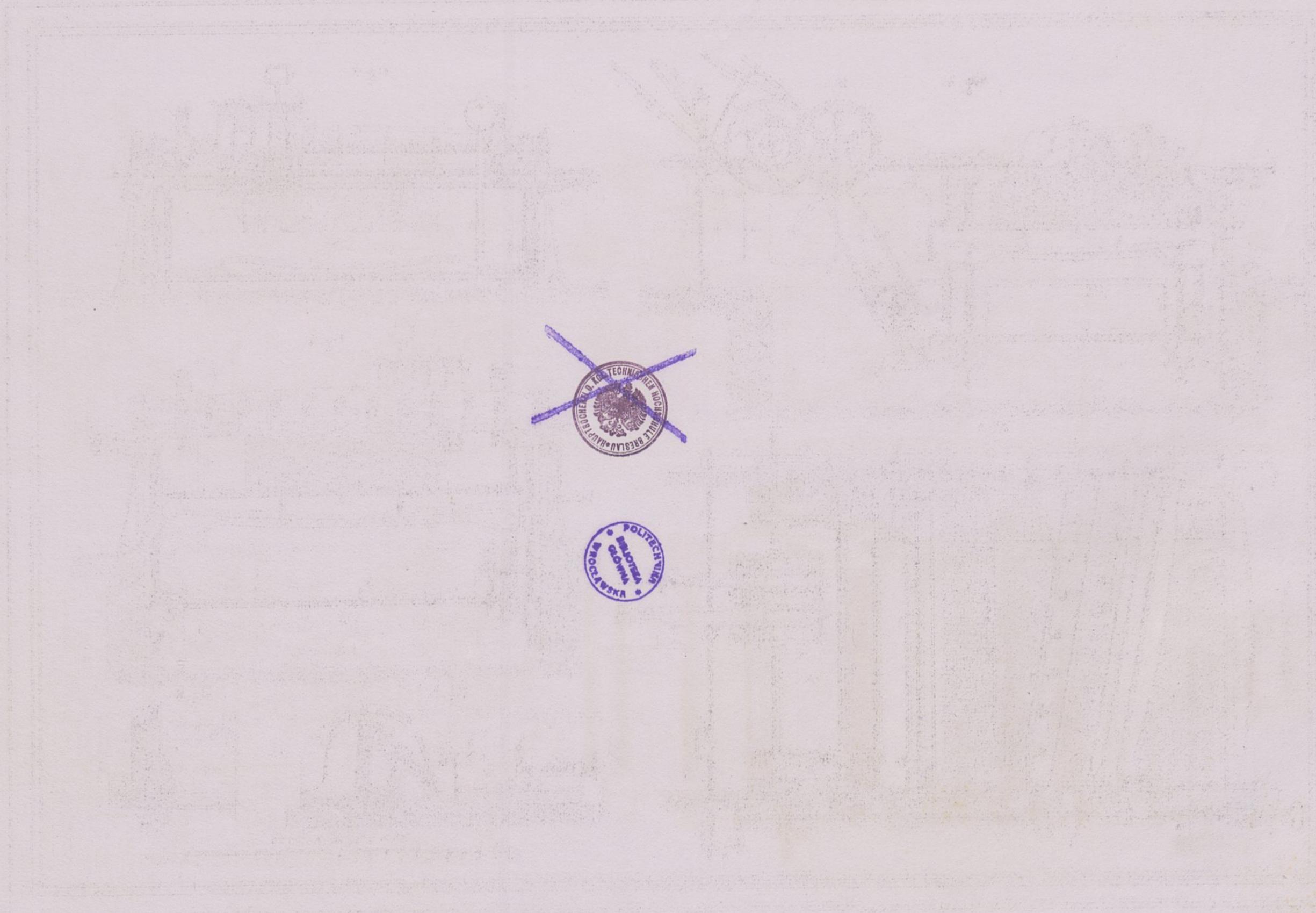


Echelle de 1/30

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1948



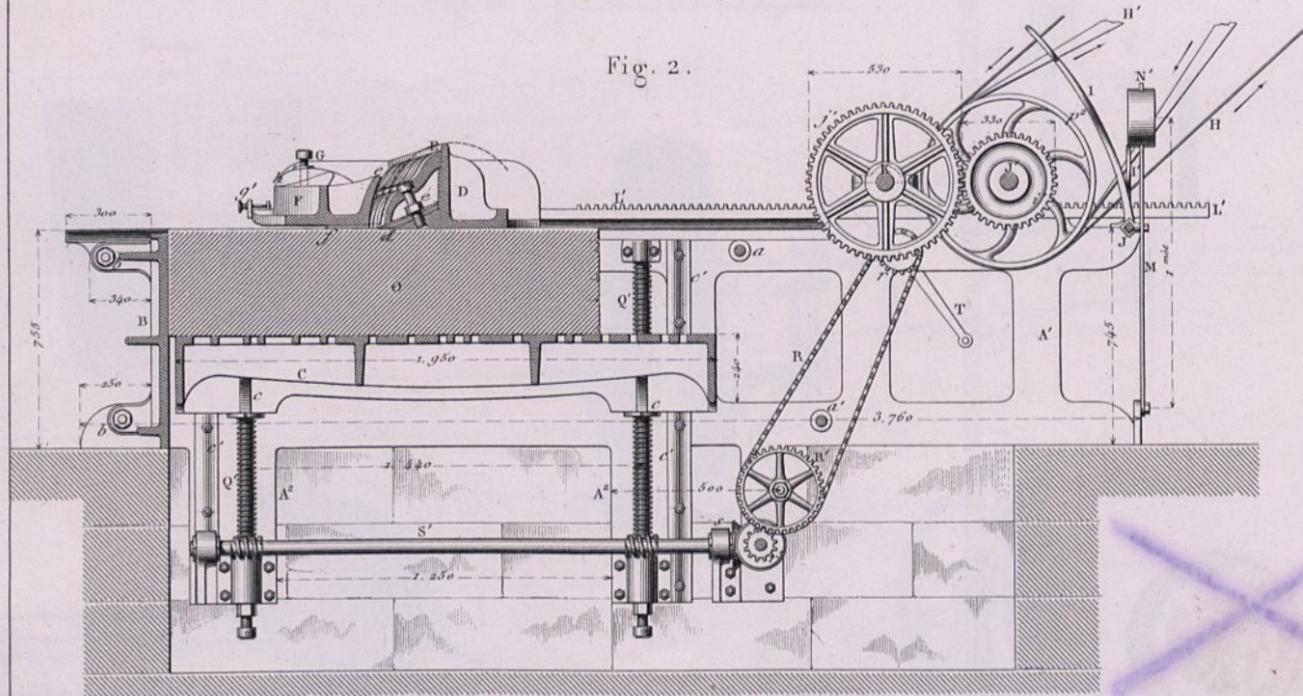


Fig. 2.

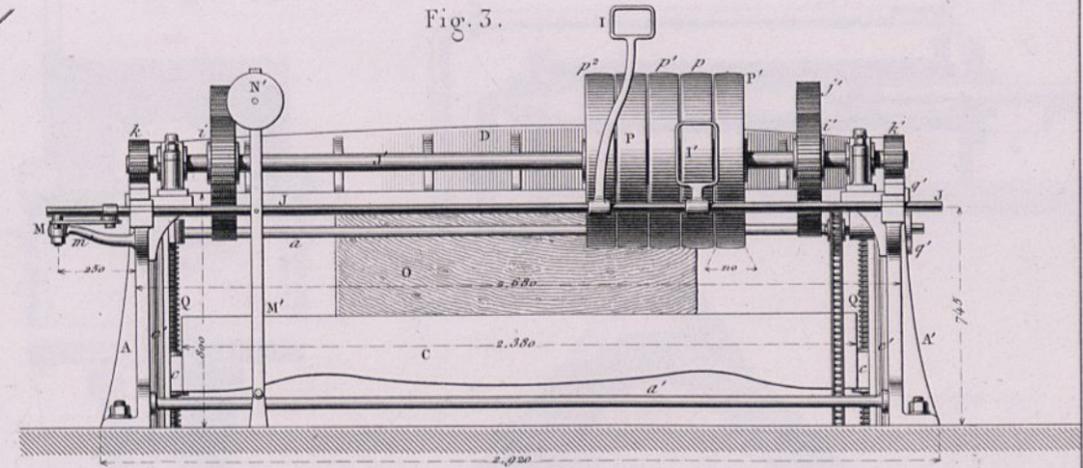


Fig. 3.

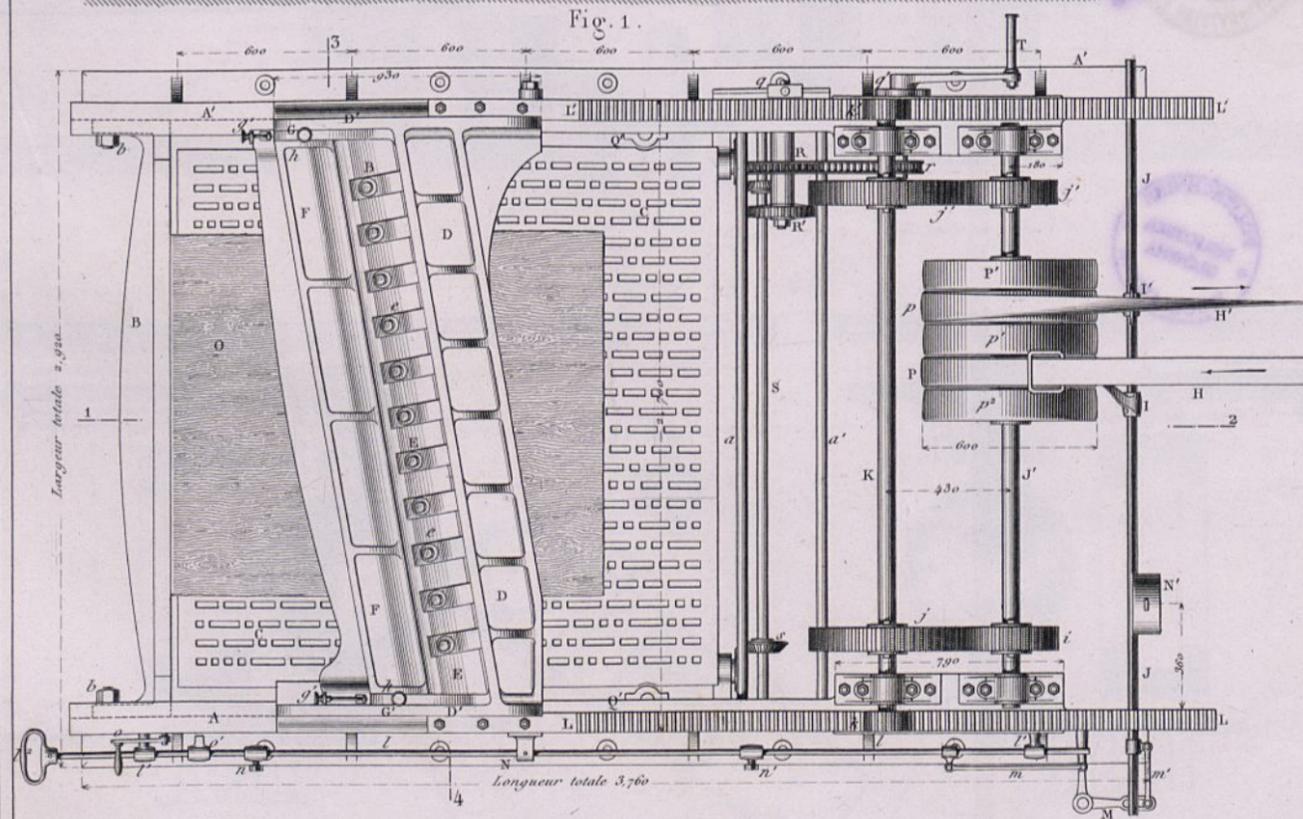


Fig. 1.

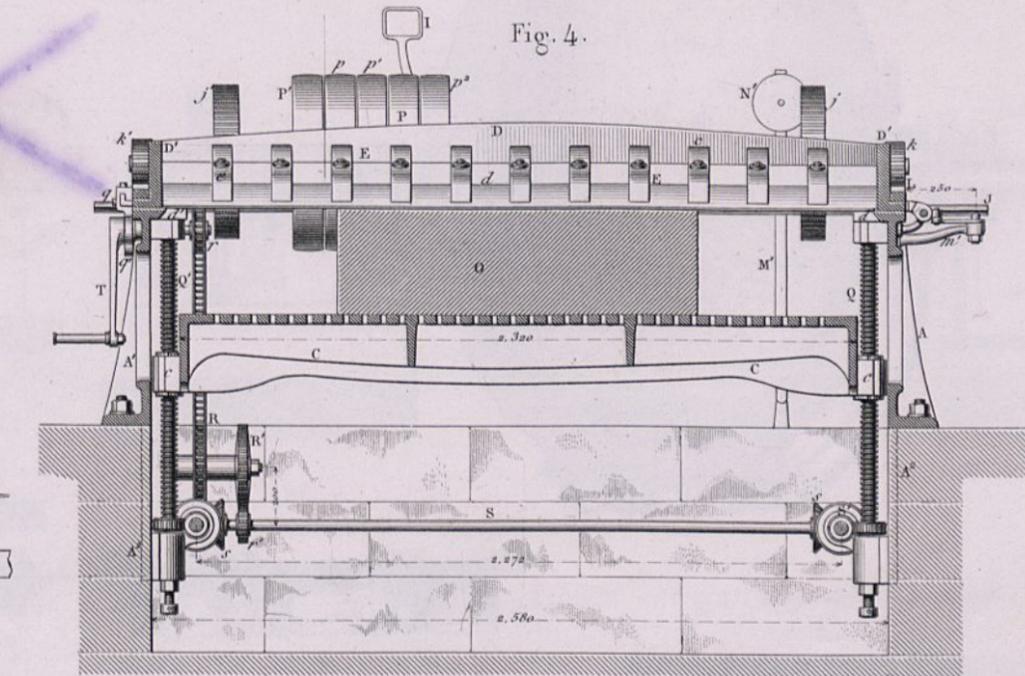


Fig. 4.

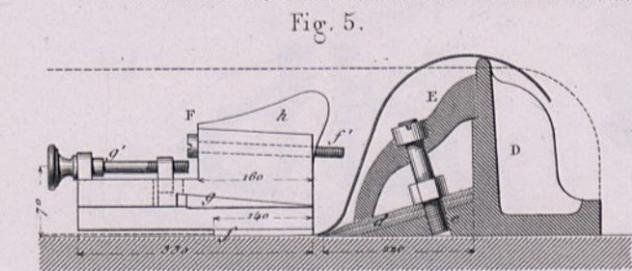


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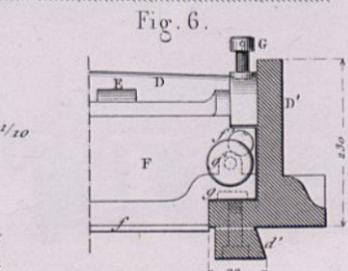


Fig. 6.

Echelle de 1/25 pour les Fig. 1 à 4.
 10 9 8 7 6 5 4 3 2 1 0 1 mètre.



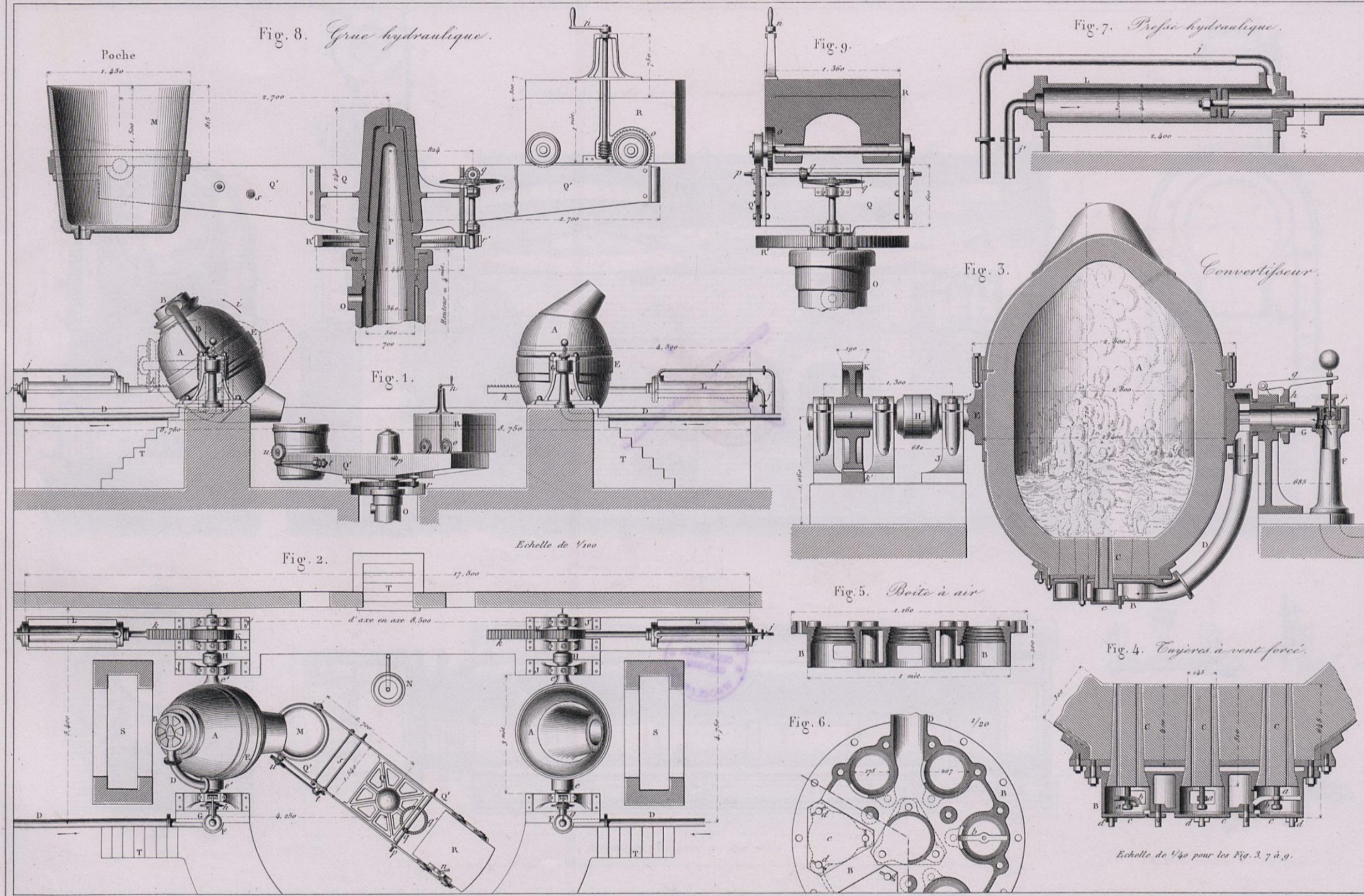




Fig. 2.

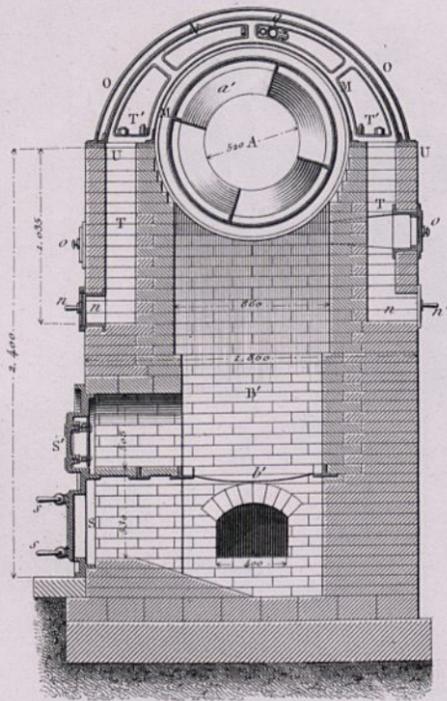


Fig. 1.

Coupe longitudinale suivant l'axe du cylindre.

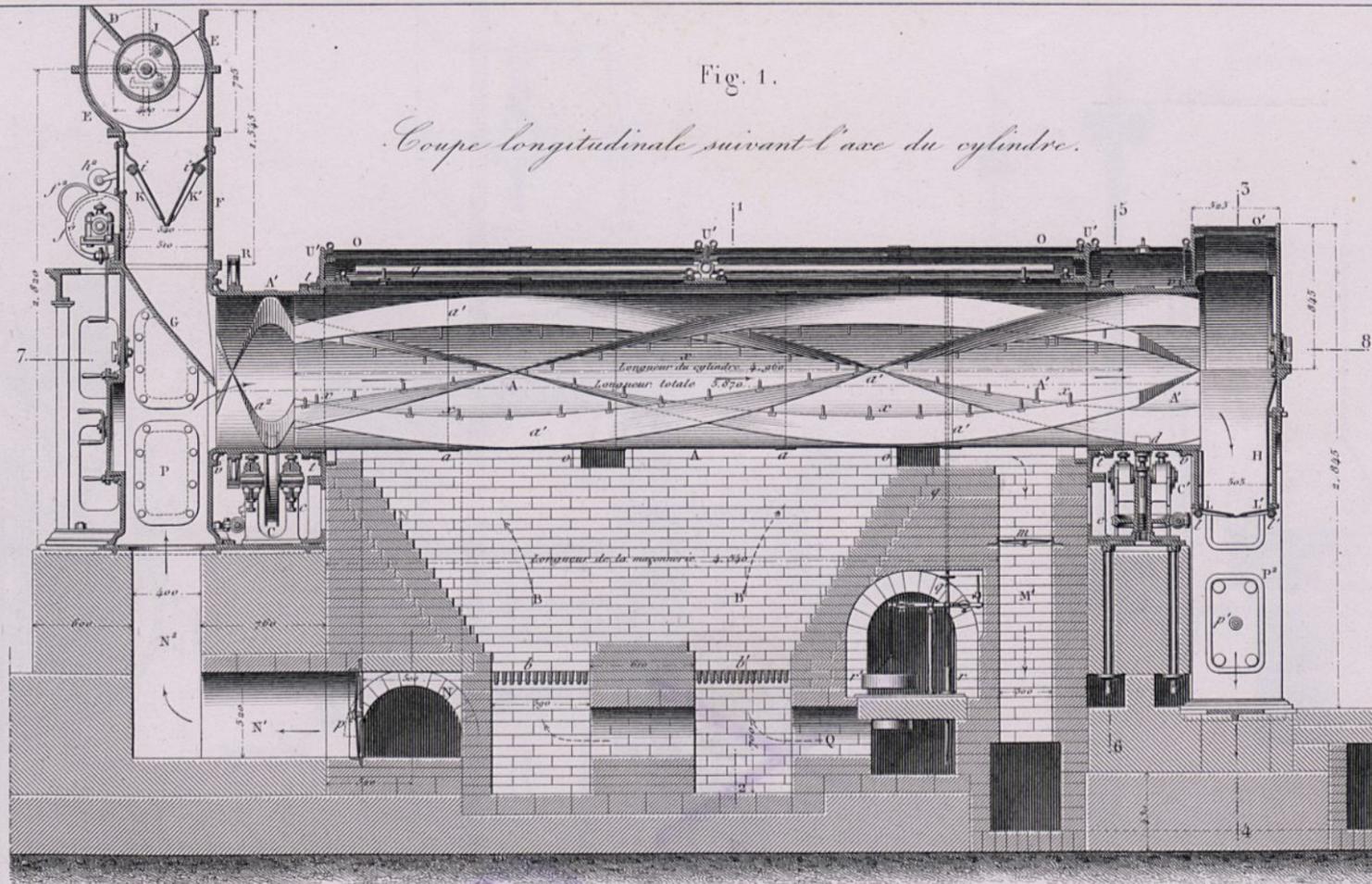


Fig. 3.

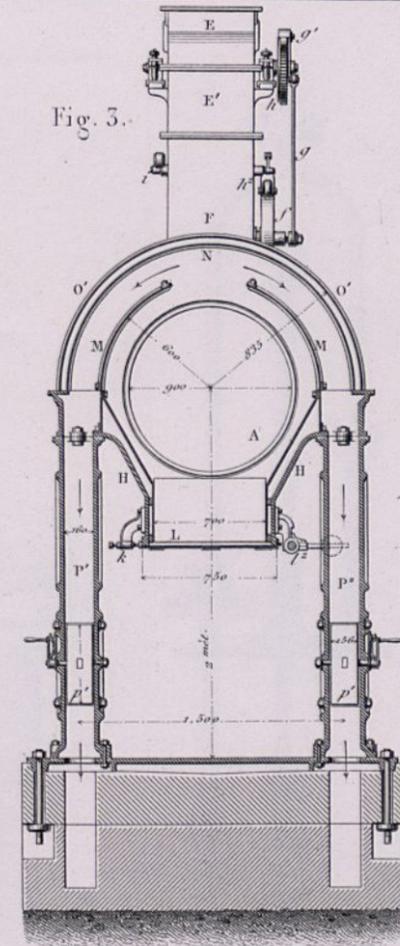


Fig. 4.

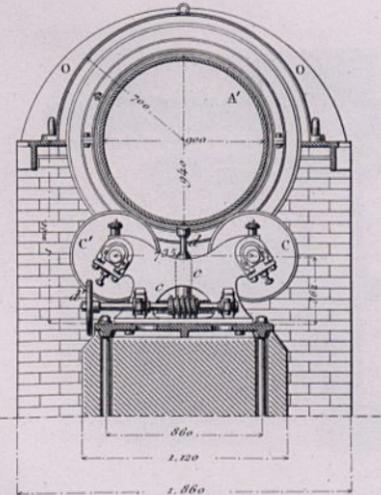
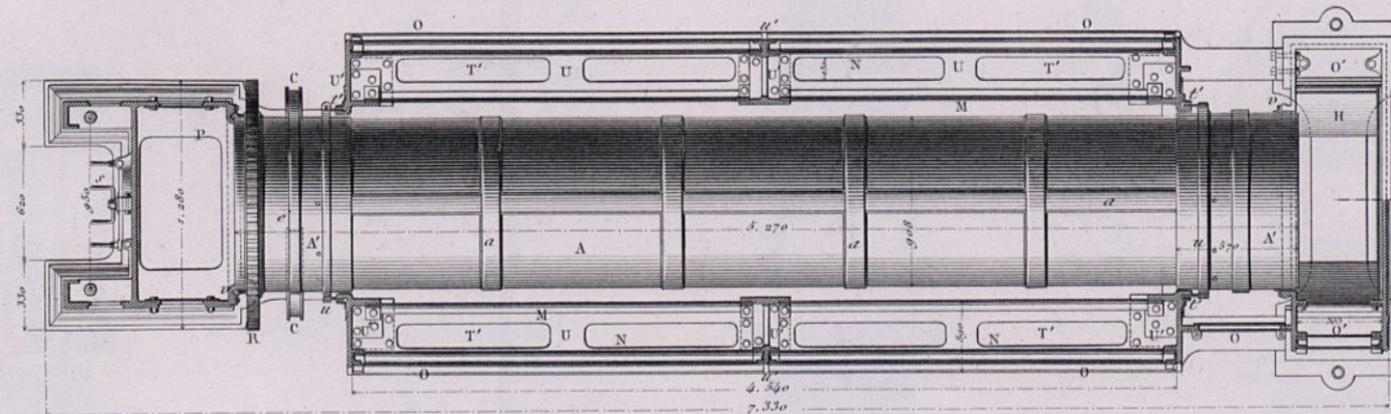


Fig. 5.



Echelle de 1/40 pour les Fig. 1 à 5.

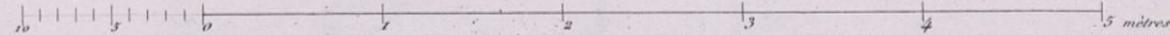


Fig. 6.

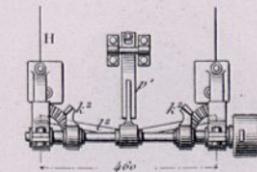


Fig. 7.

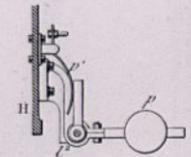


Fig. 8.

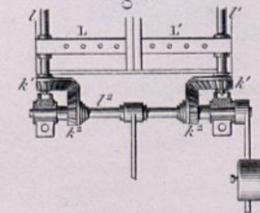
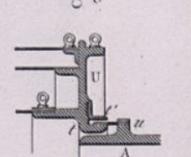
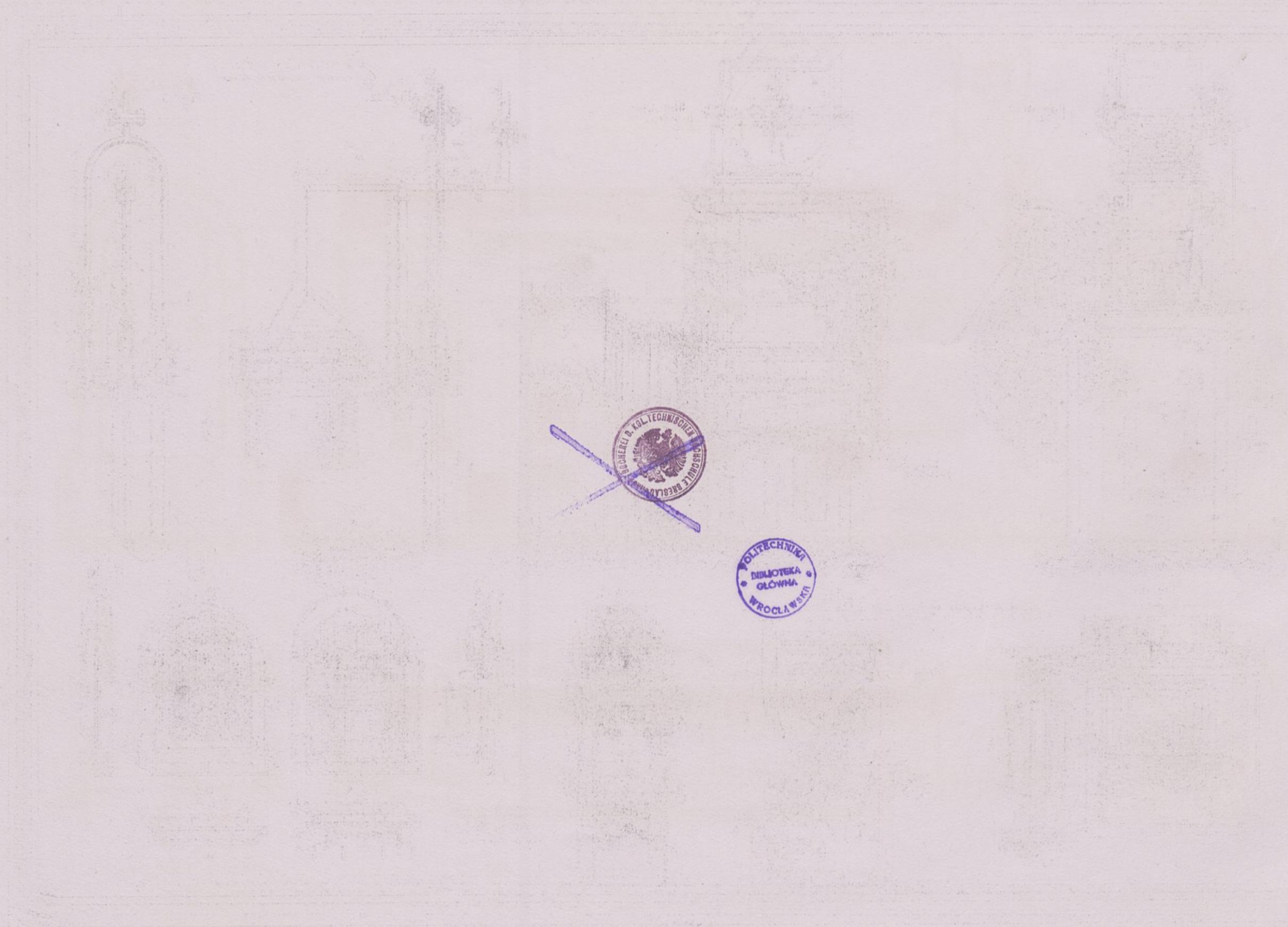


Fig. 9.



Echelle de 1/20 pour les Fig. 6 à 9.



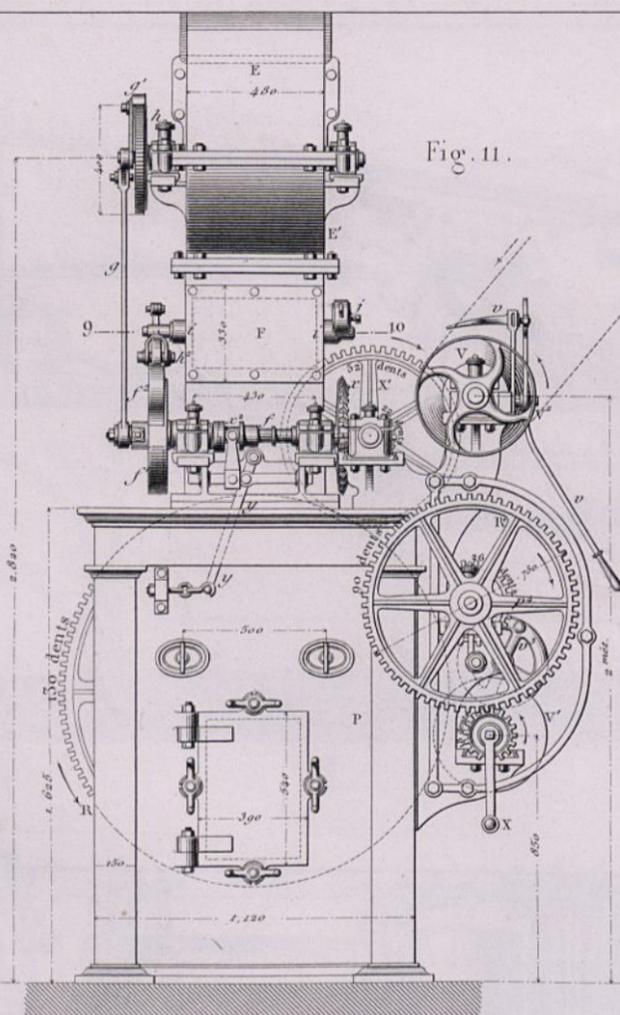


Fig. 11.

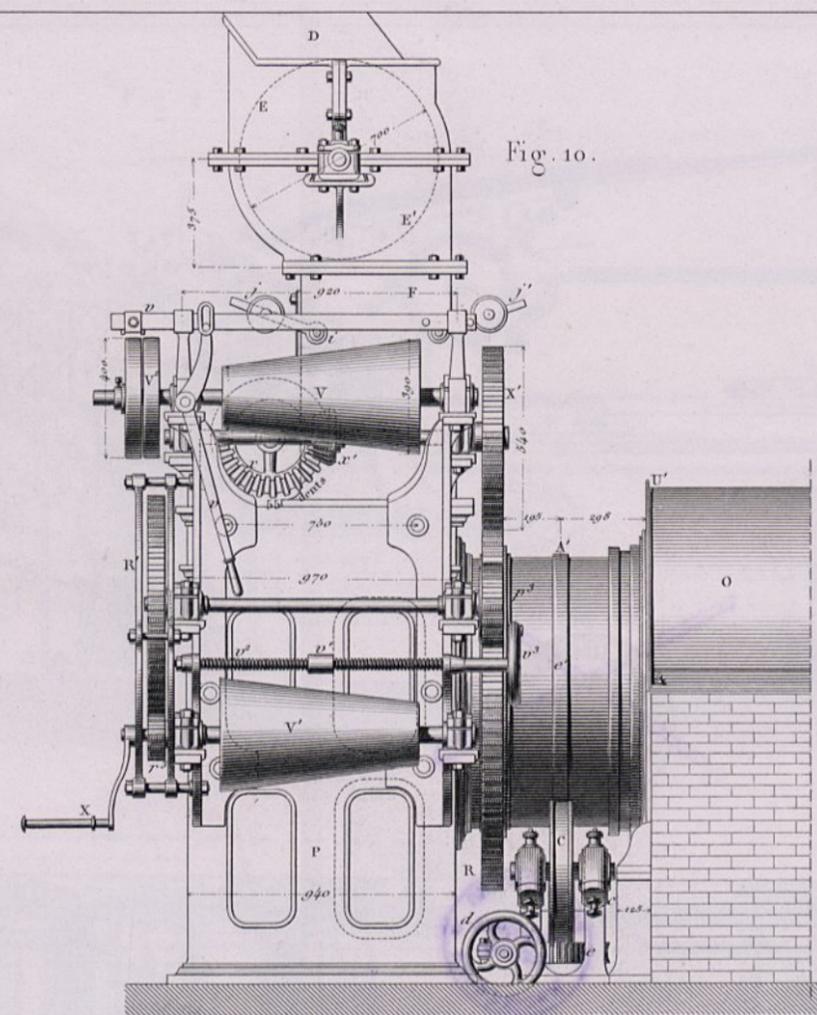
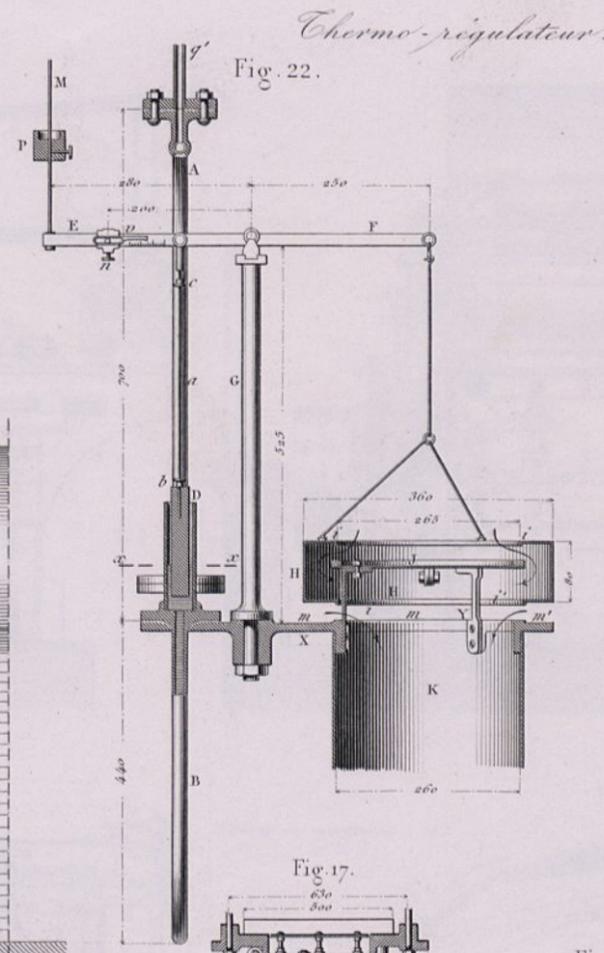


Fig. 10.



Thermo-régulateur.
Fig. 22.

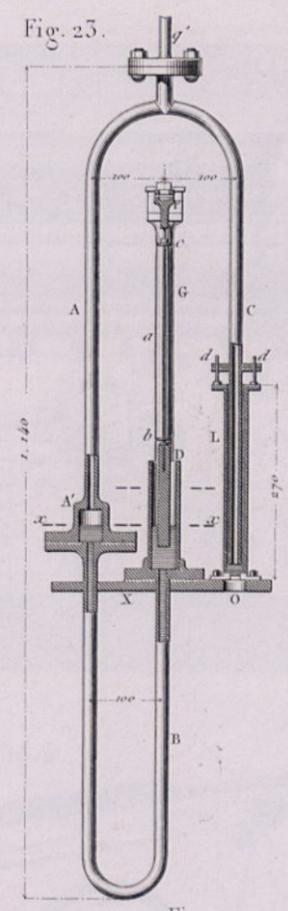


Fig. 25.

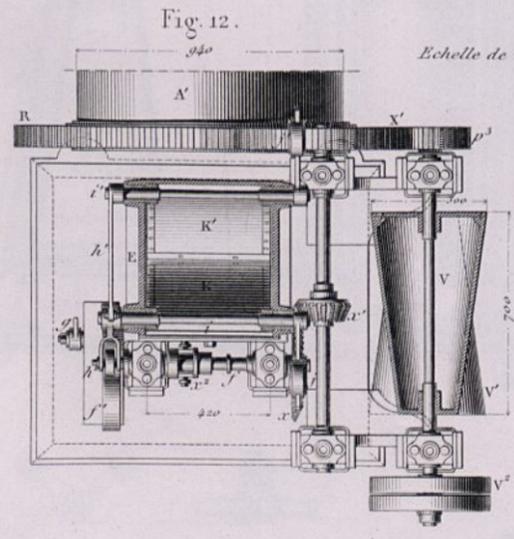


Fig. 12.

Echelle de 1/25 pour les Fig. 10 à 21.

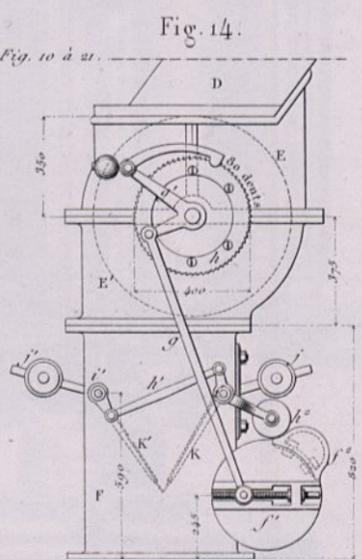


Fig. 14.

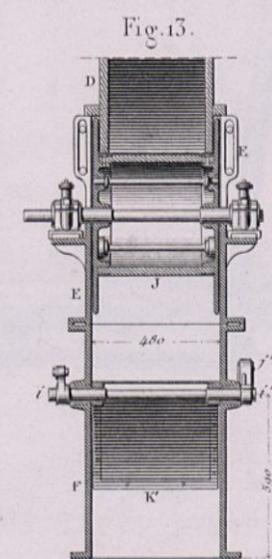


Fig. 13.

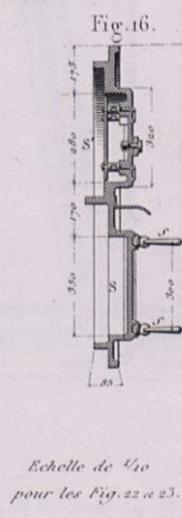


Fig. 16.

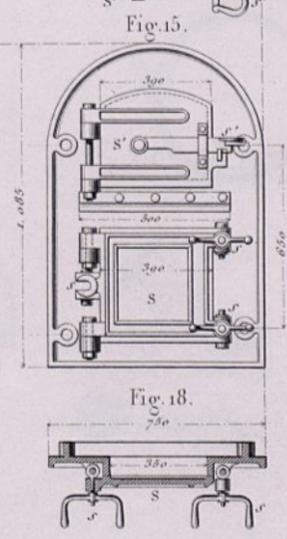


Fig. 15.

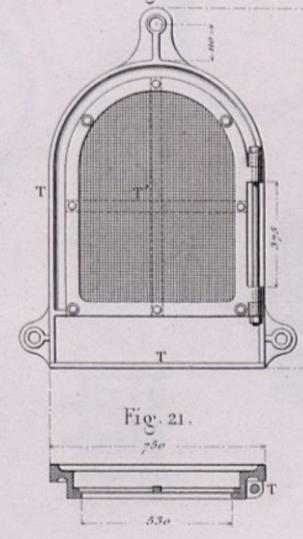


Fig. 18.

Echelle de 1/10 pour les Fig. 22 à 25.

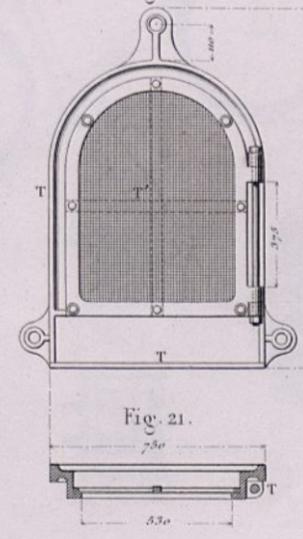


Fig. 19.



Fig. 21.

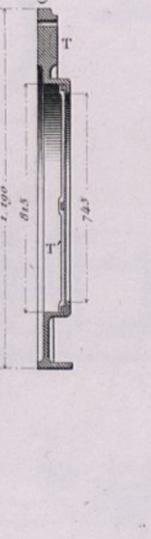


Fig. 20.



Fig. 2.

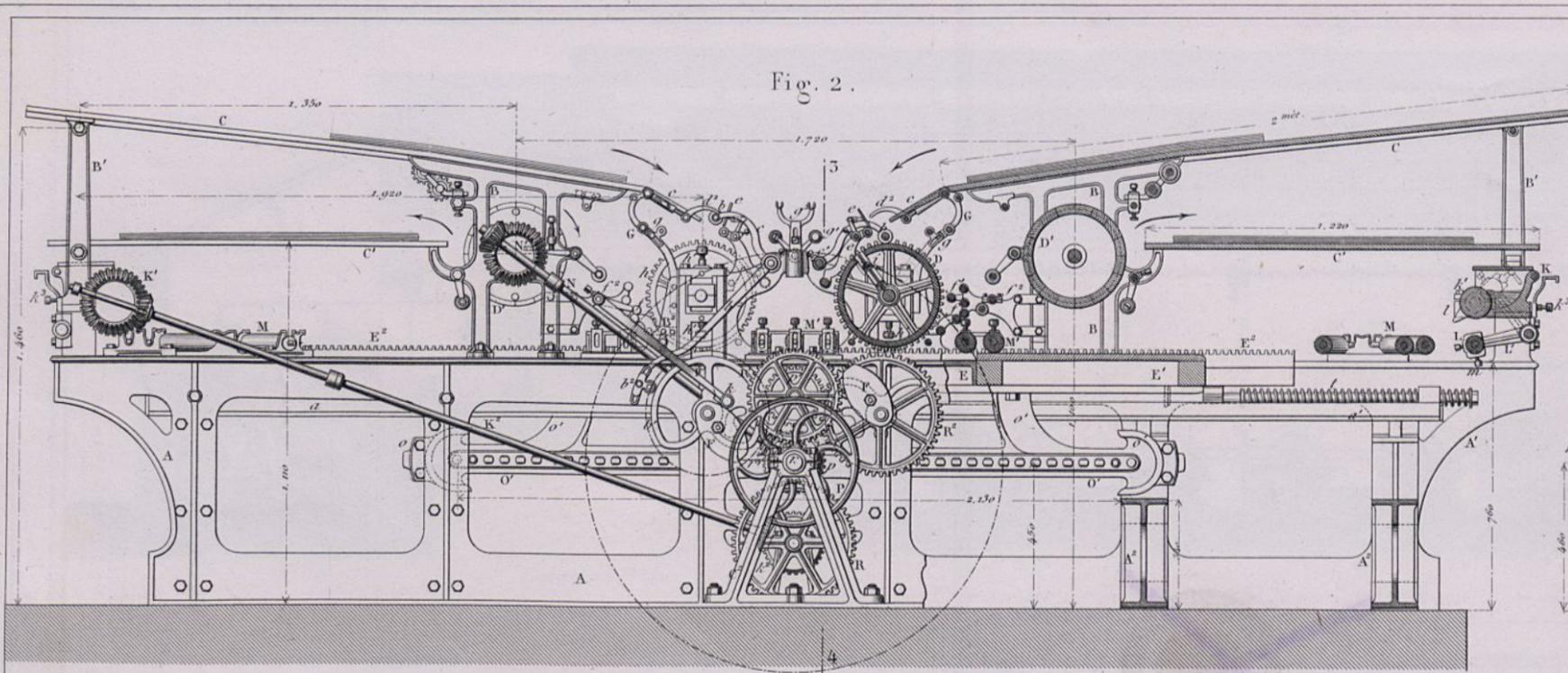


Fig. 3.

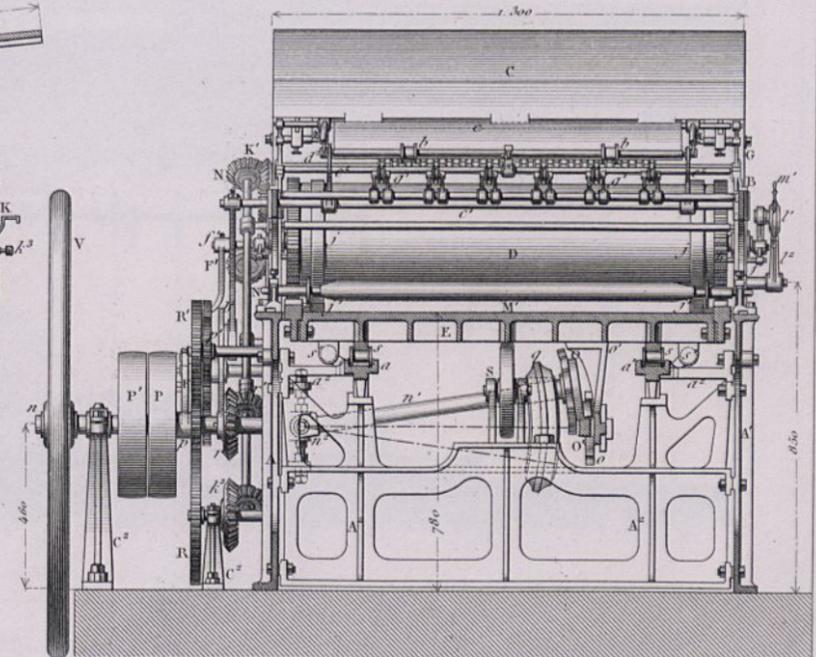


Fig. 1.

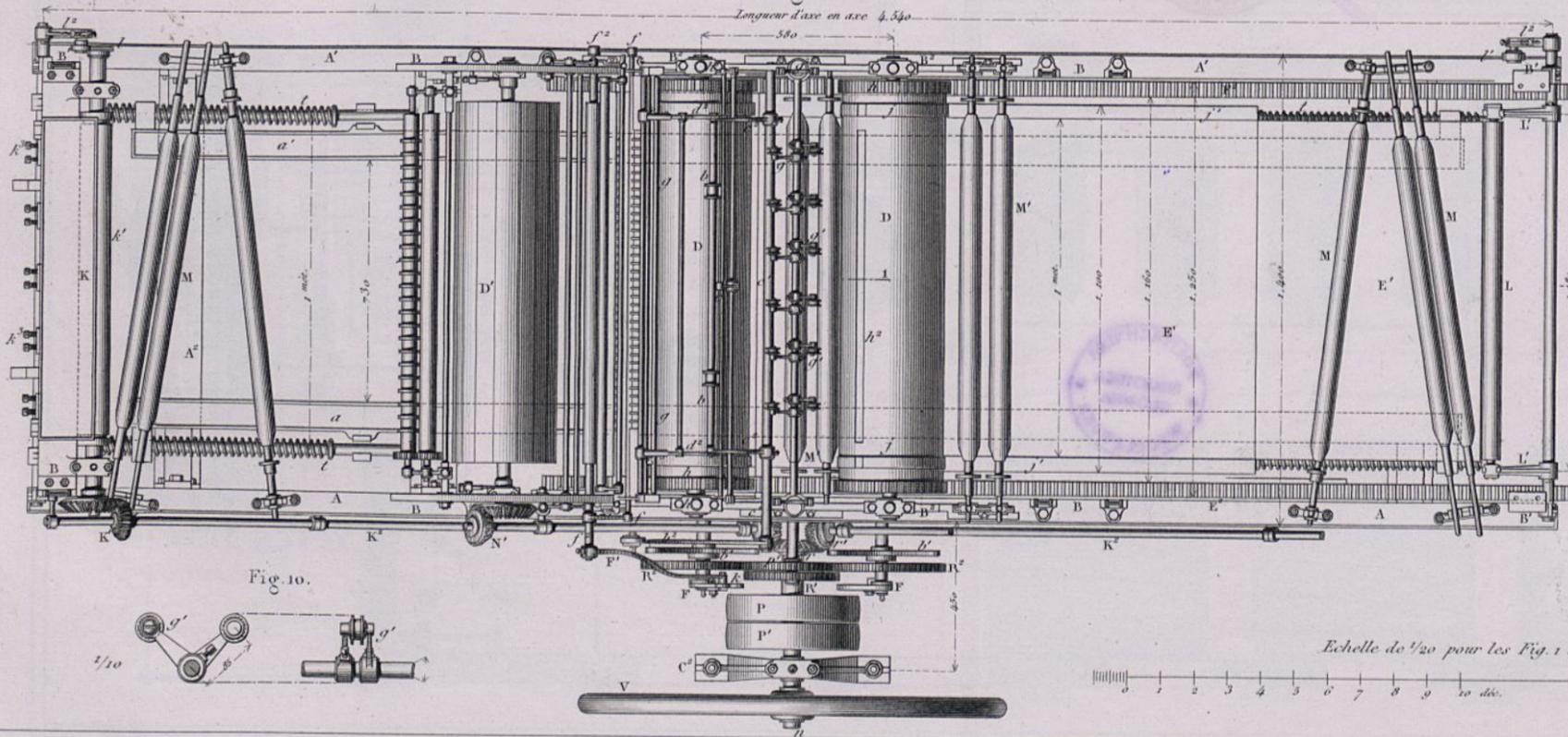


Fig. 4.

Course du marbre = 2,243

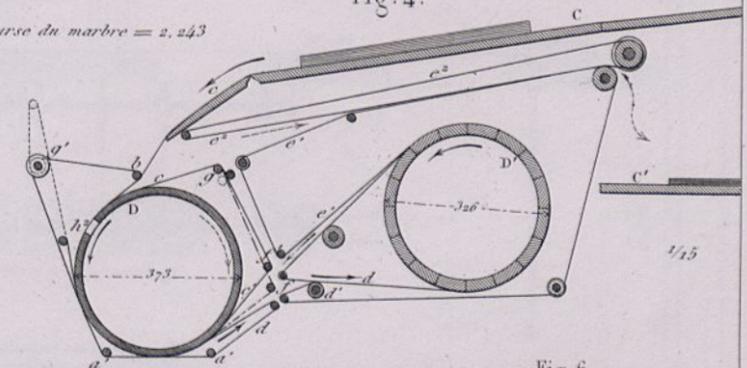


Fig. 8.

Fig. 6.

Fig. 5.

Fig. 9.

Fig. 7.

Echelle de 1/20 pour les Fig. 1 à 3.

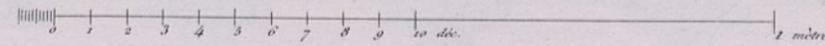
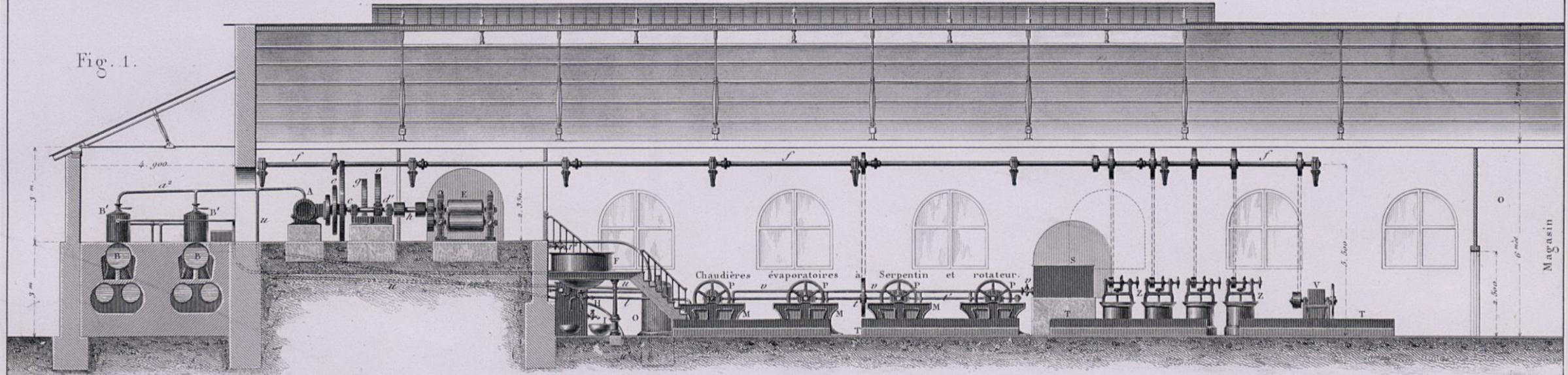


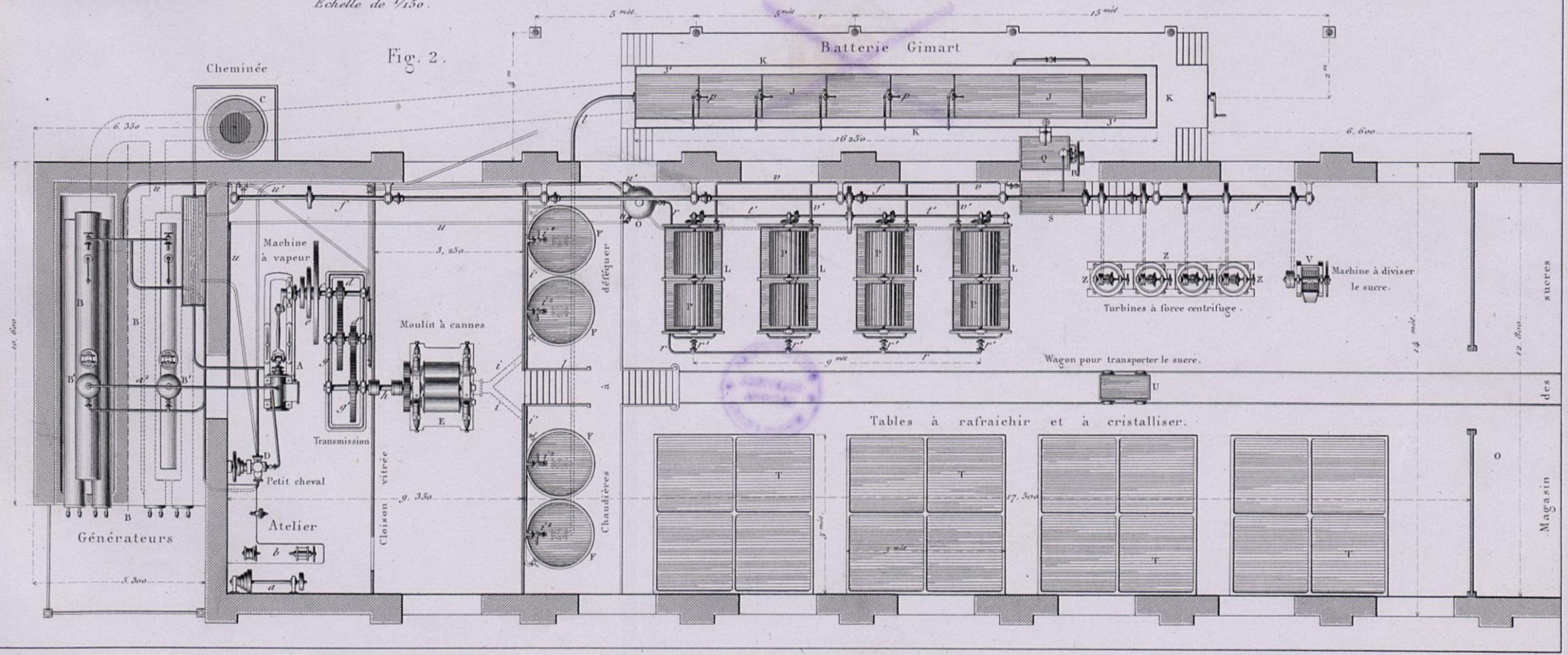


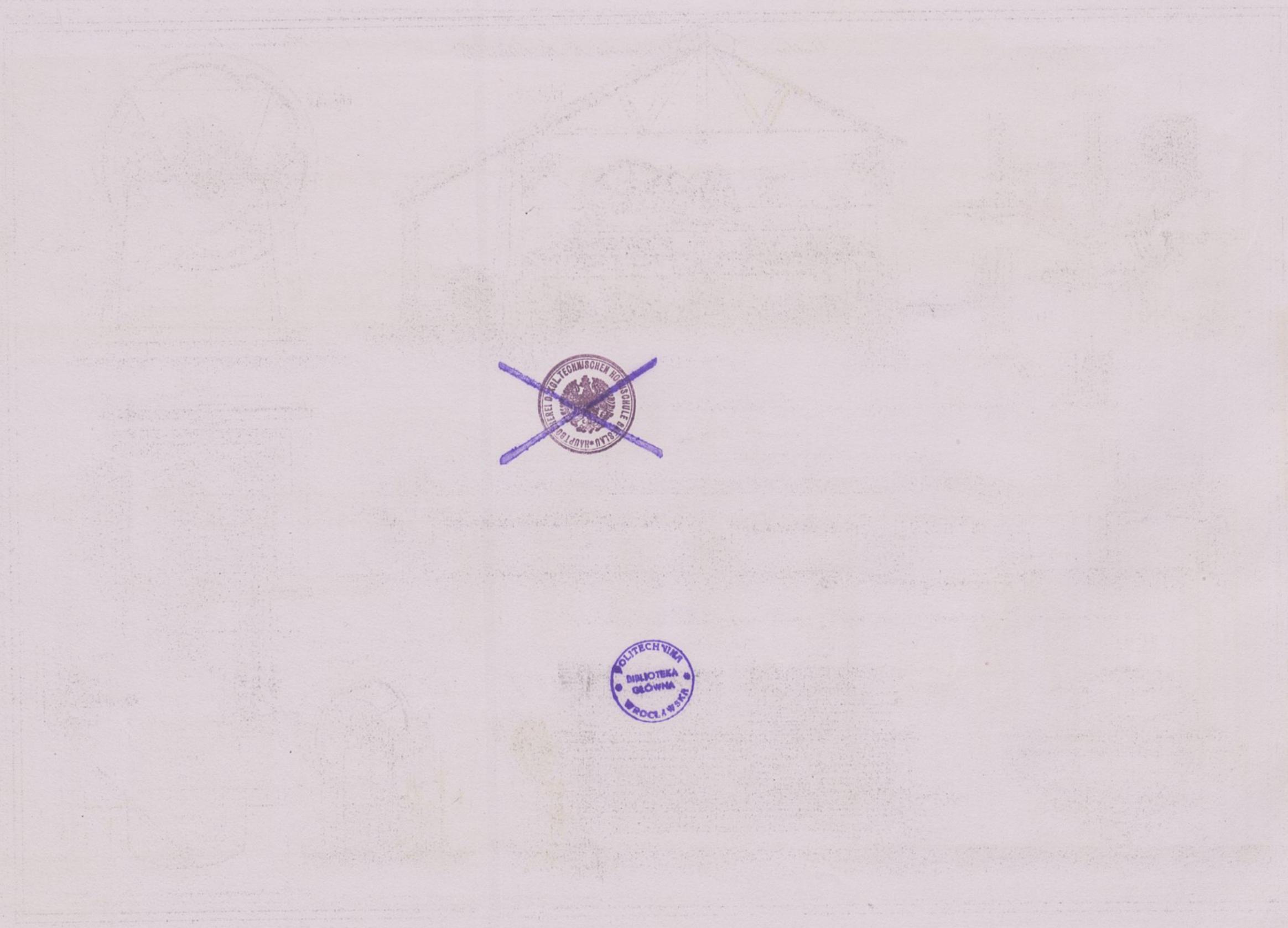
Fig. 1.



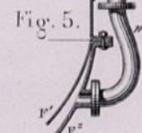
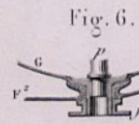
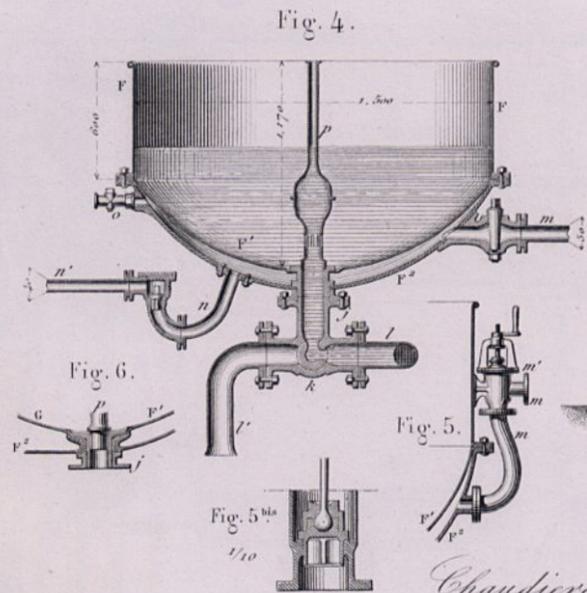
Echelle de 1/150.

Fig. 2.

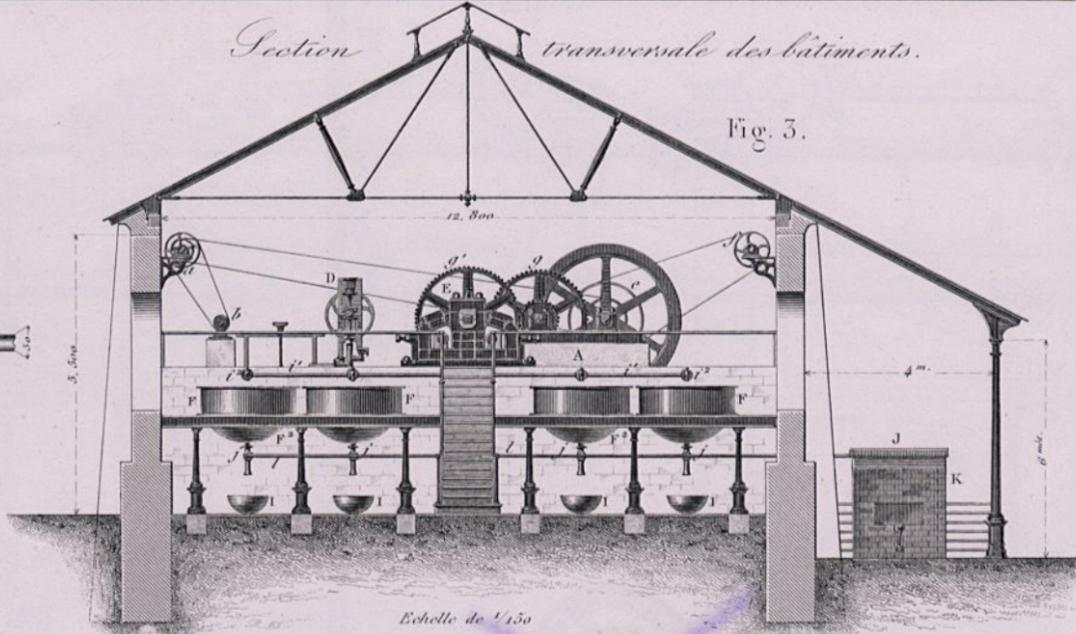




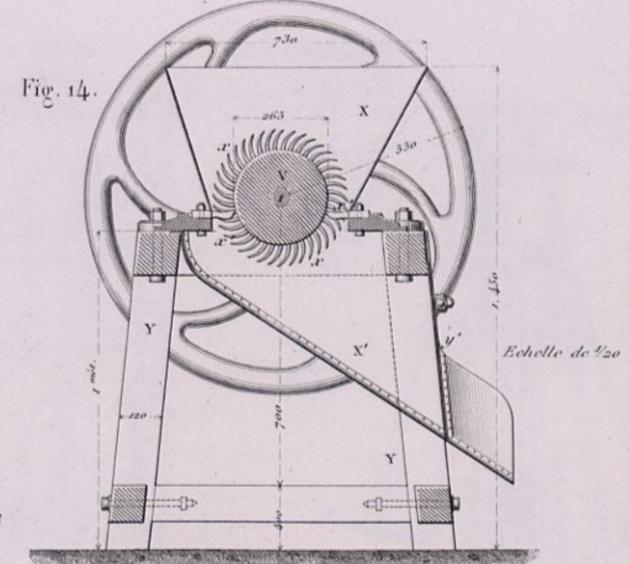
Chaudière à défigurer.



Section transversale des bâtiments.



Machine à diviser le sucre.



Chaudière à évaporer dite Batterie Gimart.

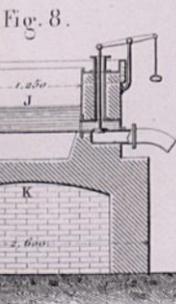
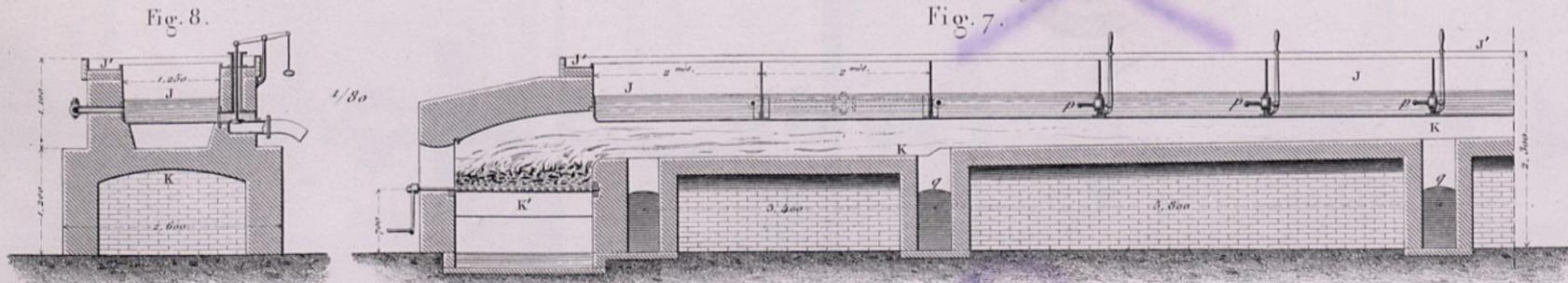
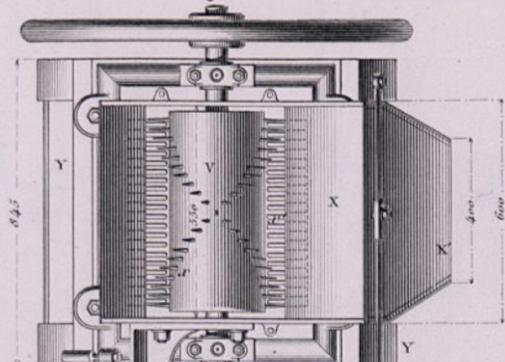
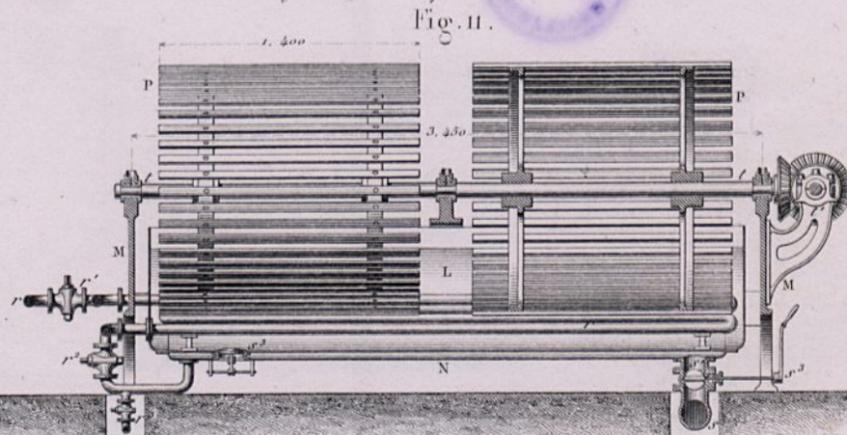
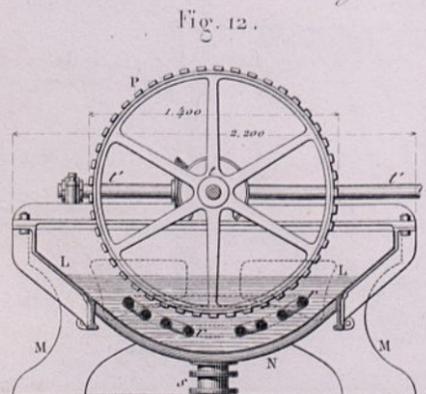


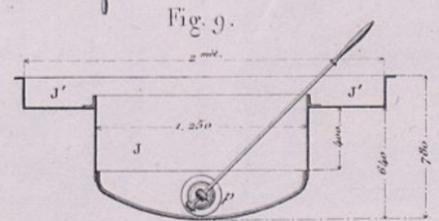
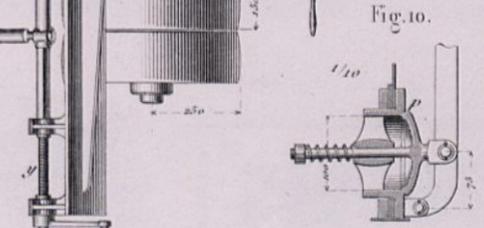
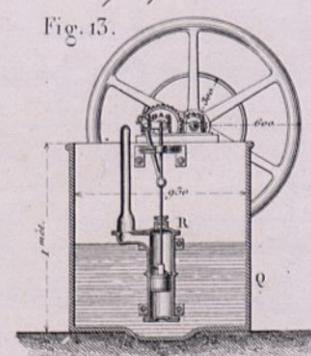
Fig. 15.



Chaudière à basse température à doubles fonds, serpentin et rotateur.



Réservoir à sirop avec pompe élévatoire.



Echelle de 1/40 pour les Fig. 4 à 6, 9, 11 à 13.







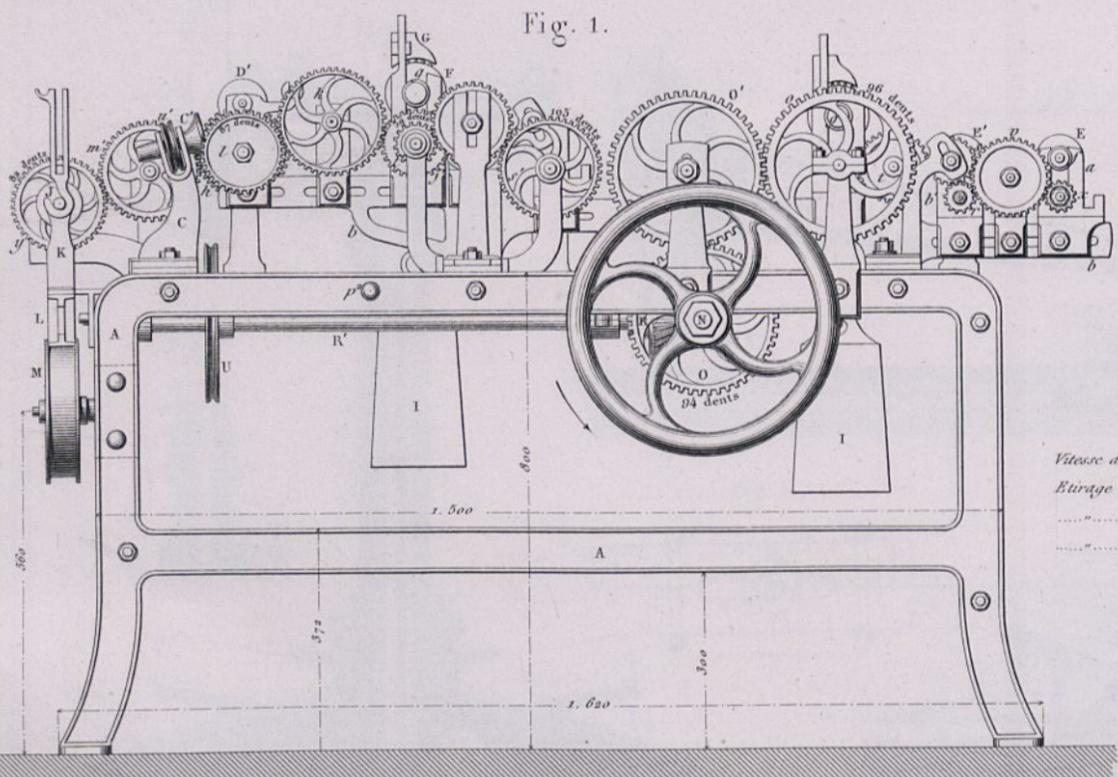


Fig. 1.

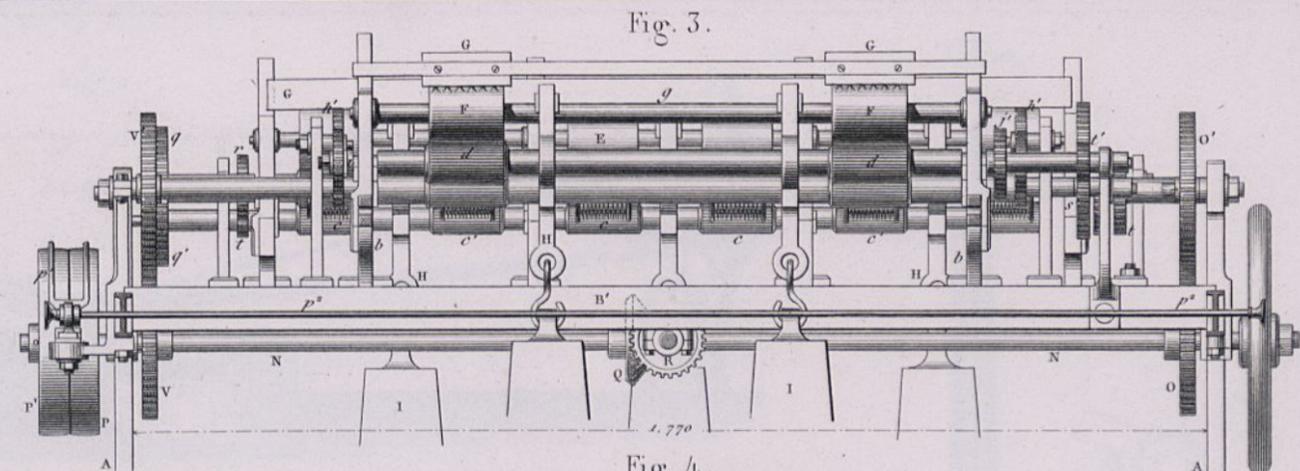


Fig. 3.

Vitesse de l'arbre moteur = 100 tours.
 Étirage de la 1^{re} tête... 3,04
 2^e tête... 2,69
 total... 8,17.

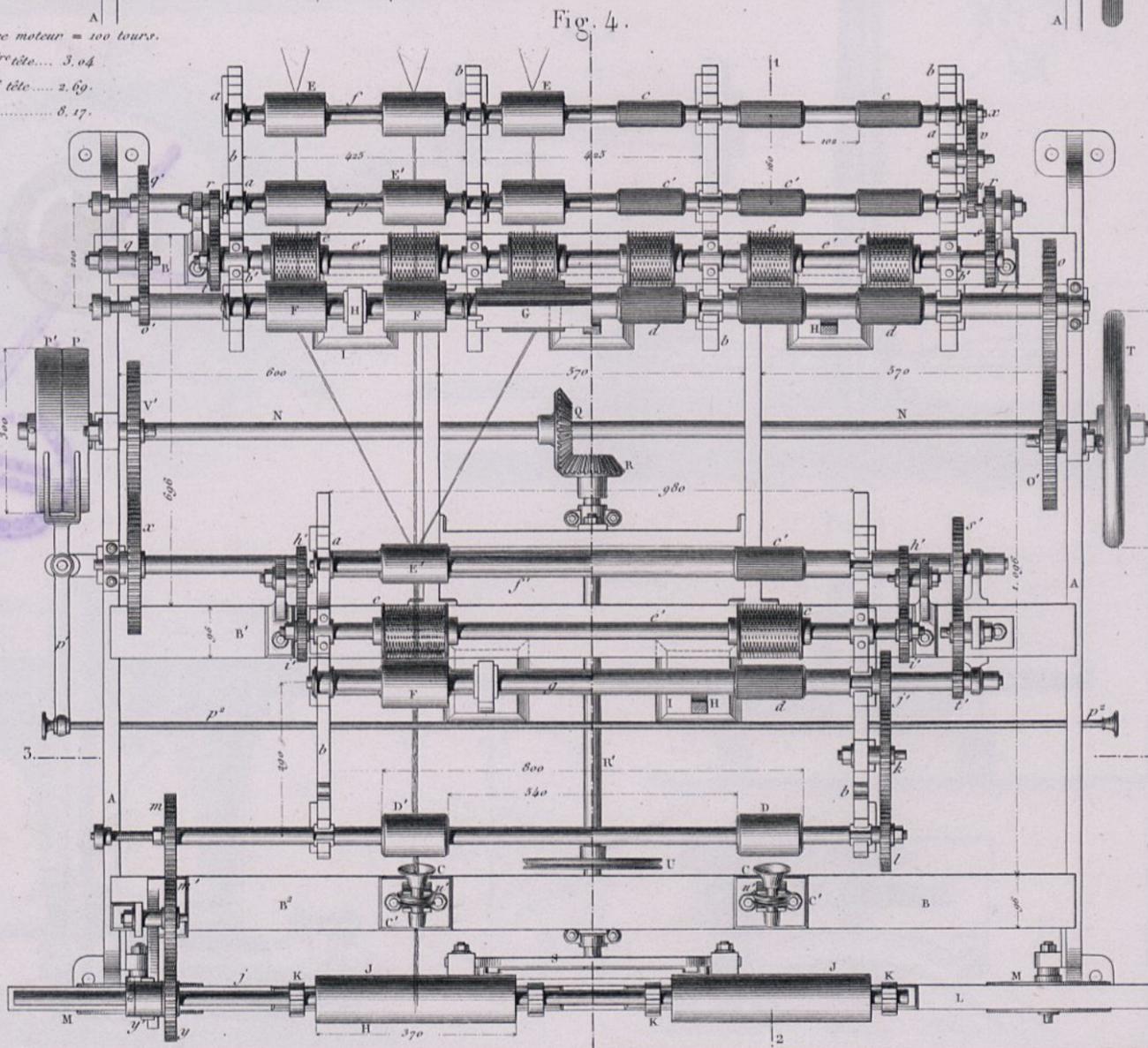


Fig. 4.

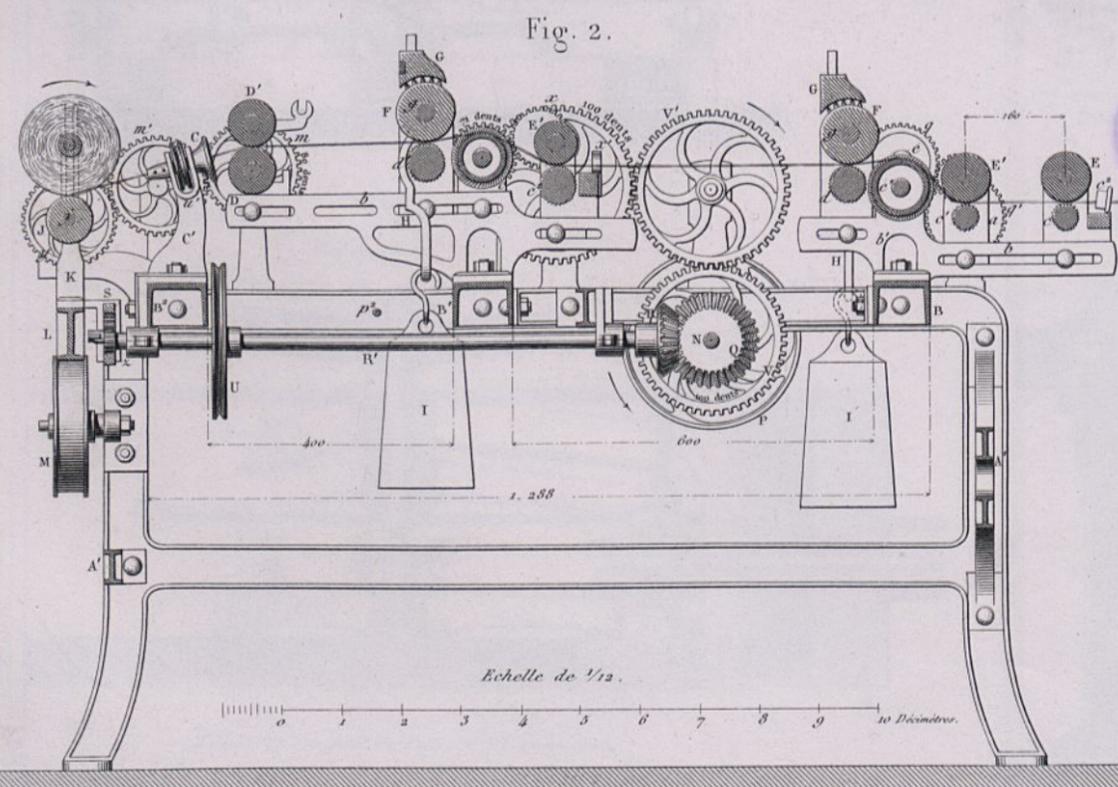
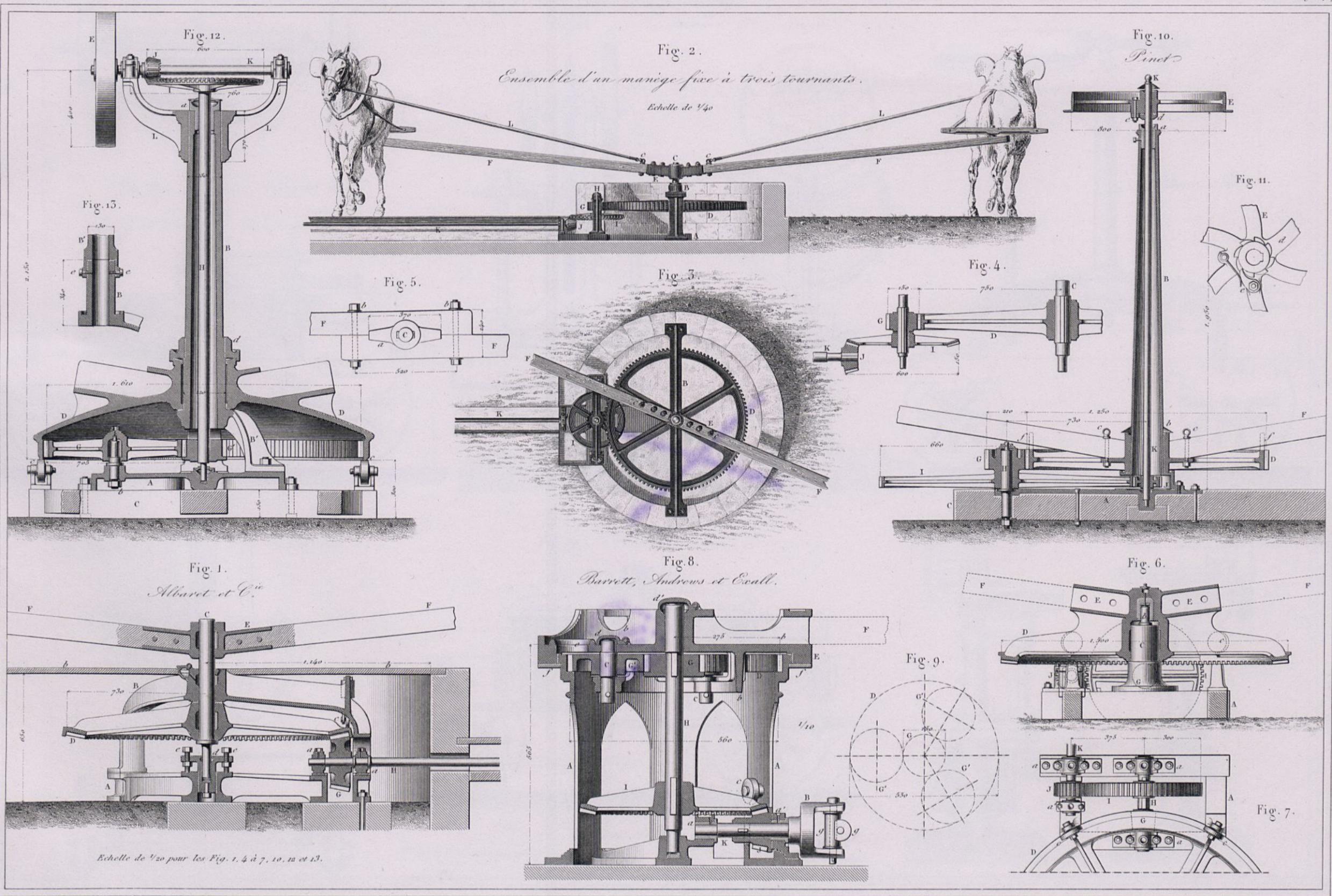


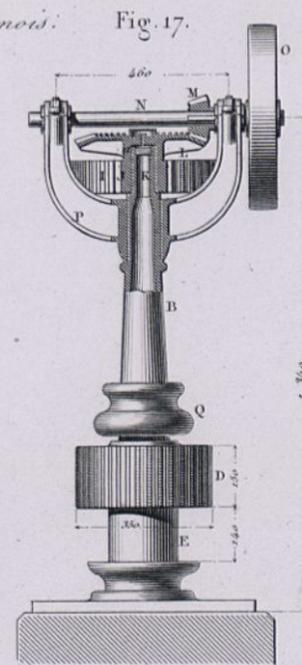
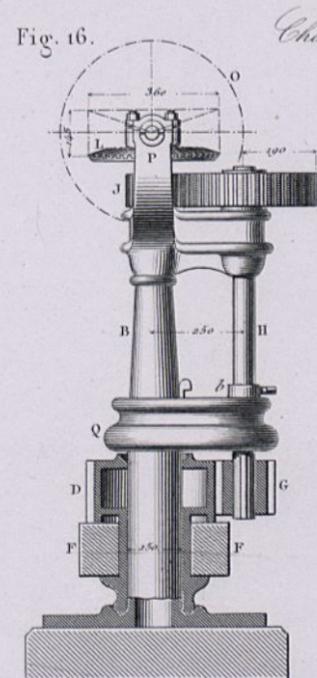
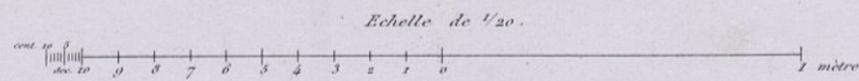
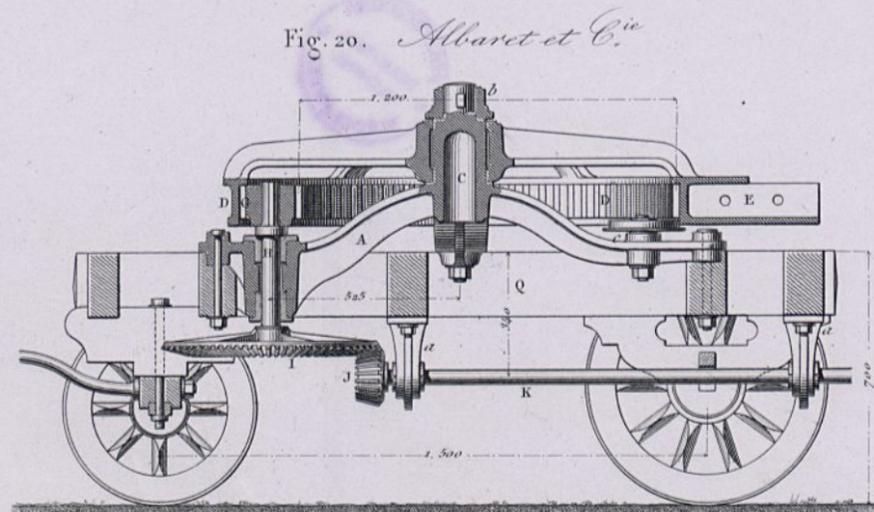
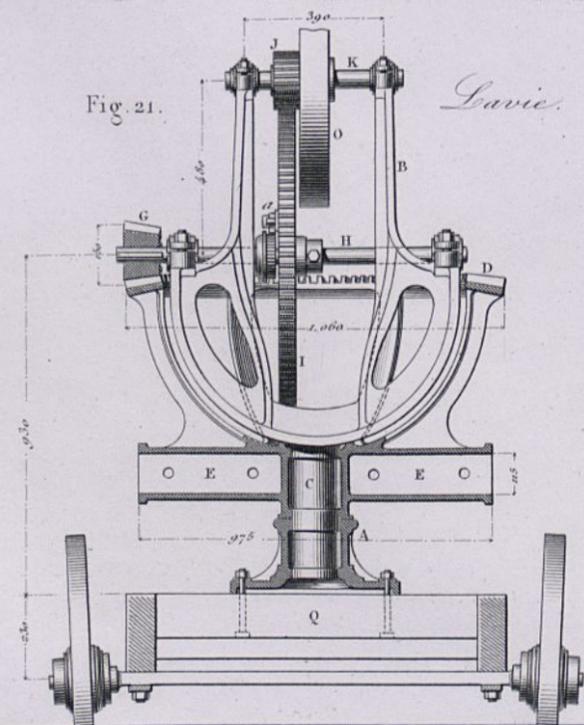
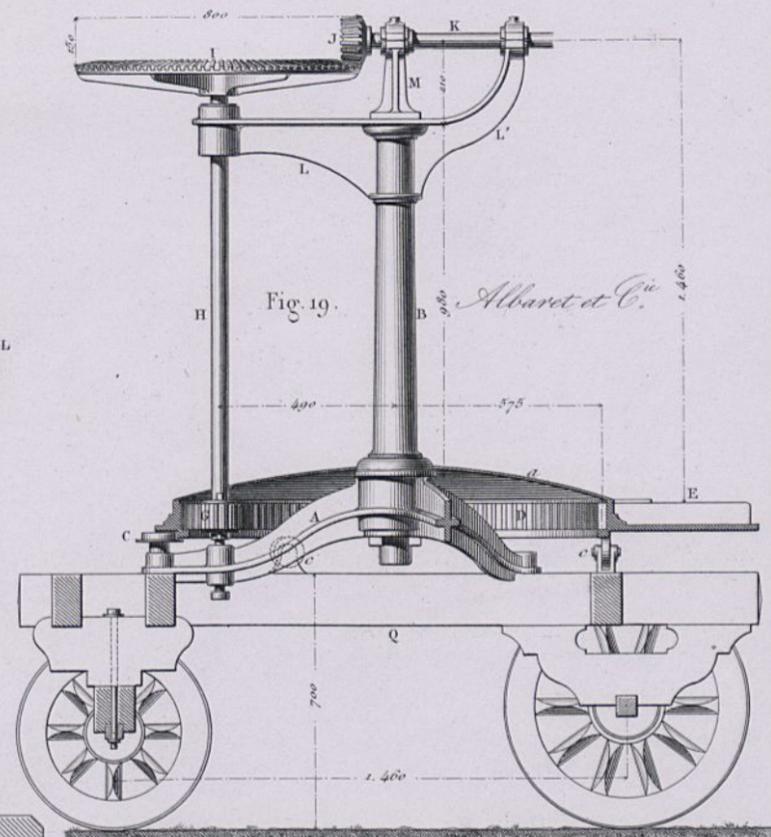
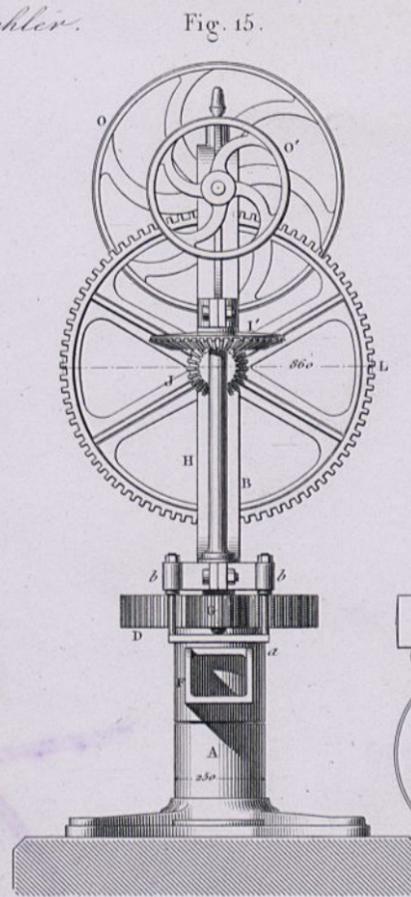
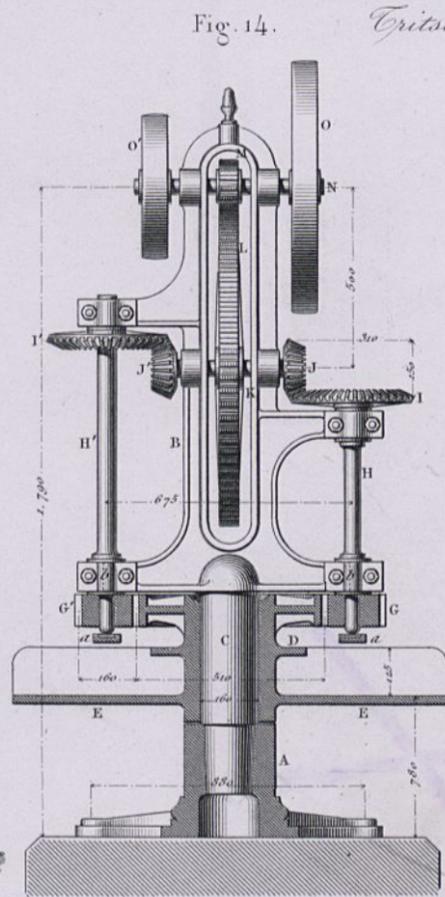
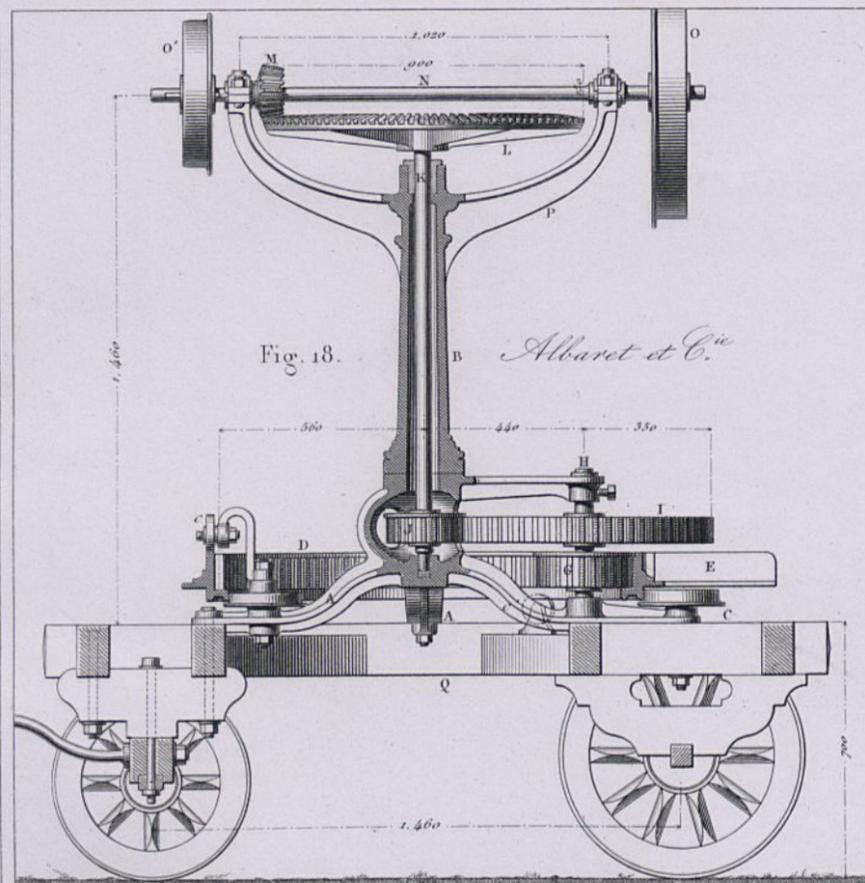
Fig. 2.

Echelle de 1/12.
 0 1 2 3 4 5 6 7 8 9 10 Décimètres.

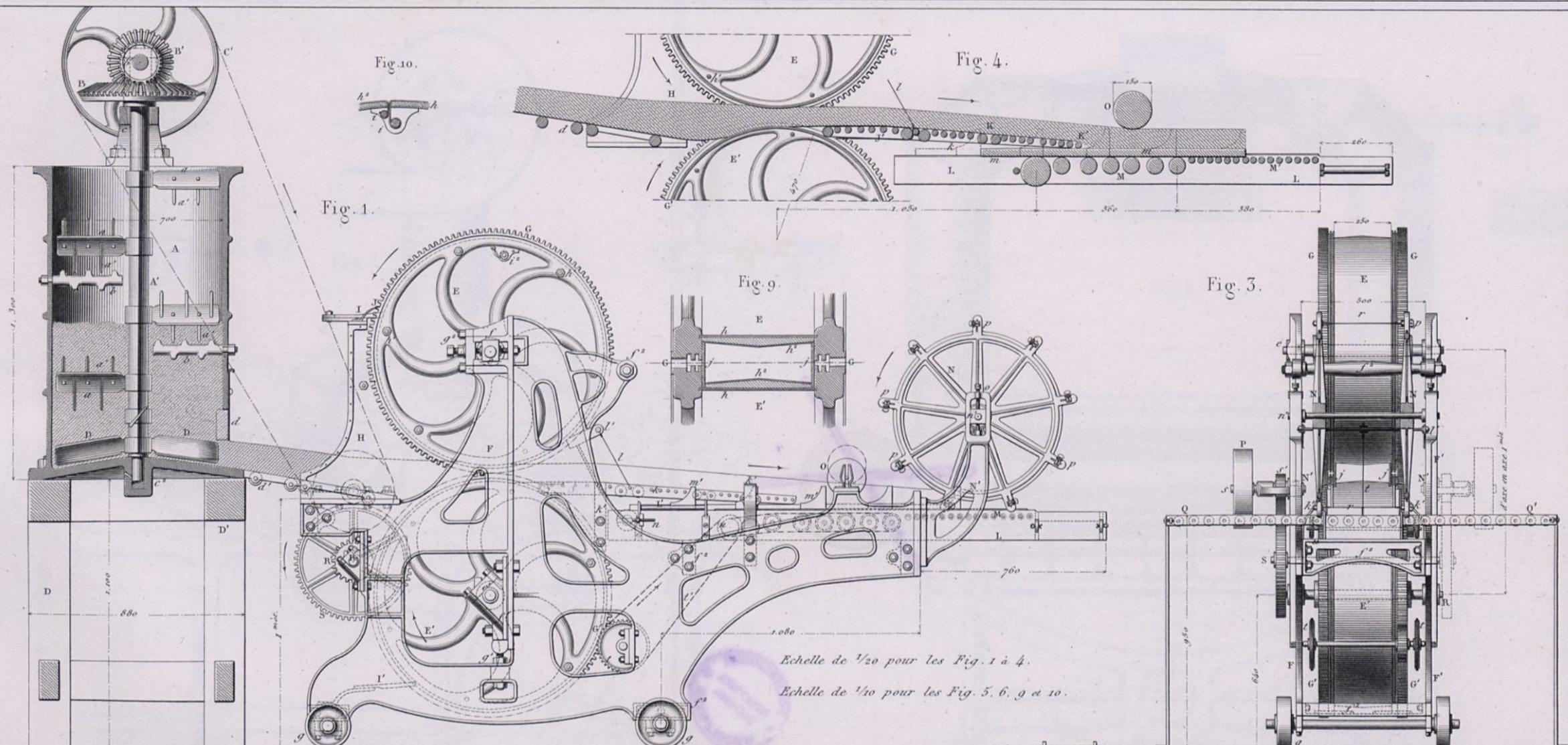






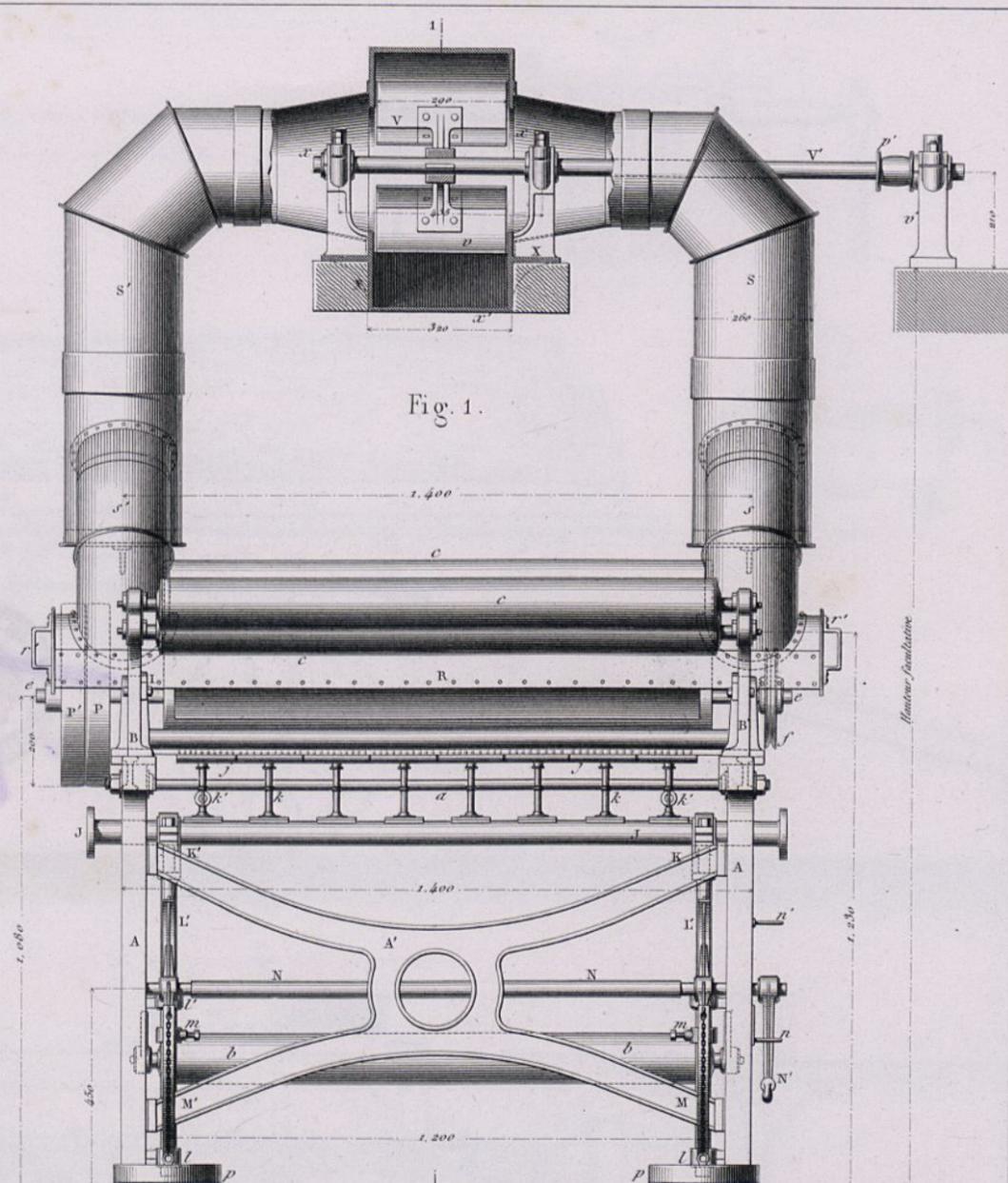
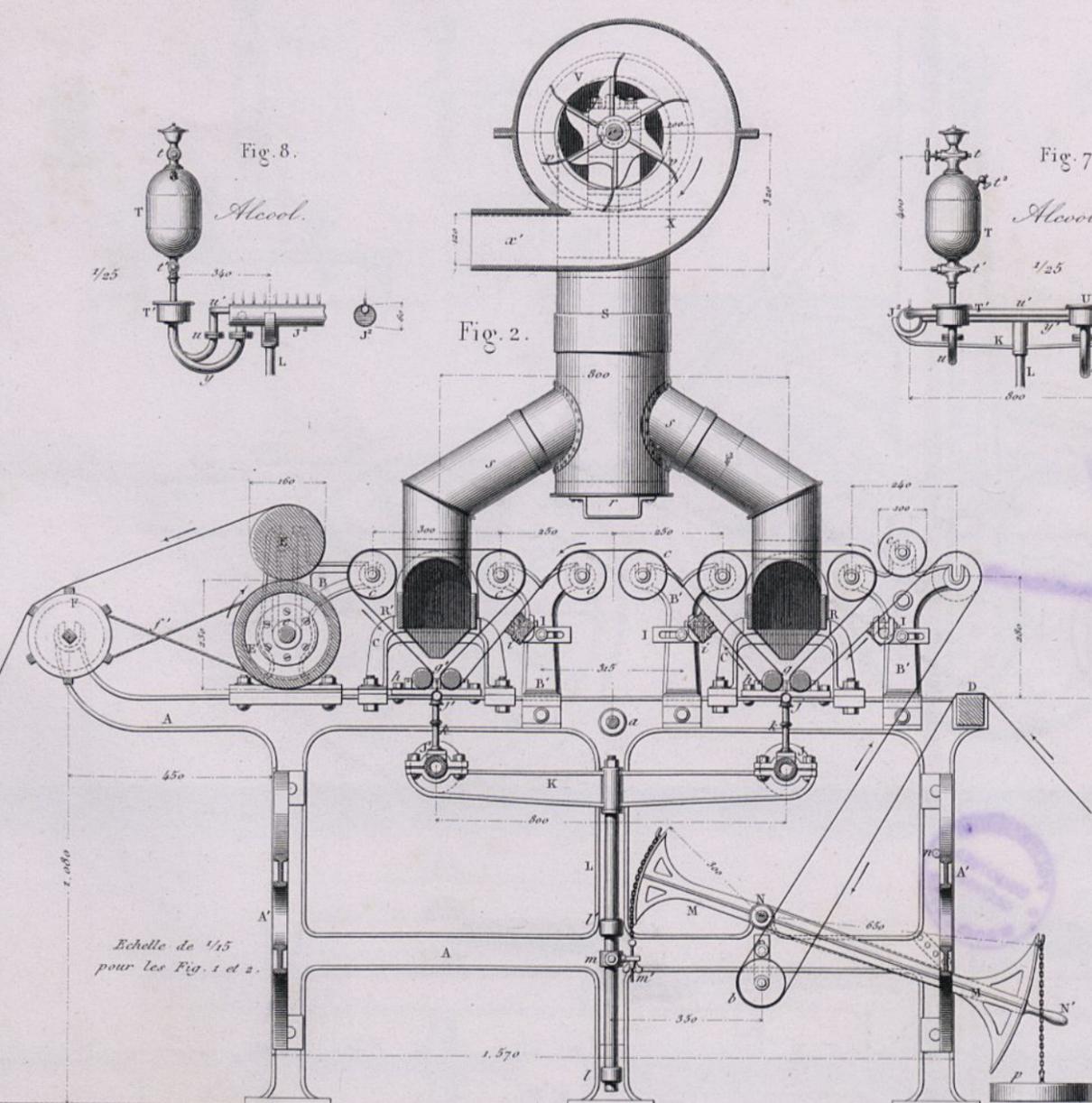
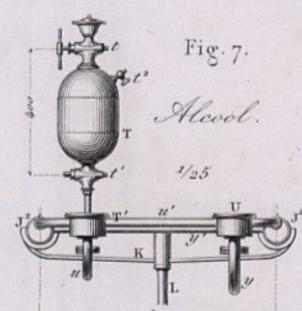
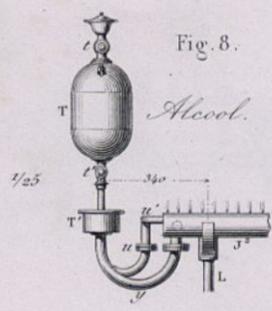




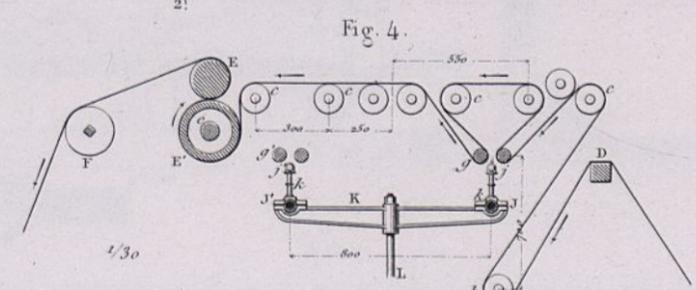
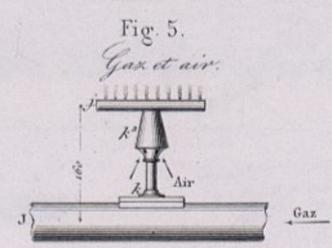
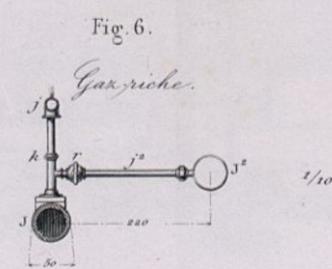
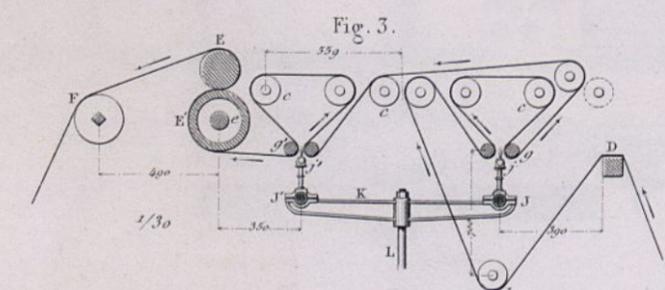


Echelle de 1/20 pour les Fig. 1 à 4.
 Echelle de 1/10 pour les Fig. 5, 6, 9 et 10.

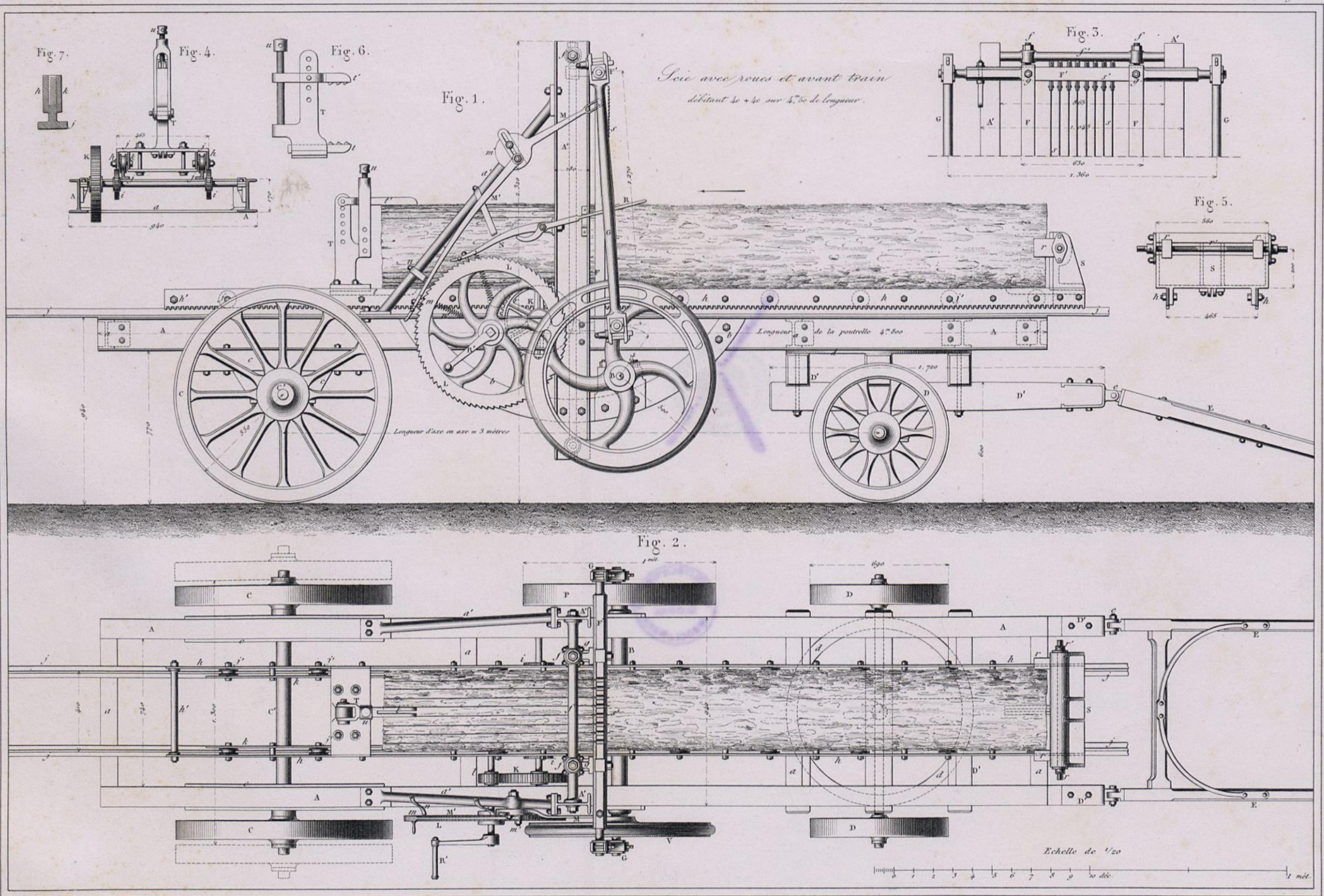




Echelle de 1/15 pour les Fig. 1 et 2.









 BIBLIOTEKA GŁÓWNA
R-96 m
Archiwum