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PUBLICATION INDUSTRIELLE

DES

MACHINES, OUTILS ET APPAREILS

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

CHEVALIER DE LA LÉGION D'HONNEUR

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PLANCHES

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MACHINES, OPTICS, ET APPAREILS

PIRELLA GÖTTSCHE LOWE



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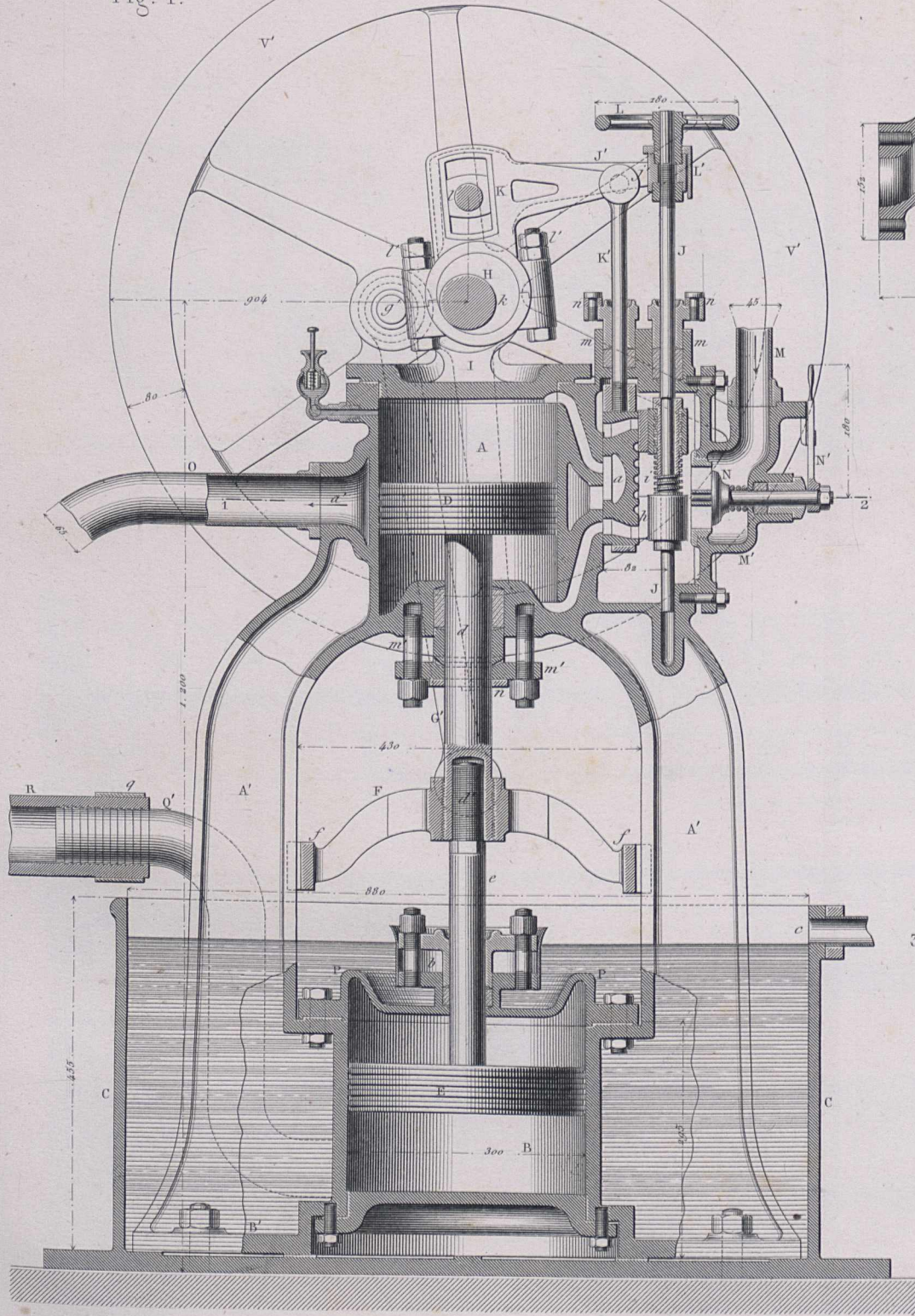


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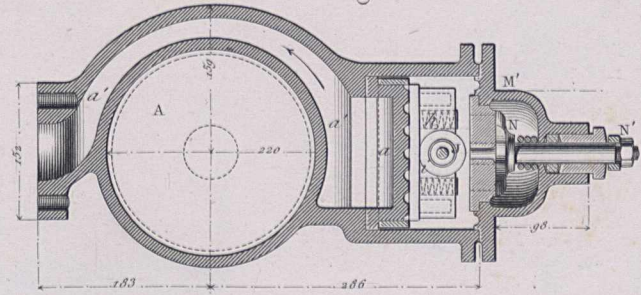


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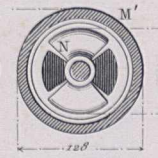


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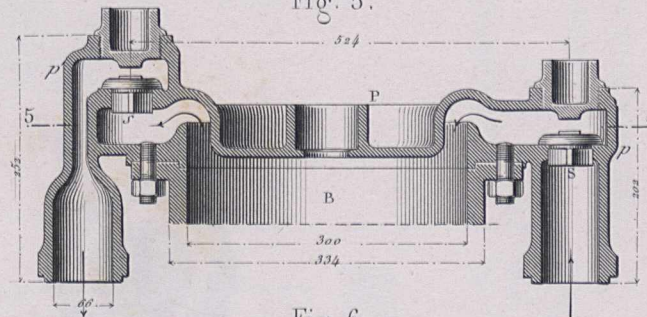


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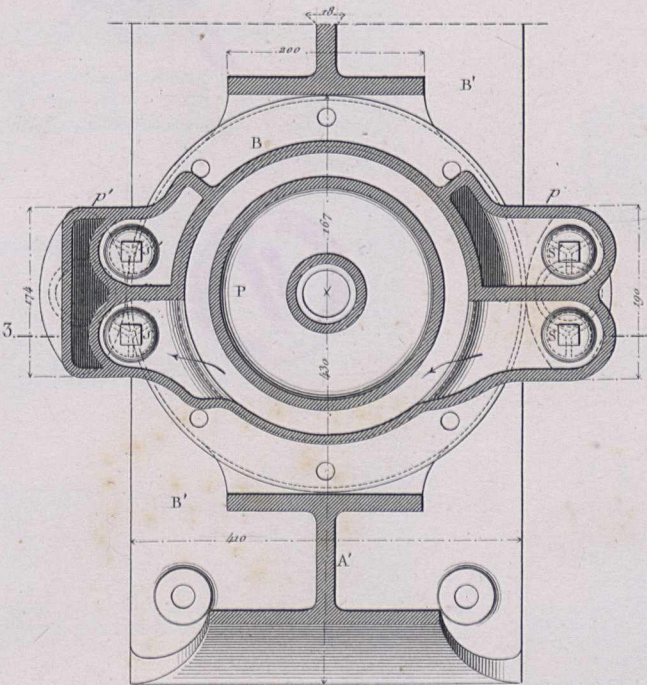
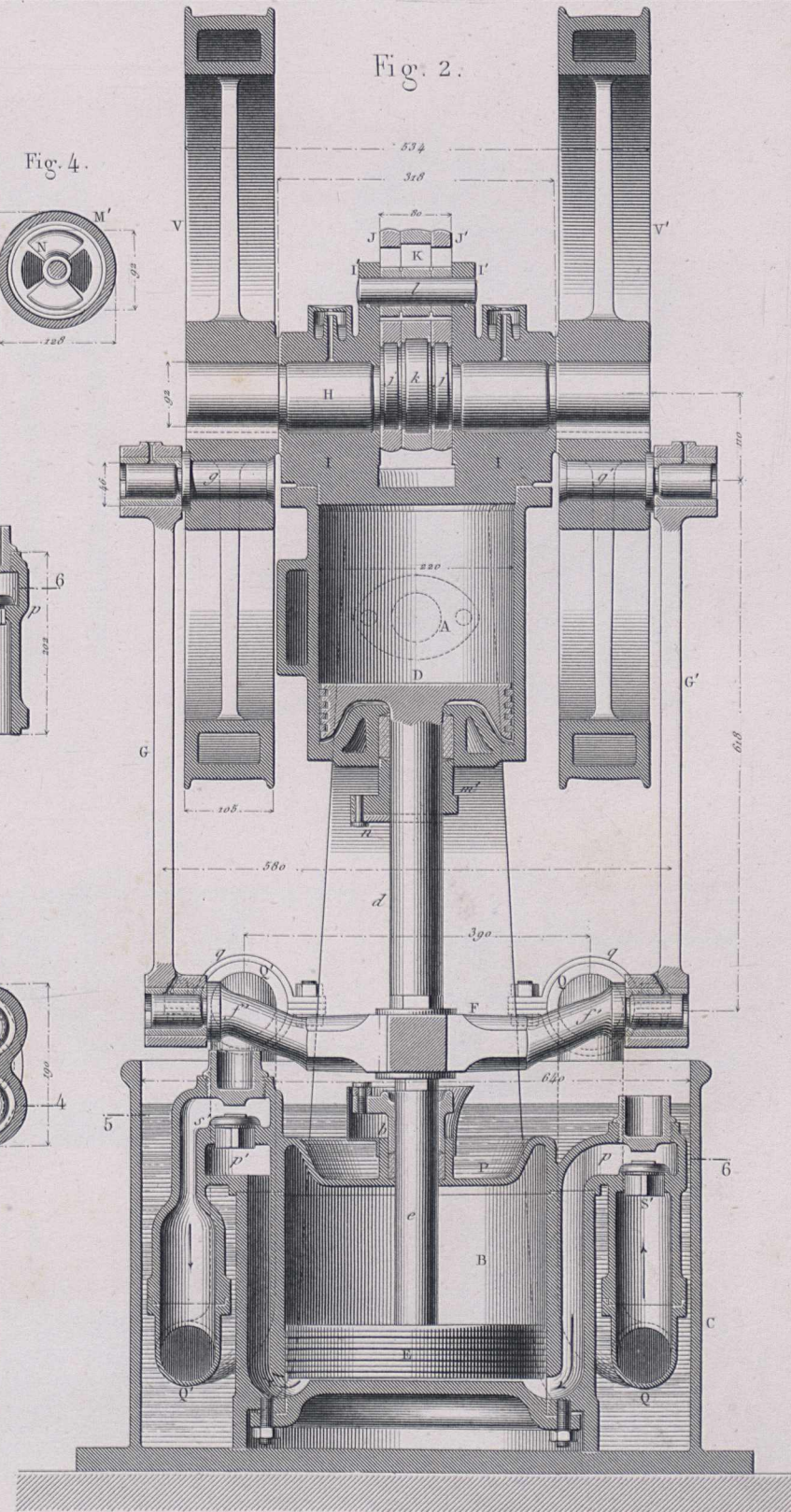


Fig. 2.



Echelle de 1/8



Fig. 3.

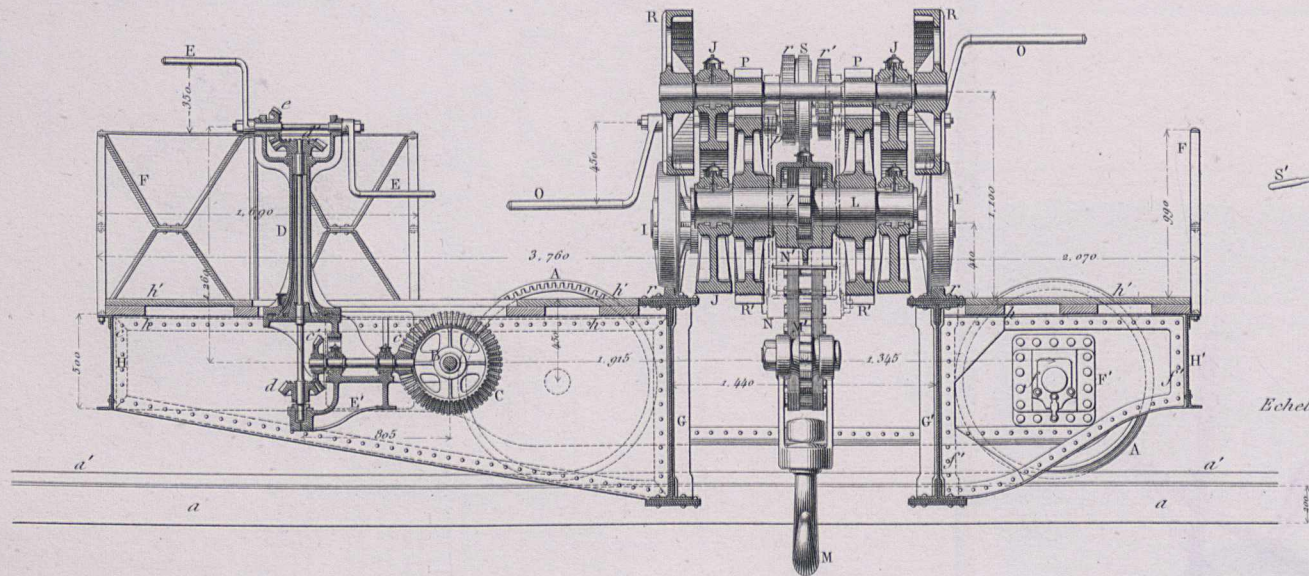


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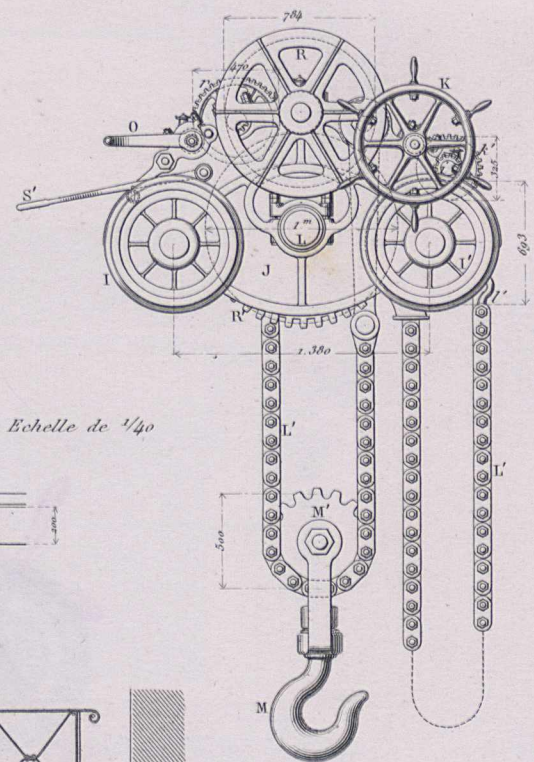


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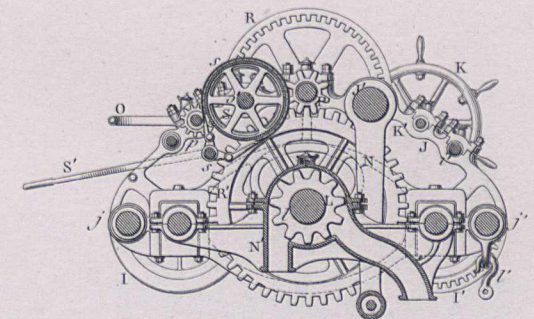


Fig. 6.

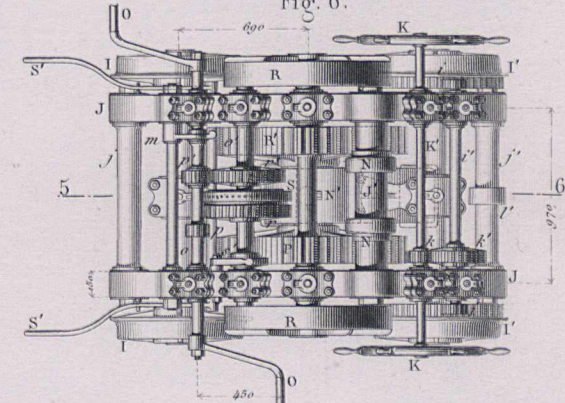


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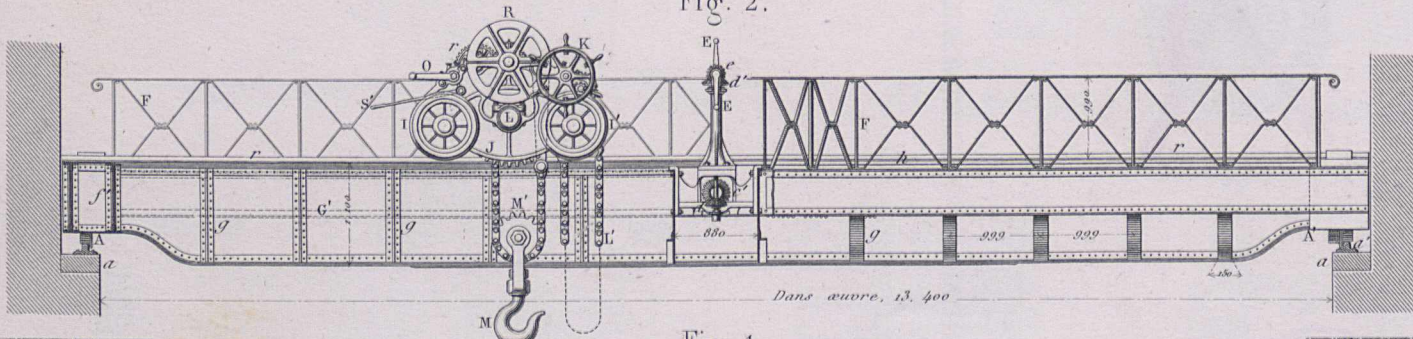


Fig. 1.

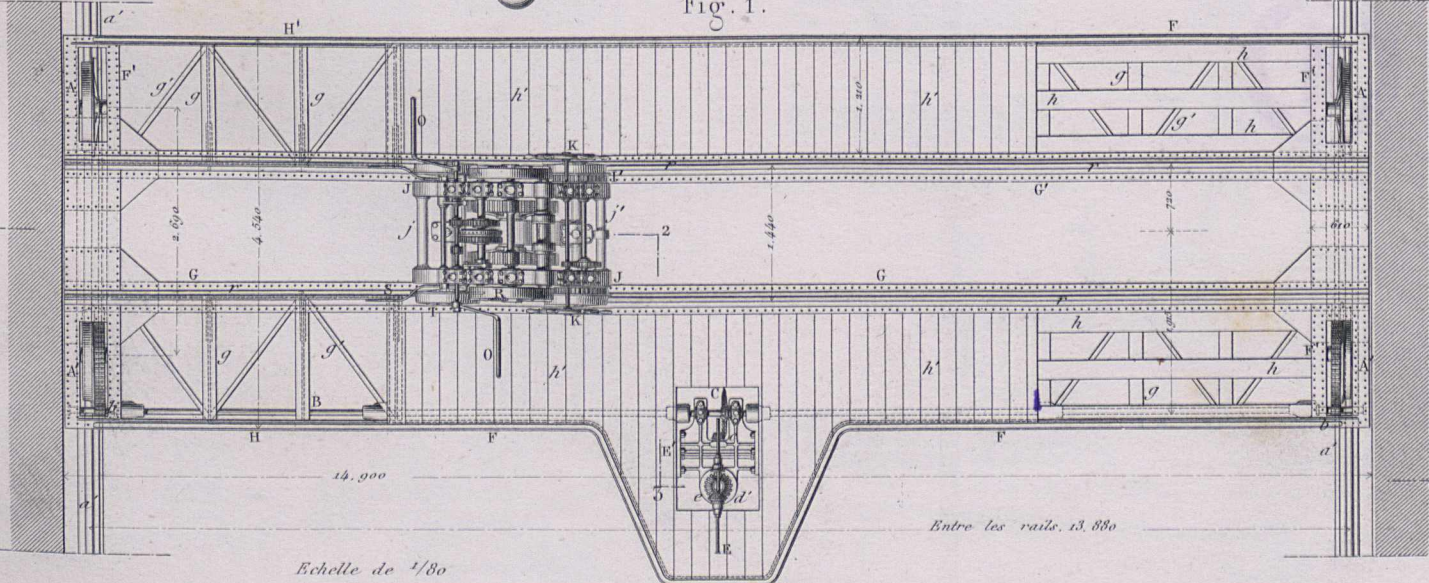


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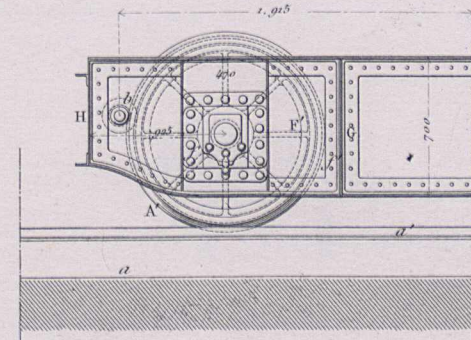


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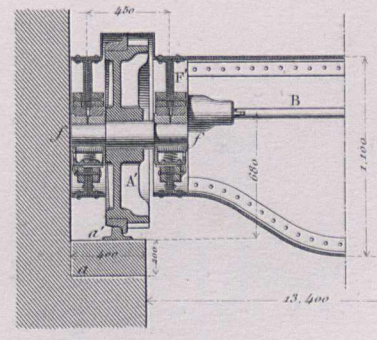


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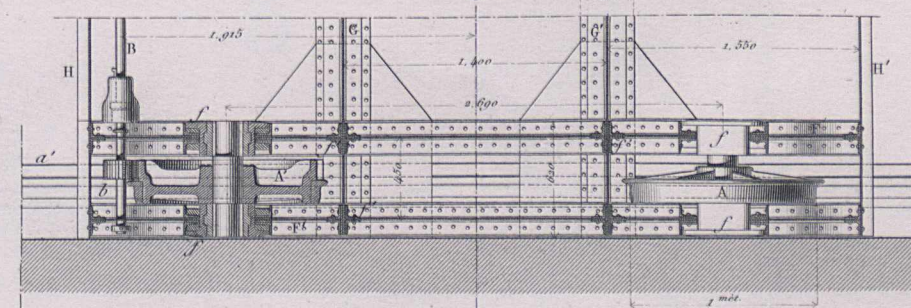
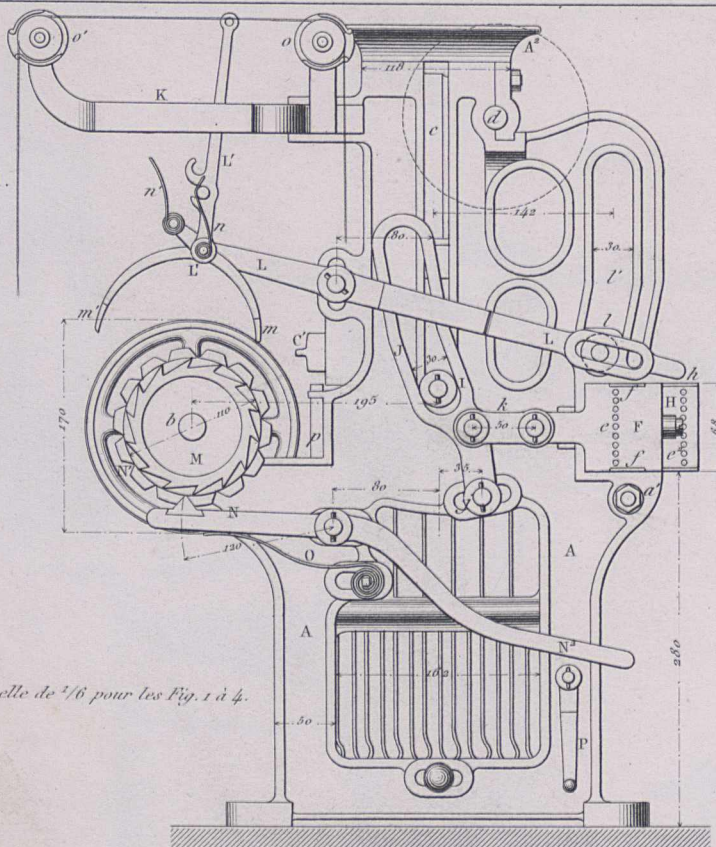




Fig. 1.



Echelle de 1/6 pour les Fig. 1 à 4.

Fig. 2.

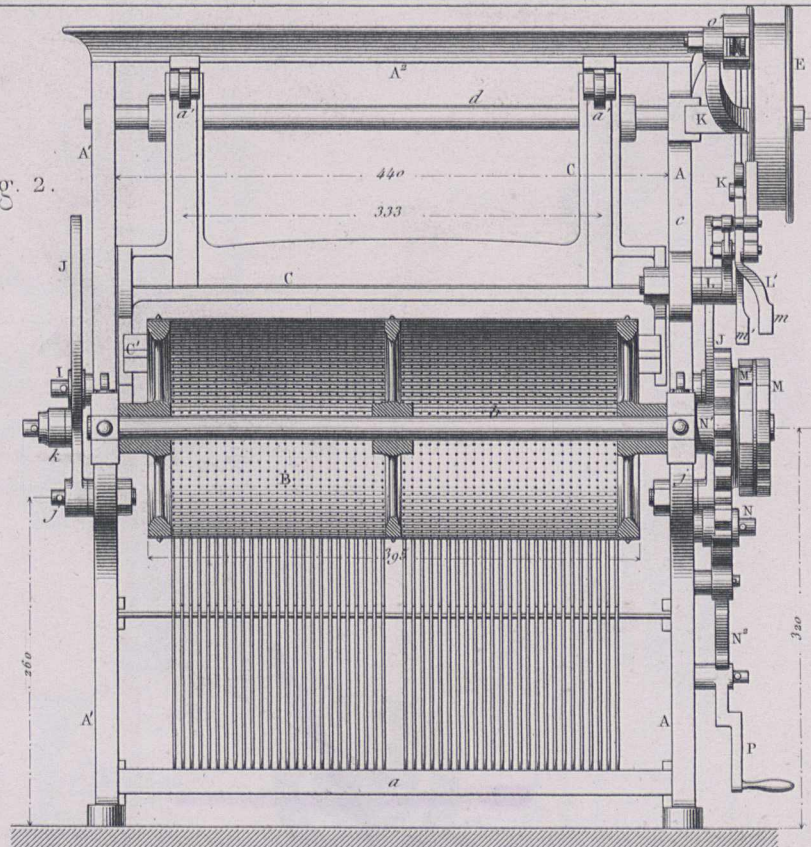
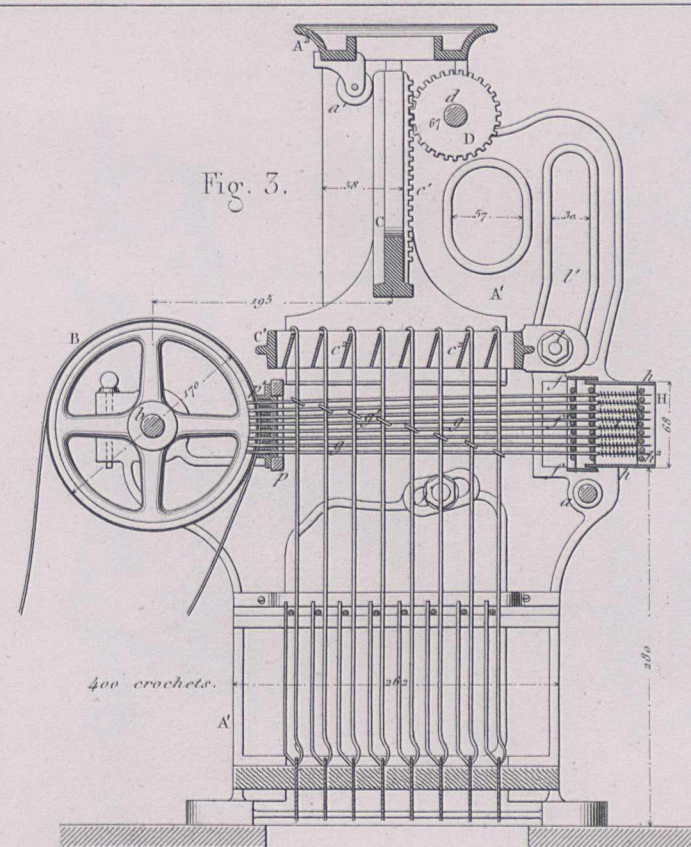


Fig. 3.



400 crochets.

Fig. 4.

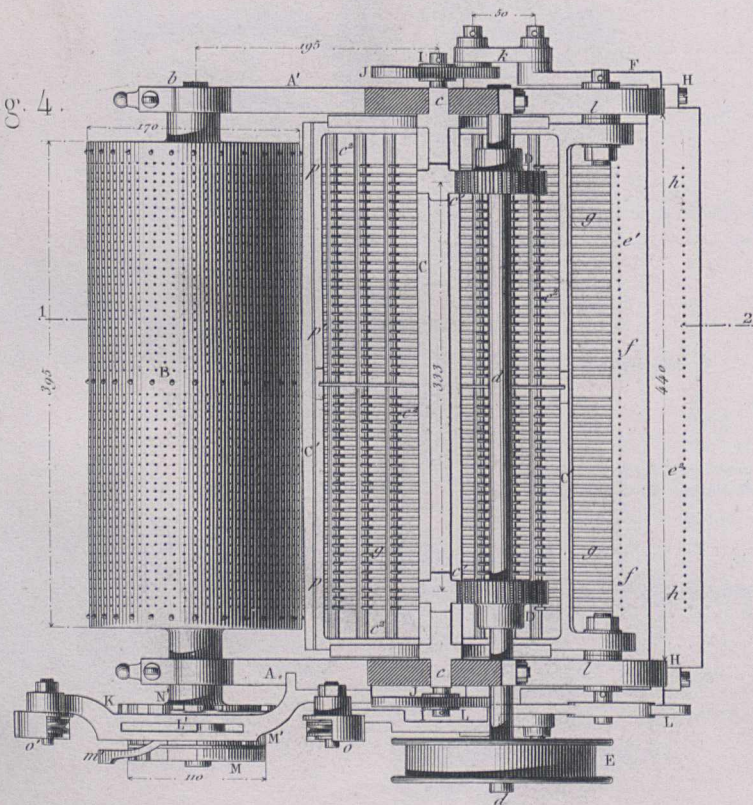


Fig. 5.

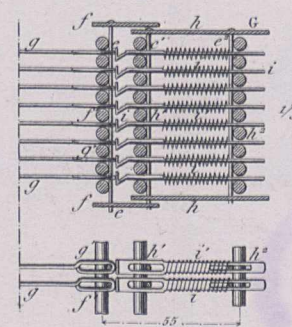
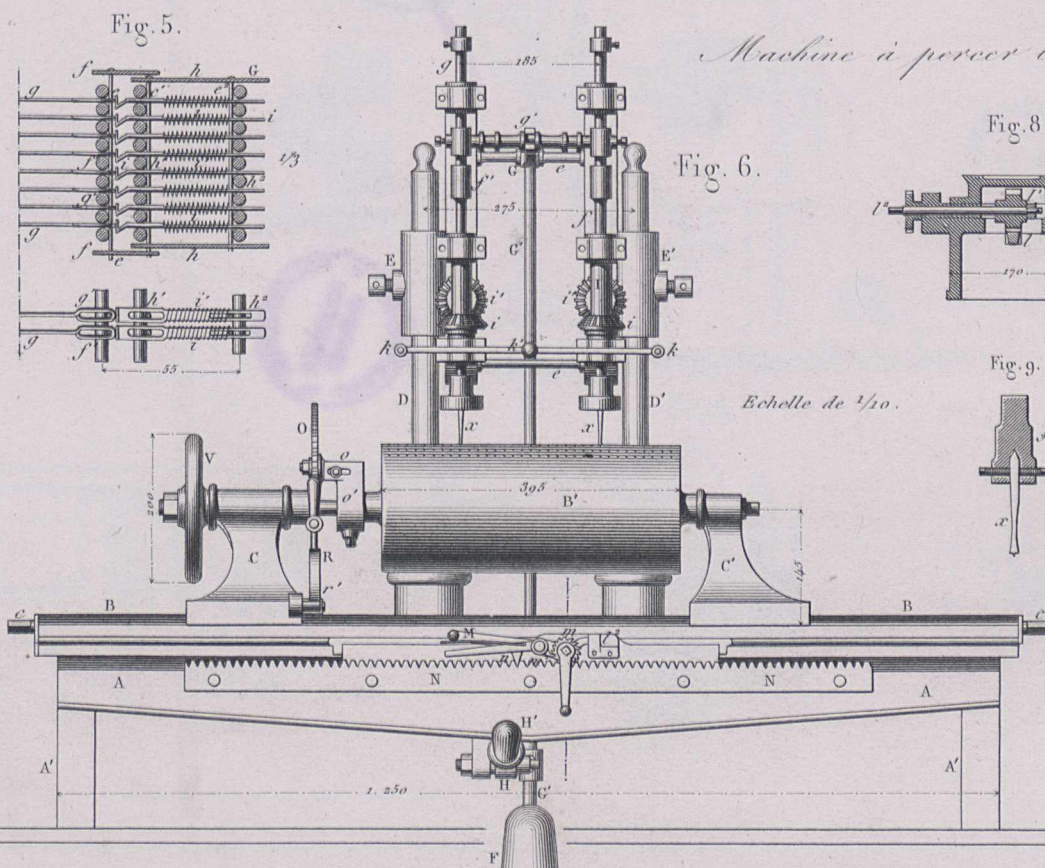


Fig. 6.



Machine à poser les Cylindres.

Echelle de 1/10.

Fig. 8.

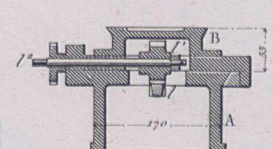


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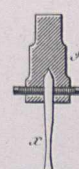
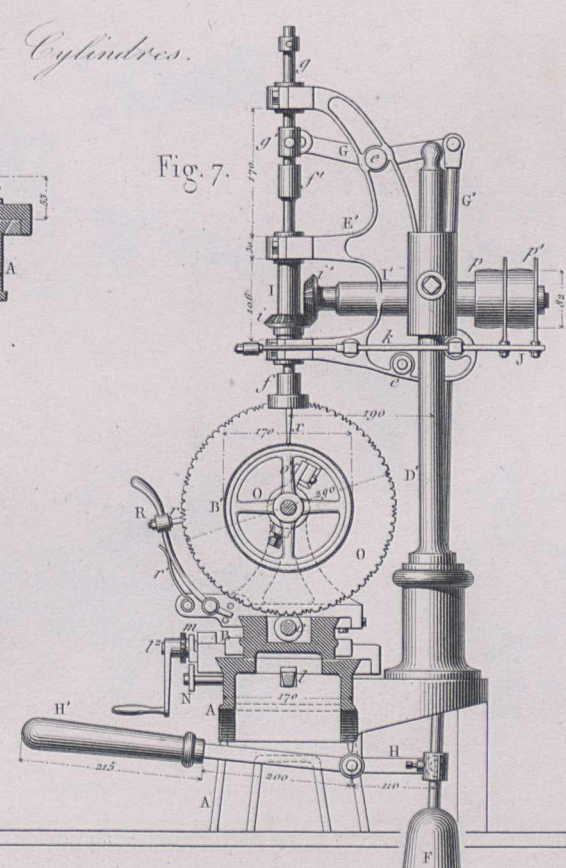


Fig. 7.





Perceuse radiale à plateau.

Perceuse appliquée sur colonne.

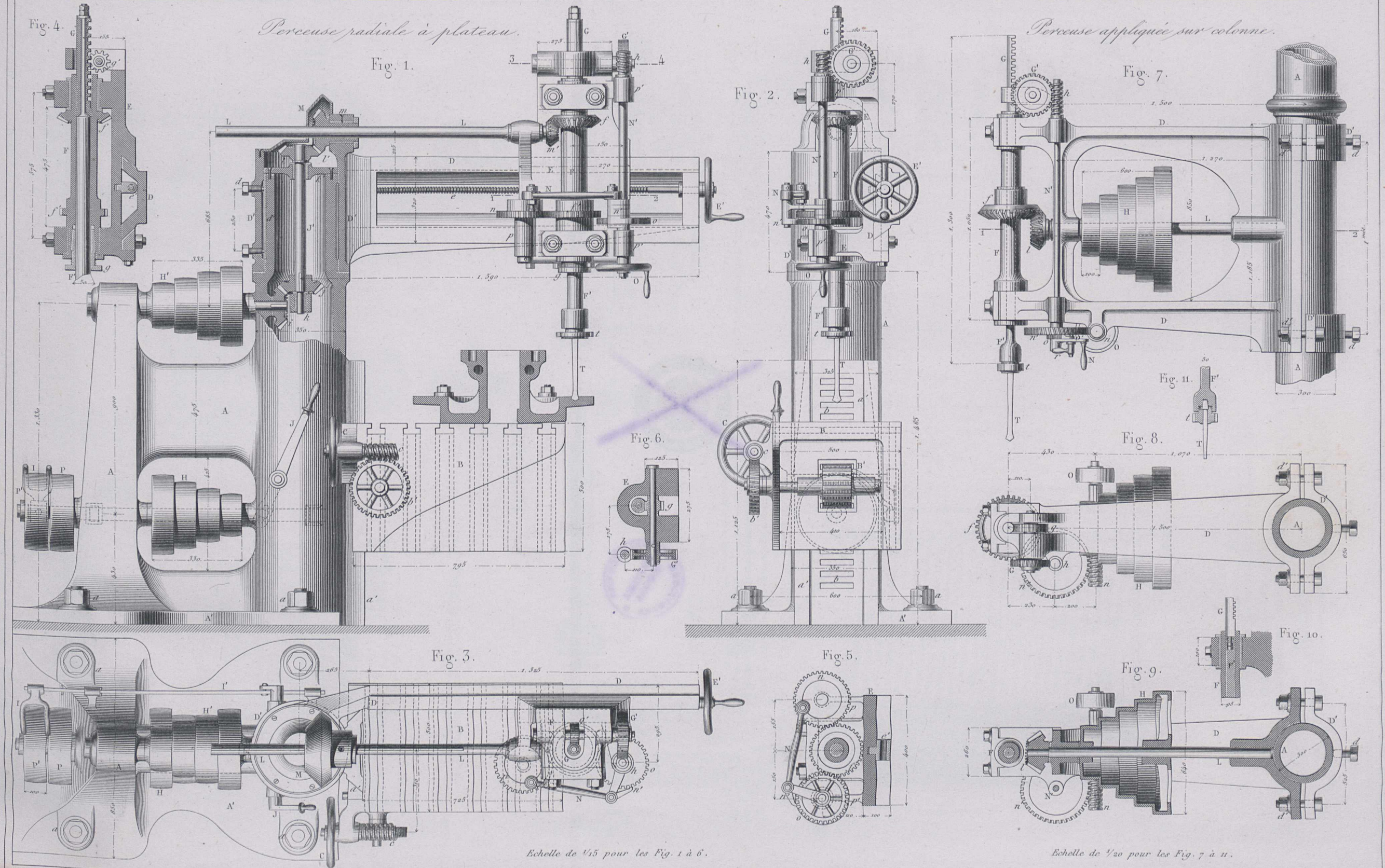


Fig. 1.

Fig. 2.

Fig. 7.

Fig. 6.

Fig. 11.

Fig. 8.

Fig. 3.

Fig. 5.

Fig. 10.

Fig. 9.

Echelle de 1/15 pour les Fig. 1 à 6.

Echelle de 1/20 pour les Fig. 7 à 11.



Presse Sterhydraulique.

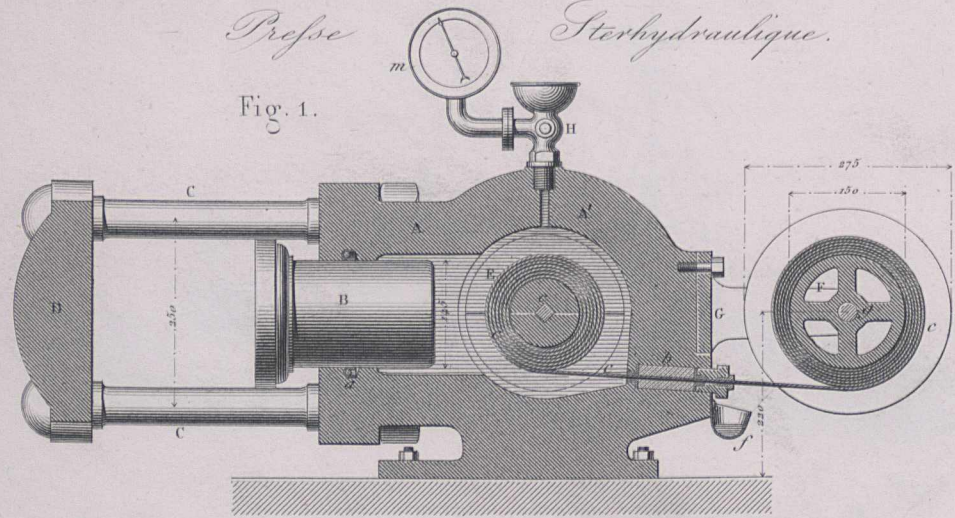


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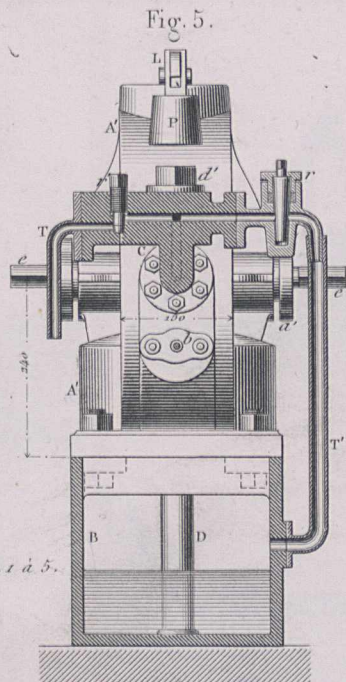


Fig. 5.

Pompe Sterhydraulique.

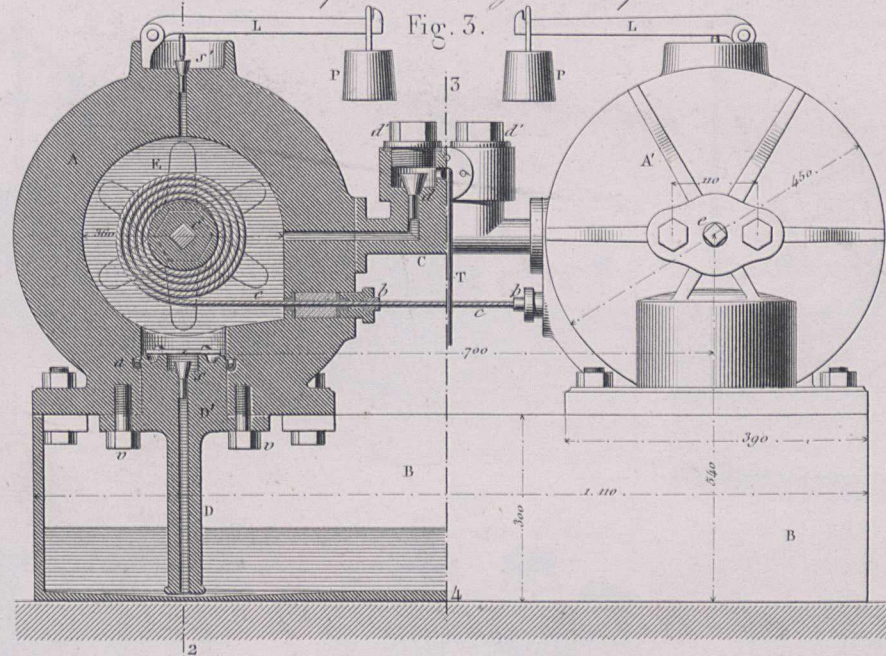


Fig. 5.

Fig. 4.

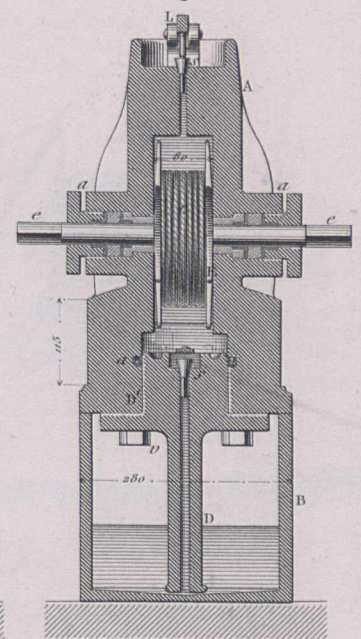
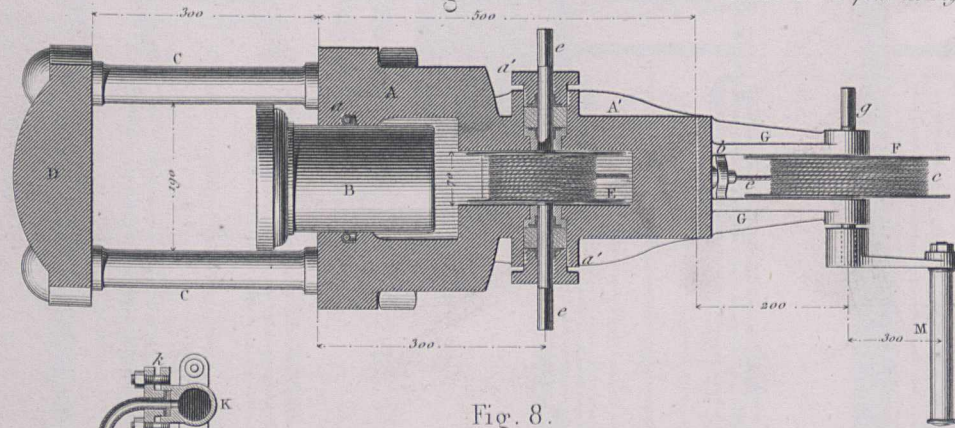


Fig. 2.

Echelle de 1/10 pour les Fig. 1 à 5.



Presse chauffée à la vapeur, par la S. J. Cockerill.

Echelle de 1/30.

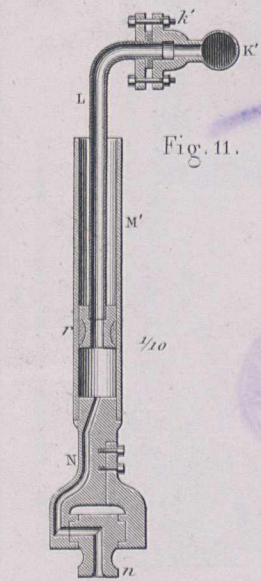


Fig. 11.

Fig. 6.

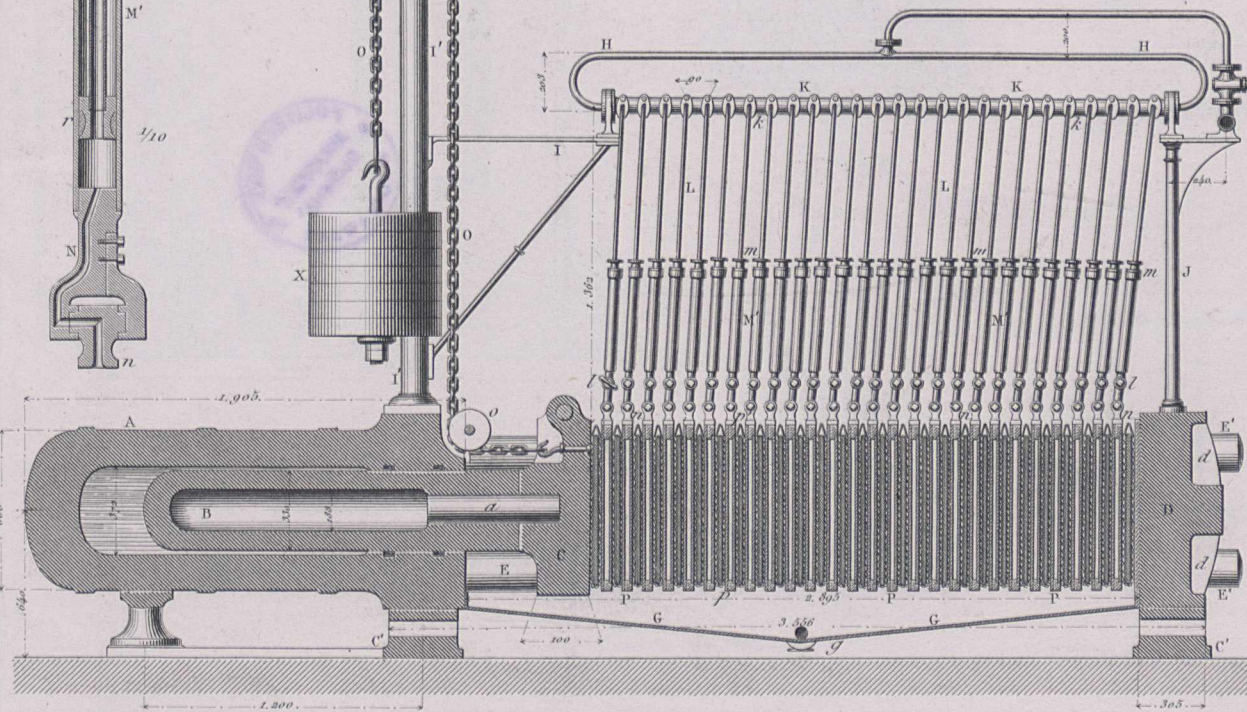


Fig. 7.

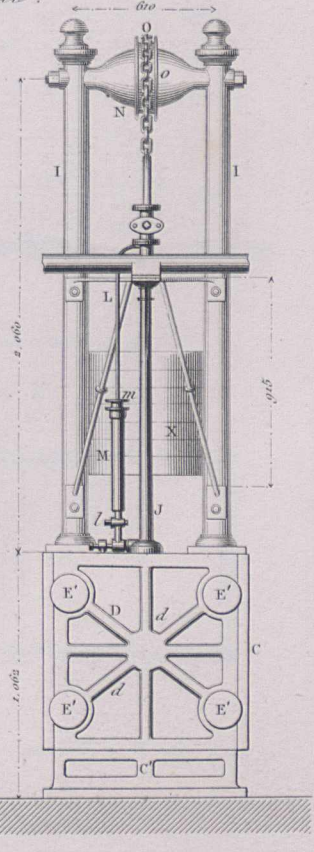


Fig. 8.

Fig. 9.

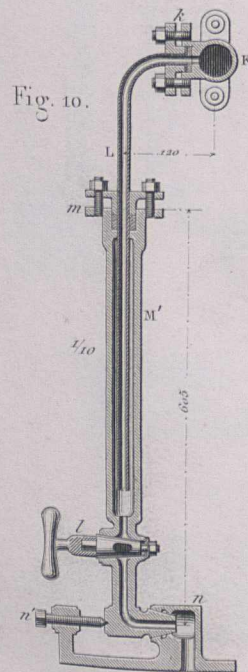
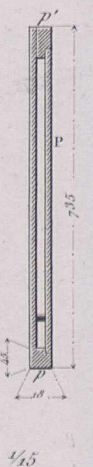
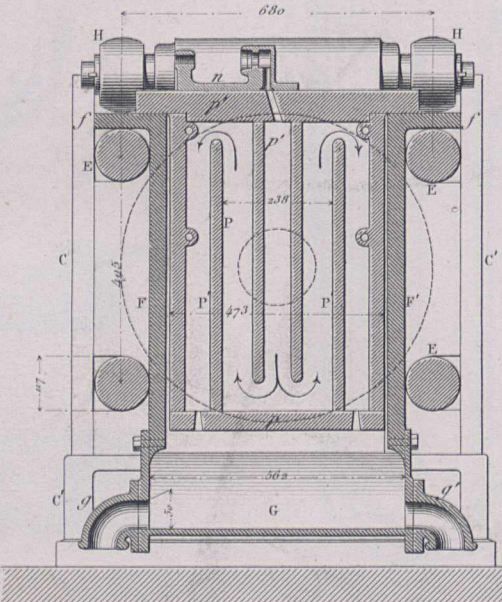


Fig. 10.



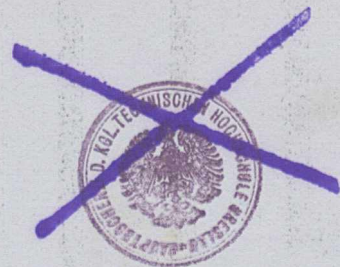
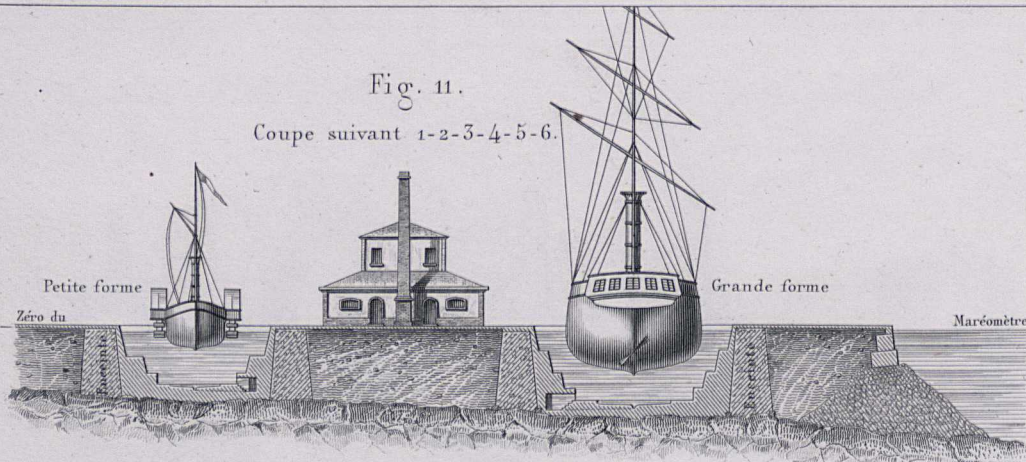


Fig. 11.
Coupe suivant 1-2-3-4-5-6.



Montage, lancement et échouage des Caisse-jalons.

Fig. 2.

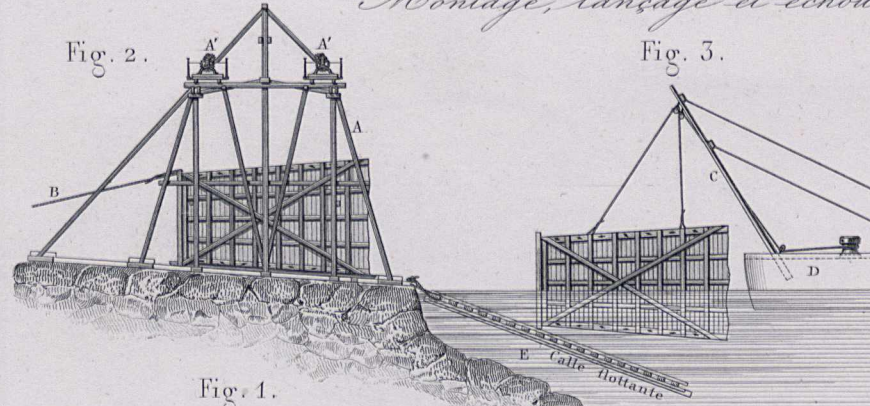


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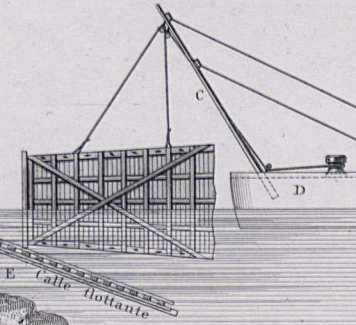


Fig. 4.

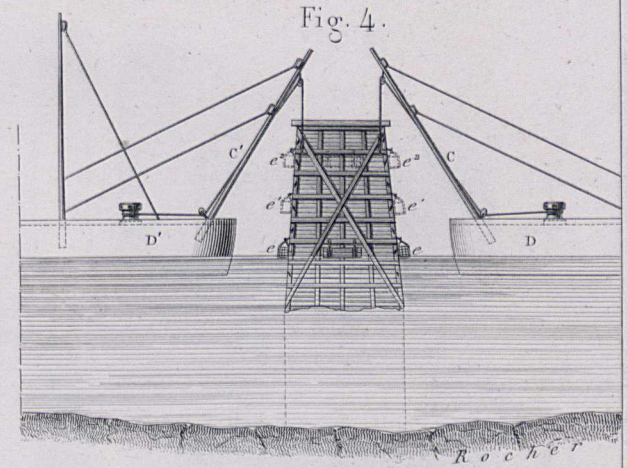


Fig. 1.

Encintes des Formes.

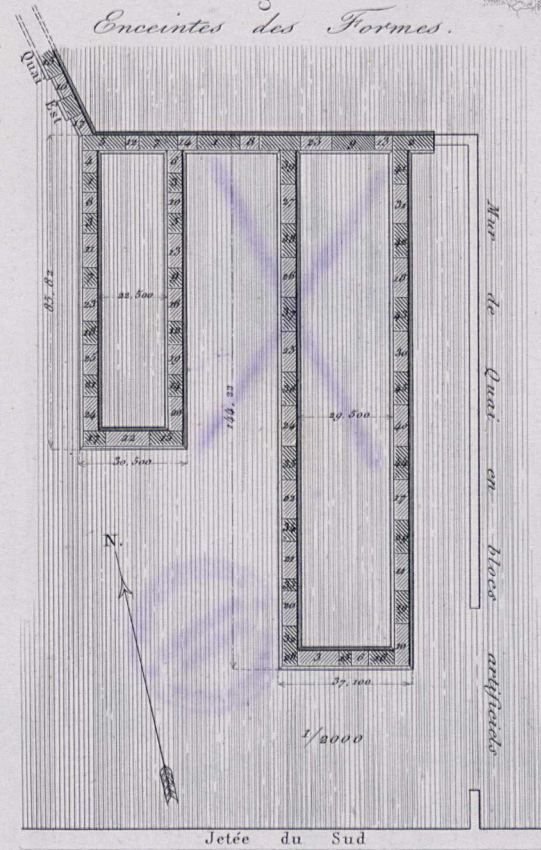


Fig. 7.

Coulage du béton.

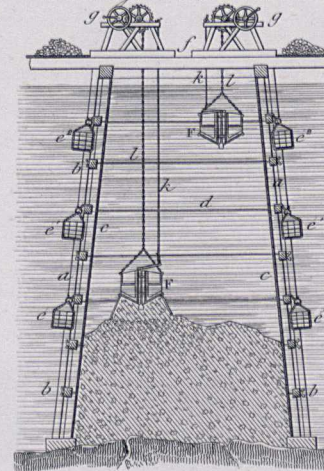


Fig. 5.

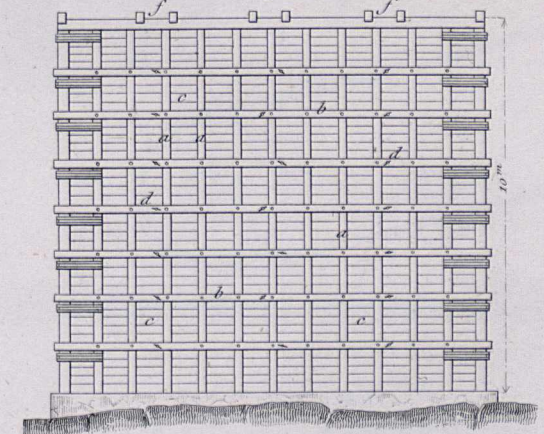


Fig. 12.

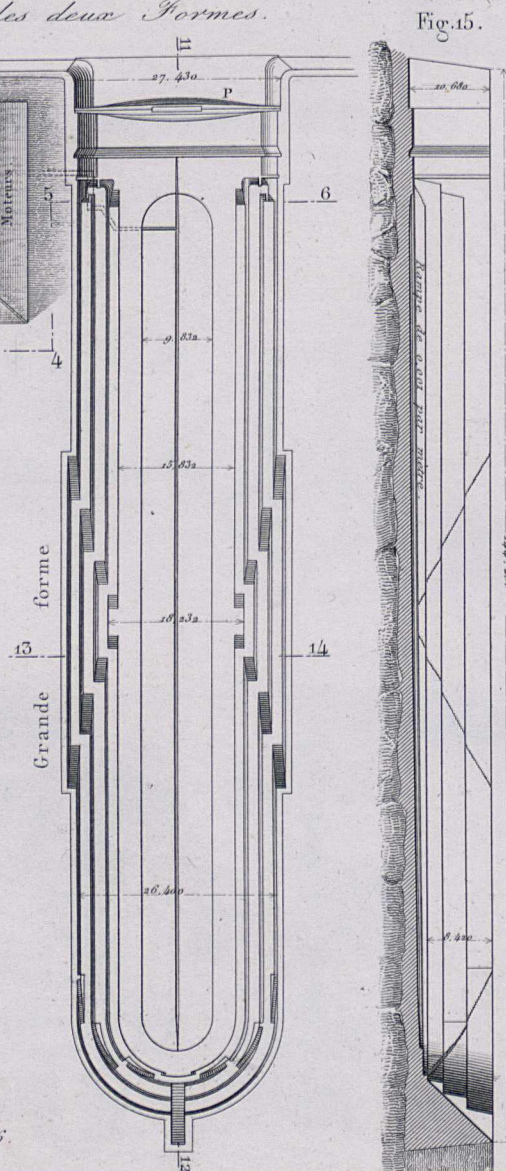


Fig. 15.

Coupe longitudinale suivant 11-12.

Fig. 14.

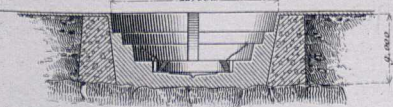
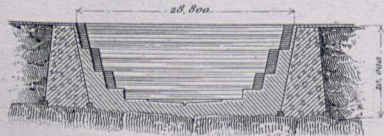


Fig. 16.



Echelle de 1/1000 pour les Fig. 11 à 16.

Coupe longitudinale suivant 7-8.

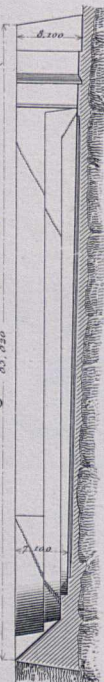
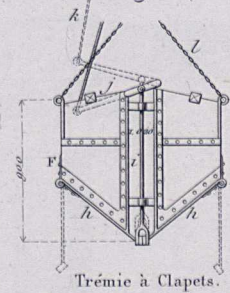


Fig. 8.



Caisse-Jalon en place.

Fig. 6.

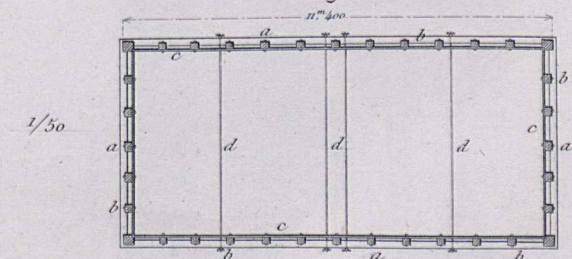


Fig. 9.

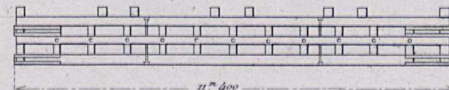
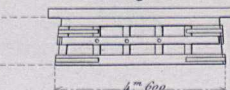


Fig. 10.



Housse de Caisse

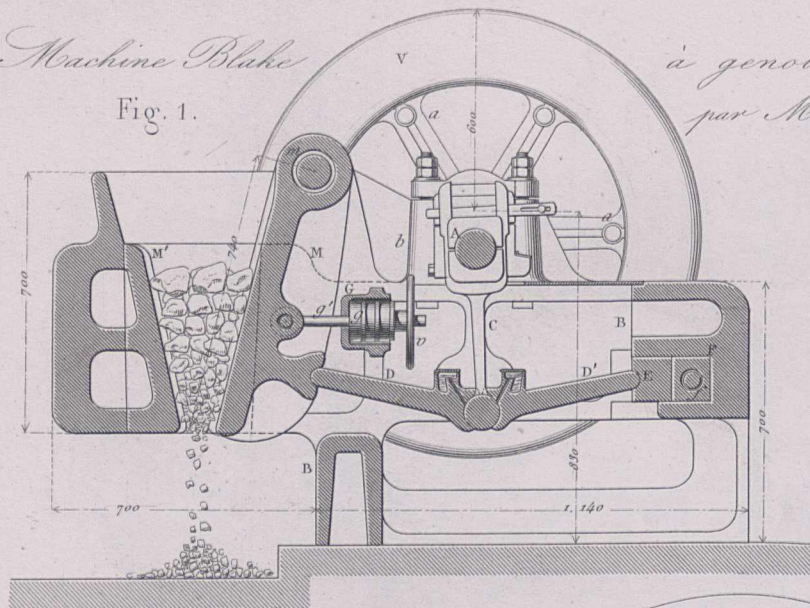
Echelle de 1/400 pour les Fig. 2, 3 et 4.

Echelle de 1/200 pour les Fig. 5 à 7 et 9 à 10.



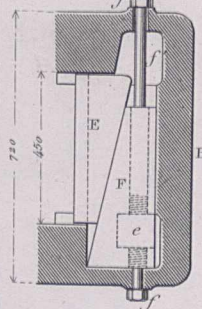
Machine Blake

Fig. 1.



à genouillère
par M. Avery

Fig. 2.



Système à mâchoire simple.

Fig. 3.

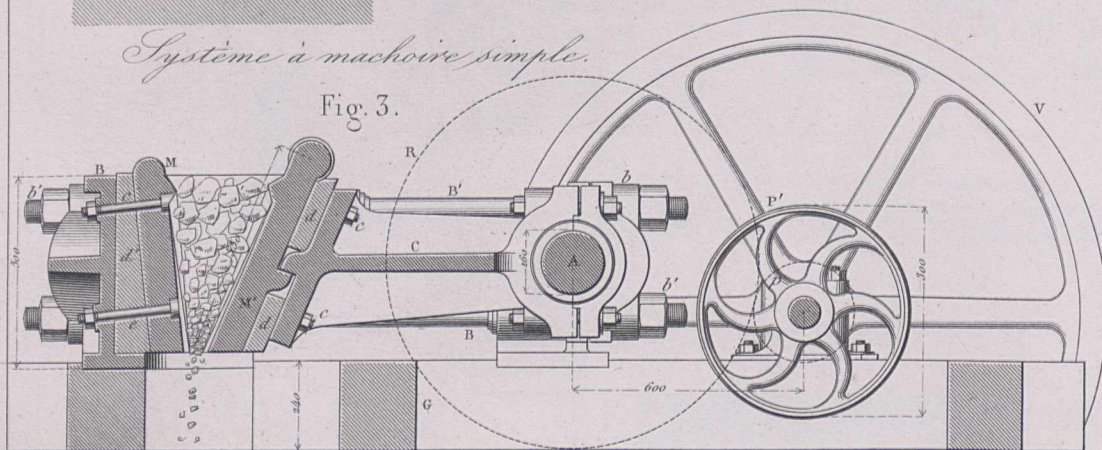


Fig. 4.

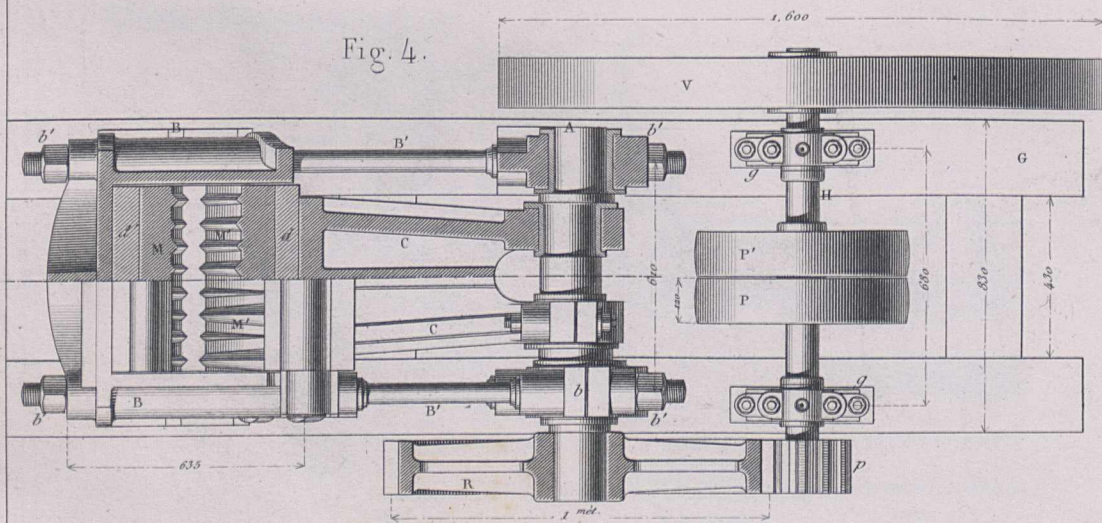
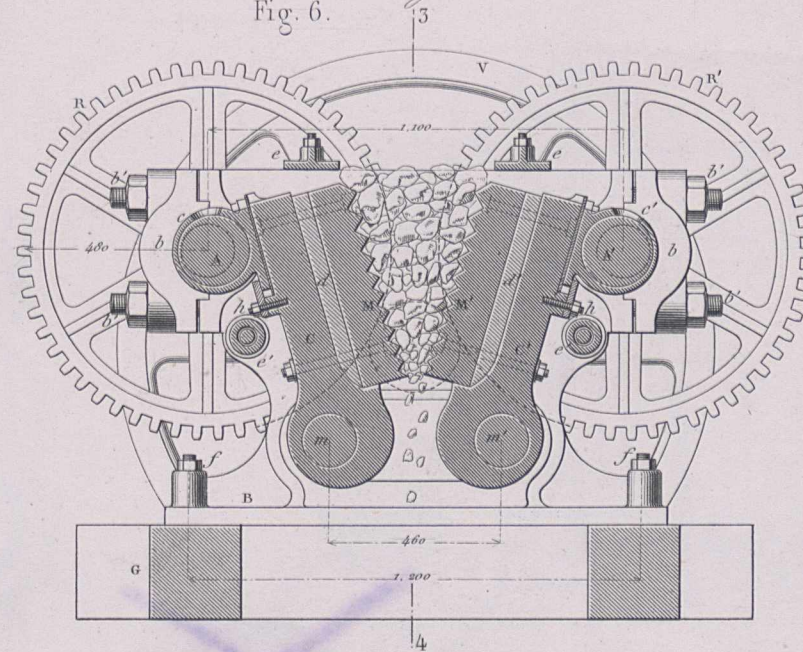


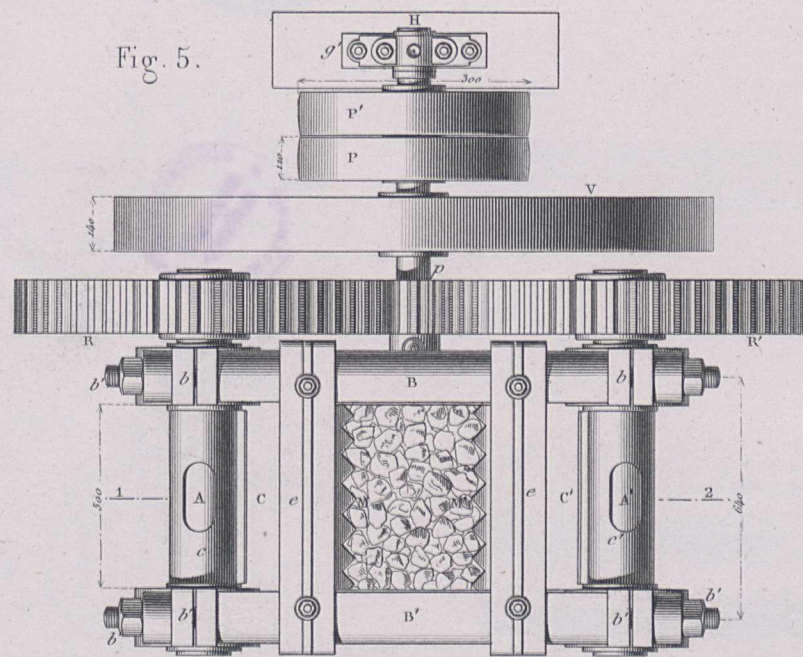
Fig. 6.

Système à deux mâchoires mobiles.



Machines de M. Dyckhoff

Fig. 5.



Echelle de 1/20.

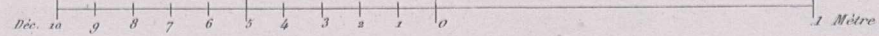
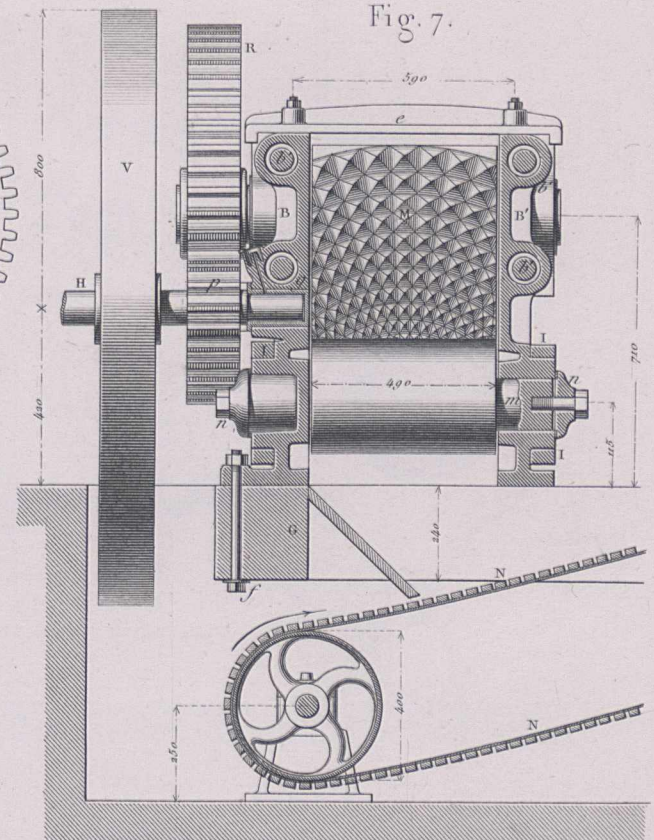
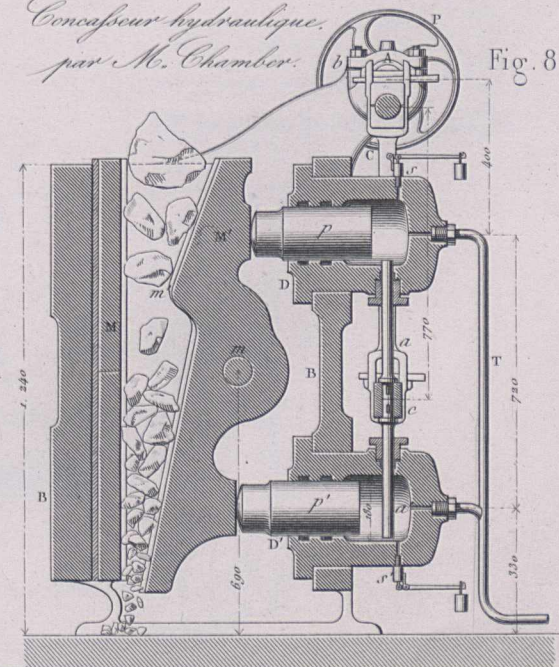


Fig. 7.



Concasseur hydraulique.
par M. Chamber.

Fig. 8.





M. Bruncaux Constructeur.

Fig. 1.

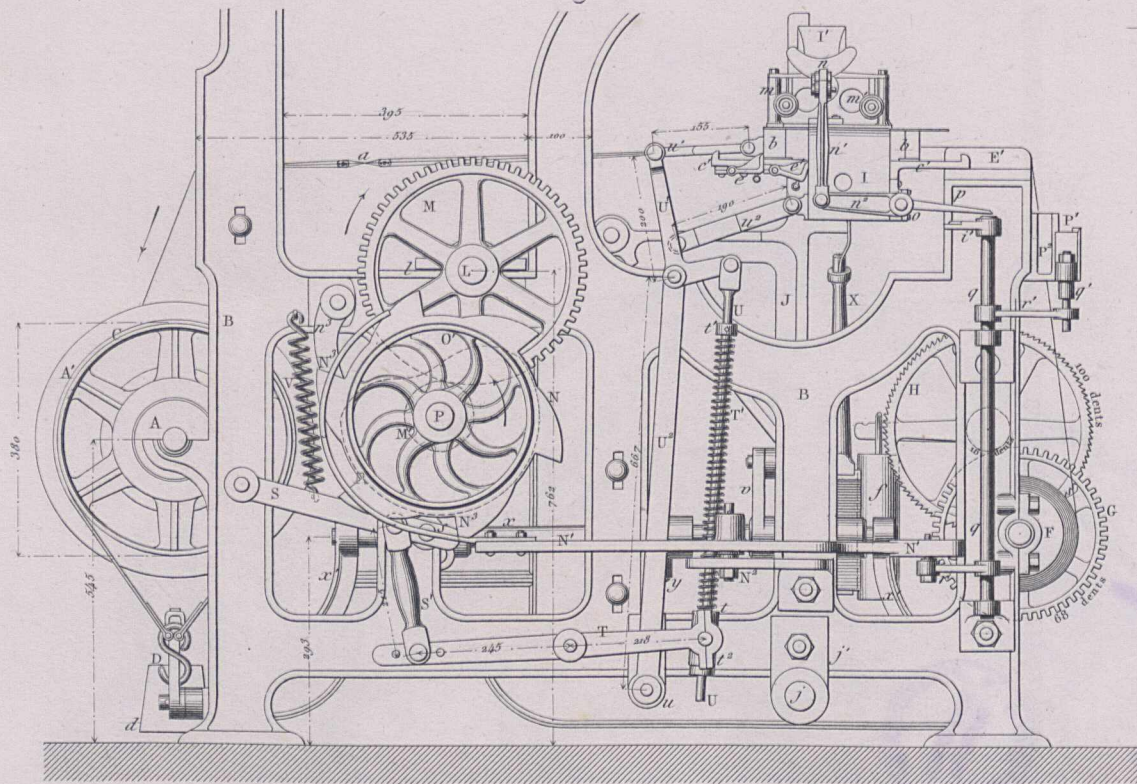


Fig. 2.

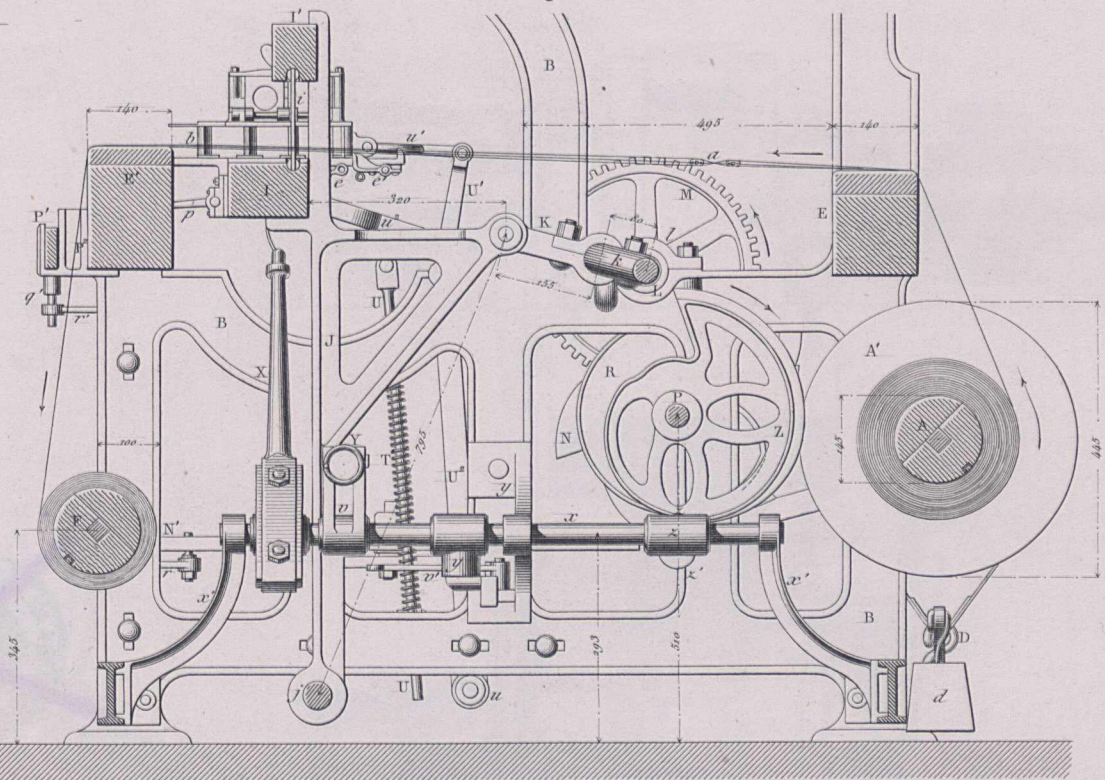


Fig. 3.

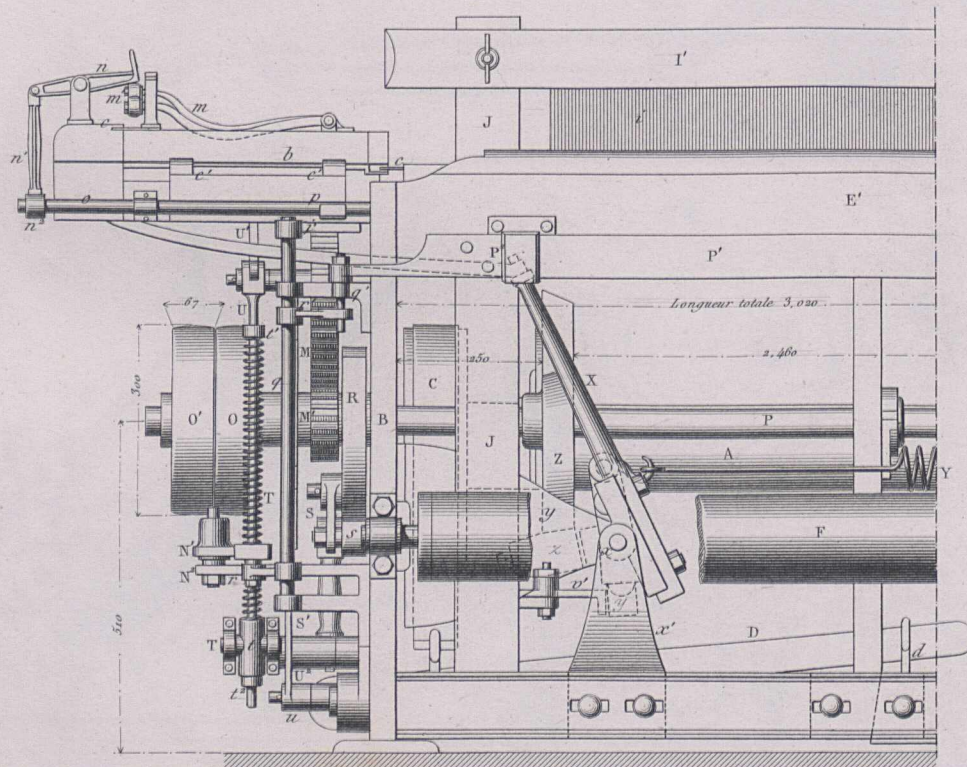


Fig. 5.

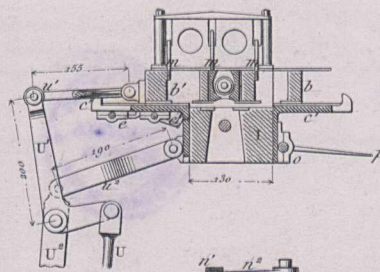
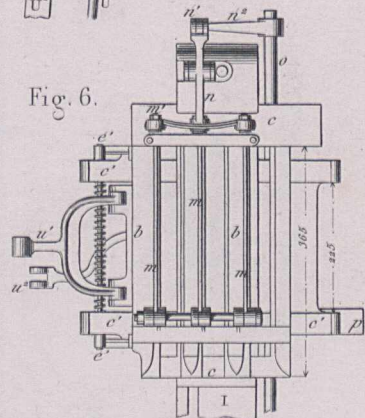


Fig. 6.



Echelle de 1/12

Fig. 4.

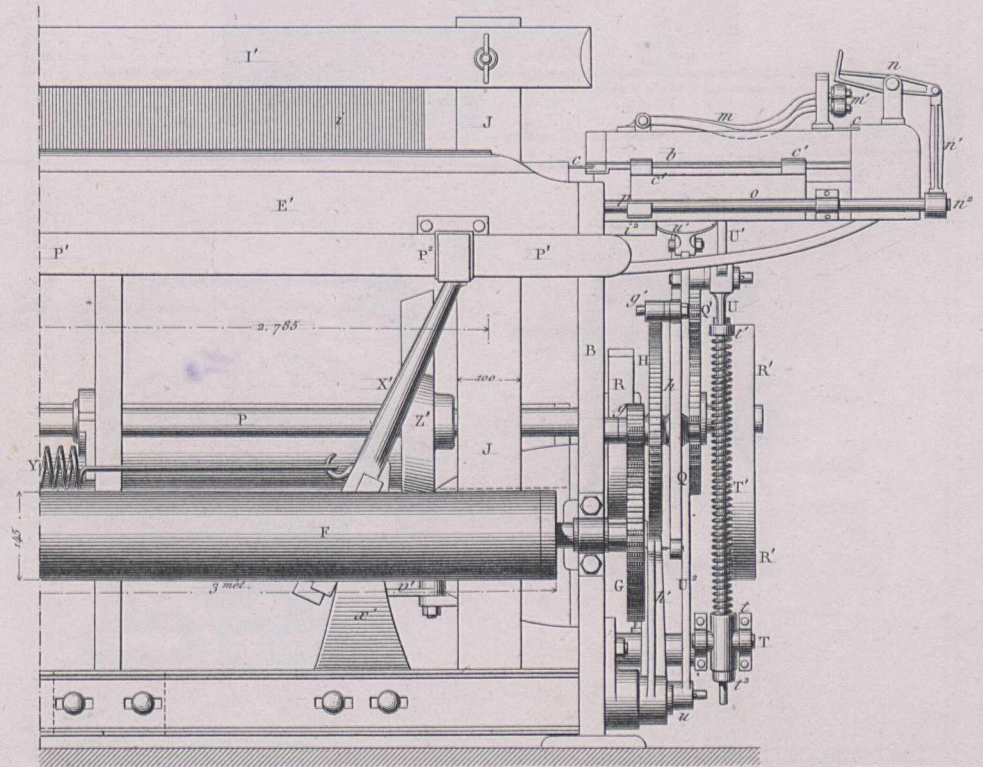




Fig. 1.

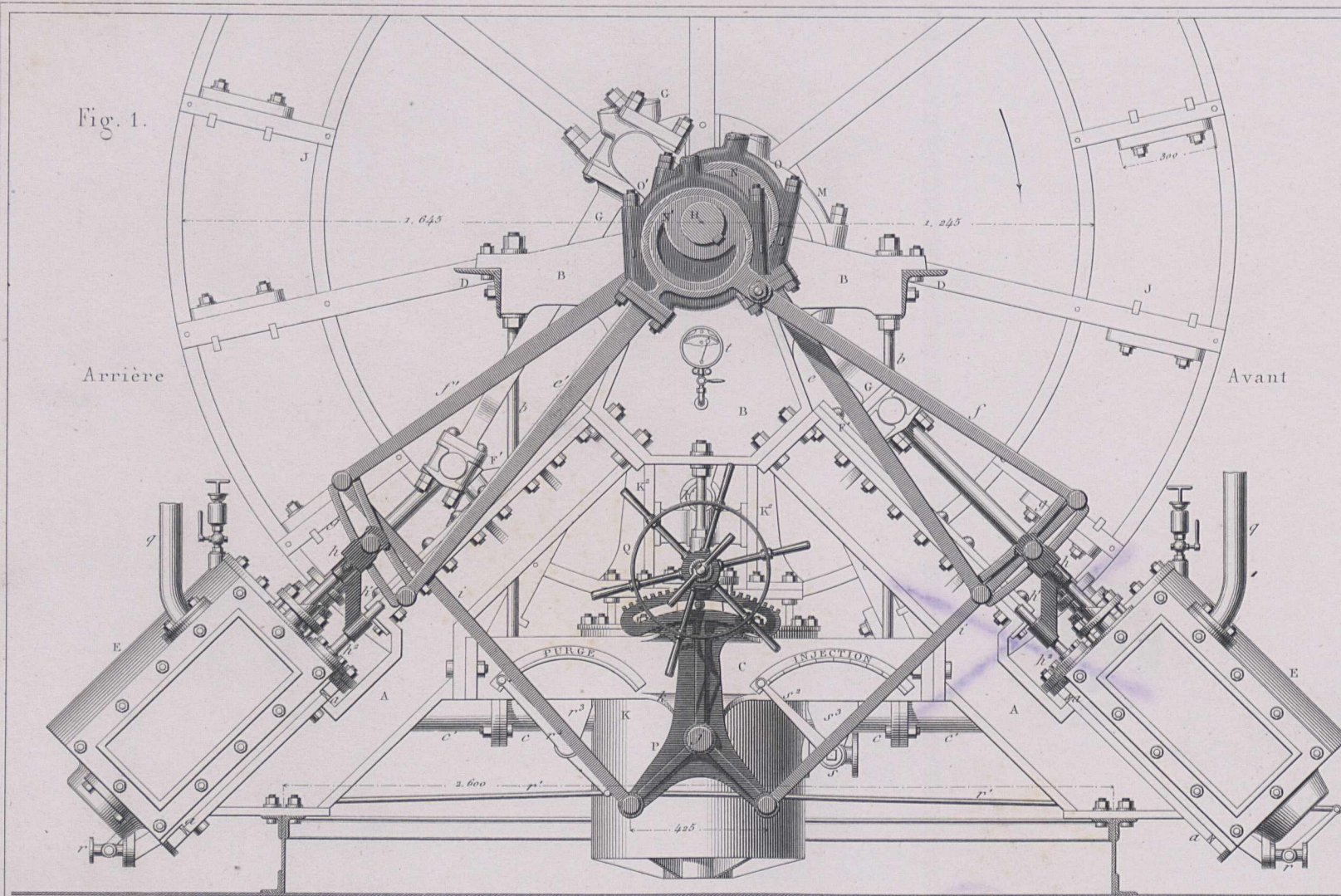


Fig. 2.

Force nominale : 30 chevaux. Vitesse : 30^t p 1'

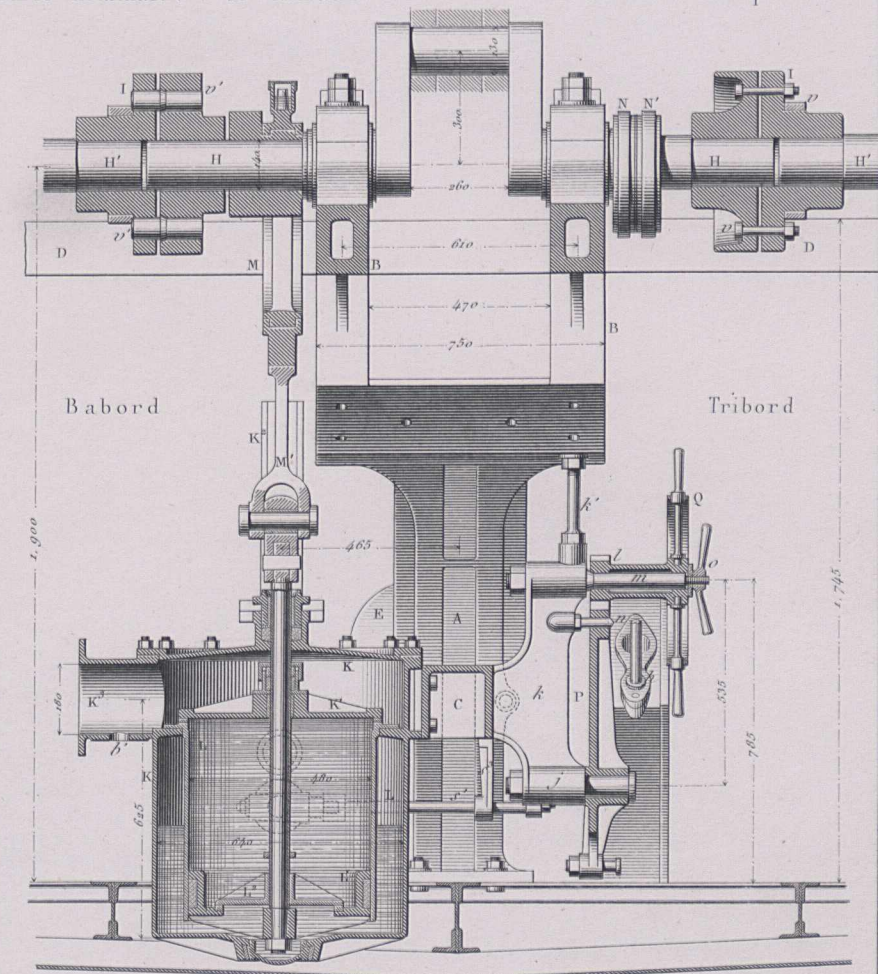


Fig. 3.

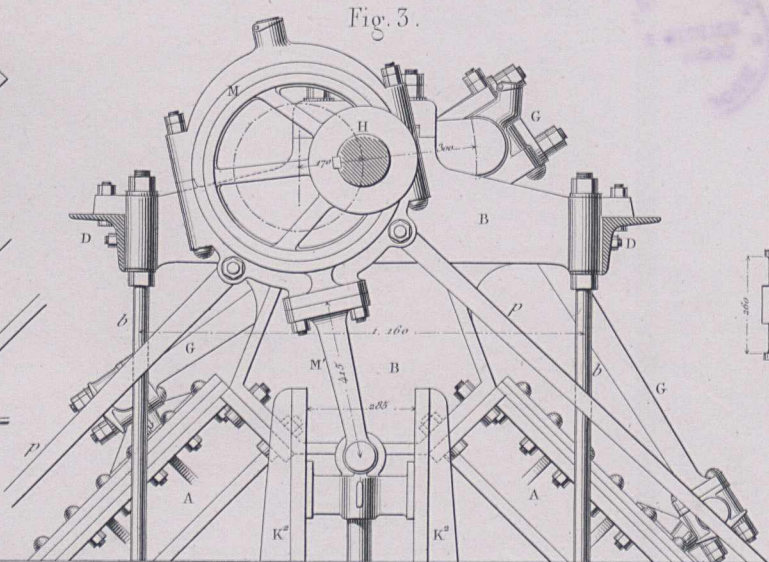


Fig. 4.

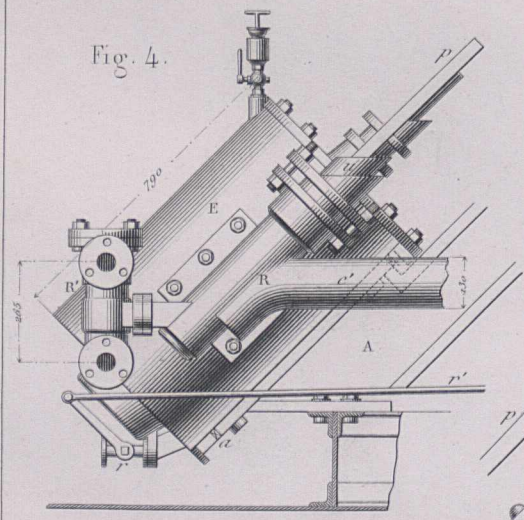
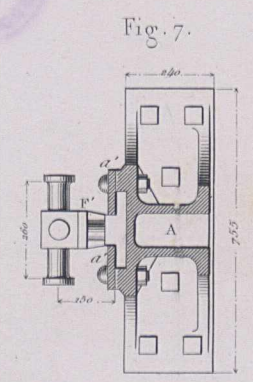


Fig. 7.



Echelle de 1/20

Fig. 5.

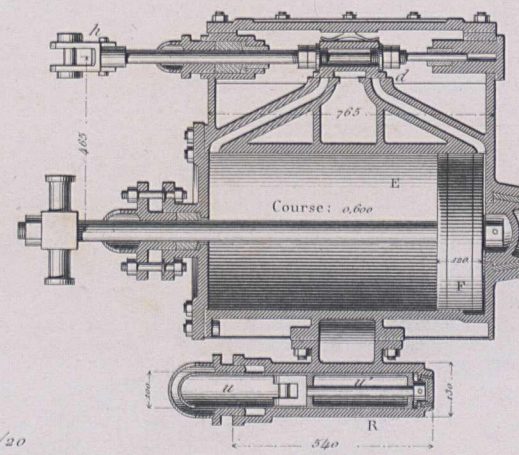
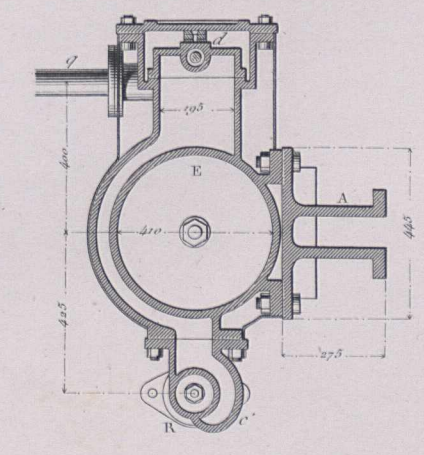
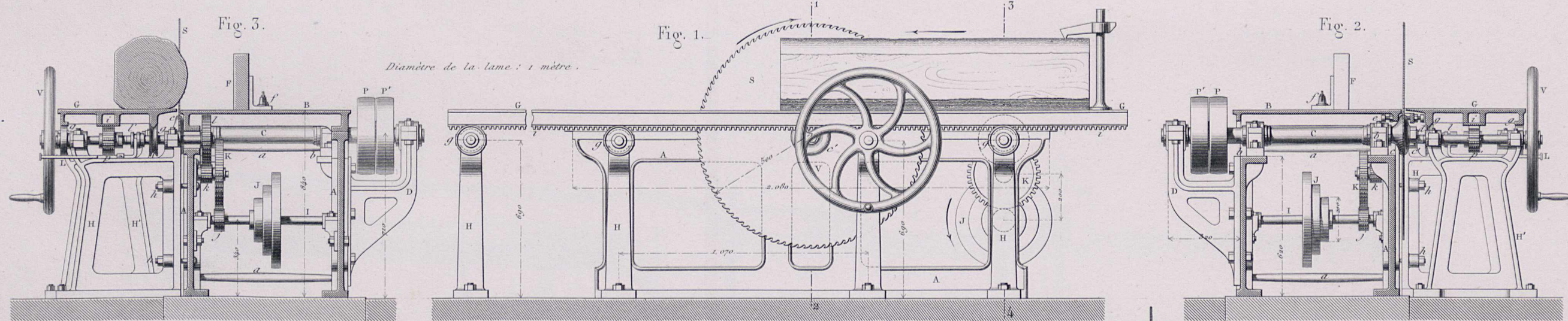


Fig. 6.

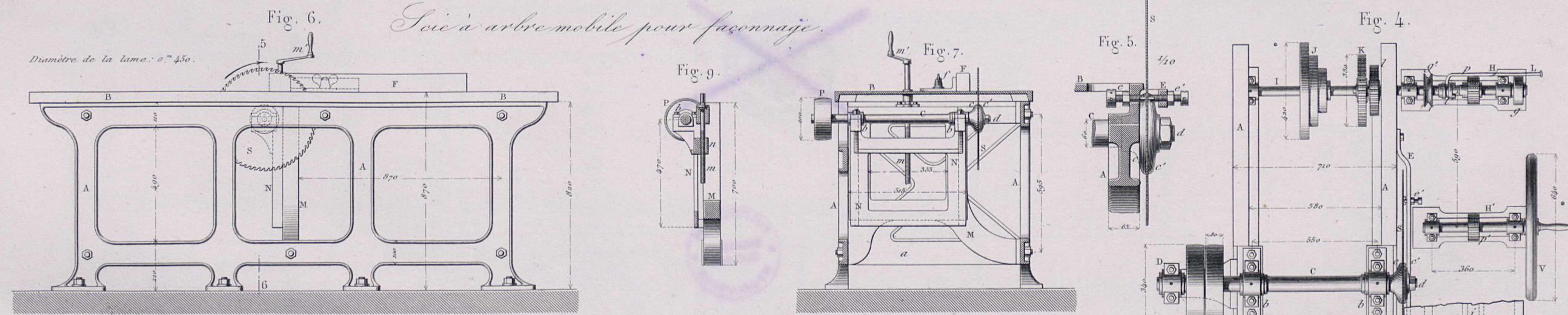




Scie à chariot pour débiter les bois ronds et équarris.



Scie à arbre mobile pour façonnage.



Scie à inclinaison variable.

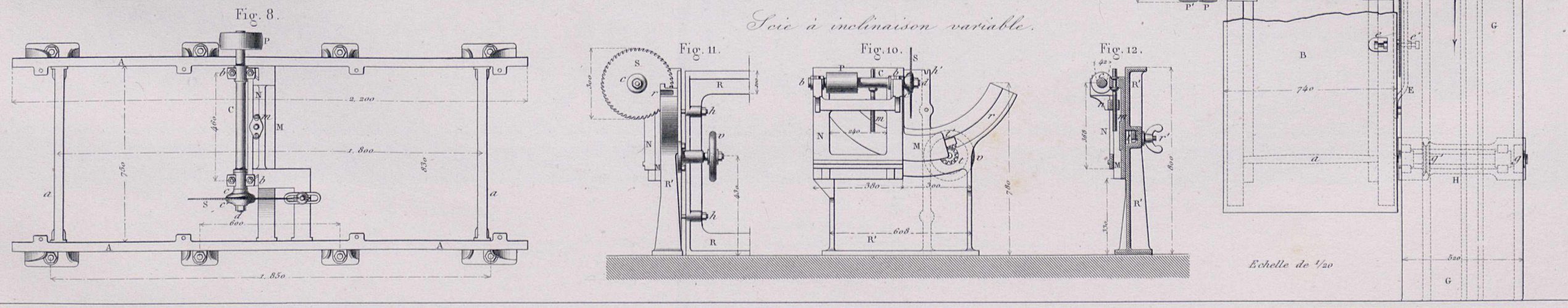


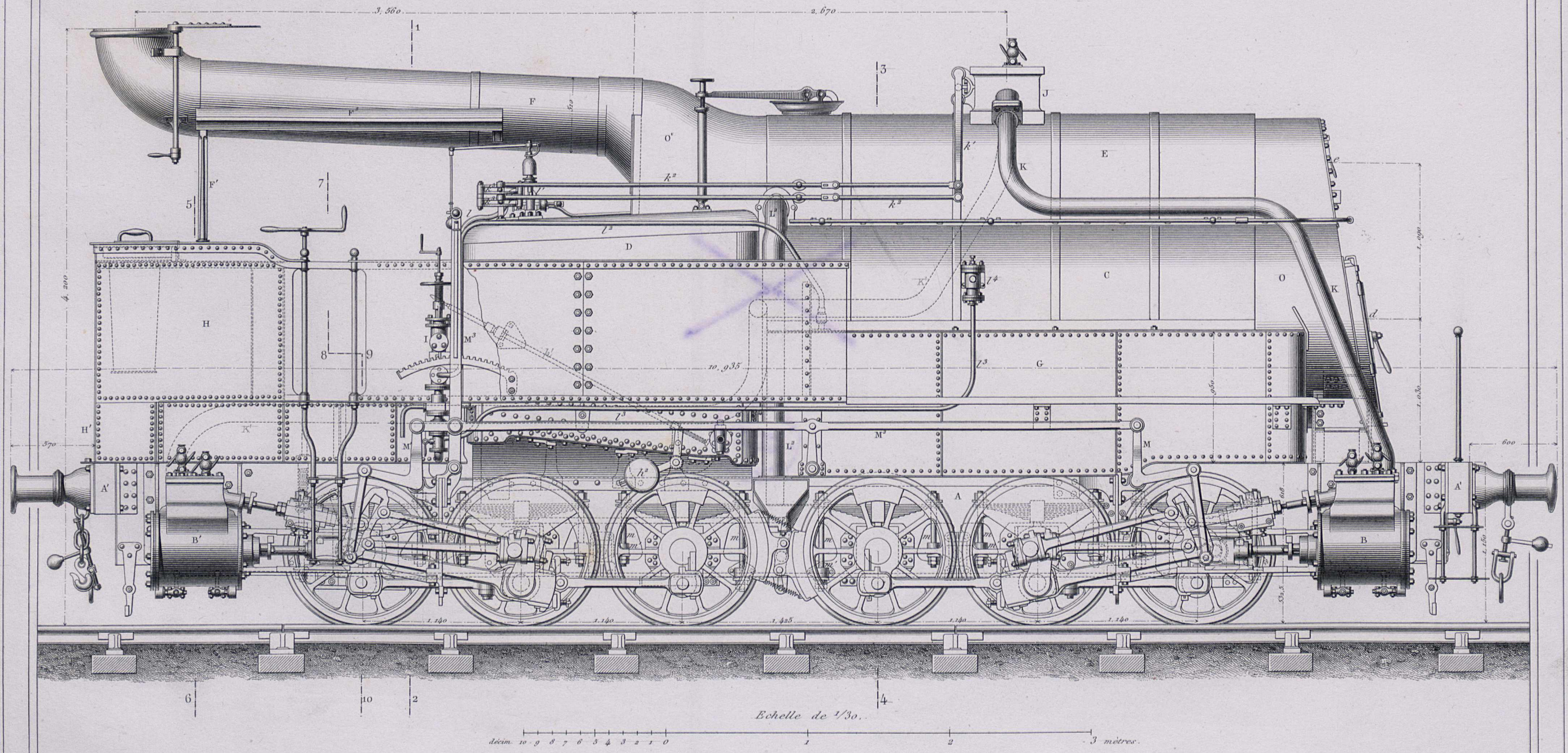


Fig. 1.

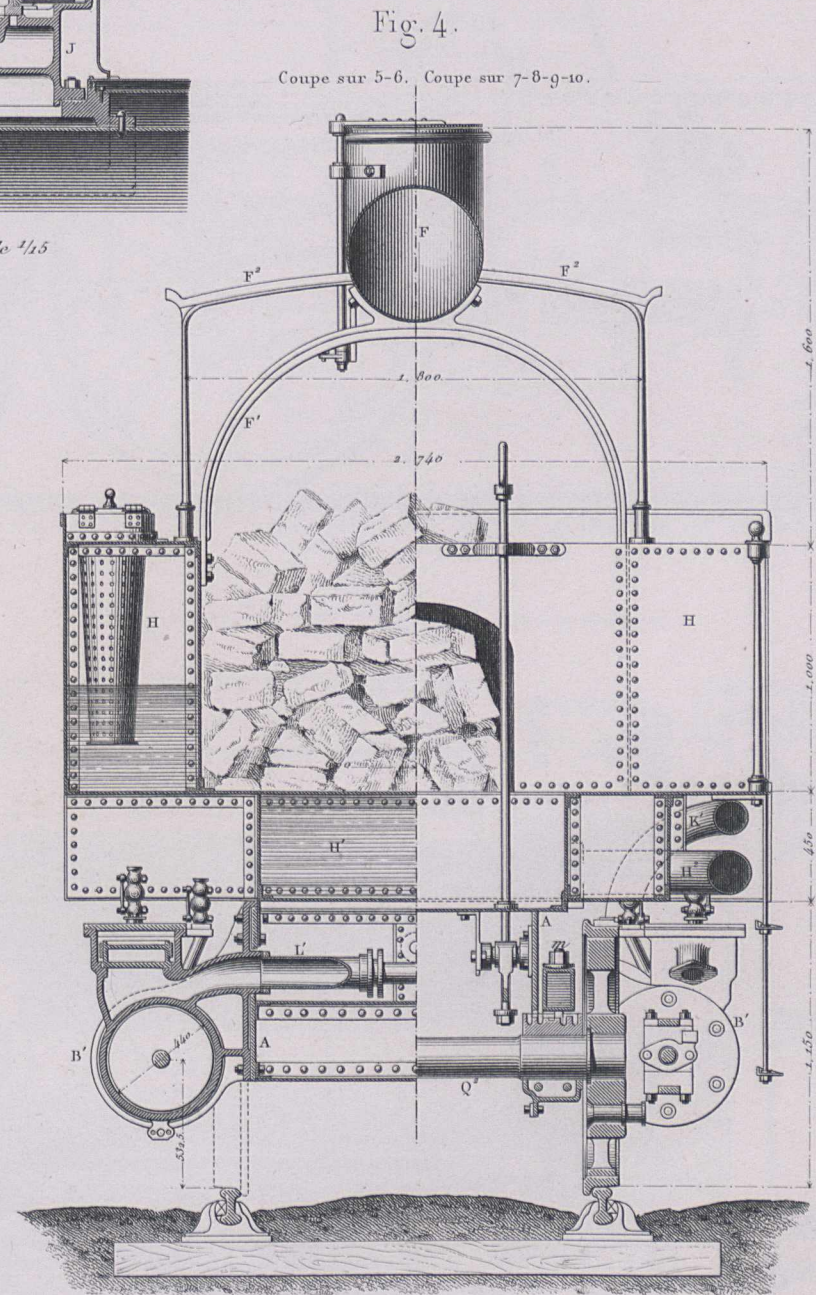
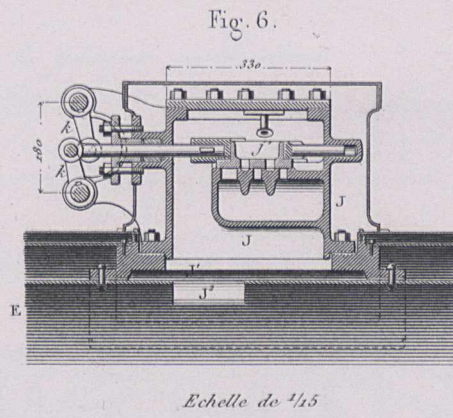
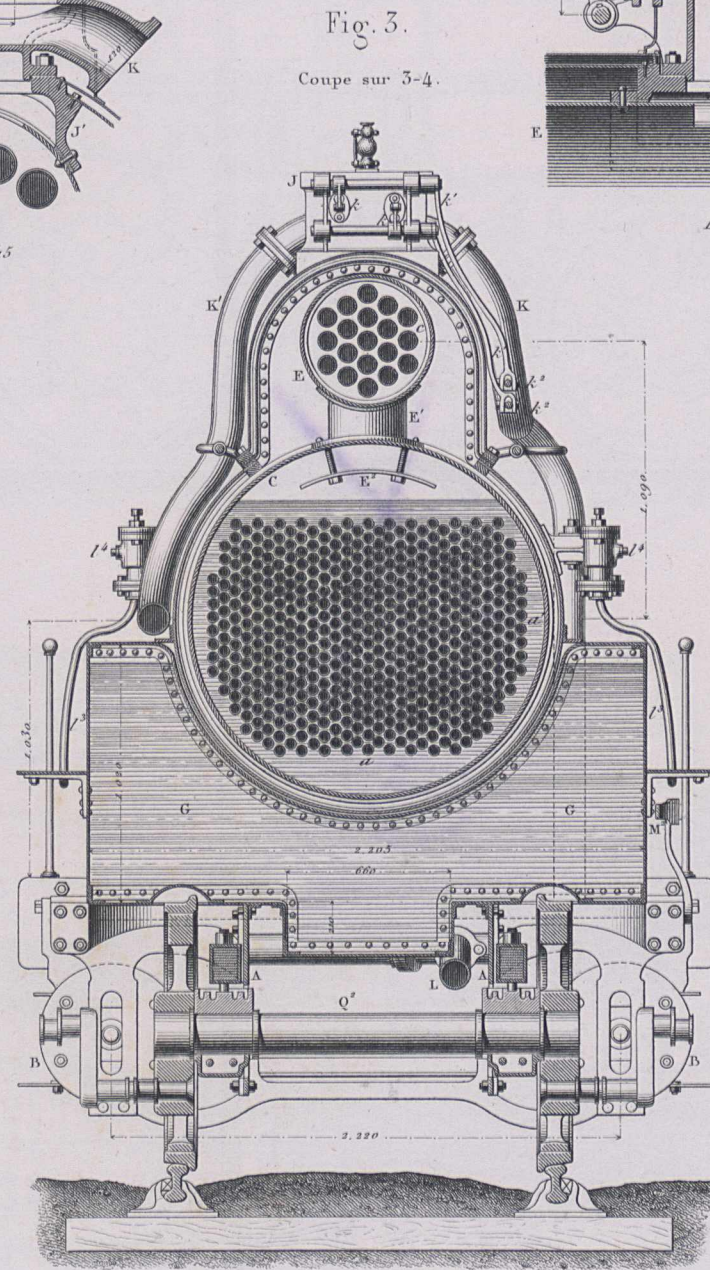
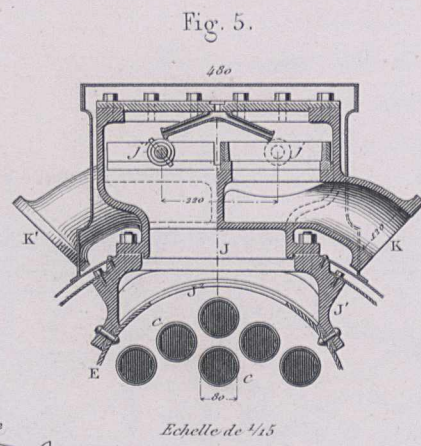
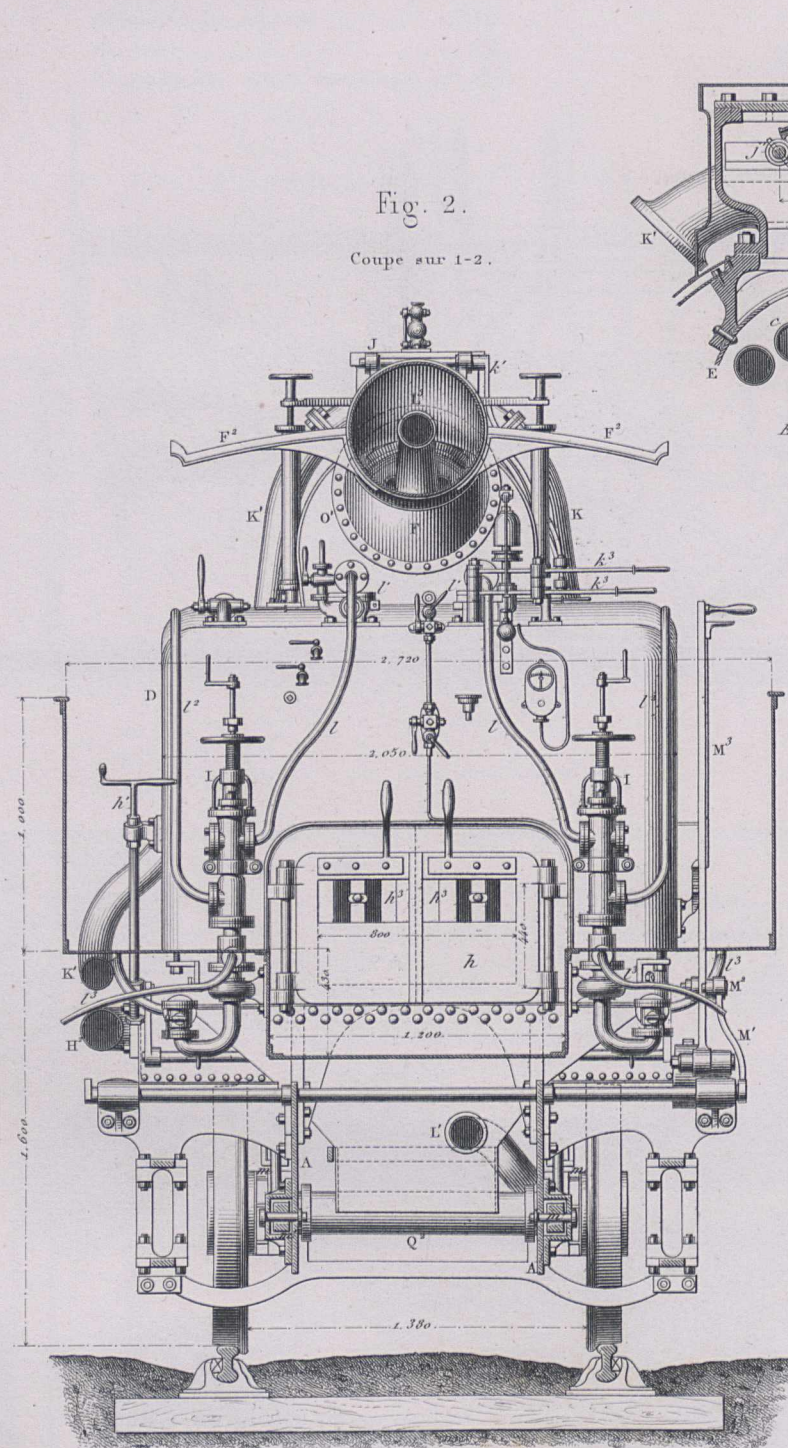
*Elevation extérieure de la machine à marchandises
à quatre cylindres et à six essieux accouplés.*

Diamètre des pistons.....0^m 440
Course.....0, 440
Diamètre des roues.....1, 065

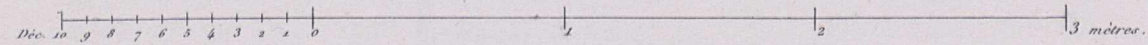
Surface de chauffe totale.....221 m. q.
Poids total en ordre de marche.....59700 kil.
Effort de traction.....8000 kil.







Echelle de 1/30 pour les Fig. 2, 3 et 4.



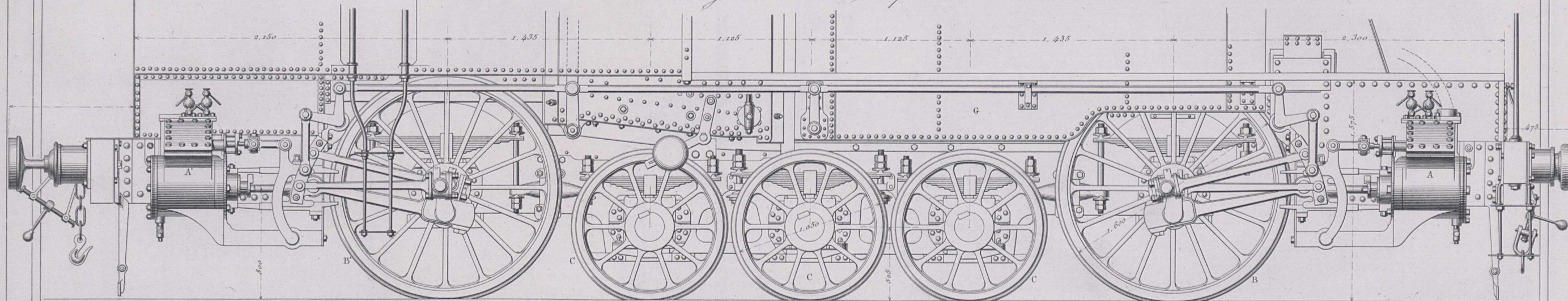


Diamètre des pistons..... 0^m 360
Course..... 0, 340
Diamètre des roues motrices..... 1^m 600

Fig. 12.

Mécanisme de la machine à voyageurs, à quatre cylindres
et à deux essieux moteurs indépendants.

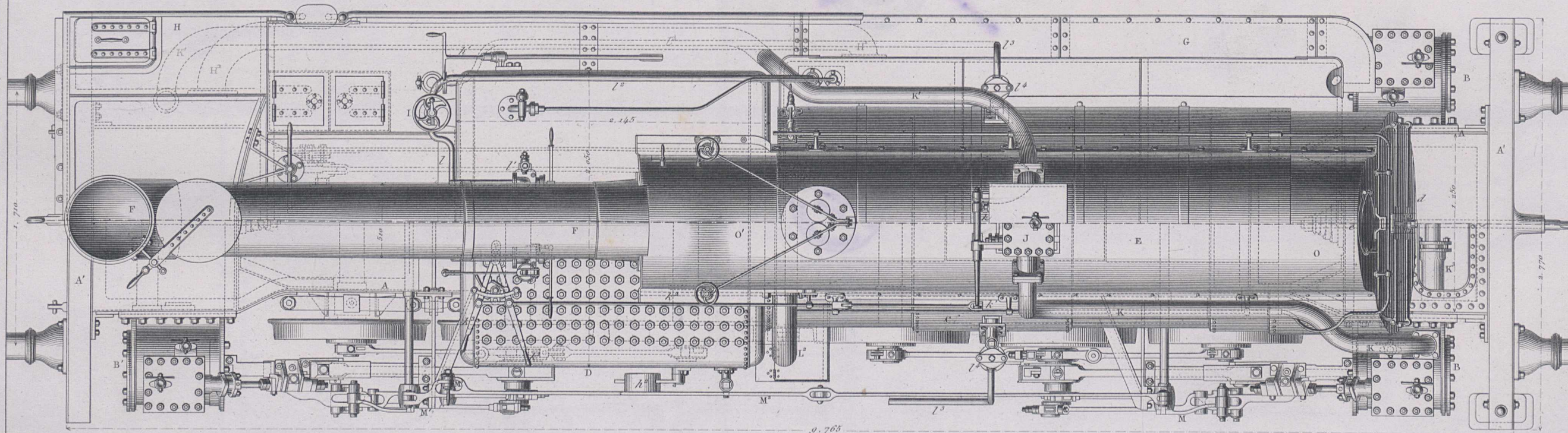
Surface de chauffe totale..... 167 m. q.
Poids total en ordre de marche... 48350 kil.
Effort de traction..... 3000 kil.



Machine à marchandises.

Fig. 7.

Projection horizontale extérieure.



Echelle de 1/30.



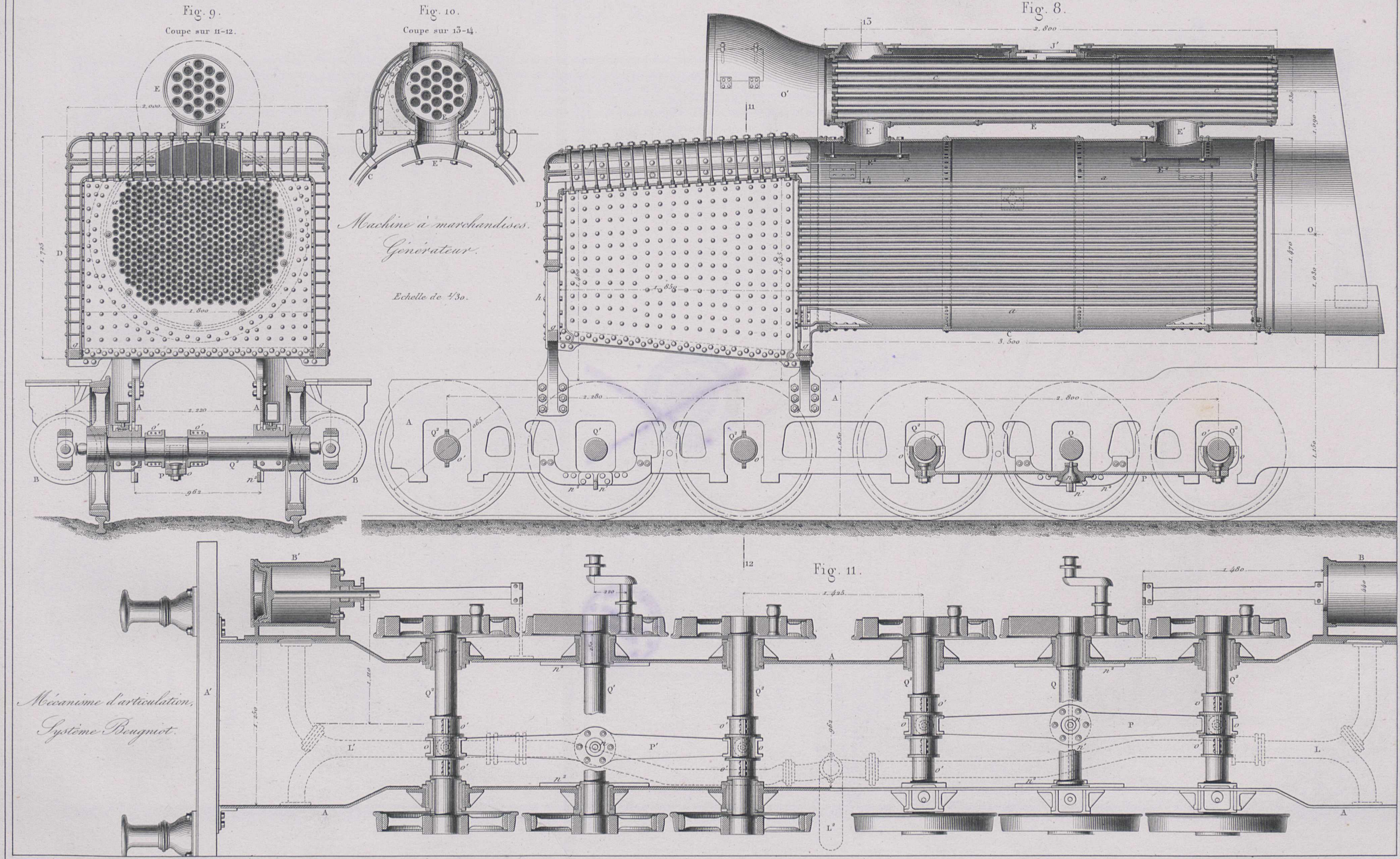
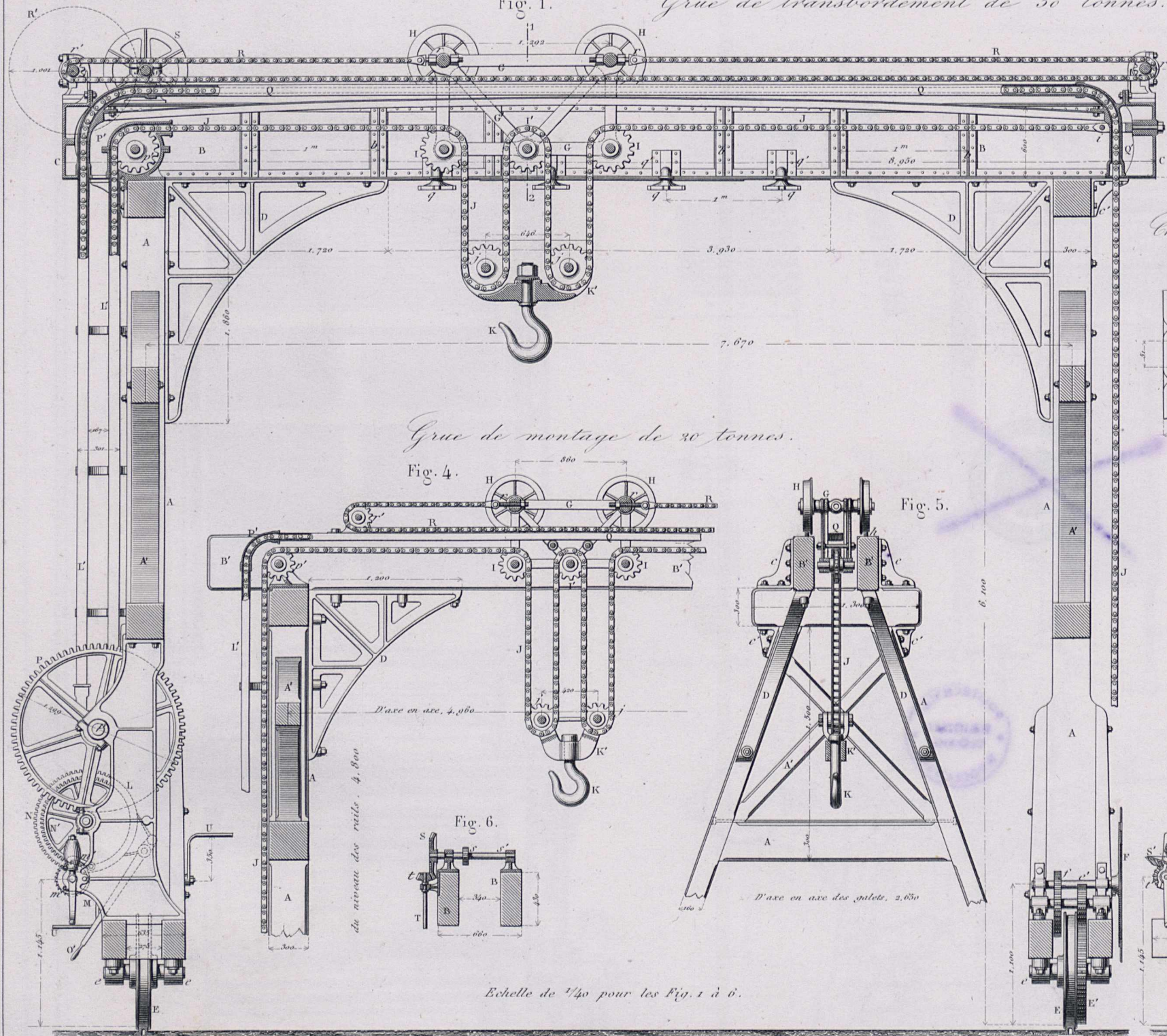




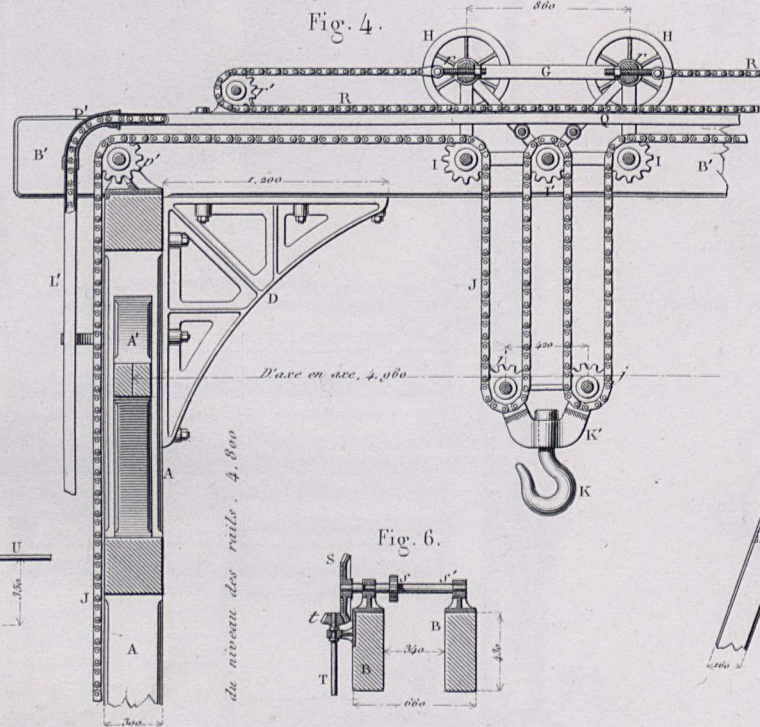
Fig. 1.

Grue de transbordement de 30 tonnes.



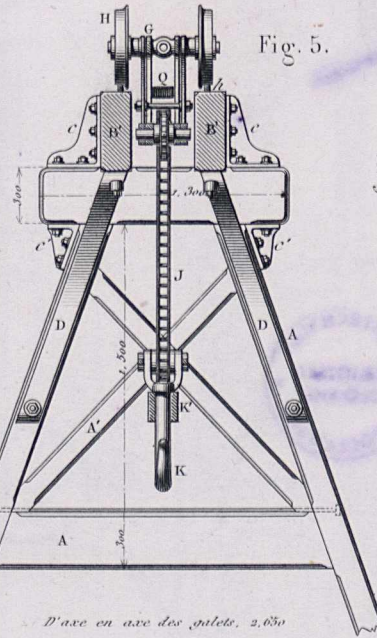
Grue de montage de 30 tonnes.

Fig. 4.



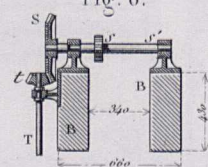
du niveau des rails. 4.850

Fig. 5.



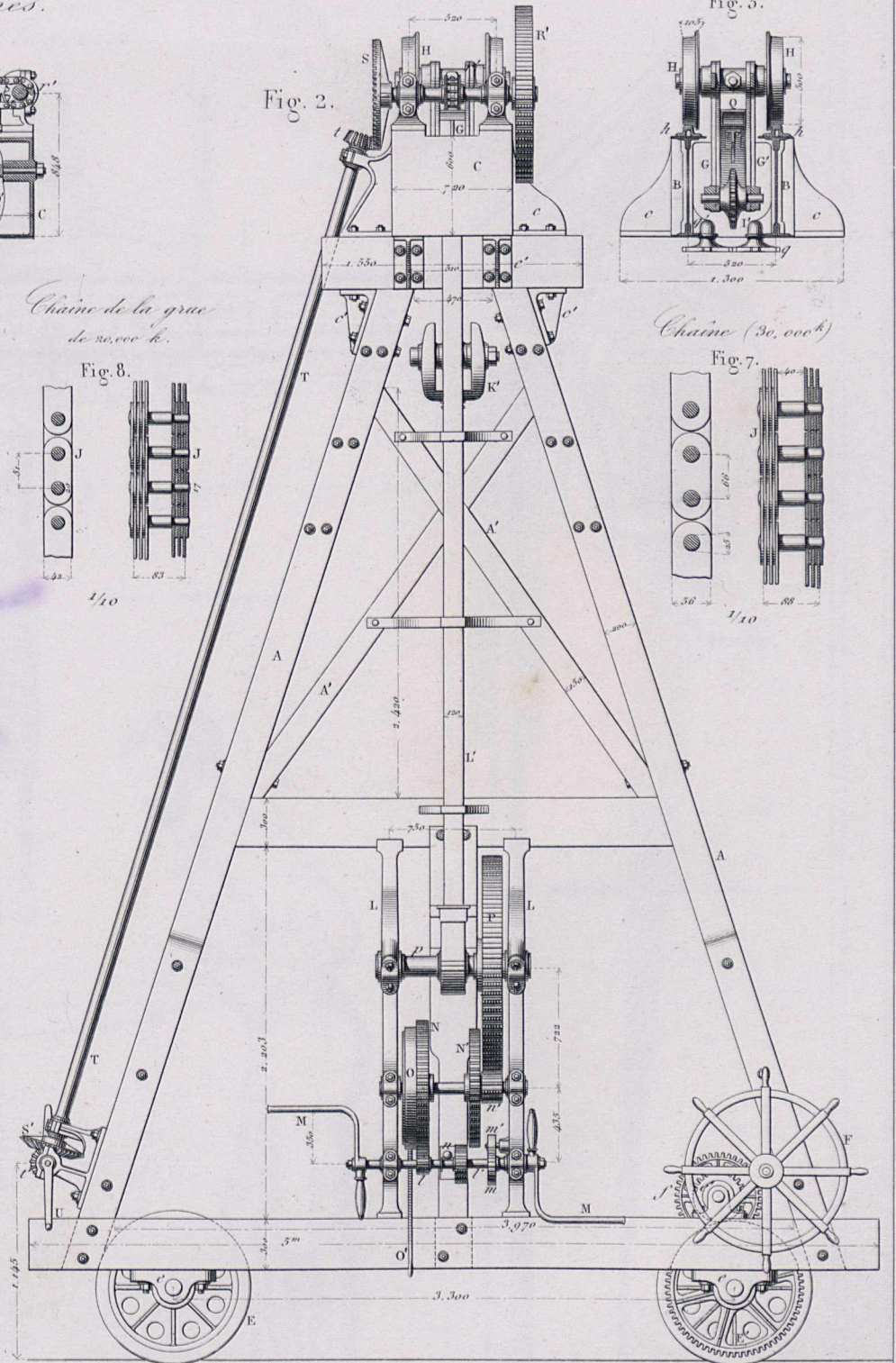
D'axe en axe des pignons, 2.650

Fig. 6.



Echelle de 1/40 pour les Fig. 1 à 6.

Fig. 2.



Chaîne de la grue de 30,000 k.

Fig. 8.

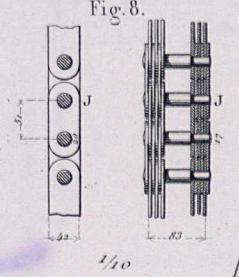
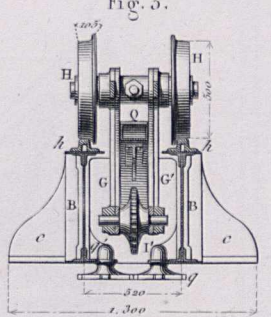
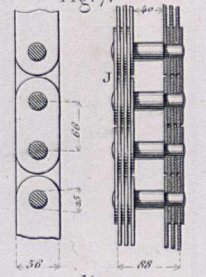


Fig. 3.

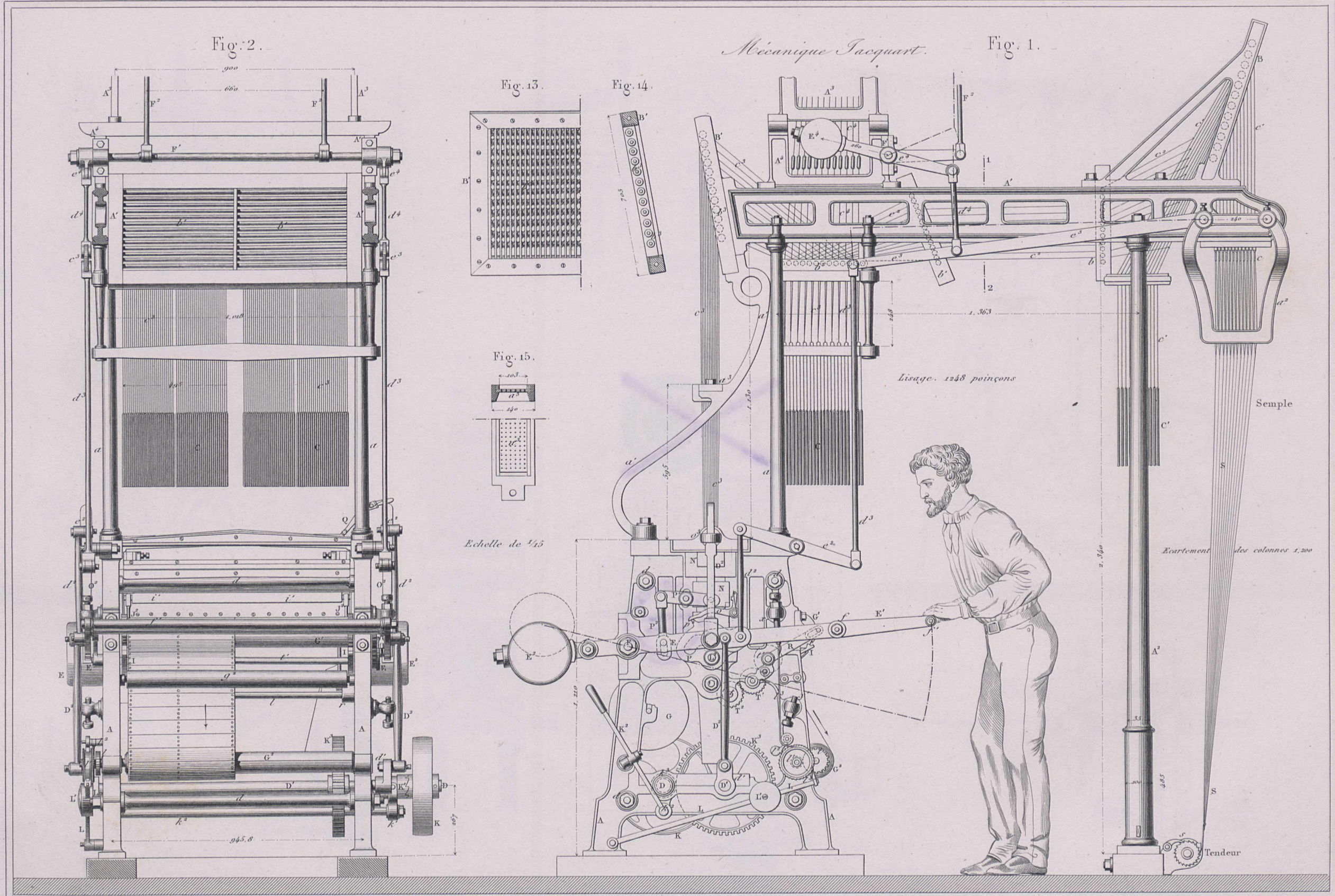


Chaîne (30,000 k)

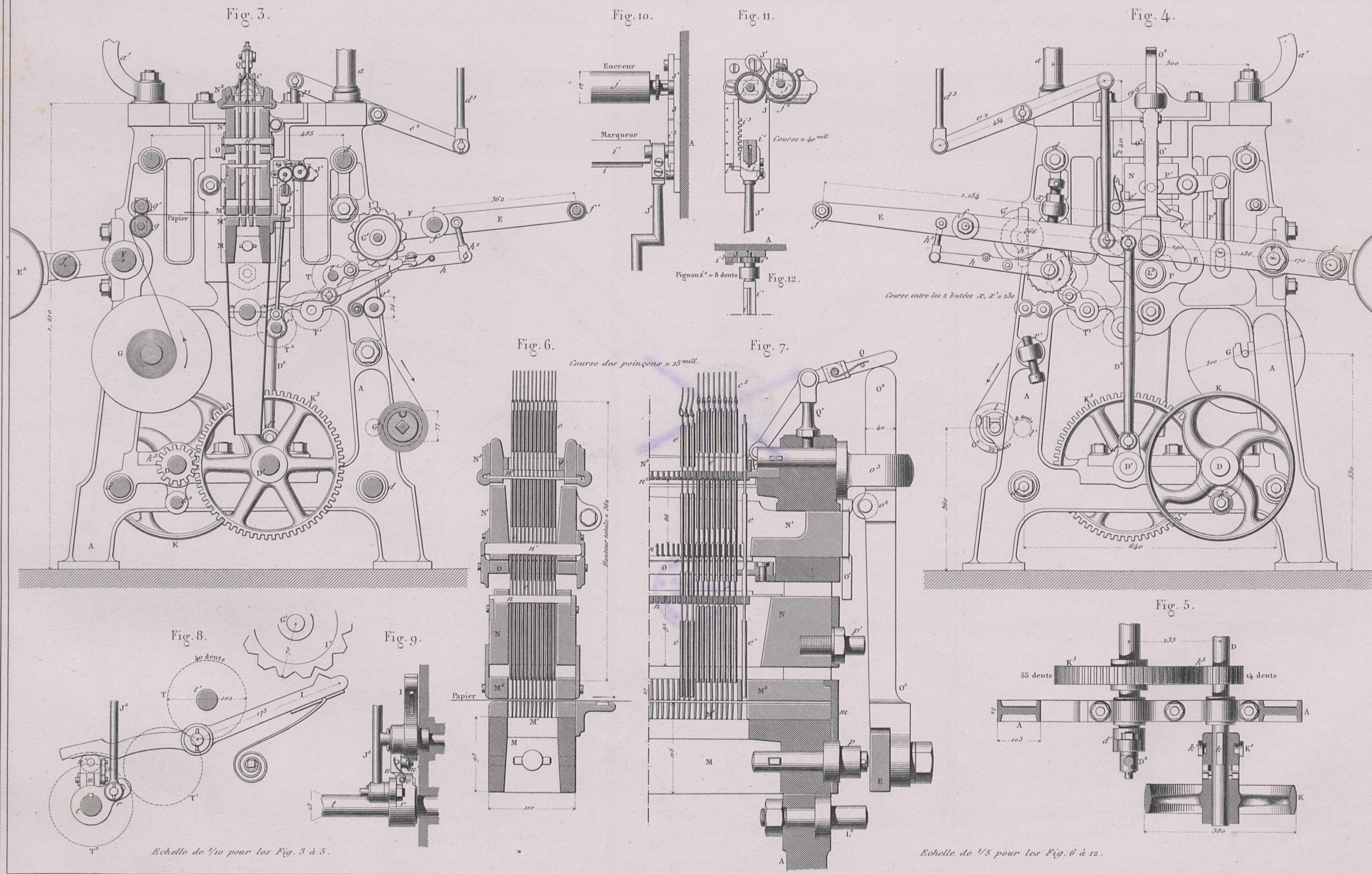
Fig. 7.







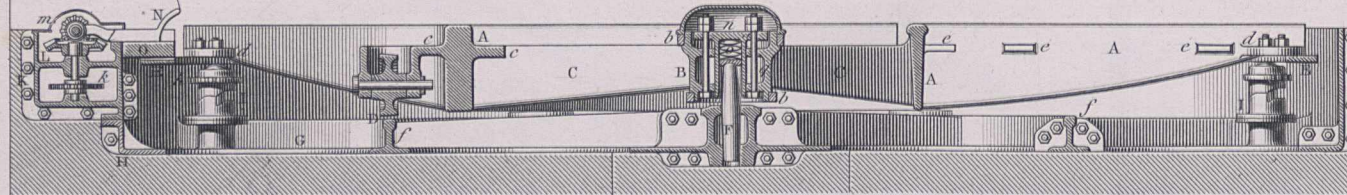






Section de la plaque soulevée par les tampons.

Fig. 1.



Elevation du plateau abaissé reposant sur ses galets.

Fig. 3.

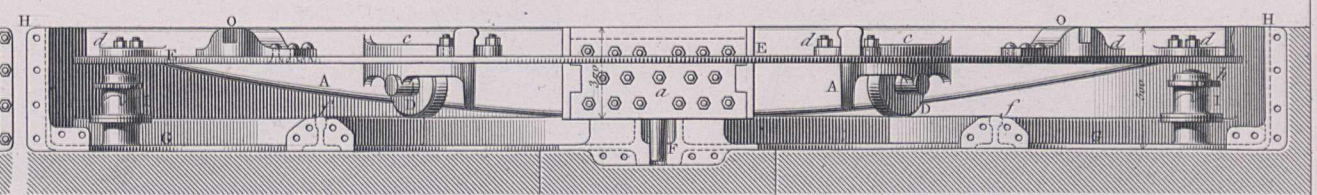
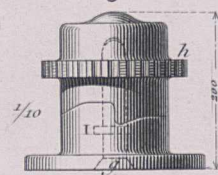


Fig. 5.



Tampon descendu.

Plan de la plaque de fondation.

Fig. 2.

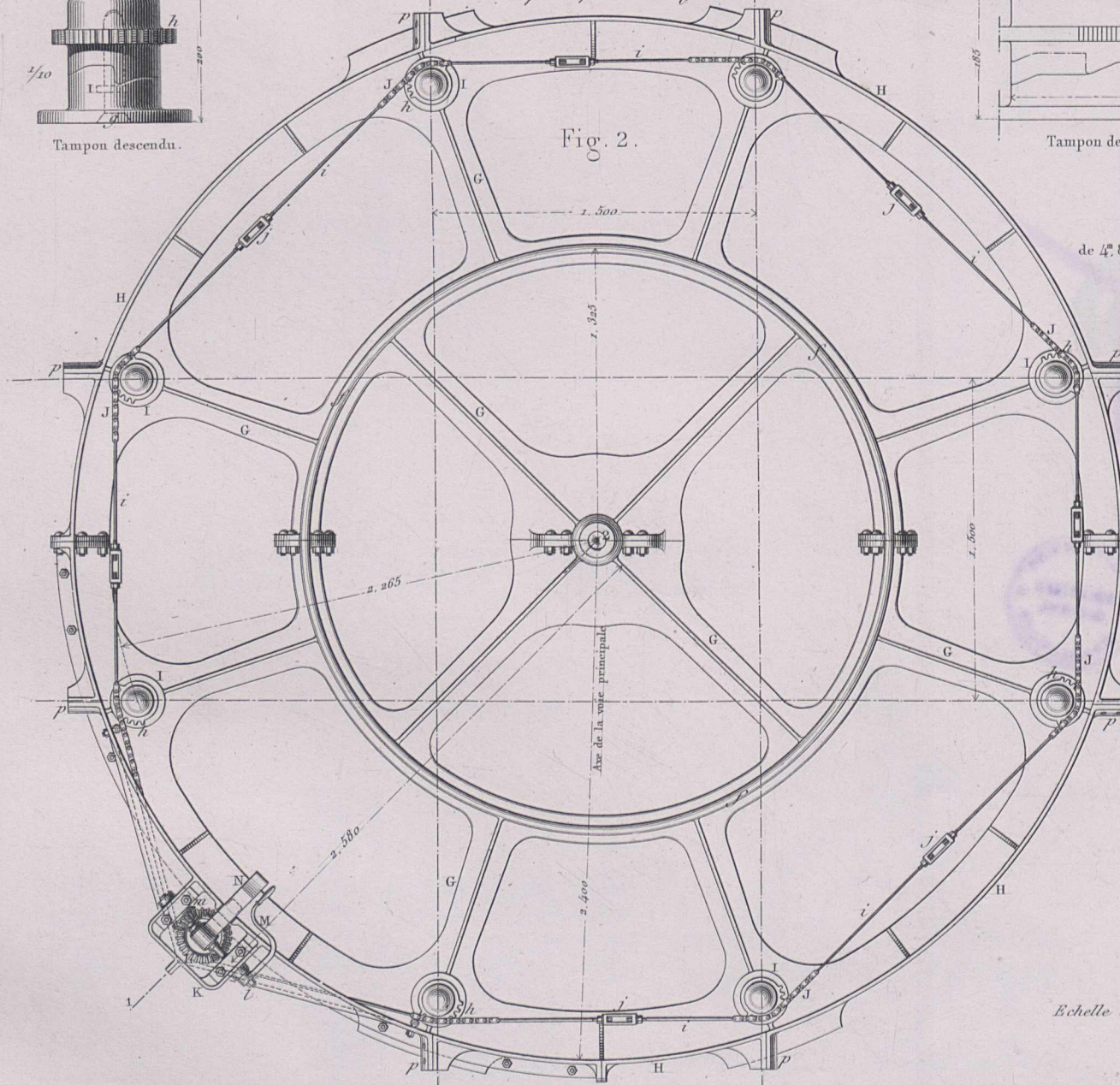
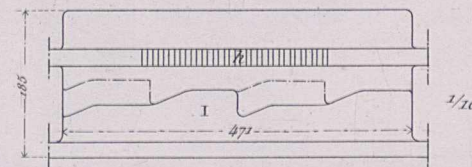


Fig. 7.



Tampon de calage développé.

Type de 4,800 de diamètre

Plan du plateau supérieur.

Fig. 4.

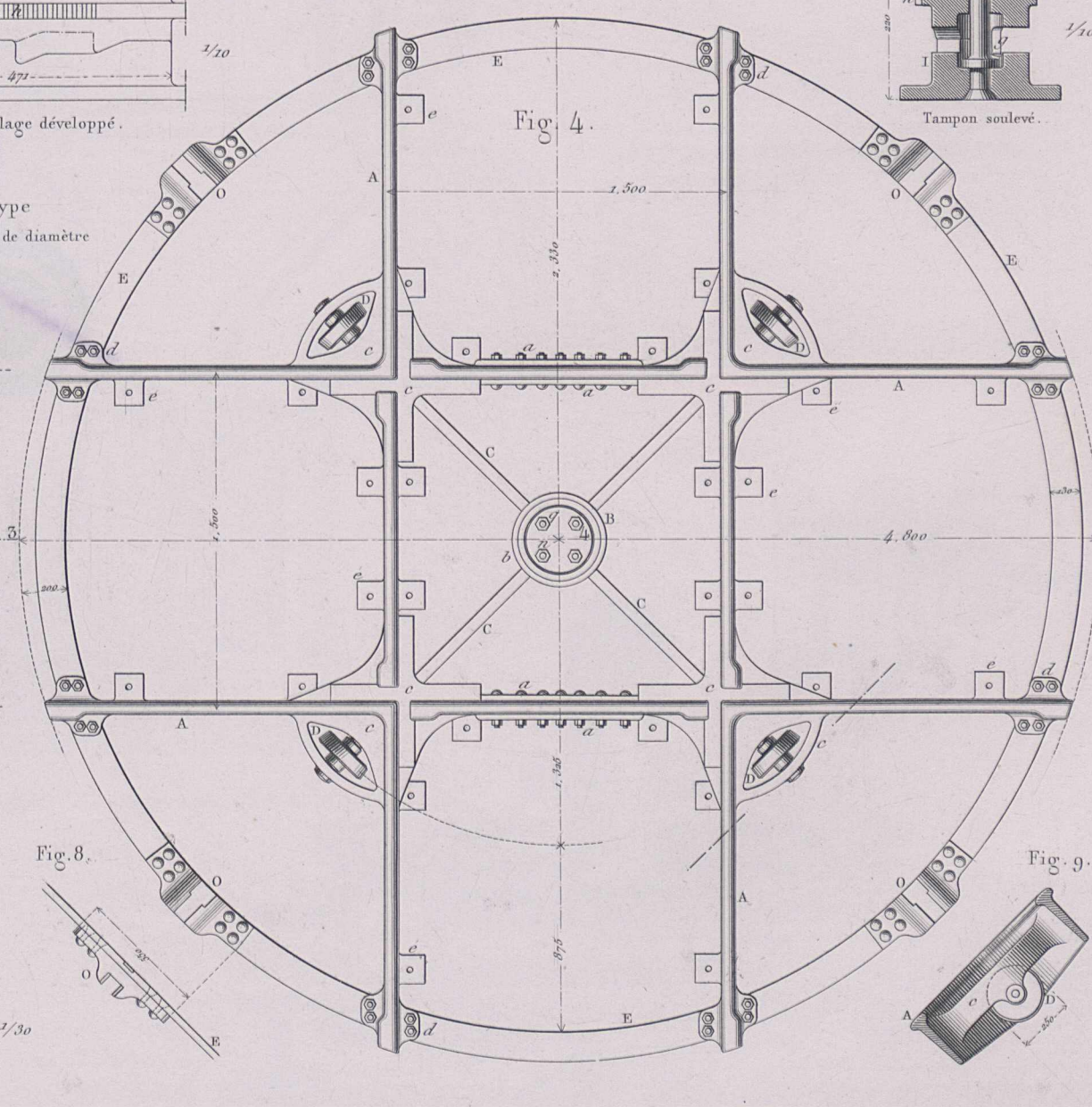
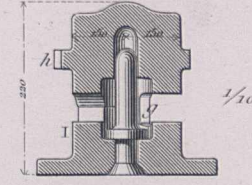
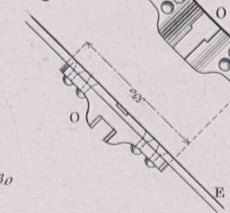


Fig. 6.



Tampon soulevé.

Fig. 8.



Echelle de 1/30

Fig. 9.

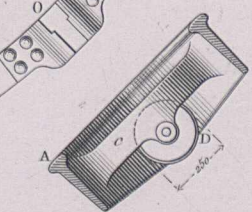




Fig. 3.

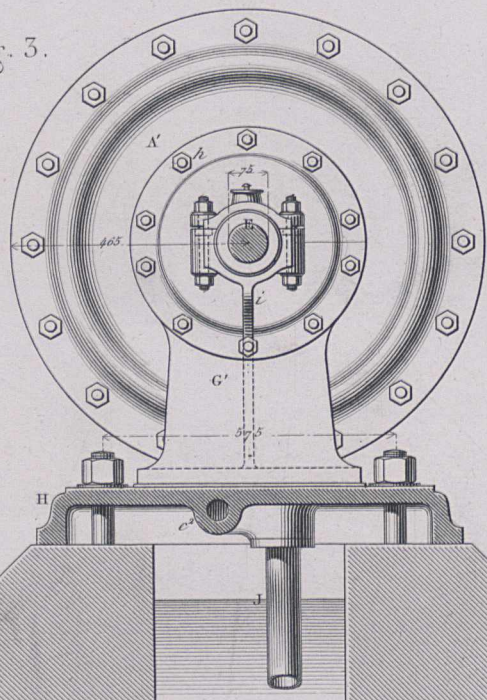


Fig. 1.

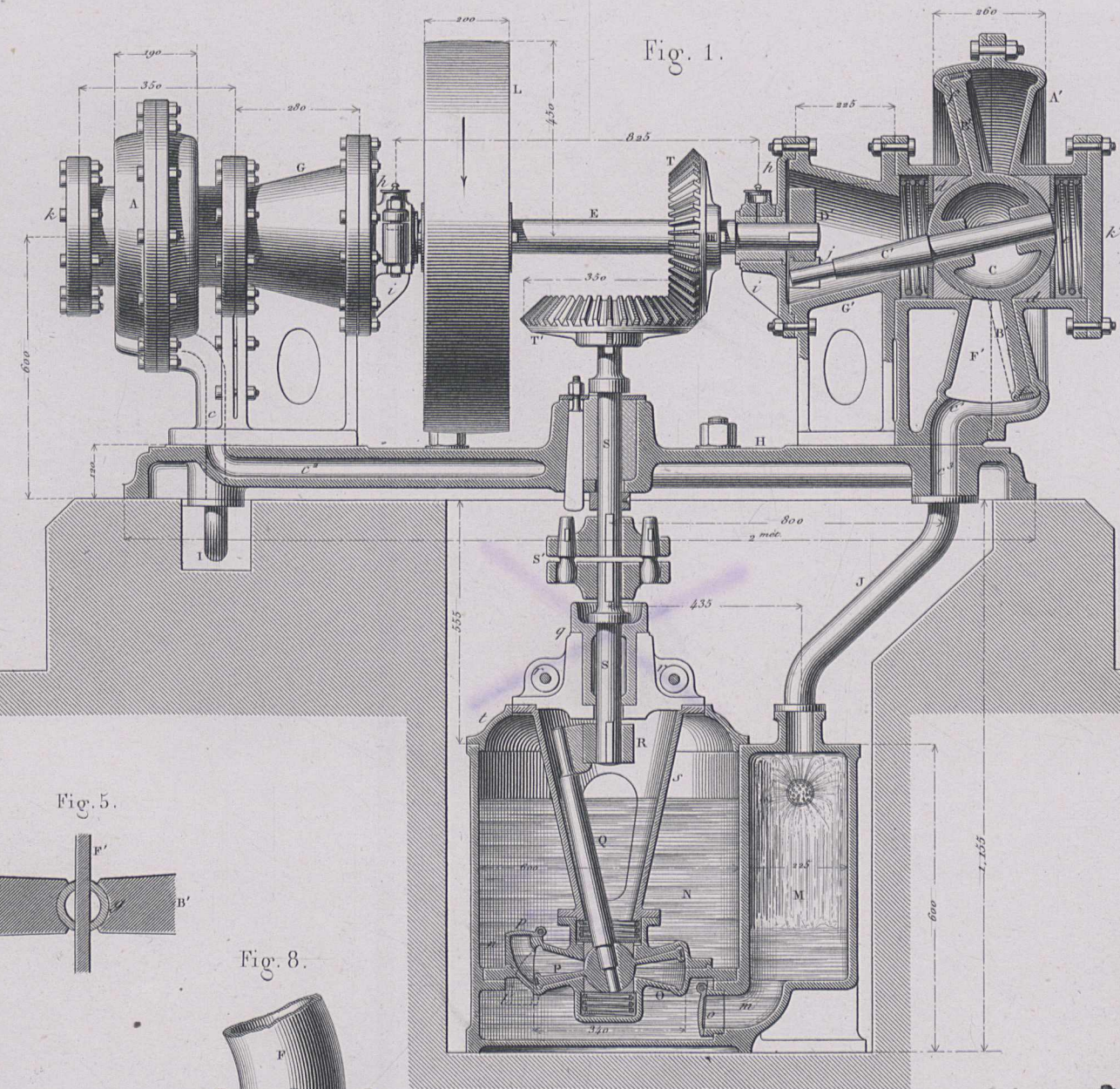


Fig. 2.

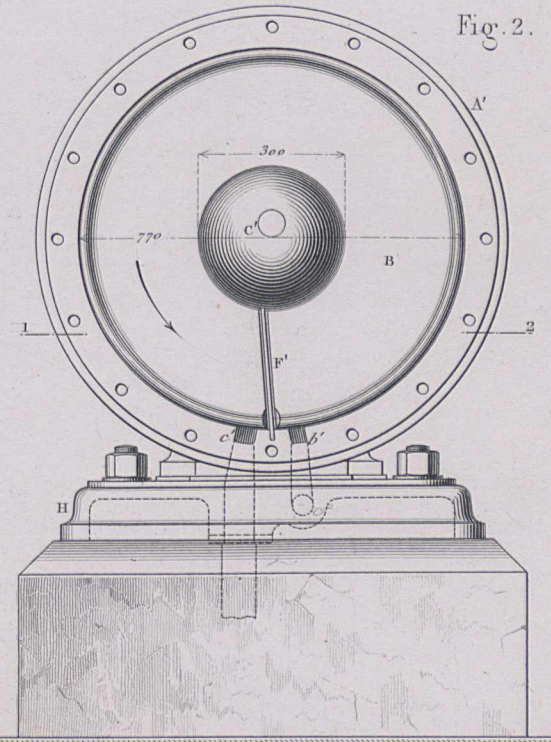


Fig. 4.

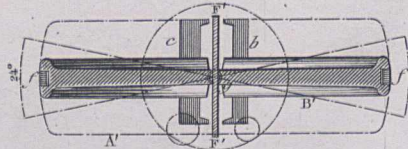


Fig. 5.

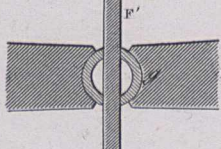
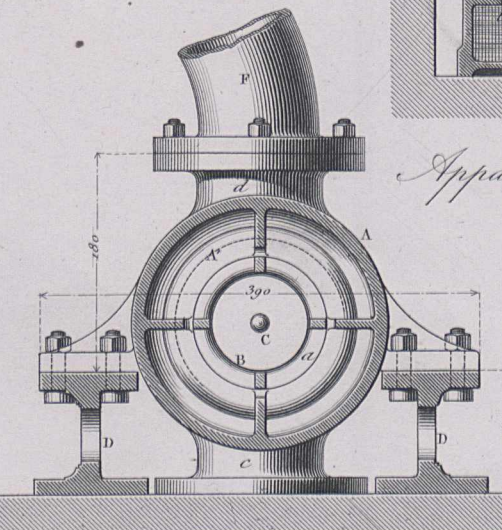
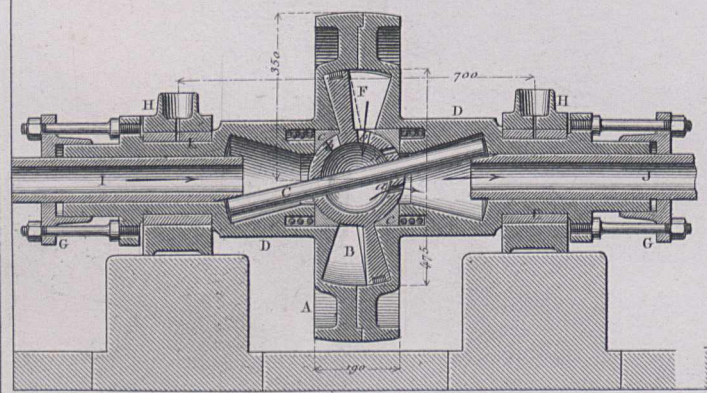


Fig. 8.



Machine à disque, à corps tournant.

Fig. 6.



*Appareil distributeur équilibré,
par M. Perret.*

Echelle de 1/6.

*Echelle de 1/15
pour les Fig. 4 à 6.*

Fig. 9.

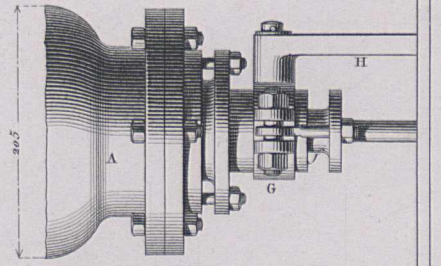
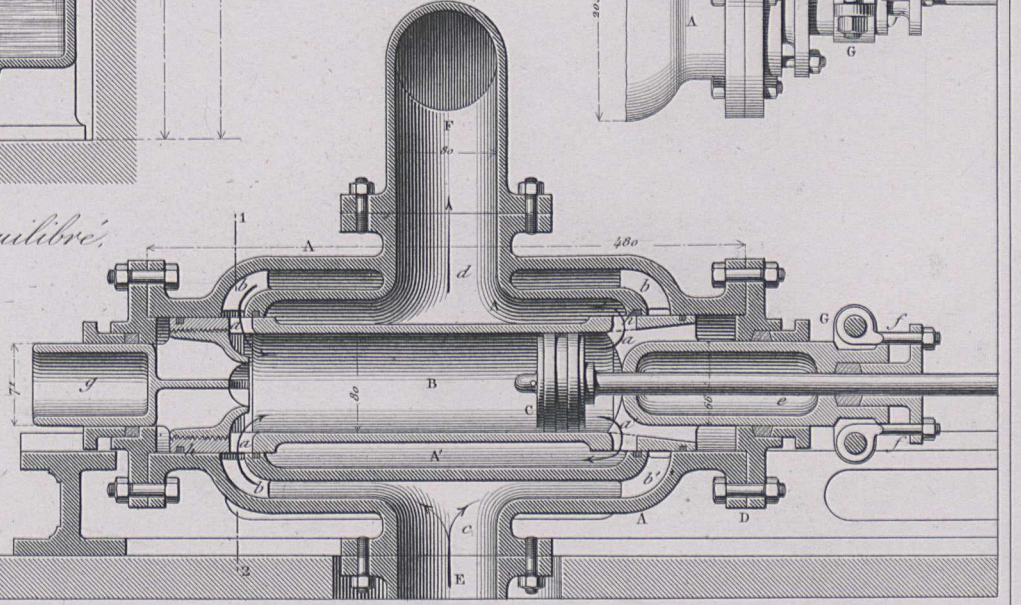
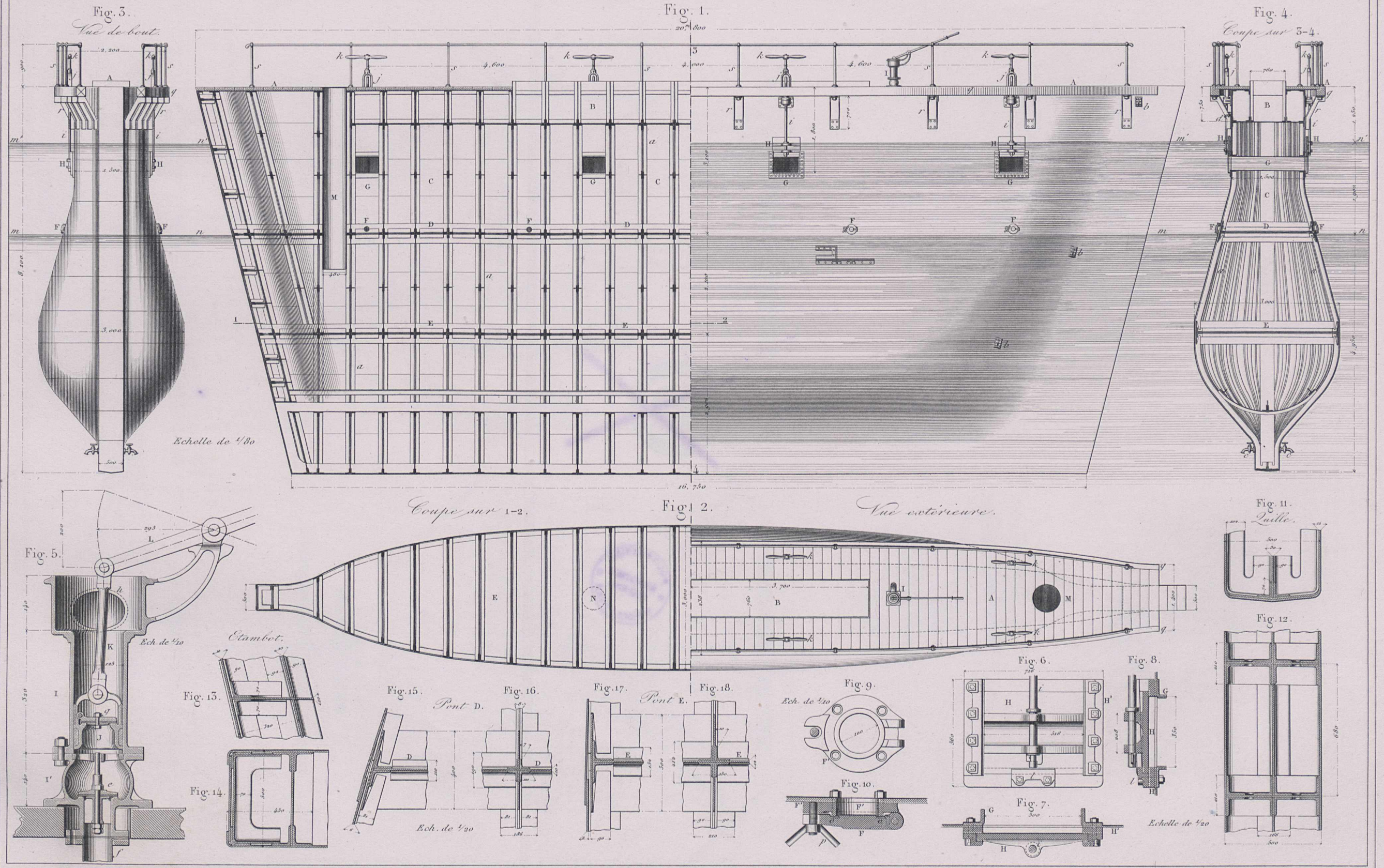


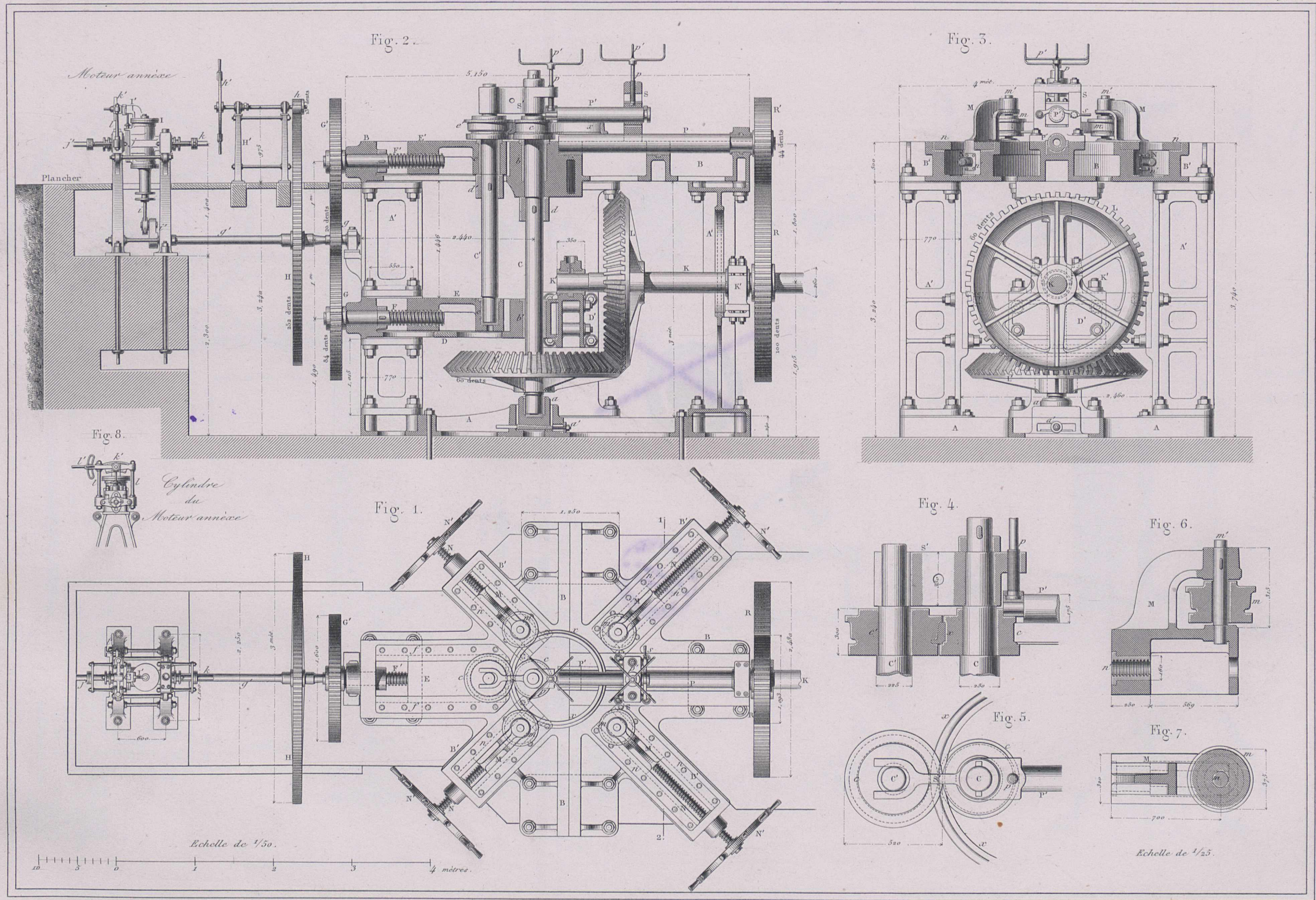
Fig. 7.







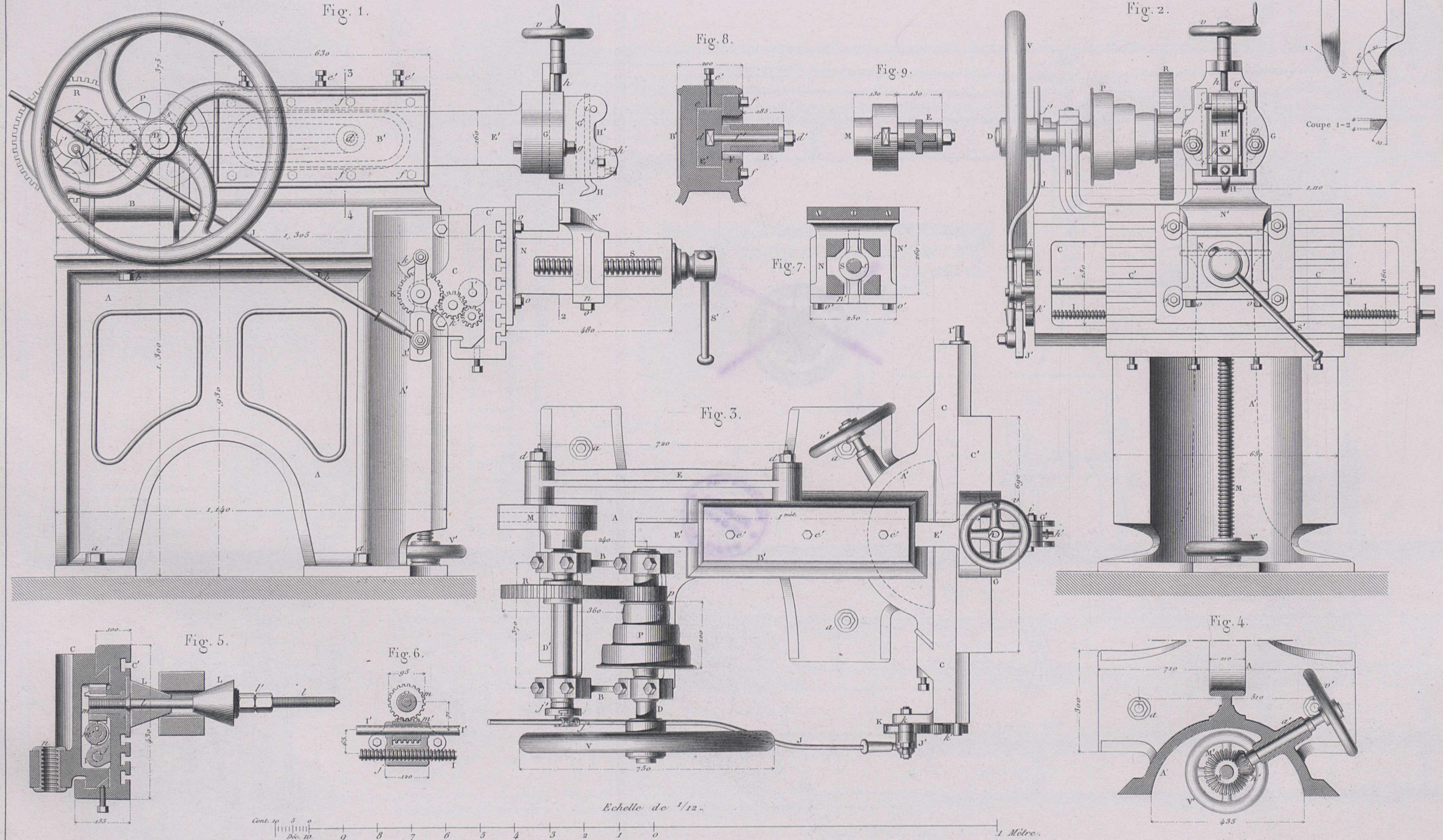






Modèle de M. Foucher, construit par M. M. F. Arbey et C^{ie}

Course maximum de l'outil: 0^m.300.





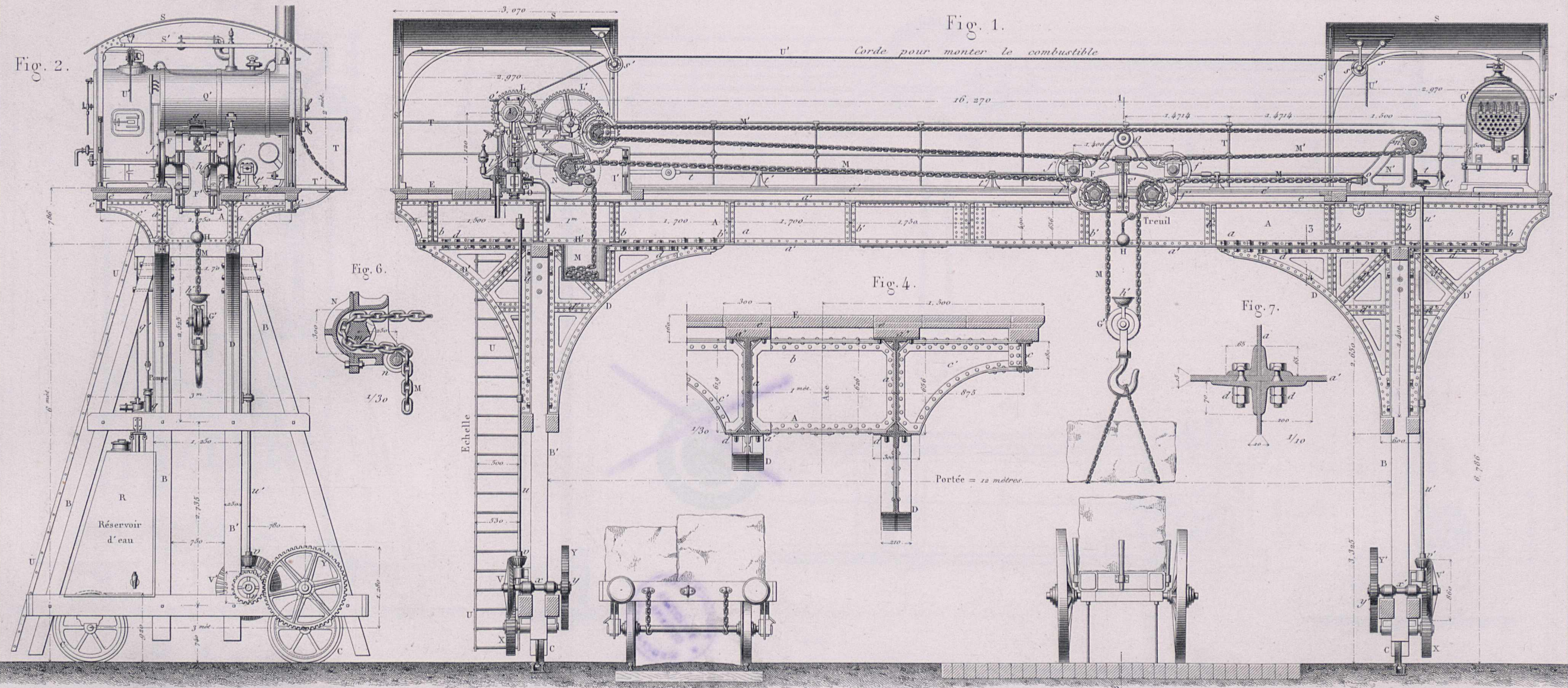


Fig. 2.

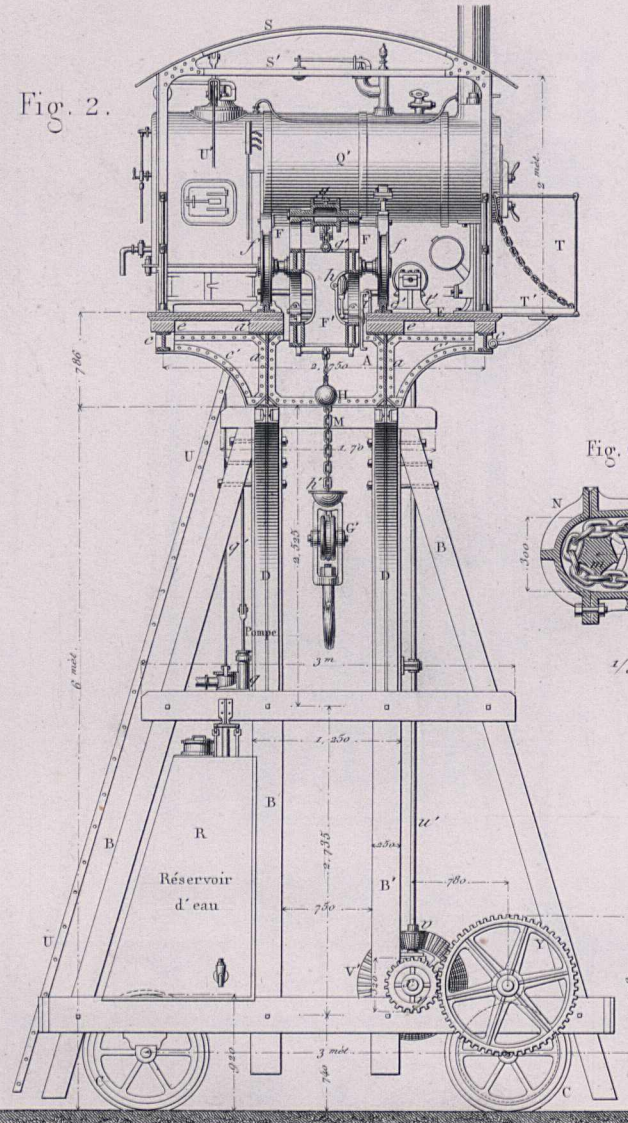


Fig. 6.

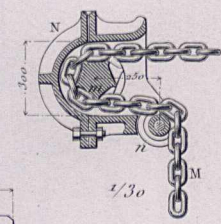


Fig. 4.

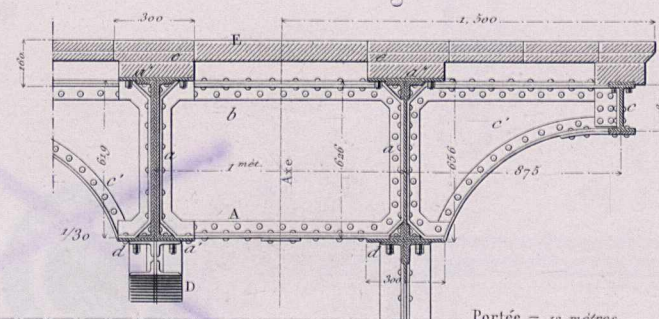
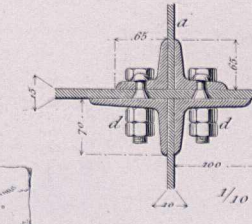


Fig. 7.



Machine motrice.

Fig. 5.

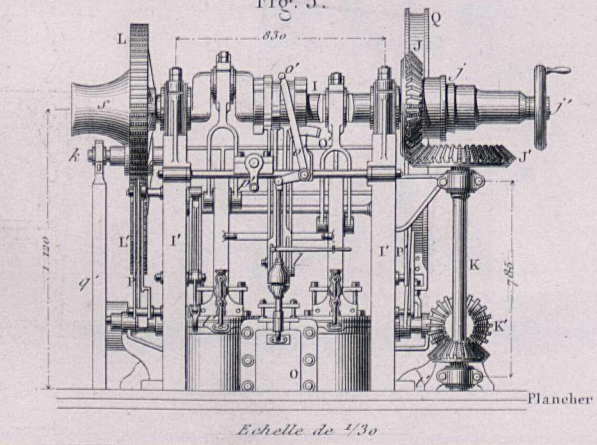
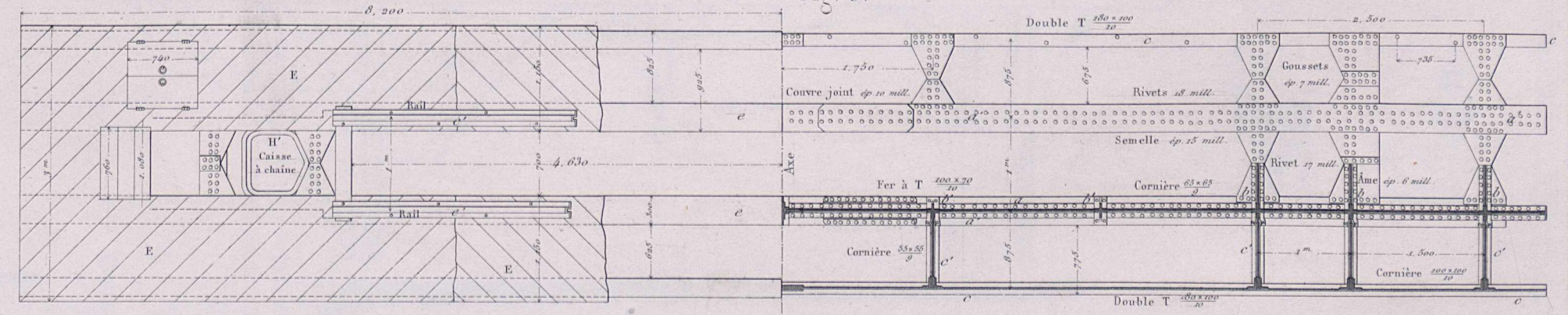
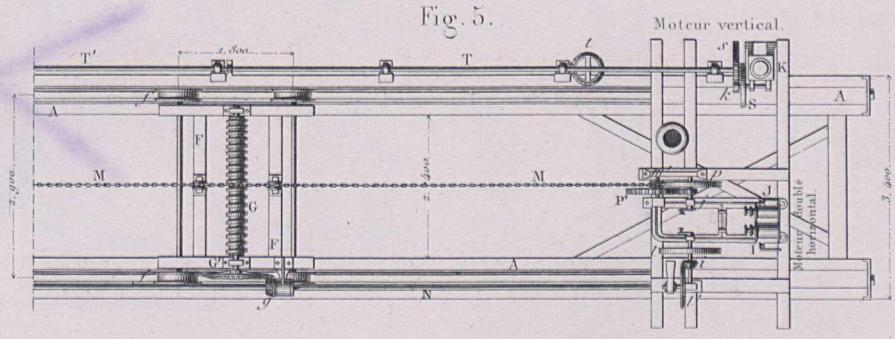
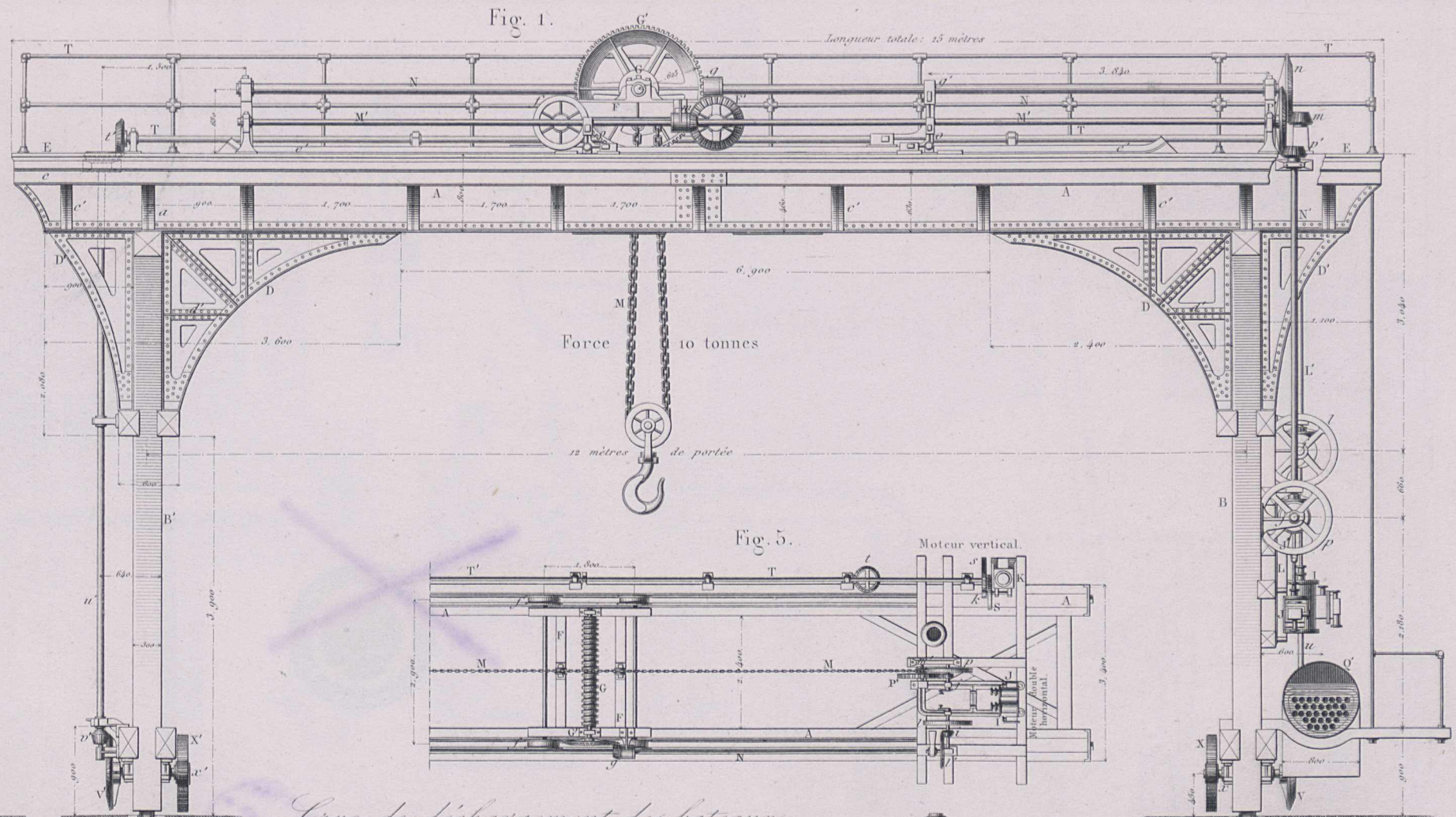
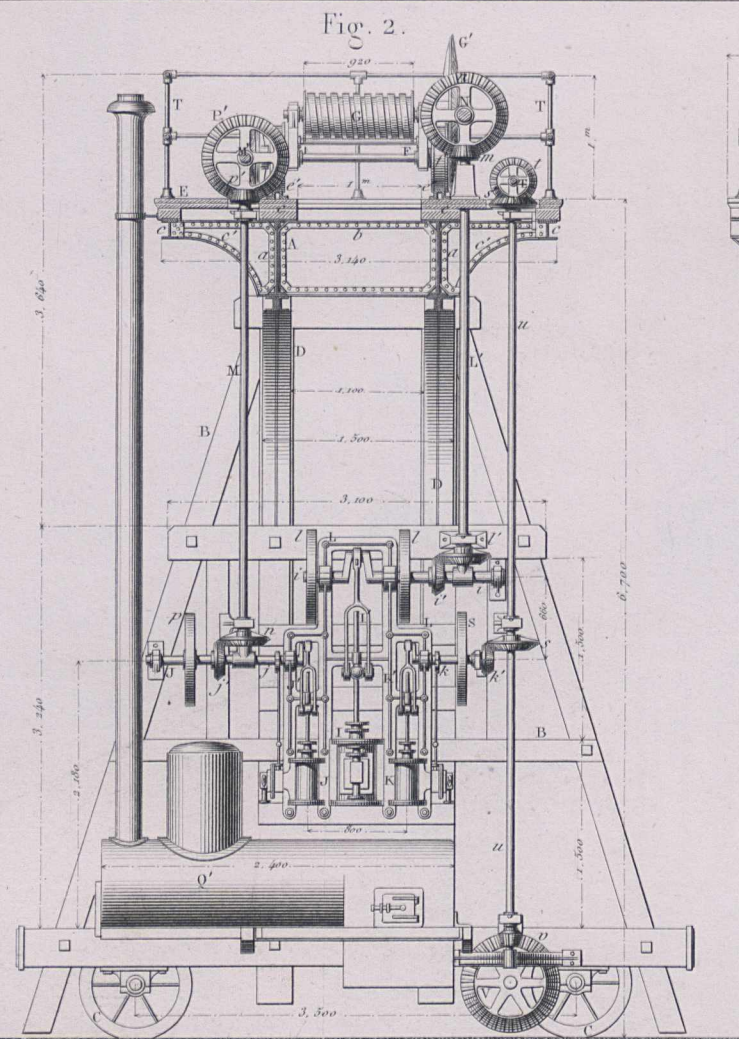


Fig. 3.

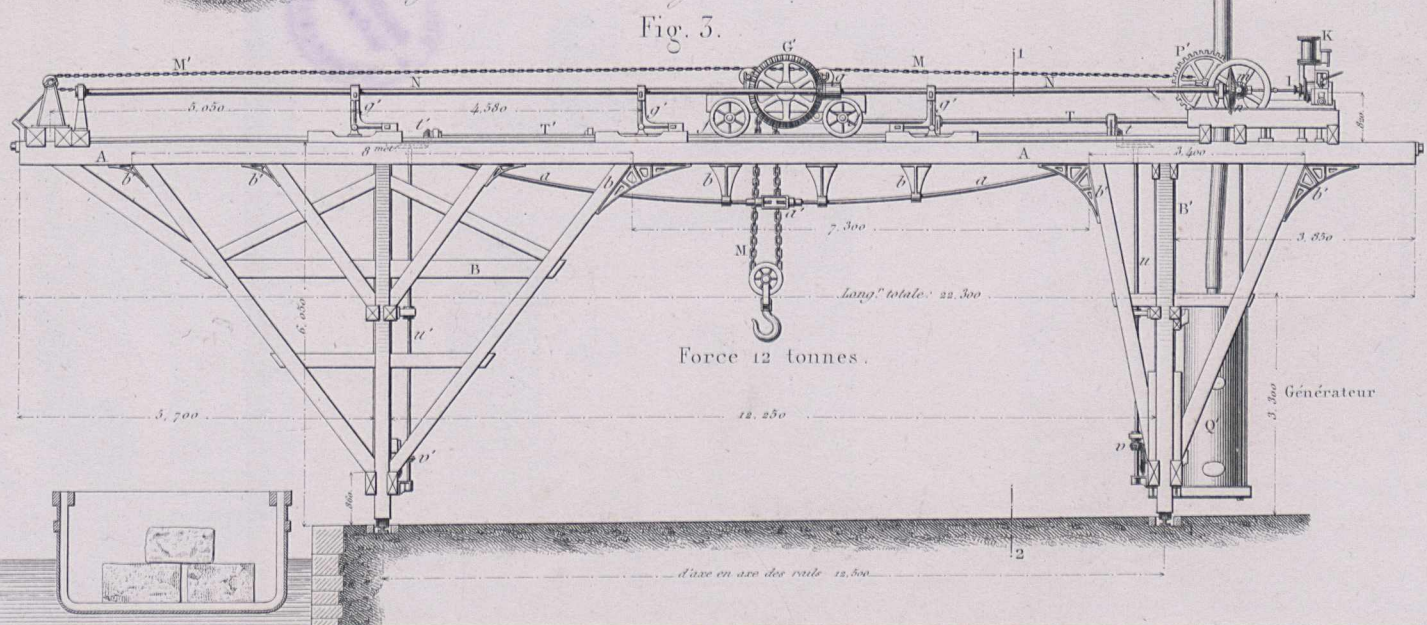
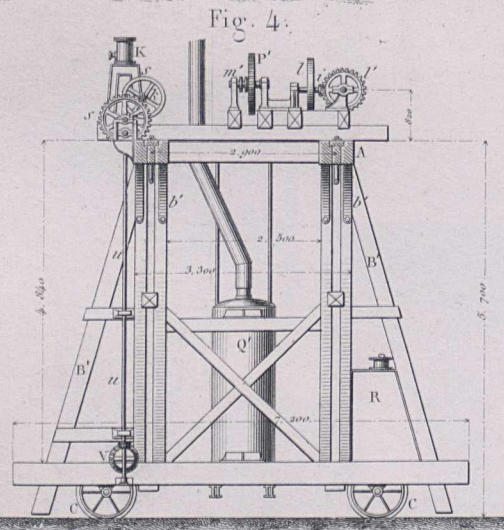


Echelle de 1/60 pour les Fig. 1 à 3.

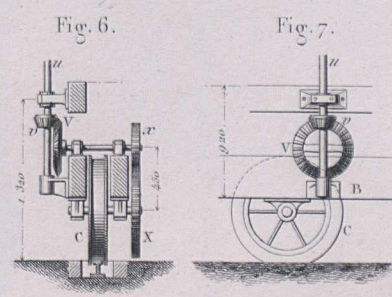




Grue de déchargement des bateaux.



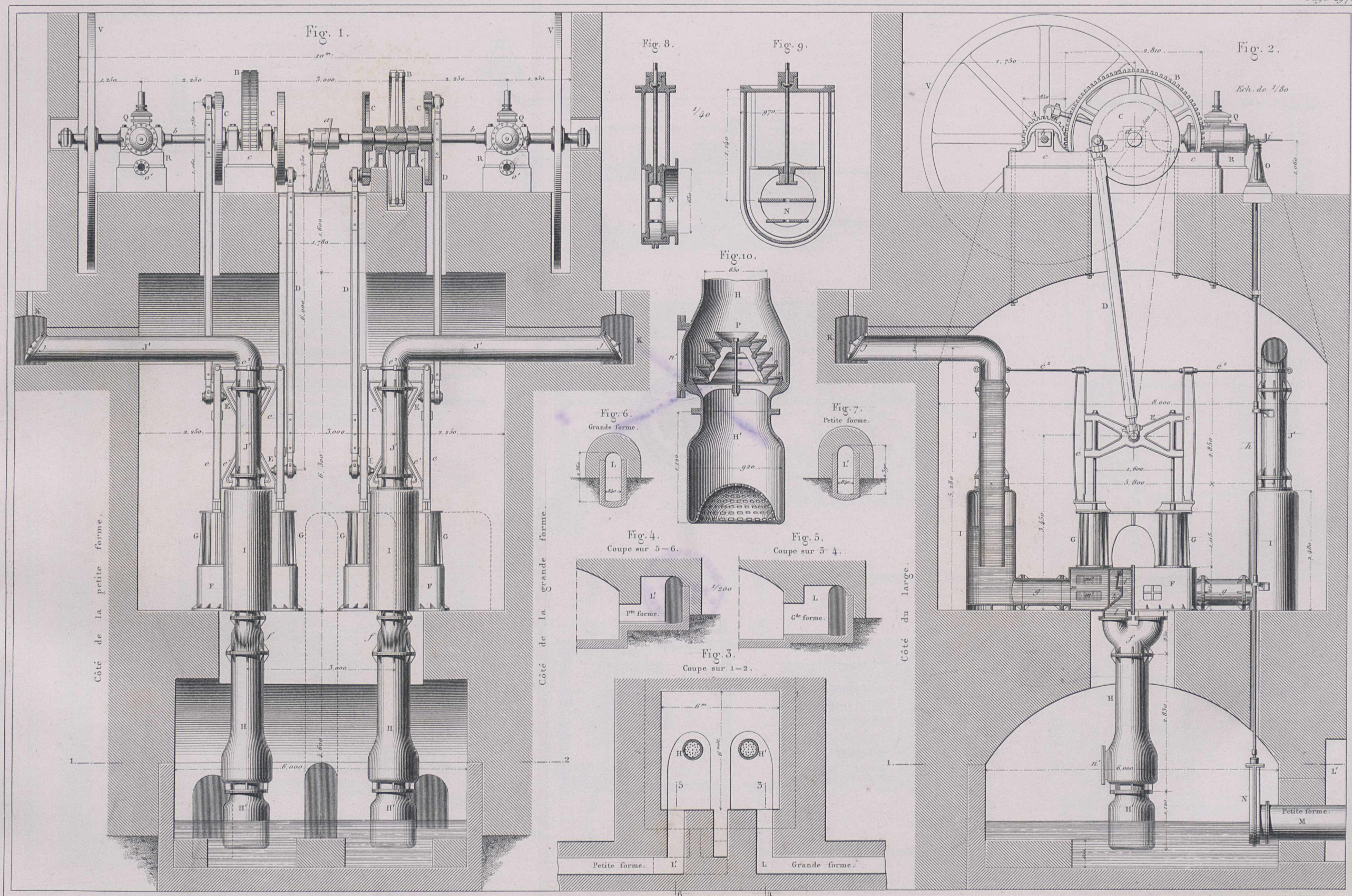
Mouvement de Translation.



Echelle de 1/60 pour les Fig. 1, 2 et 6, 7.

Echelle de 1/120 pour les Fig. 3 et 4.

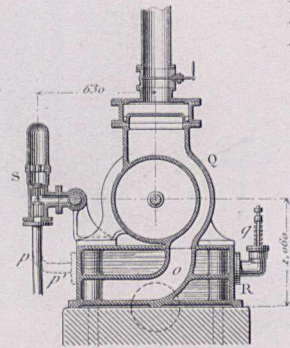






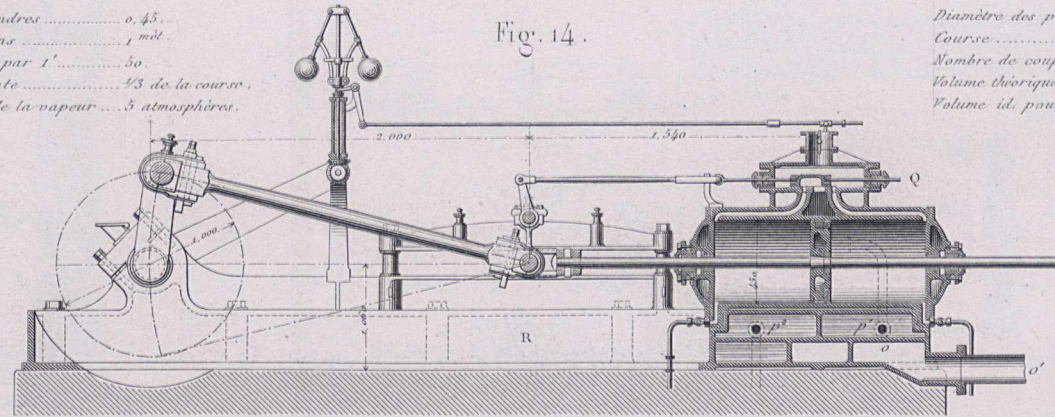
Machines motrices.

Fig. 15.



Diamètre des cylindres 0,45.
 Course des pistons 1 mètr.
 Nombre de tours par 1' 50.
 Durée de la détente $\frac{1}{3}$ de la course.
 Pression absolue de la vapeur 5 atmosphères.

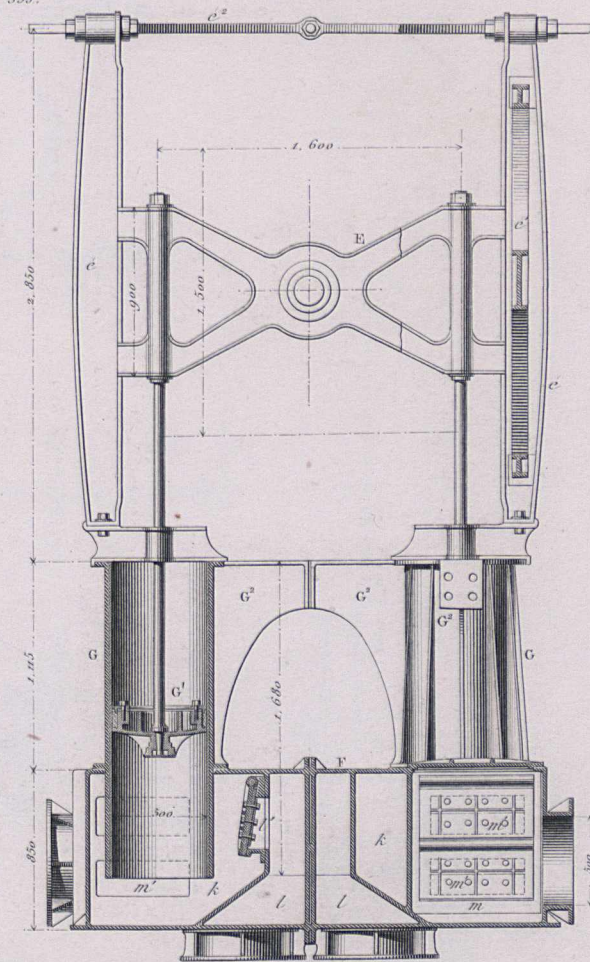
Fig. 14.



Pompes.

Fig. 16.

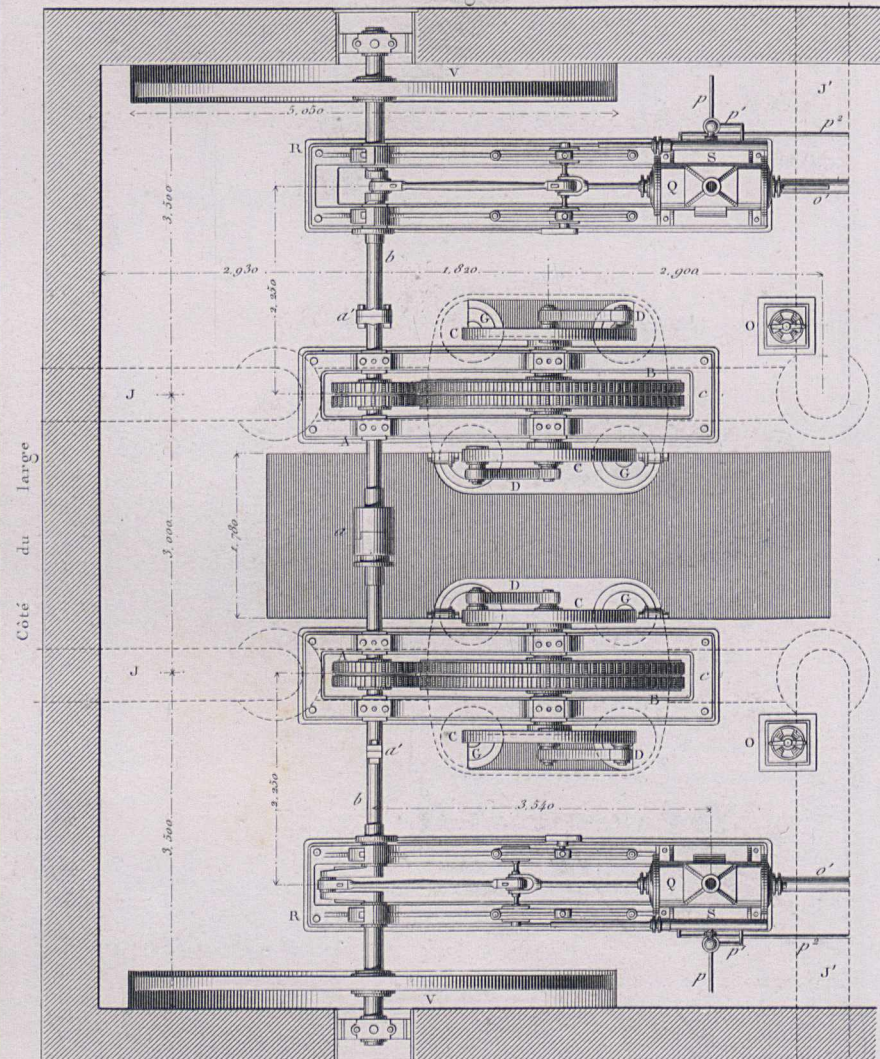
Diamètre des pistons 0^m.50.
 Course 1,50.
 Nombre de coups doubles par 1' 24 à 15.
 Volume théorique engendré par coup simple 0^m.c. 294 450.
 Volume id. pour les huit coups 2^m.c. 355.



Echelle de $\frac{1}{40}$ p^r Fig. 14 à 17.

Fig. 11.

Côté de la grande forme.



Côté de la petite forme.

Fig. 12.

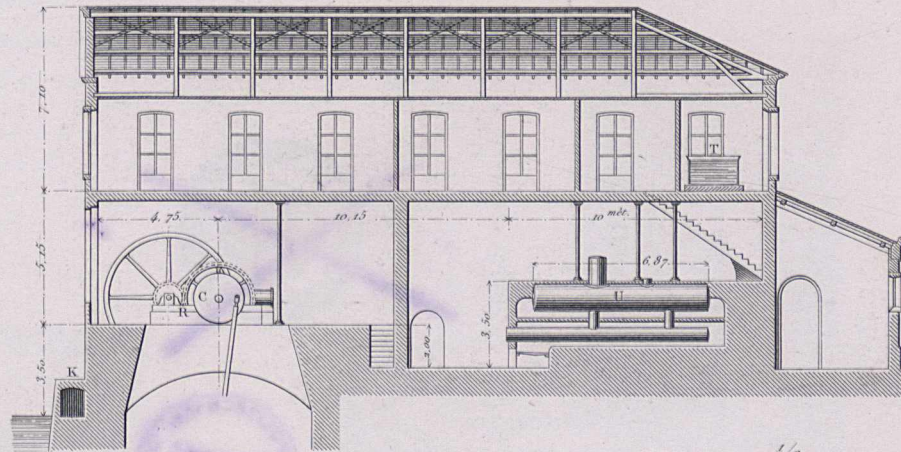


Fig. 13.

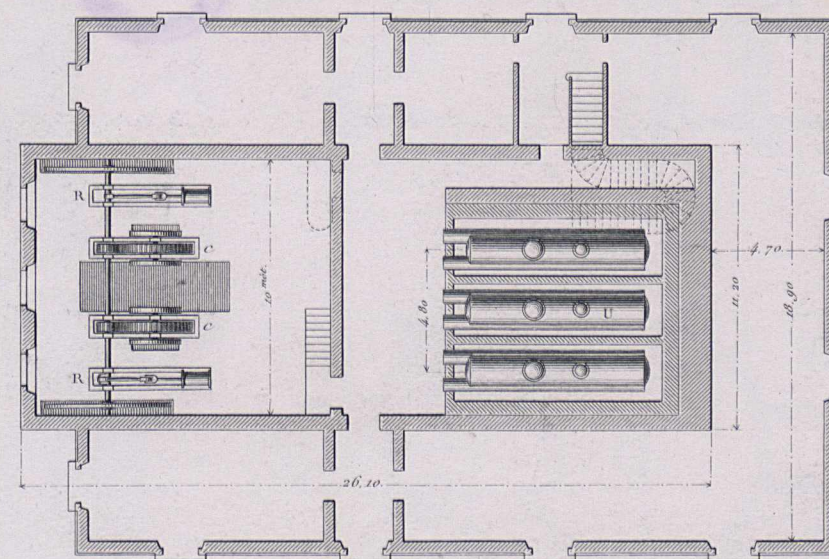
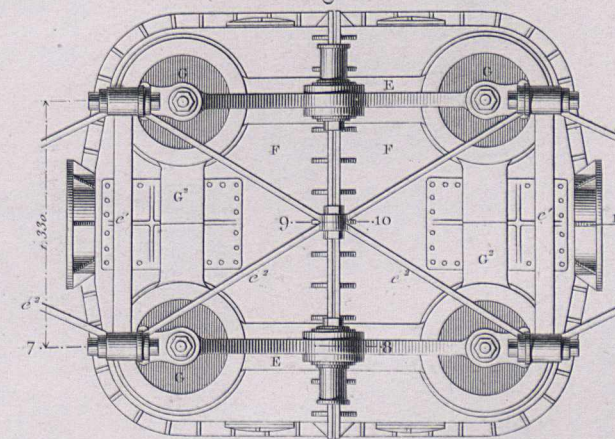
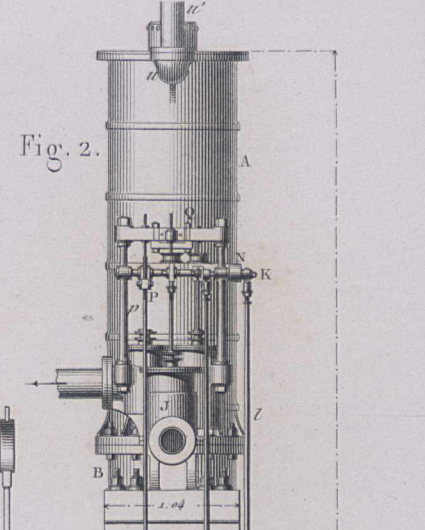
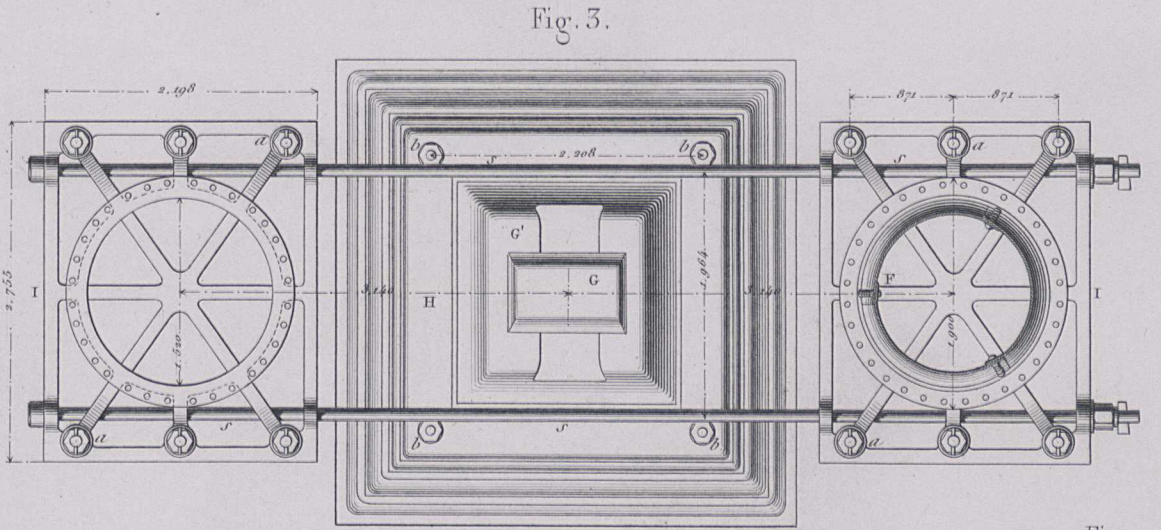
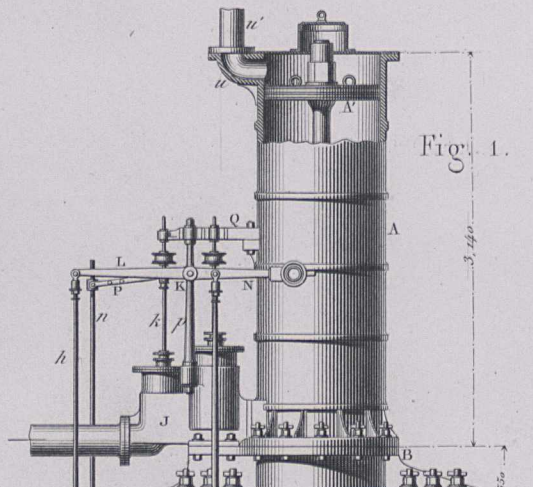
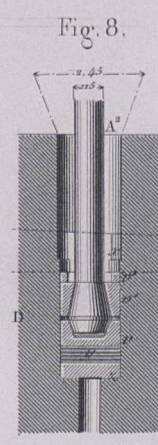


Fig. 17.







Echelle de 1/60 pour les Fig. 1 à 3.
Echelle de 1/30 pour les Fig. 4 à 8.

Poids du marteau..... 15, 190^{kil.}
Hauteur de la chute..... 2^m 510.
Poids total..... 230, 940^{kil.}

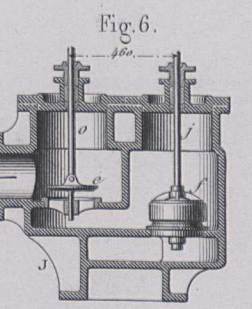
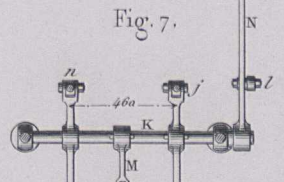
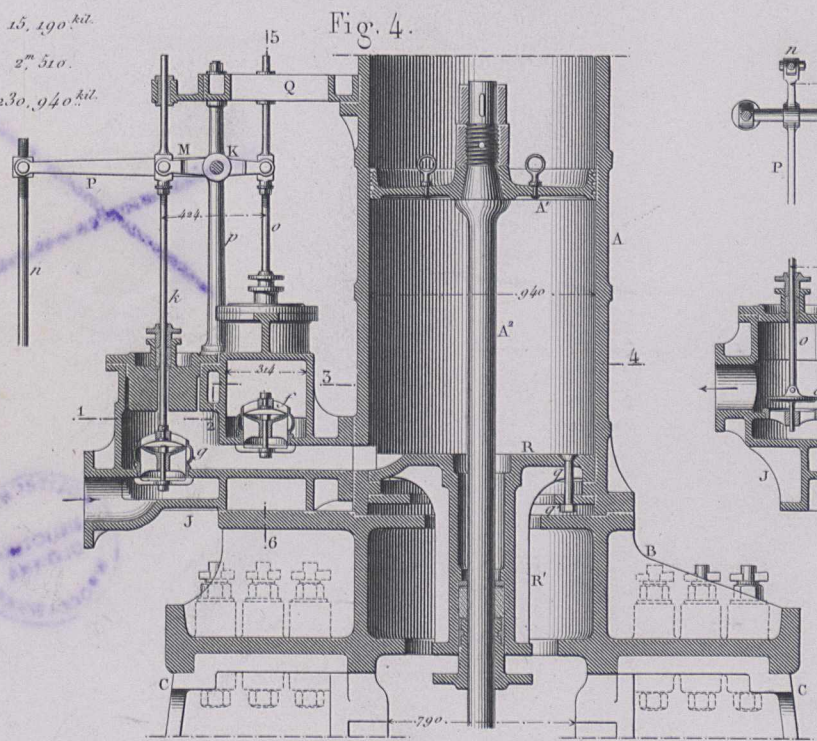
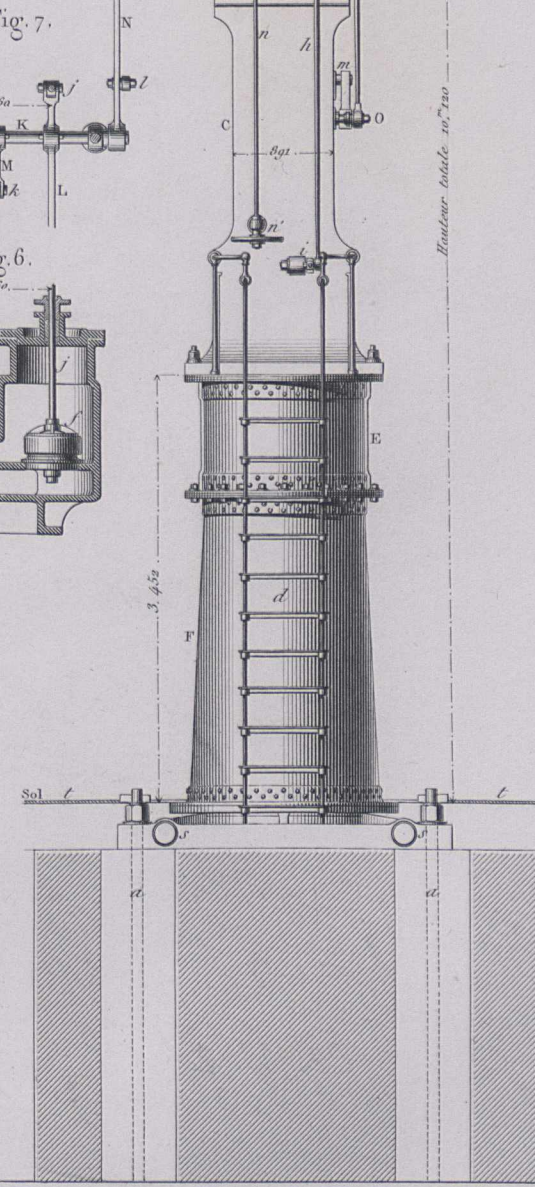
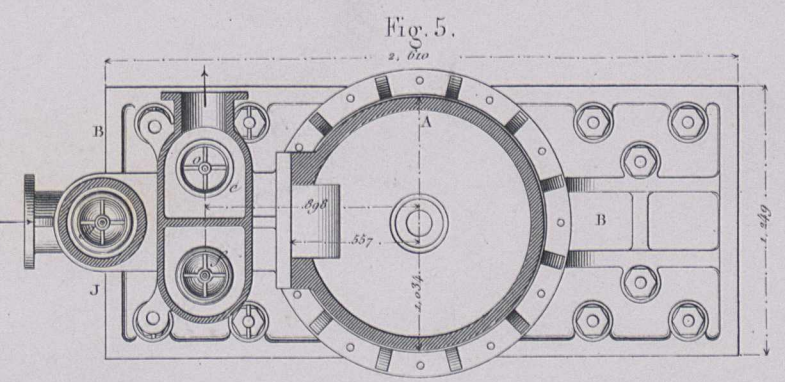
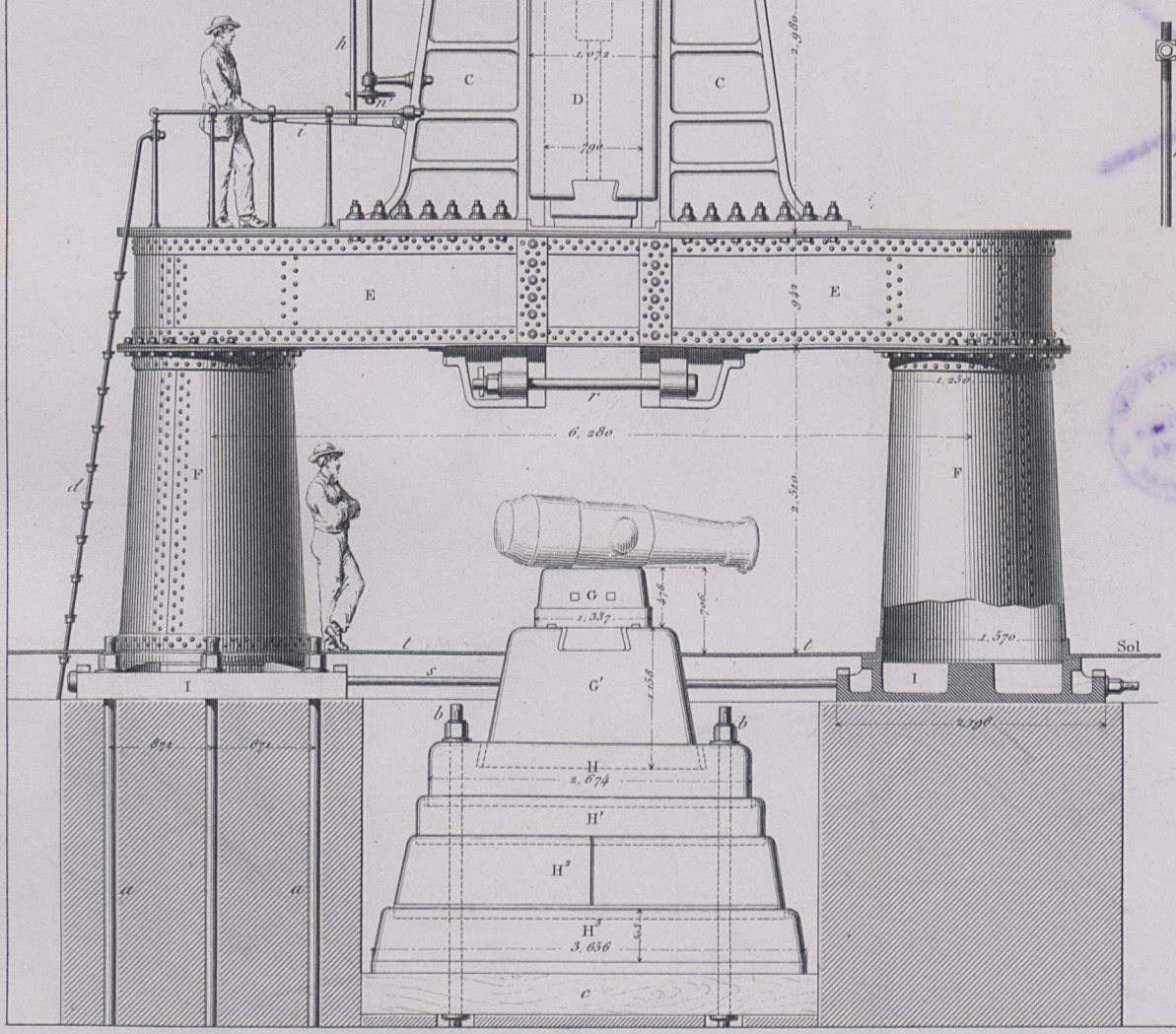
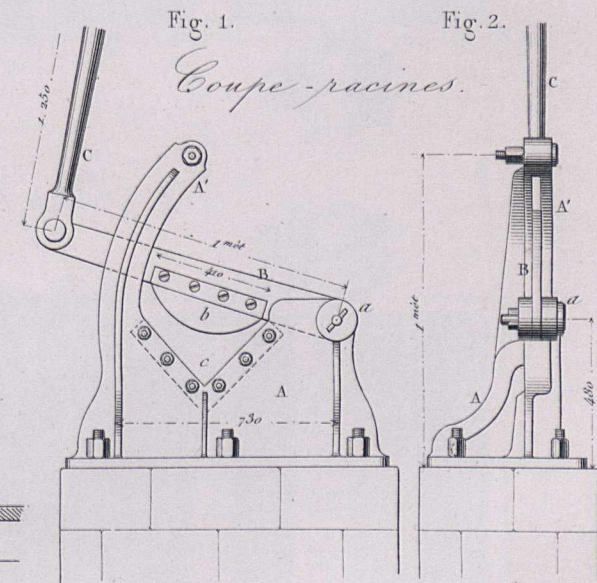
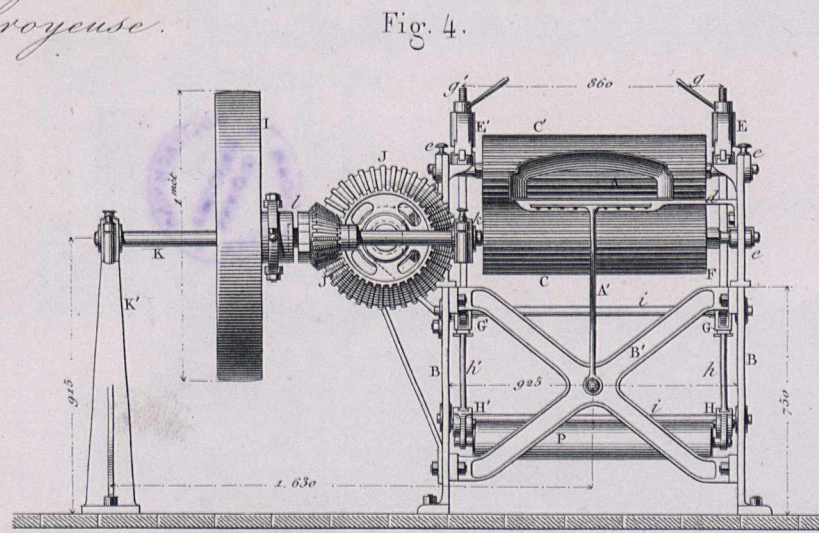
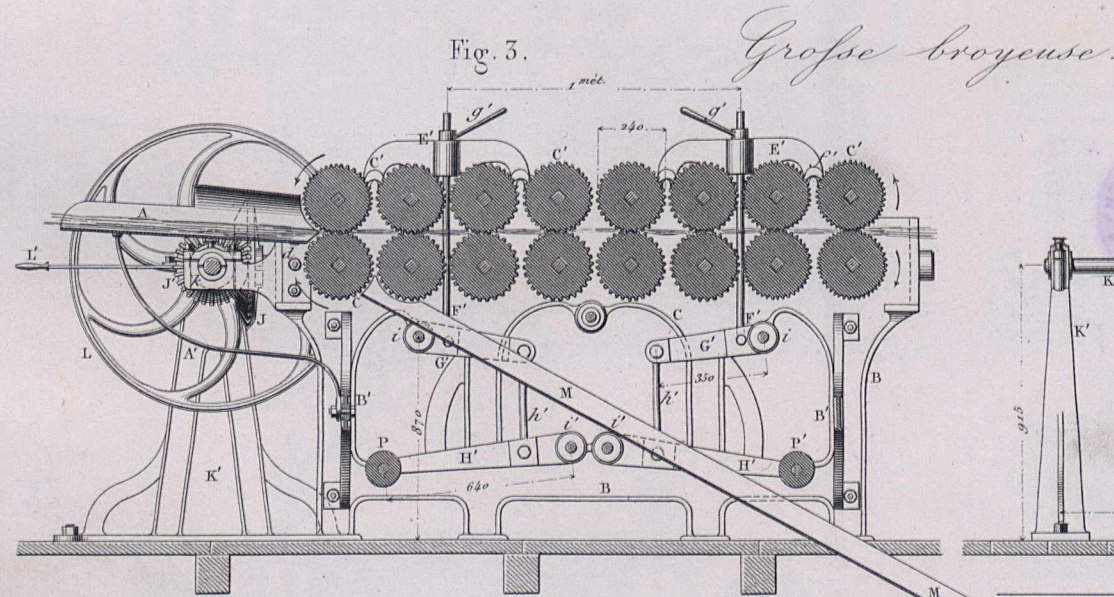
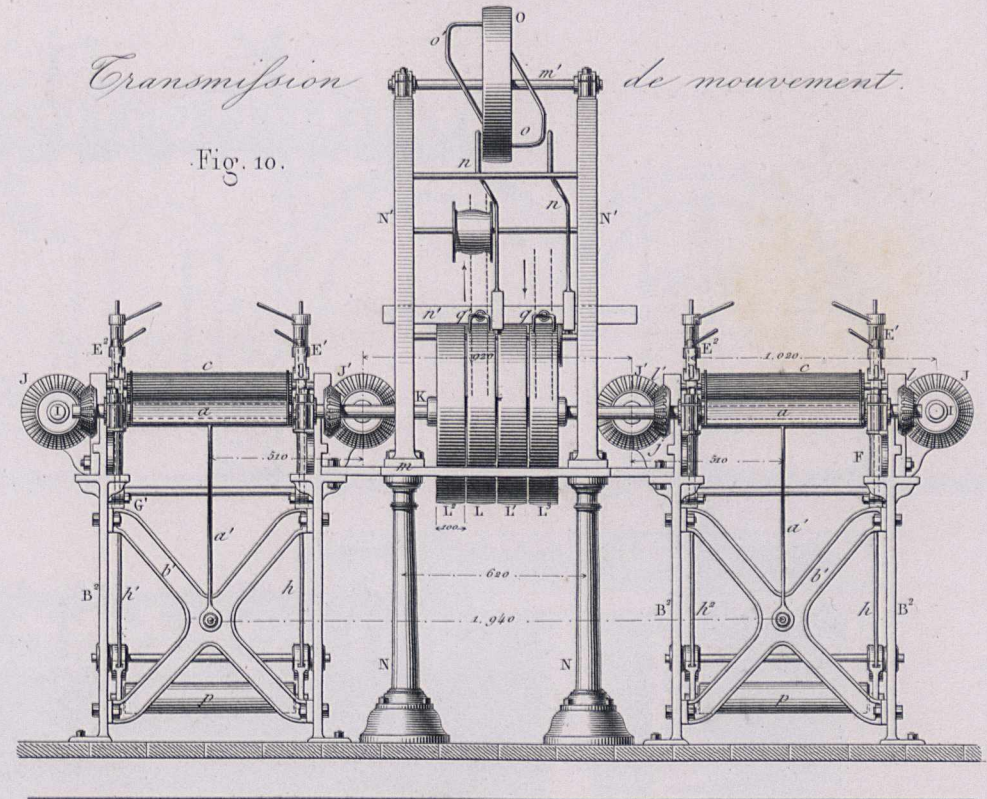
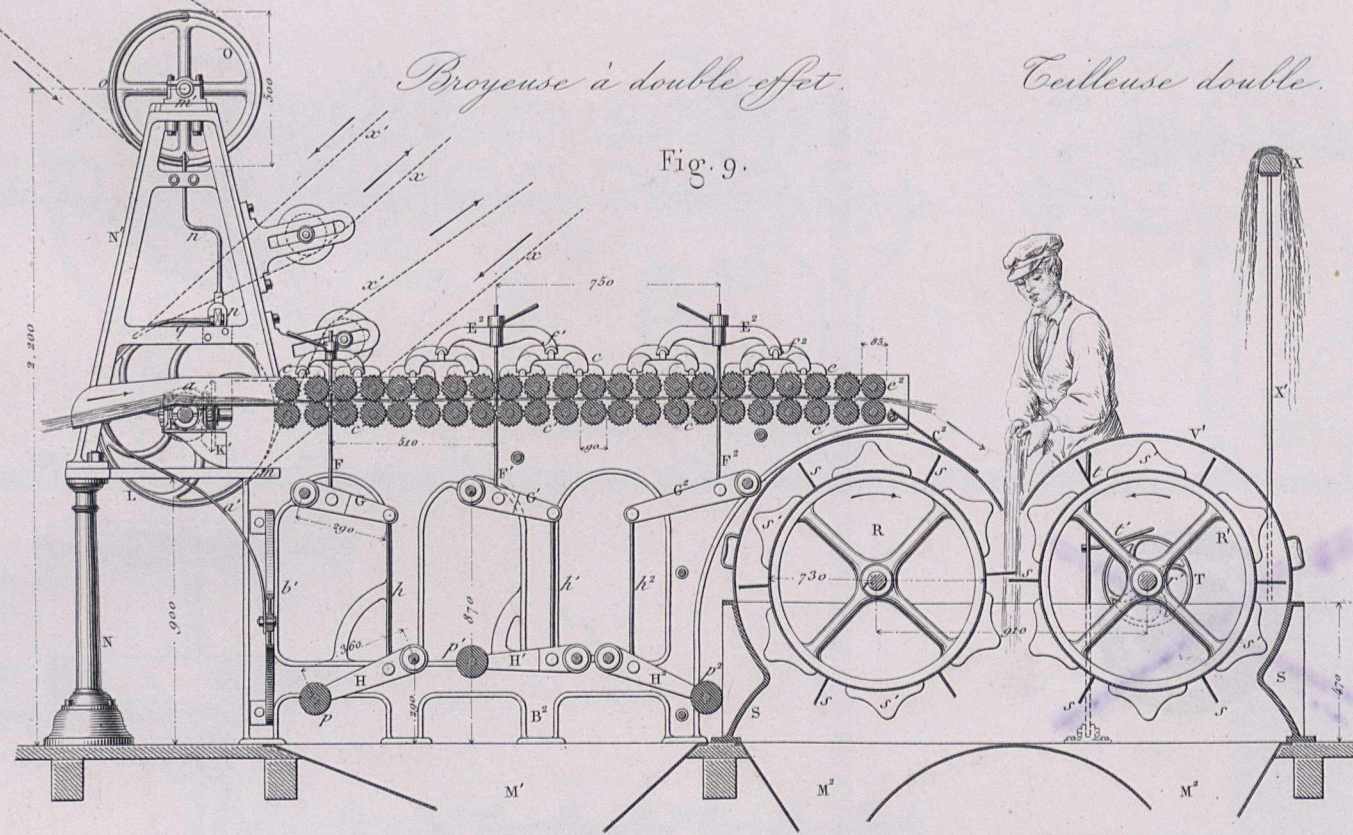


Fig. 7.

Fig. 6.







Echelle de $\frac{1}{25}$.
0 1 2 3 4 5 6 7 8 9 10 Mètres.



Fig. 5.

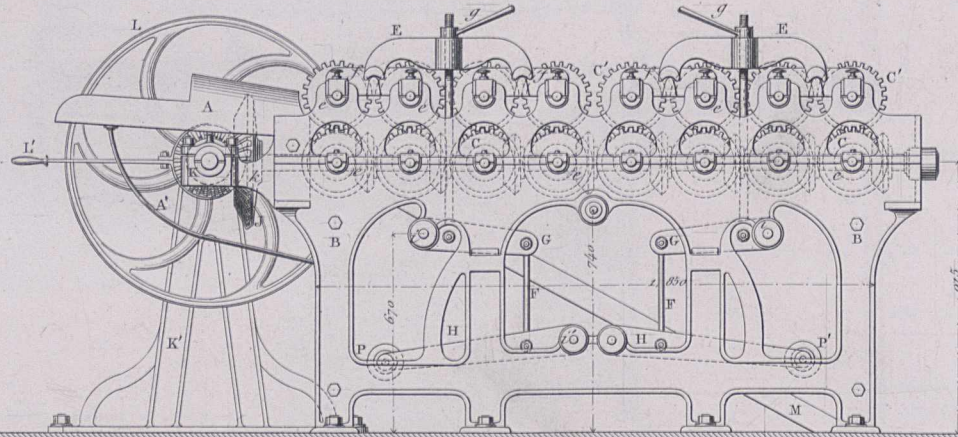


Fig. 8.

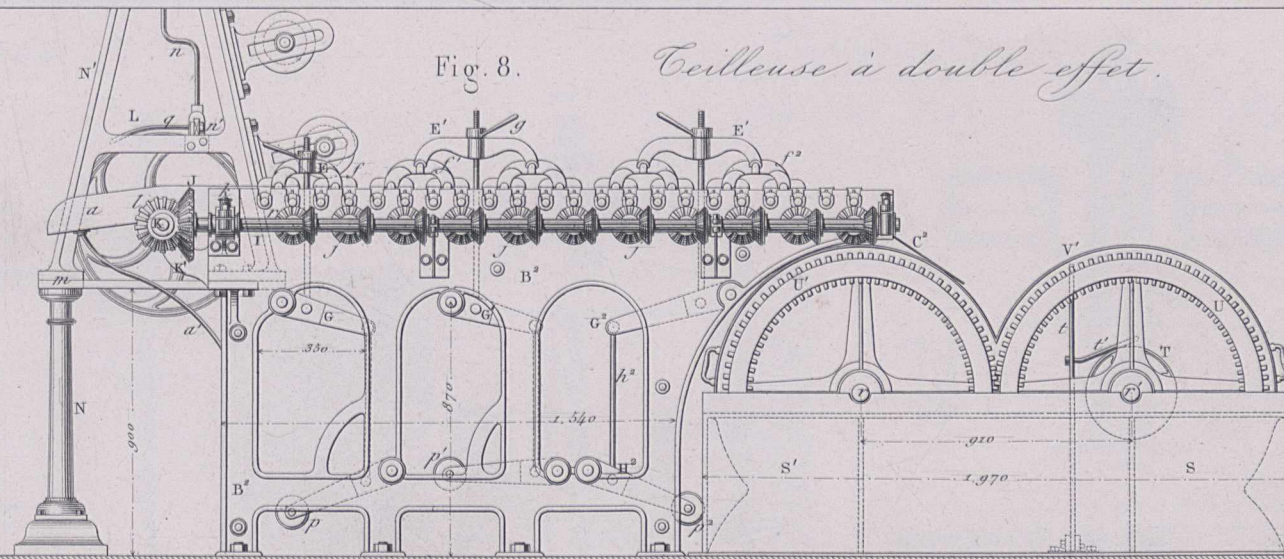


Fig. 6.

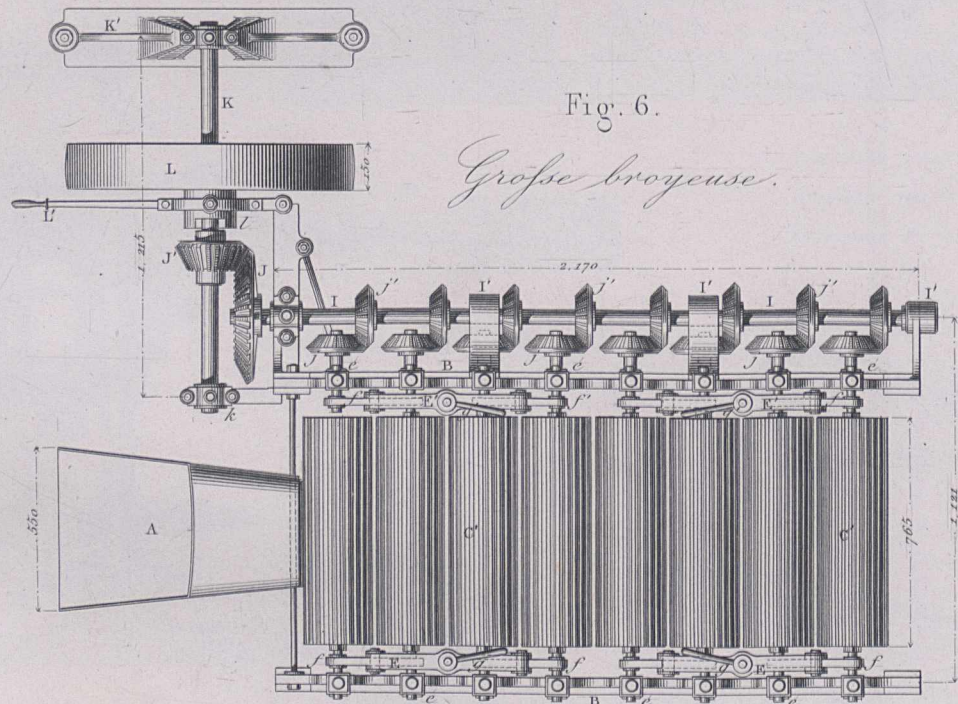


Fig. 7.

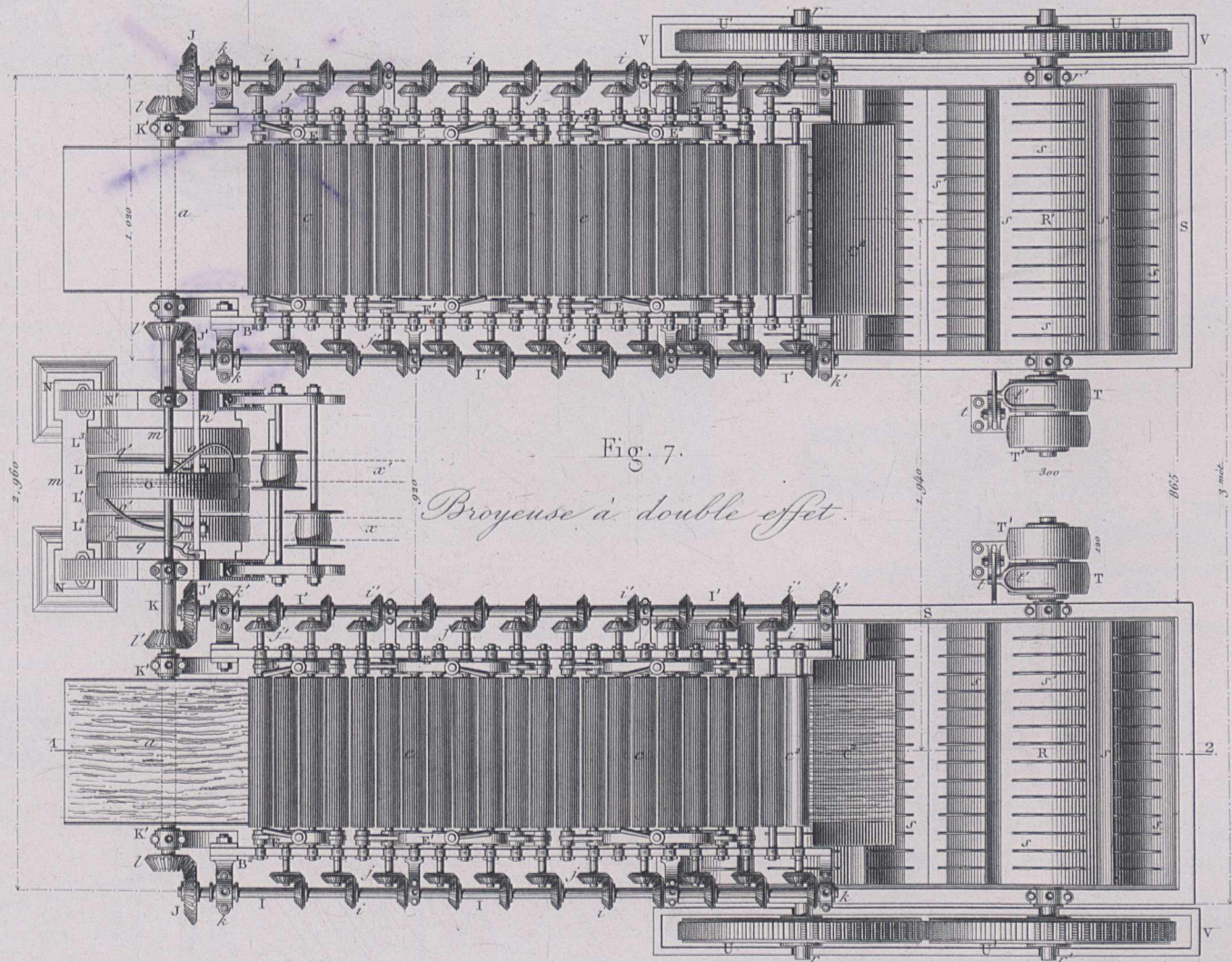
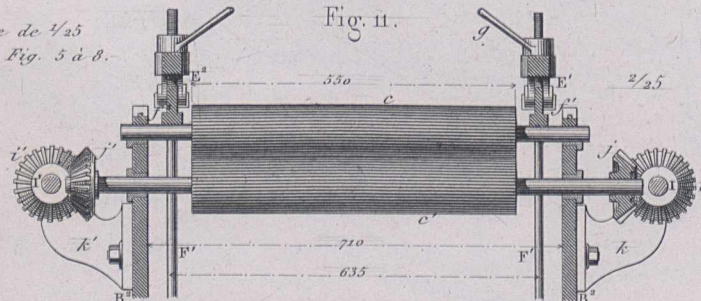


Fig. 11.

Echelle de 1/25 pour les Fig. 5 à 8.





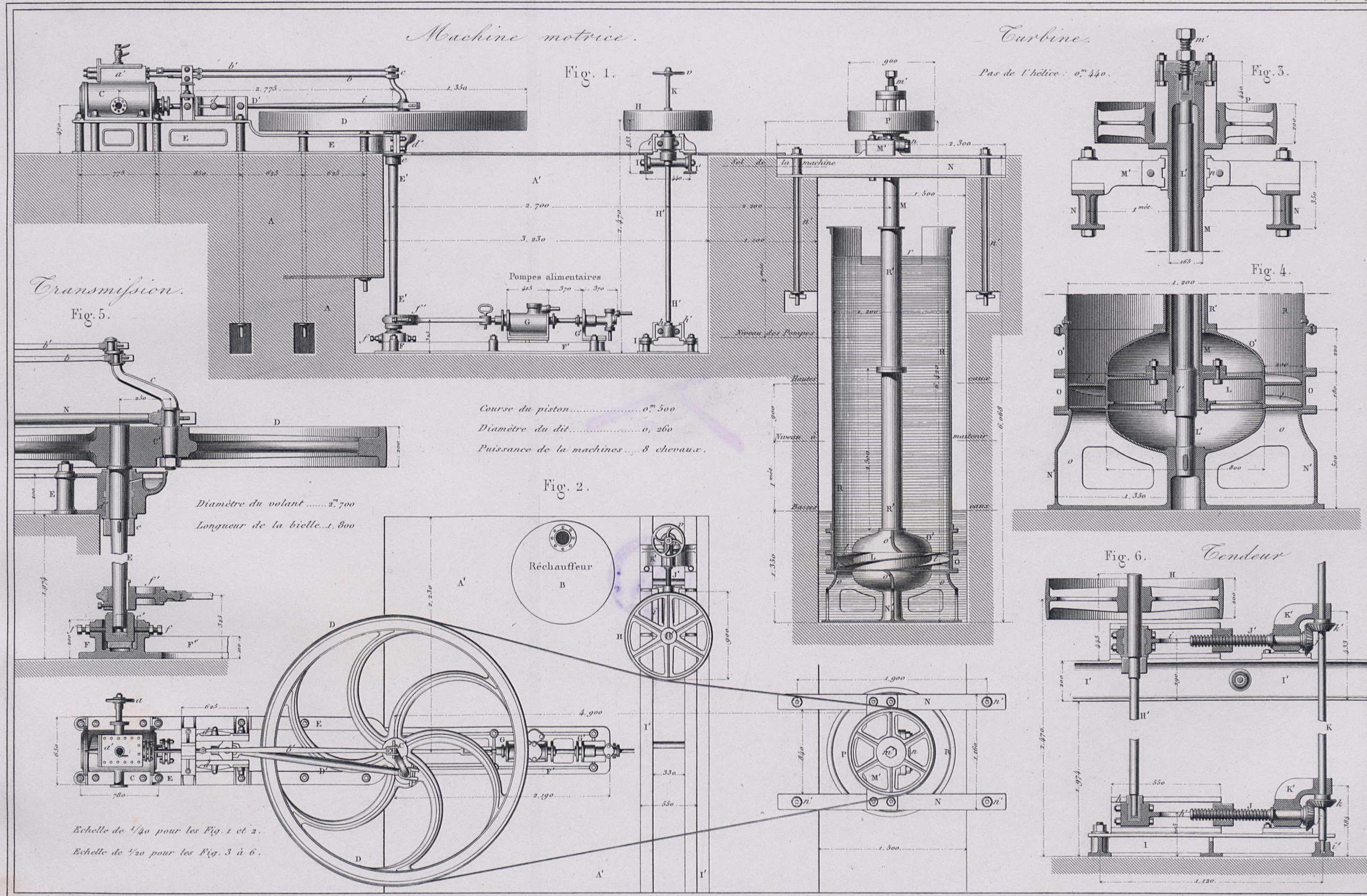




Fig. 1.

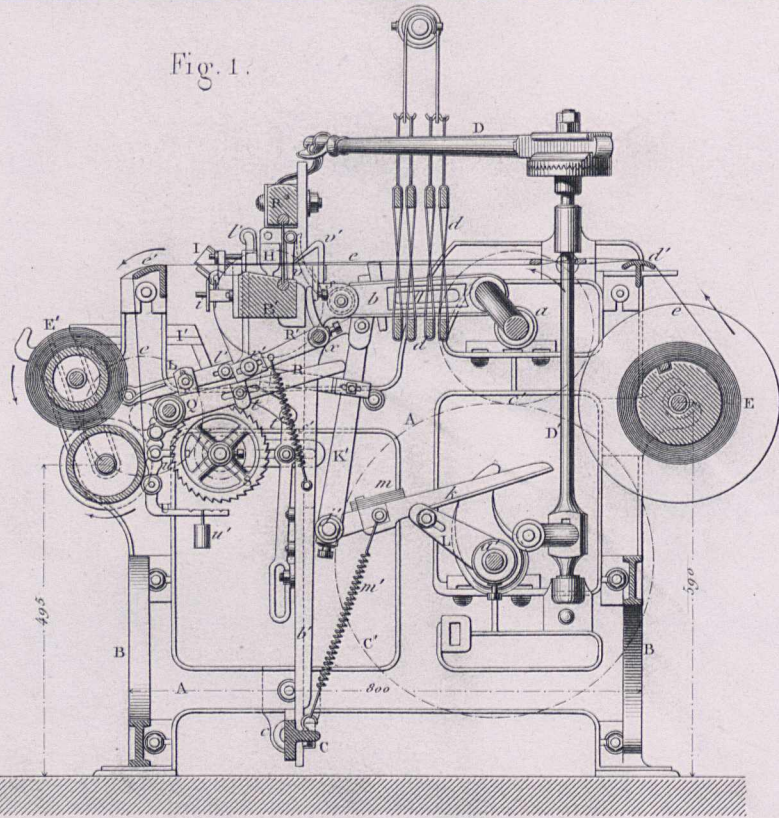


Fig. 2.

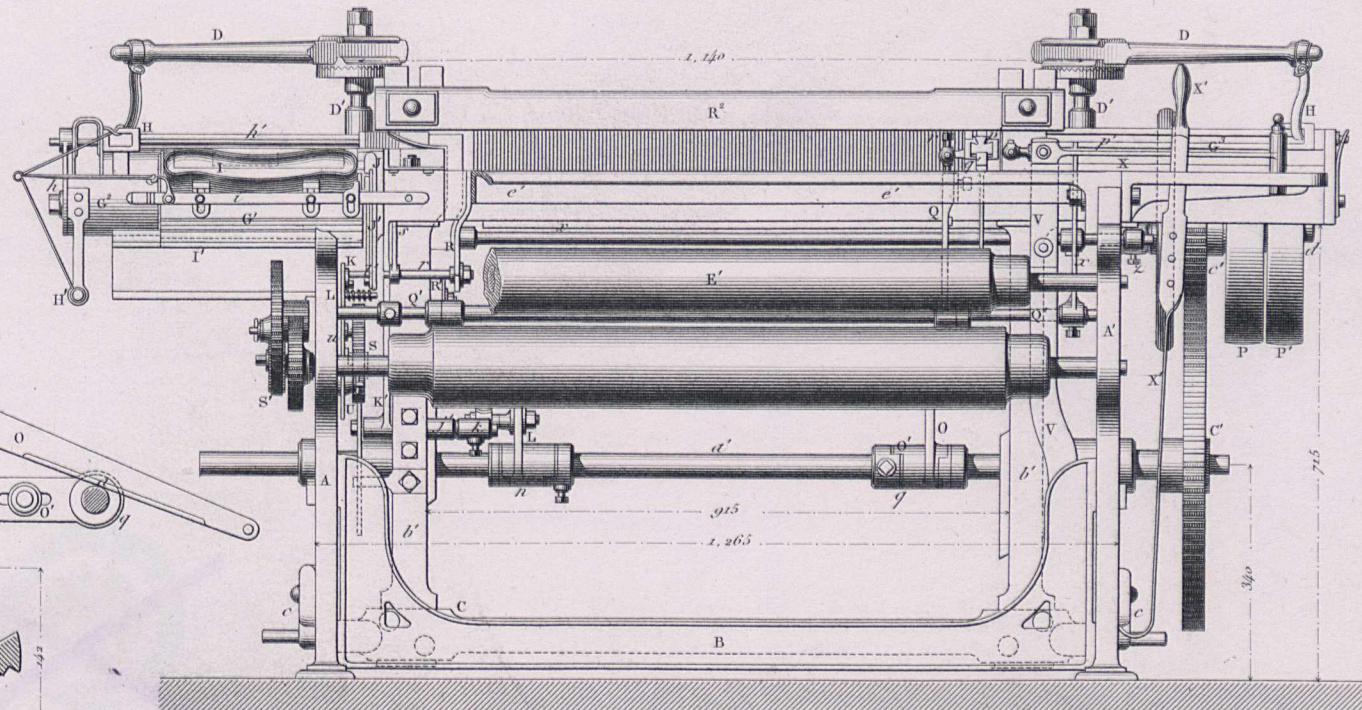


Fig. 11.

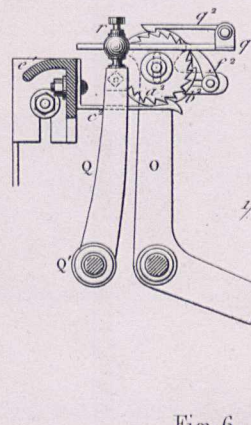


Fig. 6.

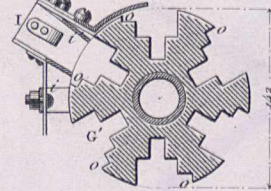


Fig. 4.

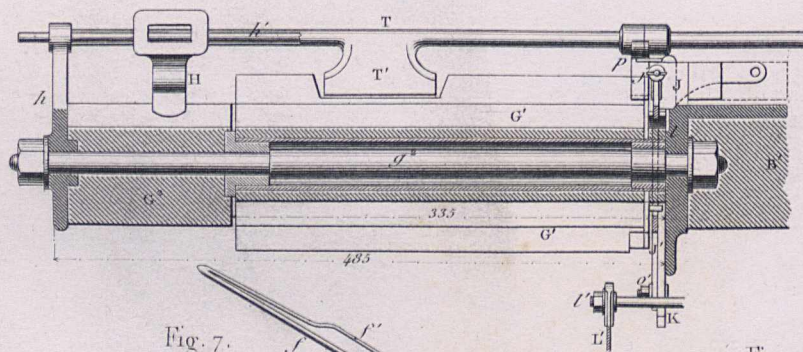


Fig. 5.

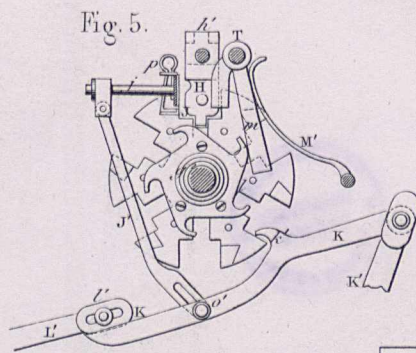


Fig. 3.

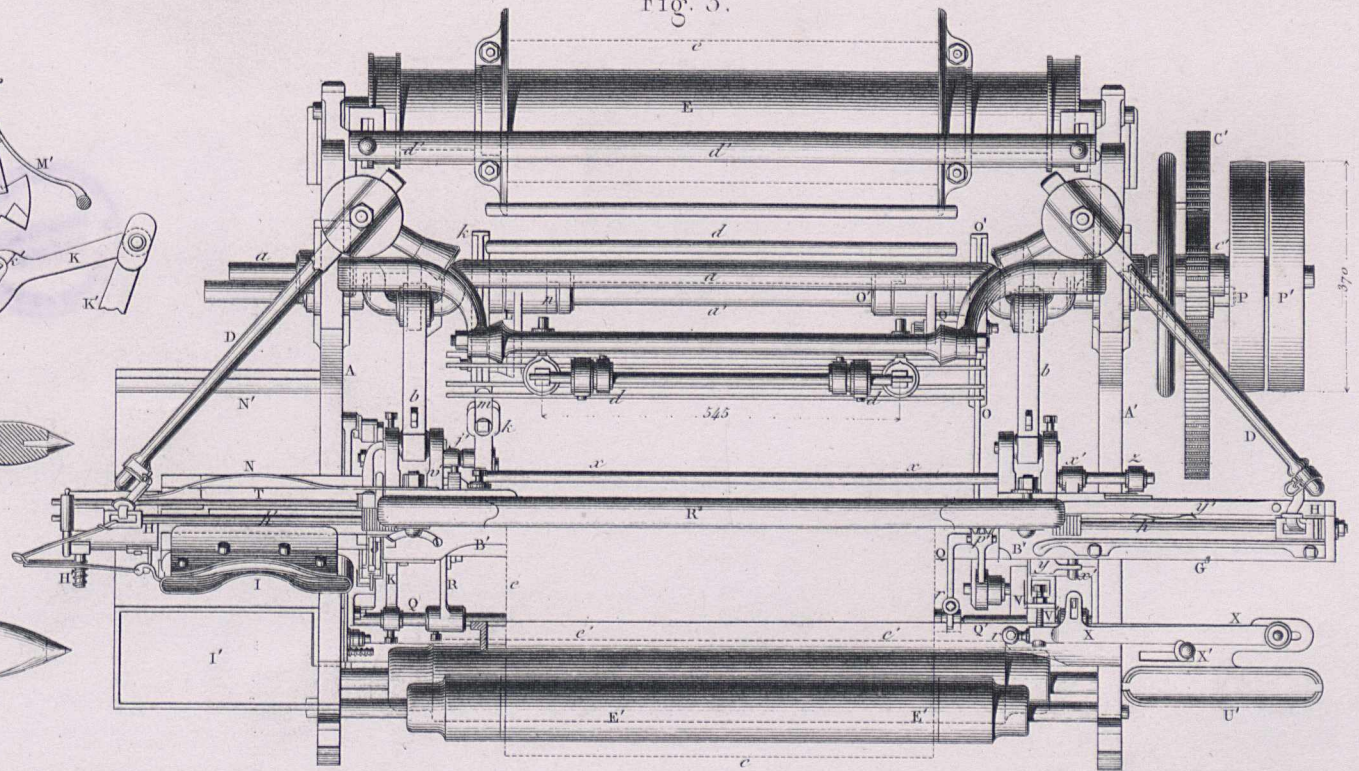


Fig. 7.

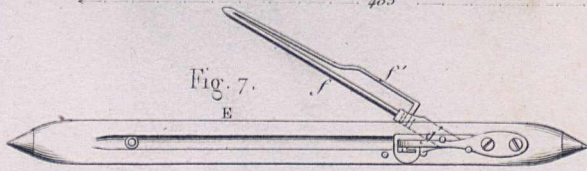


Fig. 9.

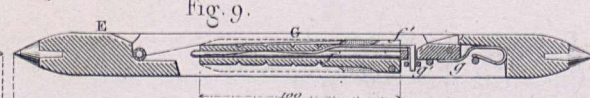


Fig. 8.

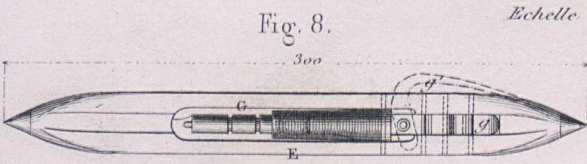
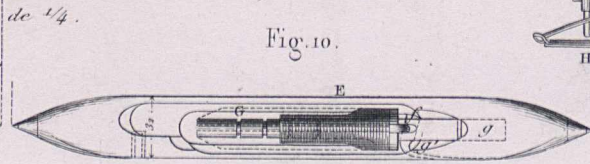


Fig. 10.



Echelle de 1/12 pour les Fig. 1 à 3.

Echelle de 1/6 pour les Fig. 4 à 6.

Echelle de 1/4.



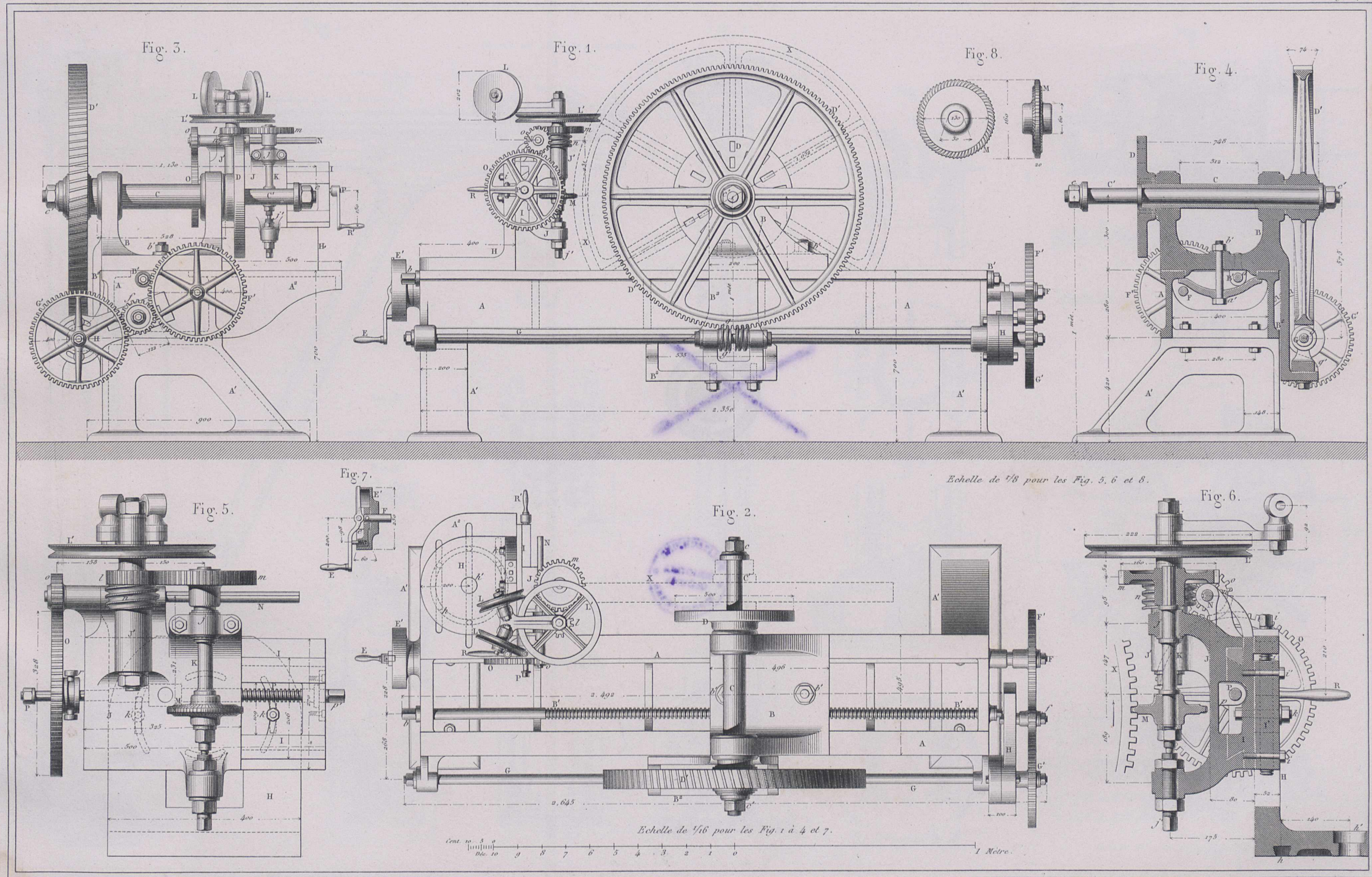
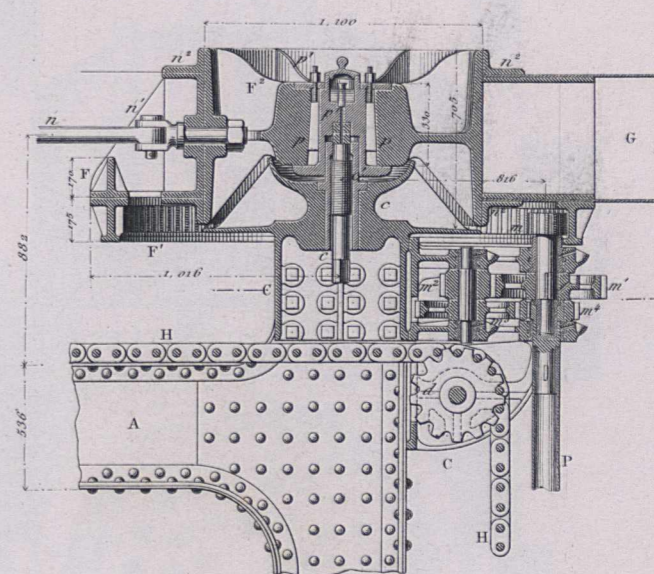
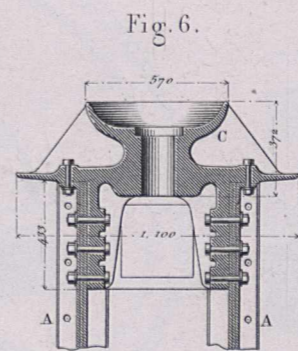
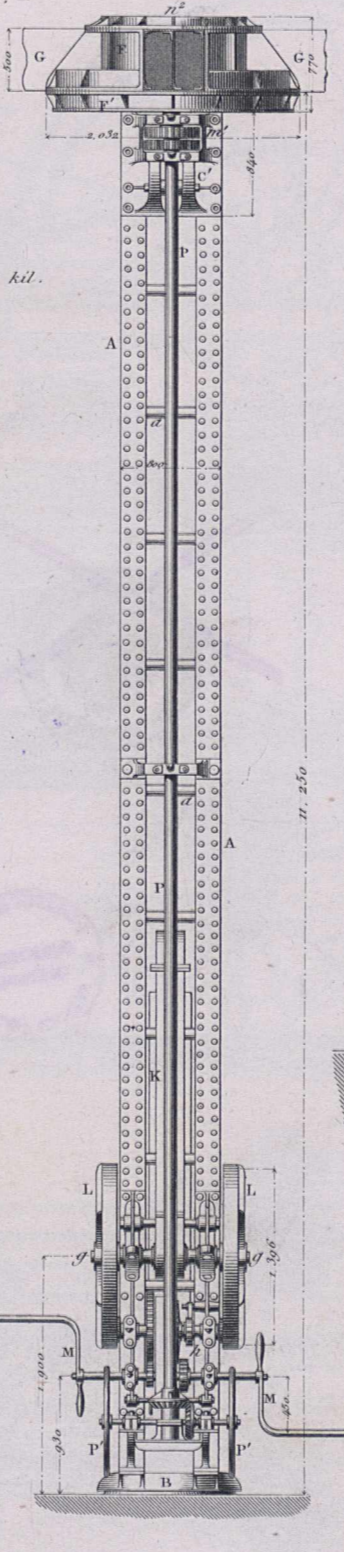
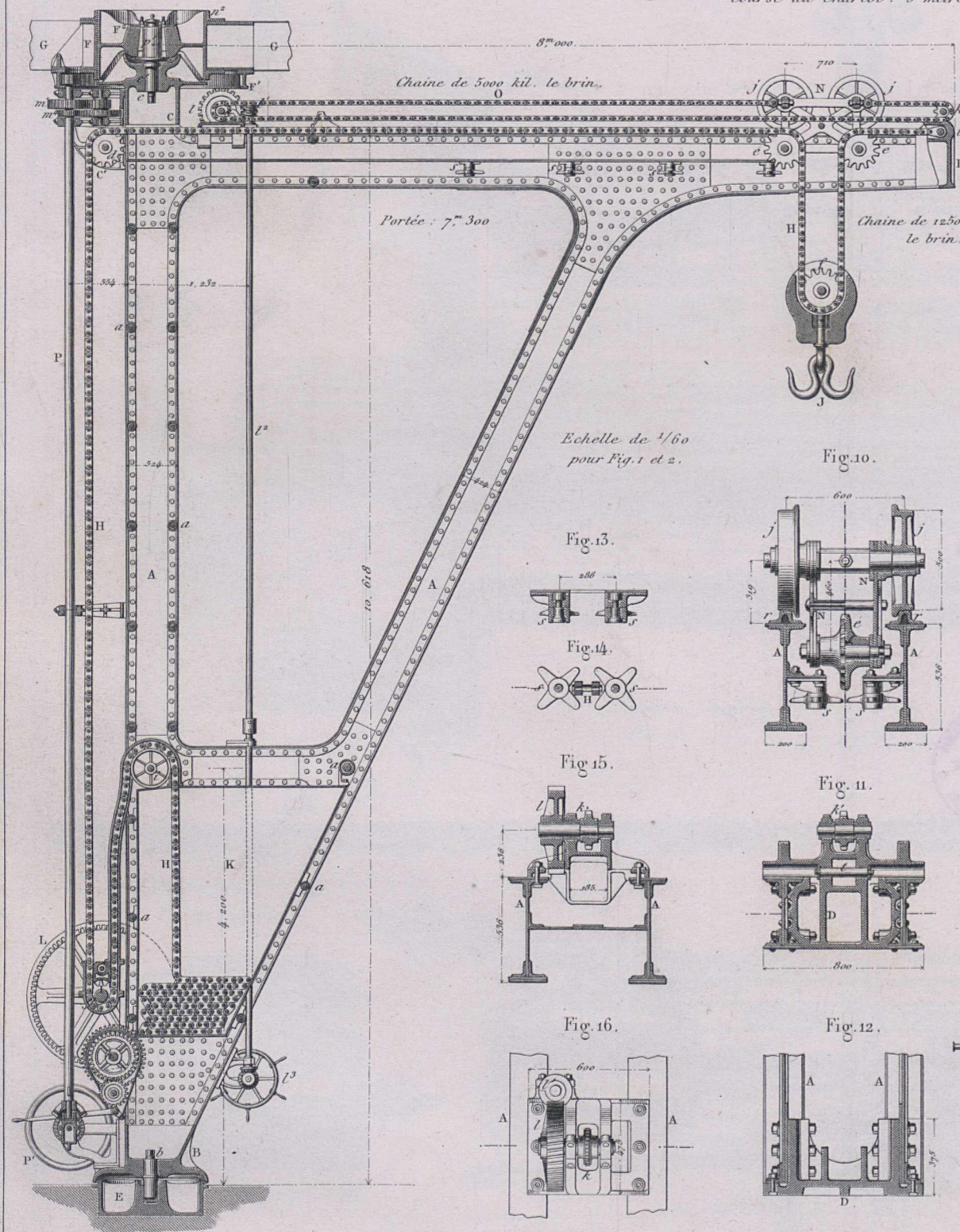




Fig. 1.

Fig. 2.

Fig. 3.



Echelle de 1/60 pour Fig. 1 et 2.

Fig. 10.

Fig. 7.

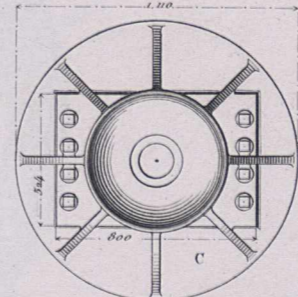


Fig. 4.

Fig. 13.

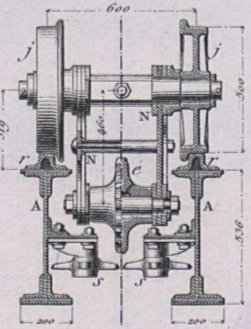


Fig. 8.

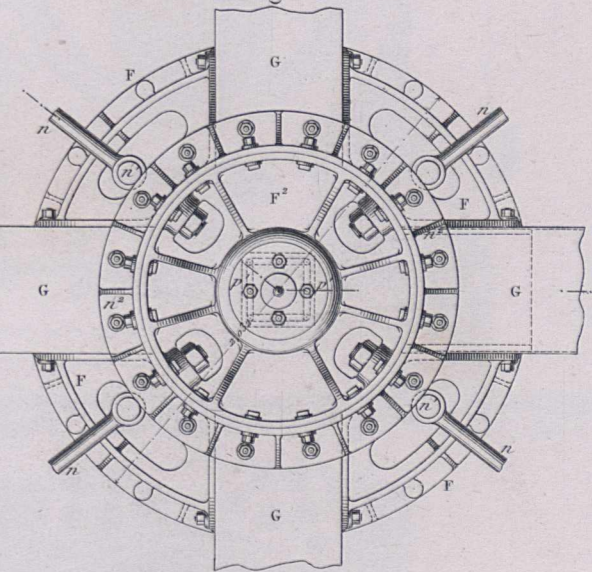
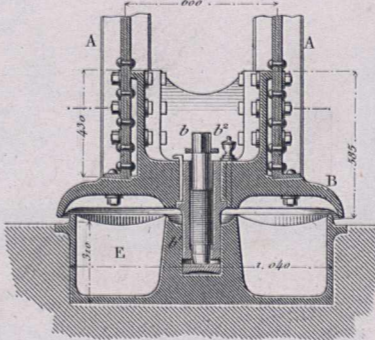


Fig. 14.

Fig. 11.

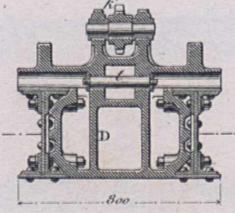
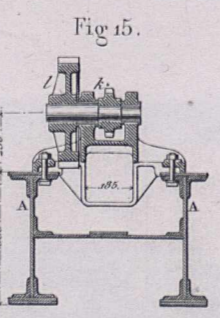


Fig. 9.

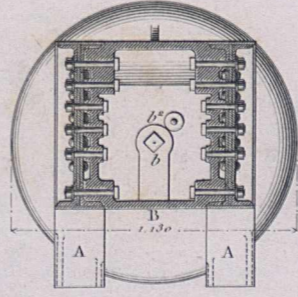
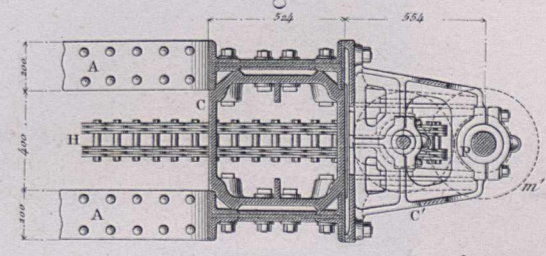
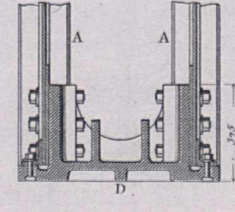
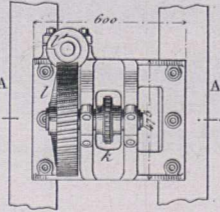


Fig. 5.

Fig. 15.

Fig. 12.

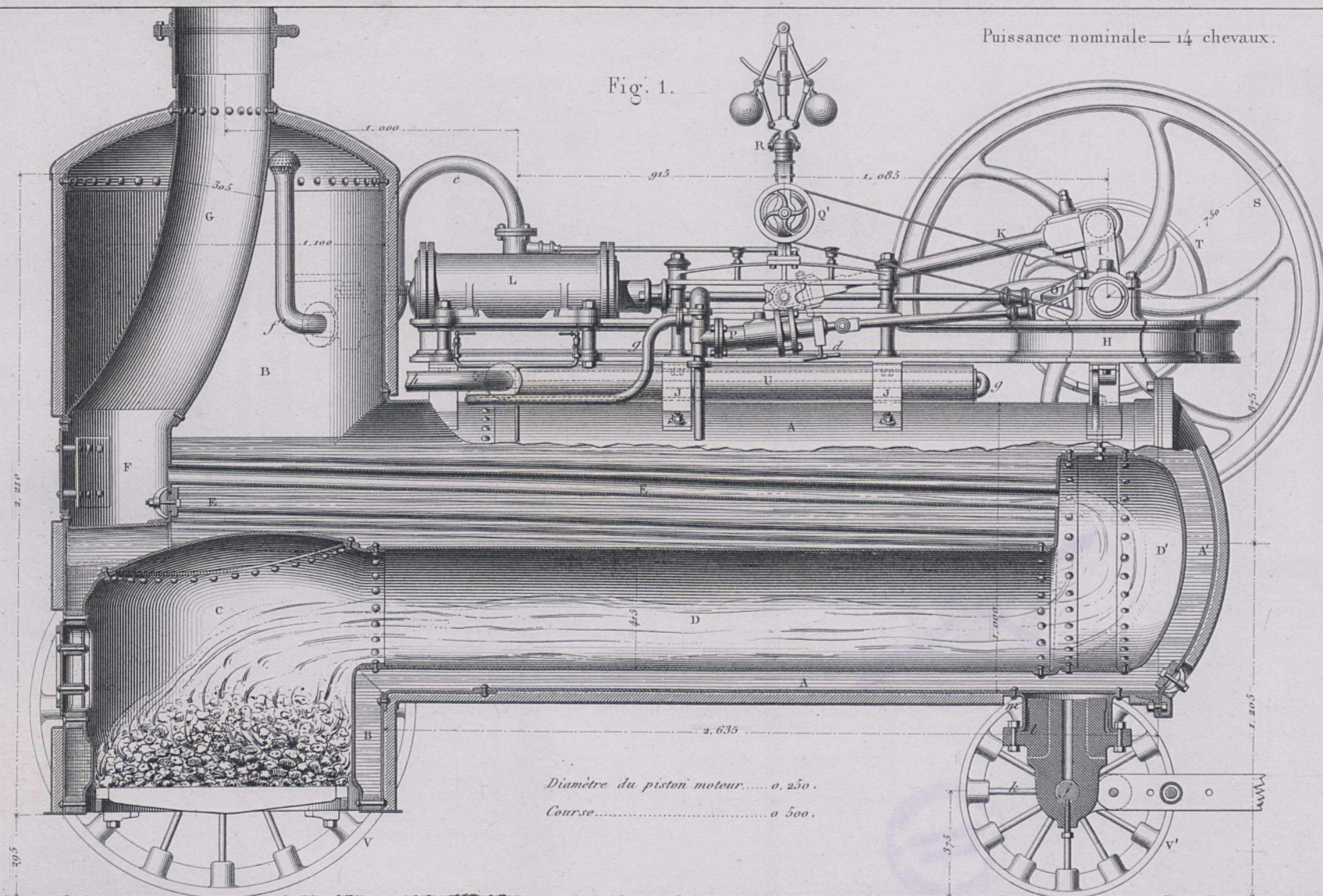


Echelle de 1/30 pour Fig. 3 à 16.



Puissance nominale — 14 chevaux.

Fig. 1.



Diamètre du piston moteur..... 0.250.
Course..... 0.500.

Fig. 2.

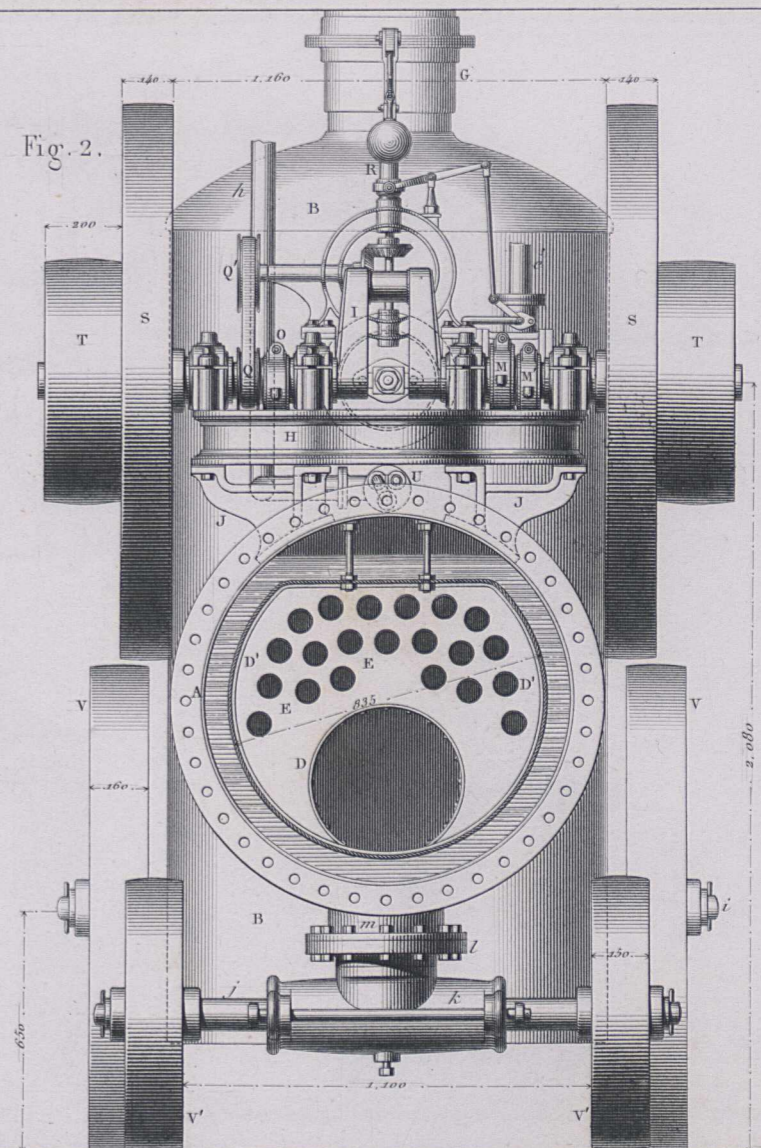


Fig. 5.

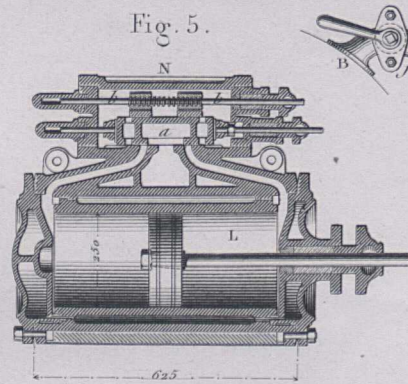
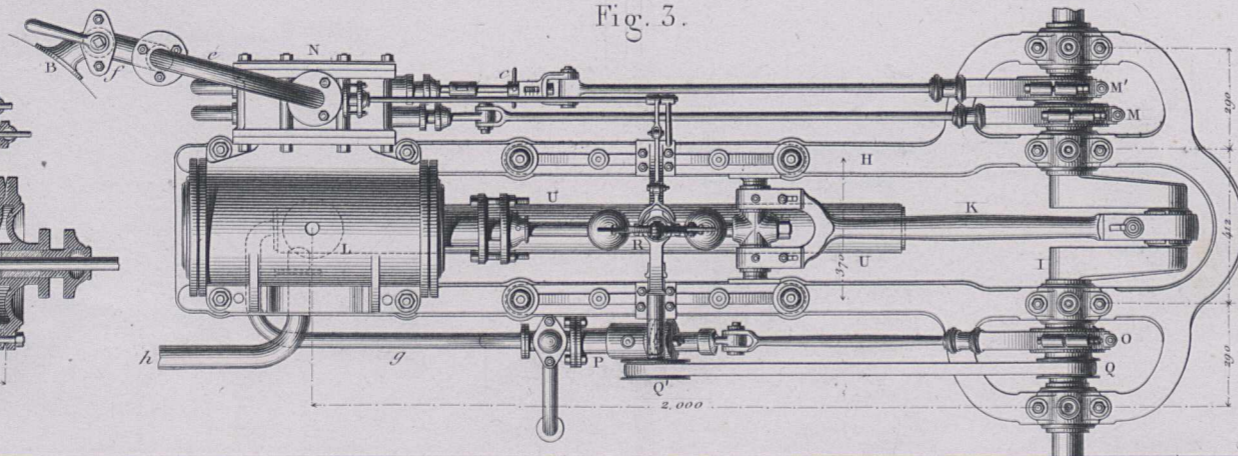
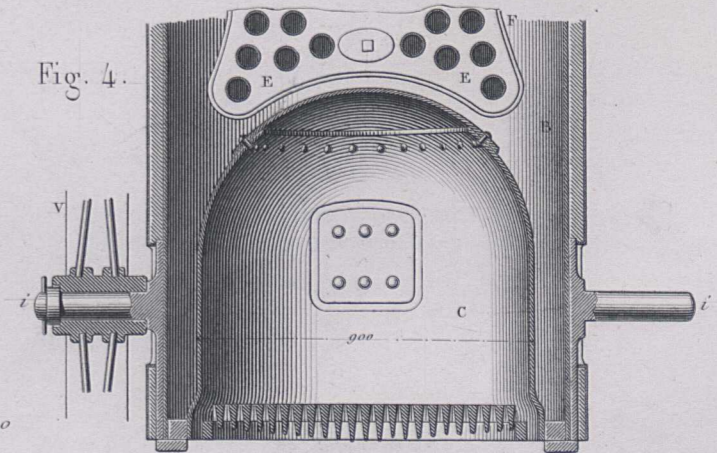


Fig. 3.



Echelle de 1/20

Fig. 4.





Systeme de M. Fairbairn.

Systeme de M. Hulse.

Fig. 1.

Fig. 3.

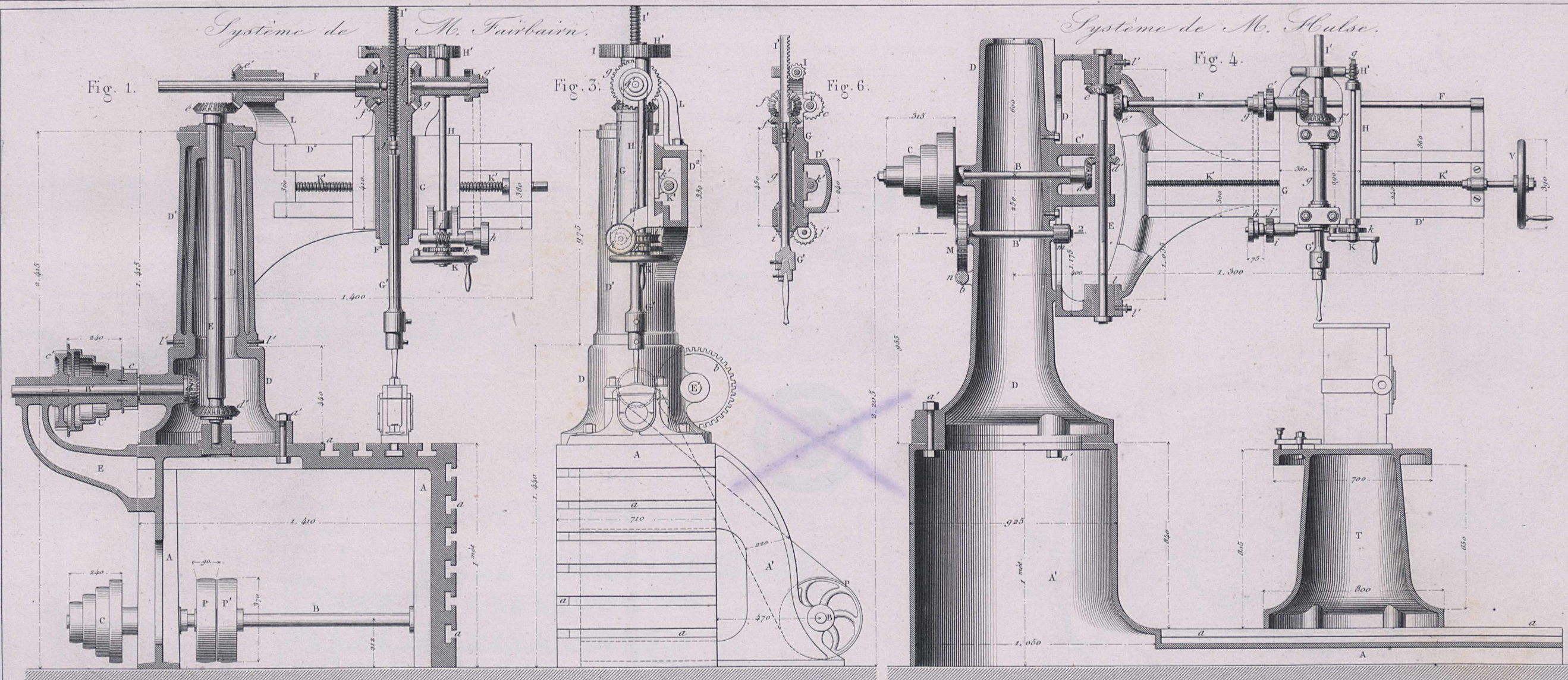
Fig. 6.

Fig. 4.

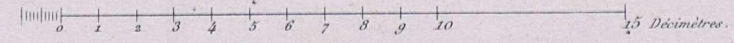
Fig. 2.

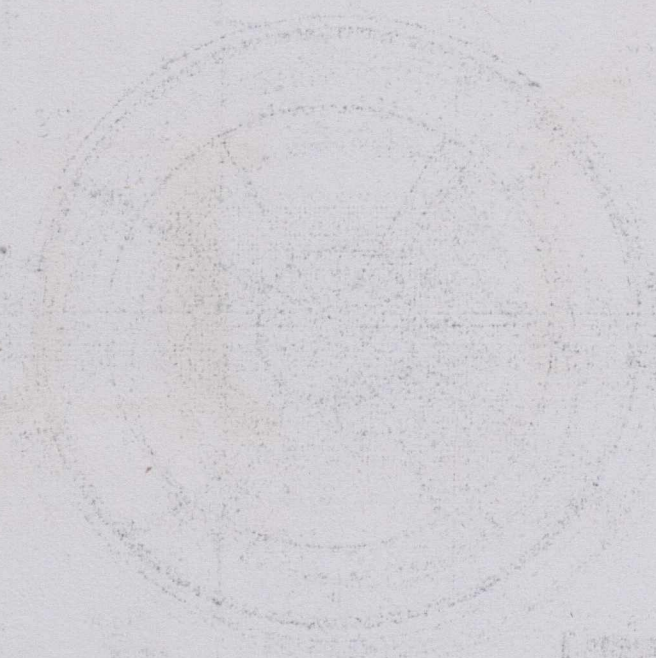
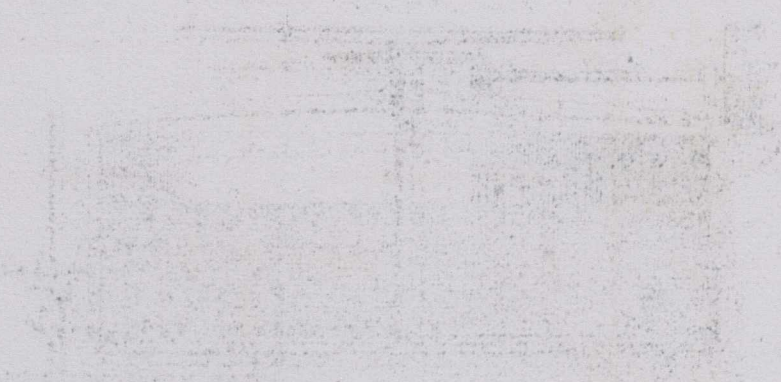
Fig. 7.

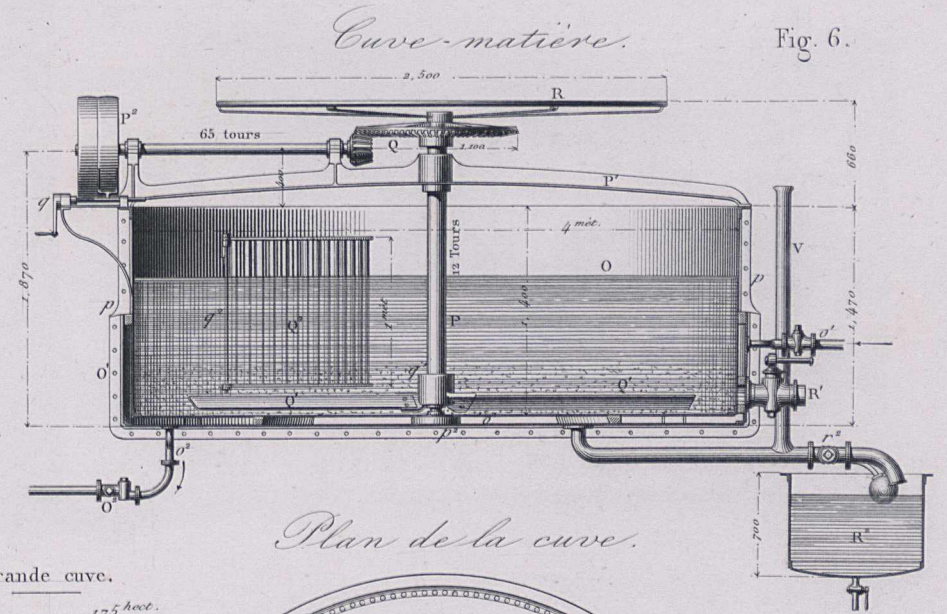
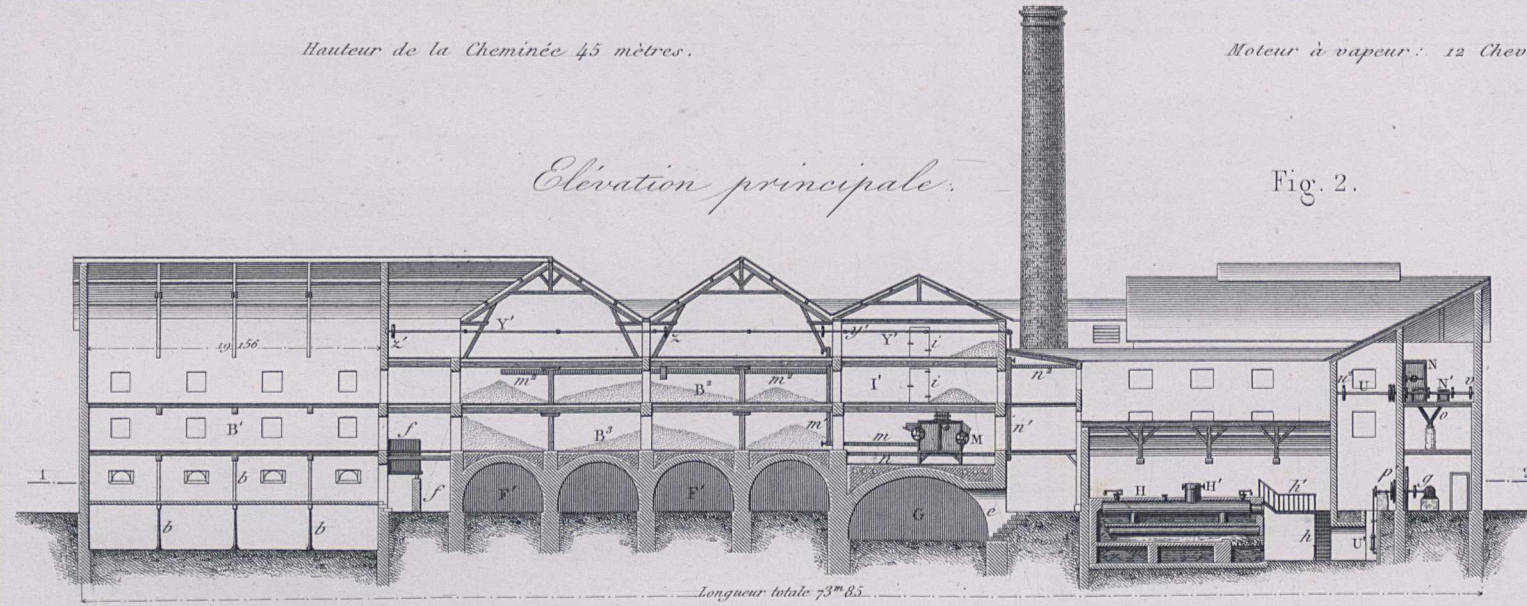
Fig. 5.



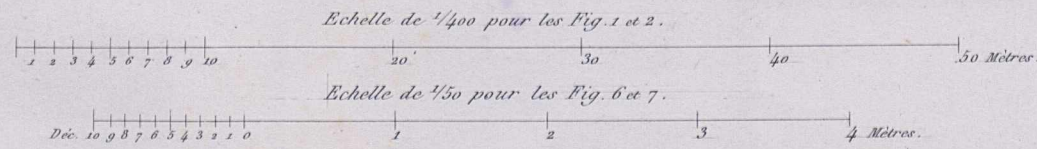
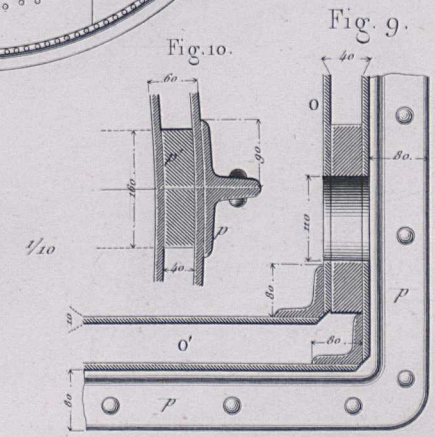
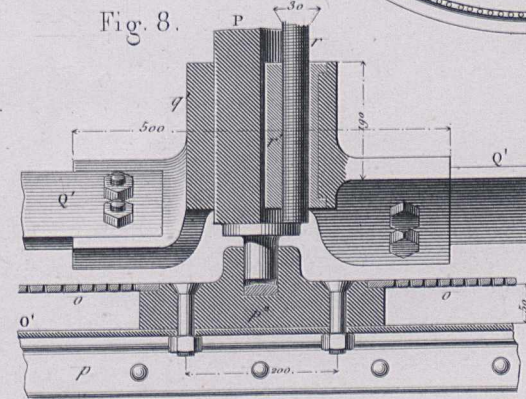
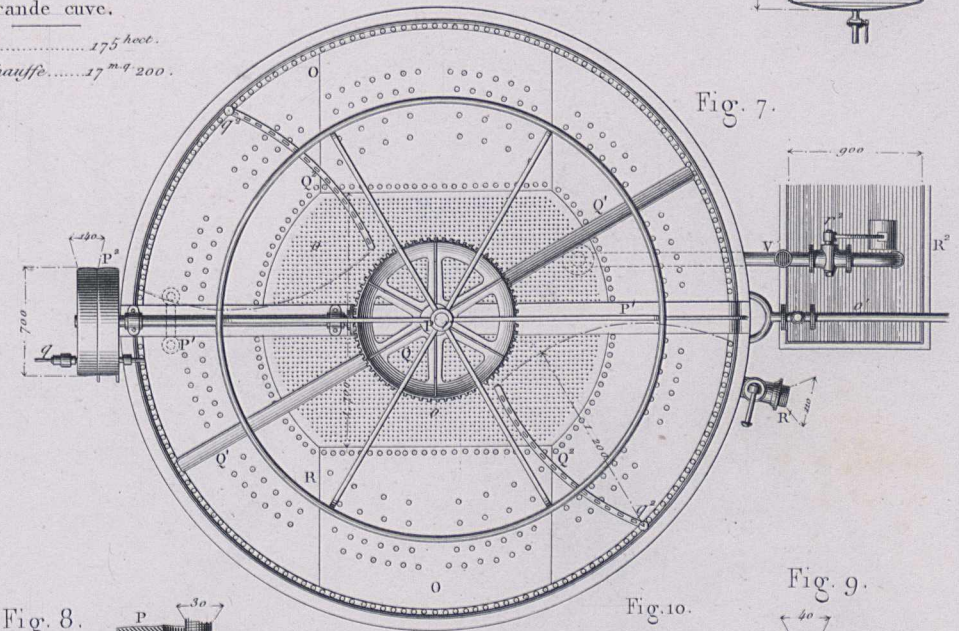
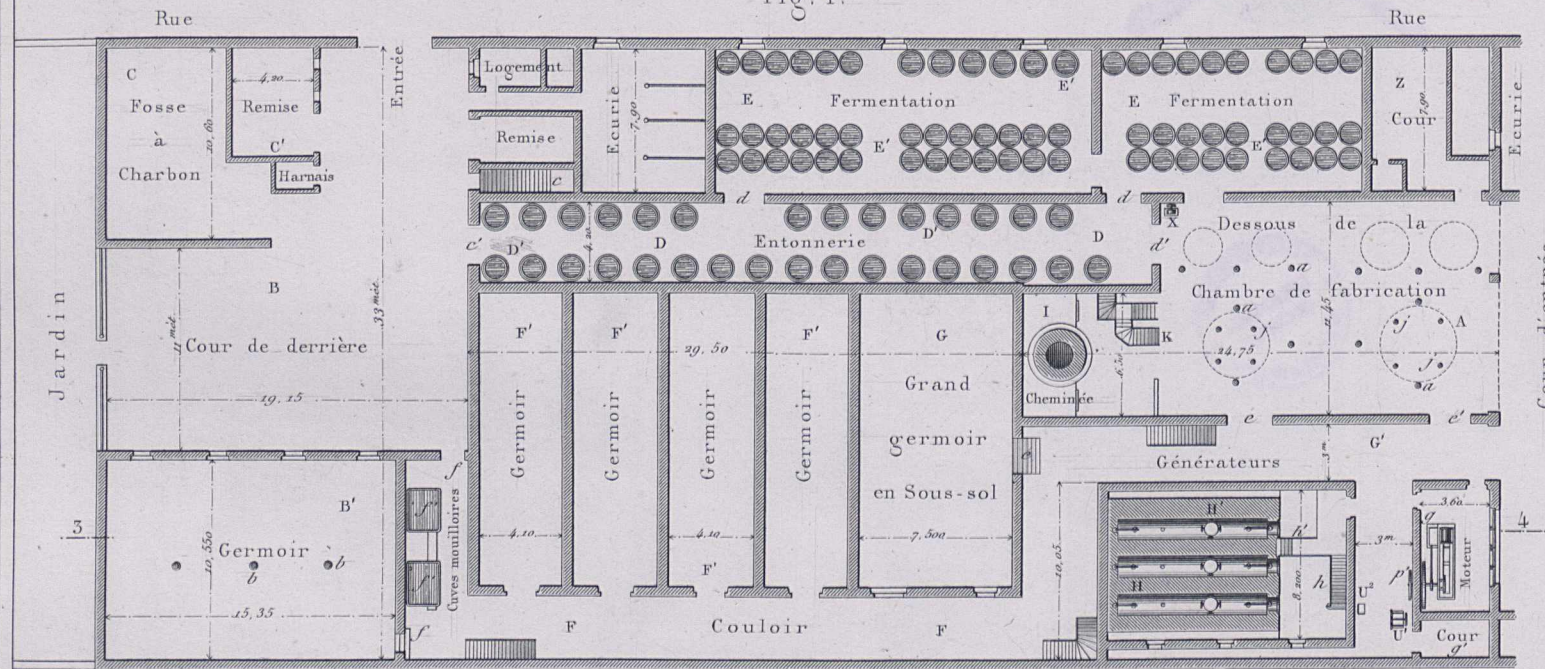
Echelle de 1/20.



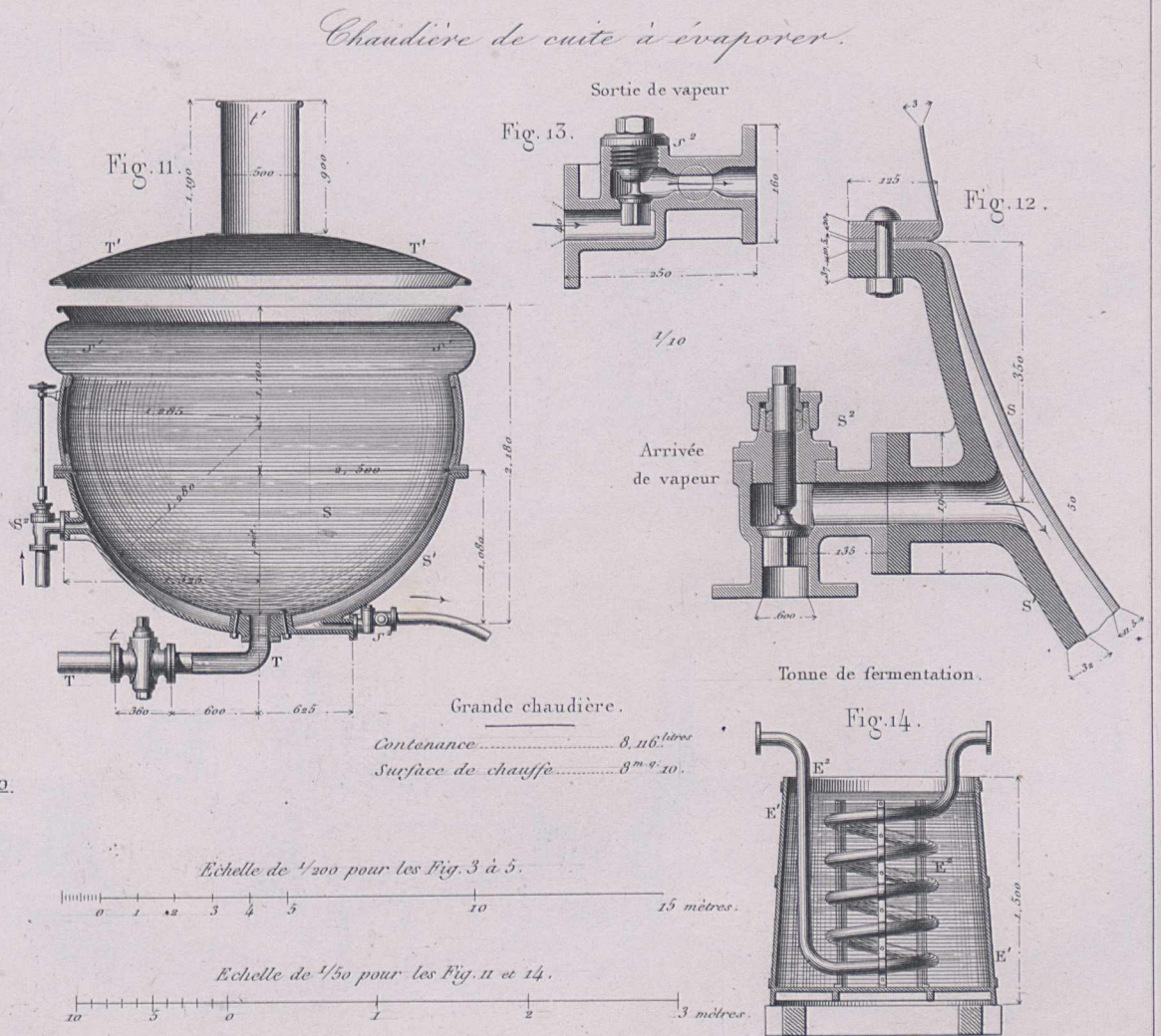
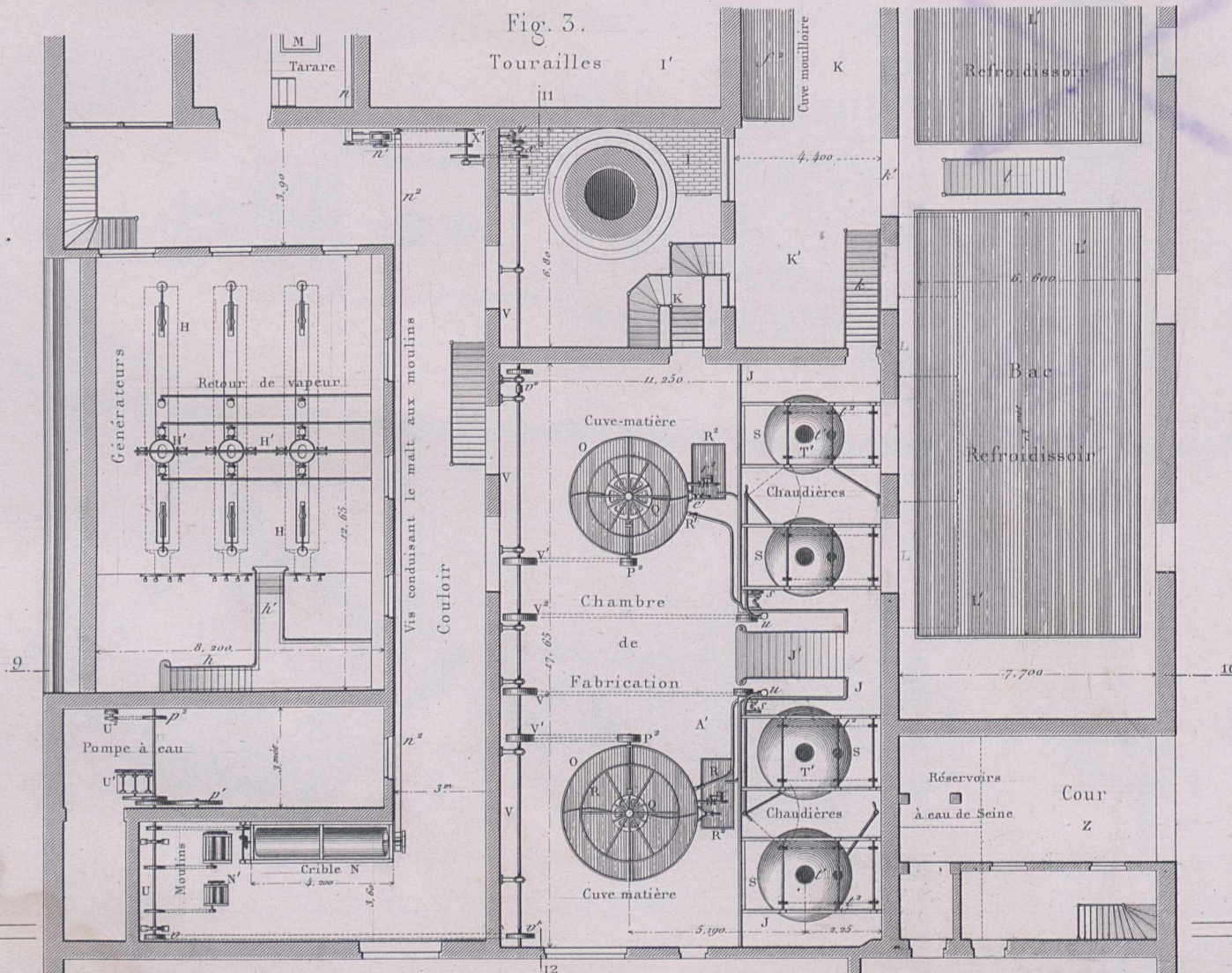
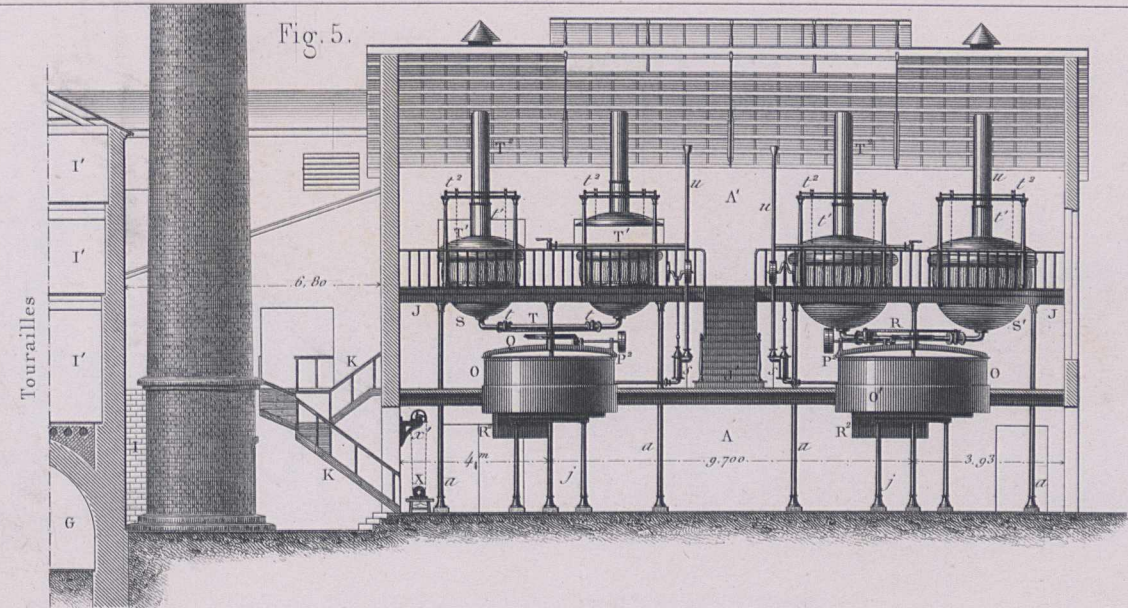
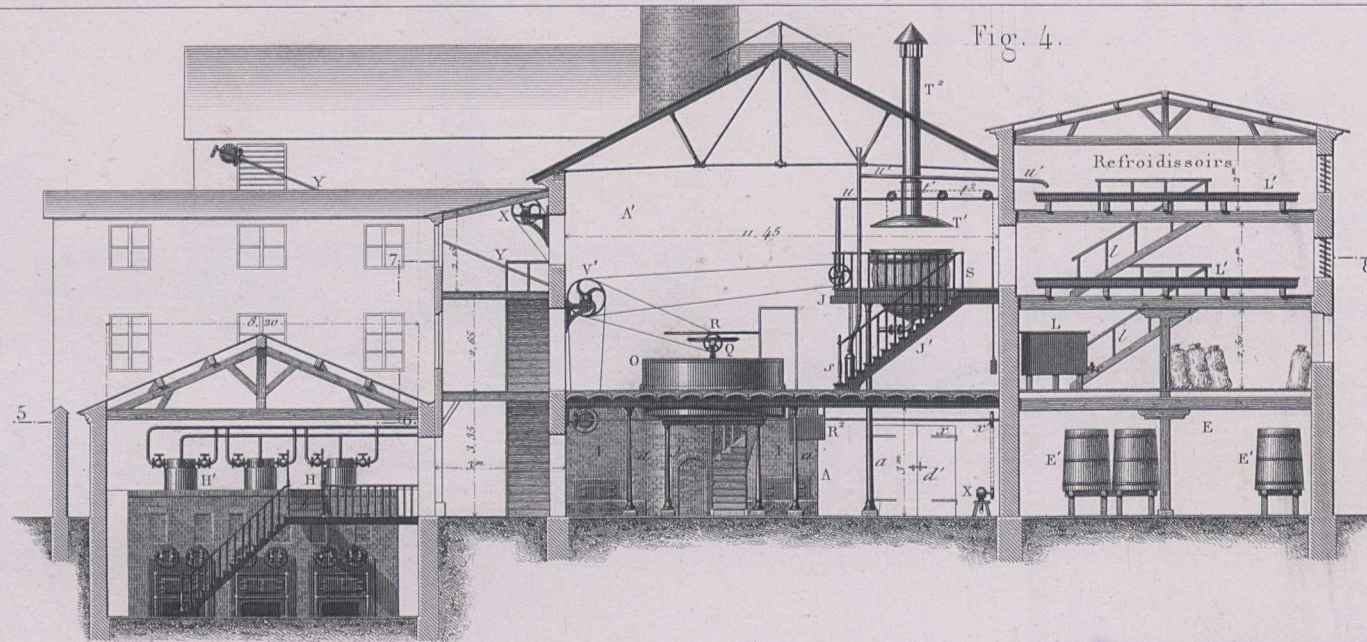




Plan général du rez-de-chaussée.









Construit pour le bassin de S^t Nazaire.

Fig. 1.

Tirant d'eau en charge sous quille = 2^m 55.

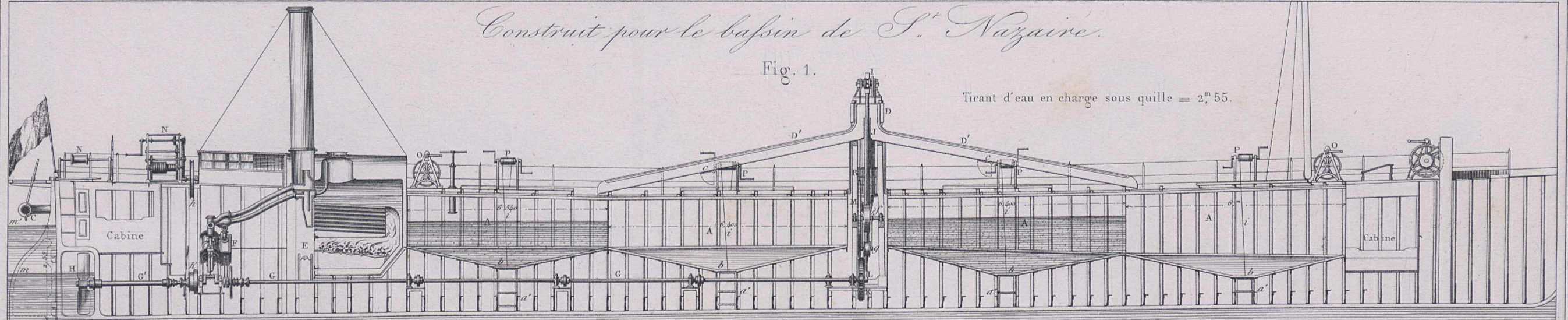
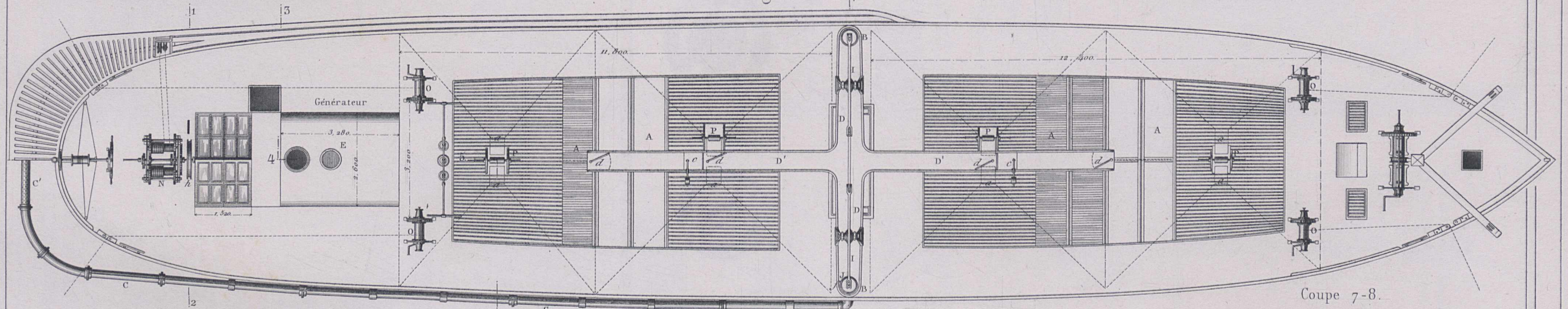


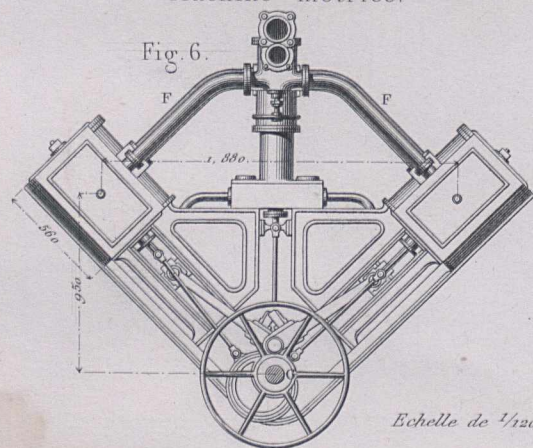
Fig. 2.

Longueur totale du bateau en charge = 41^m 50, à la flottaison.



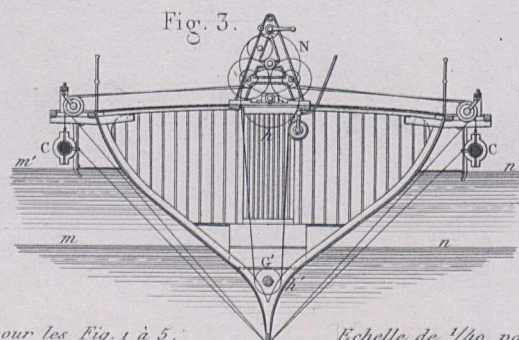
Machine motrice.

Fig. 6.



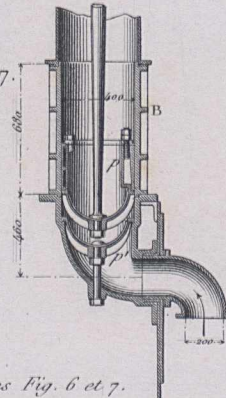
Coupe 1-2.

Fig. 3.



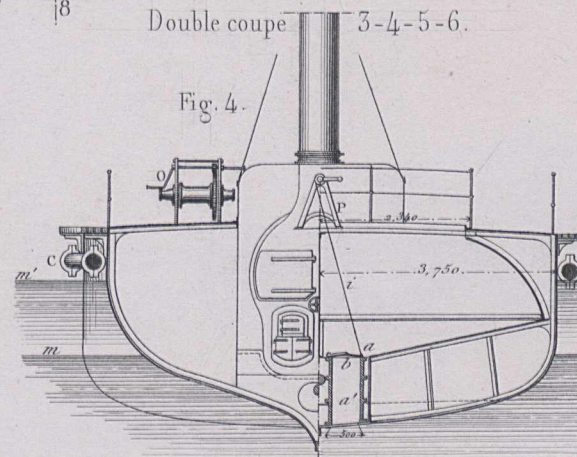
Pompe.

Fig. 7.



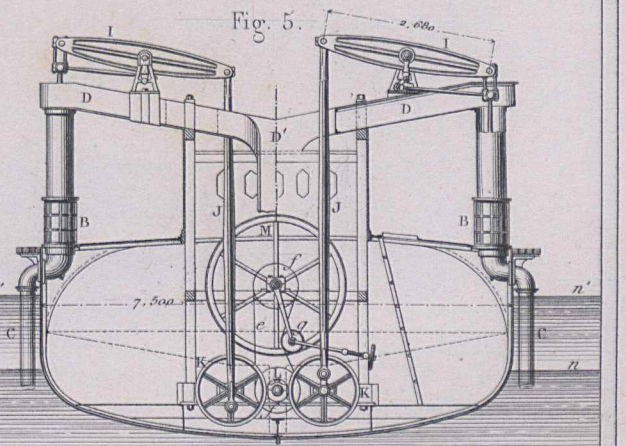
Double coupe 3-4-5-6.

Fig. 4.



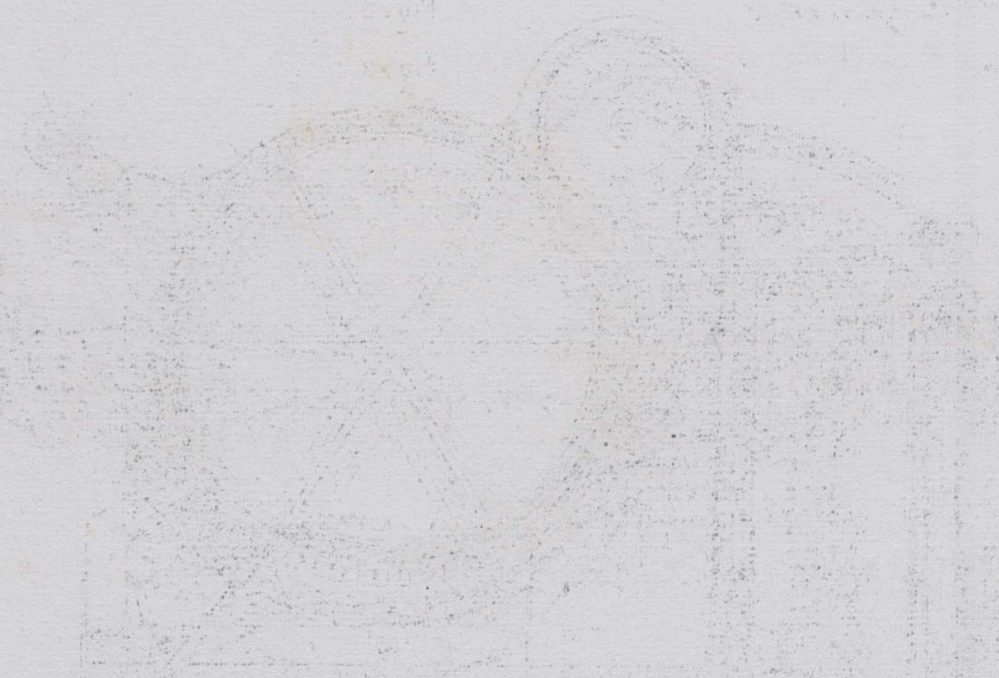
Coupe 7-8.

Fig. 5.



Echelle de 1/120 pour les Fig. 1 à 5.

Echelle de 1/40 pour les Fig. 6 et 7.



*Application de la mécanique Jacquart.
au déplacement des chapeaux*

Fig. 1.

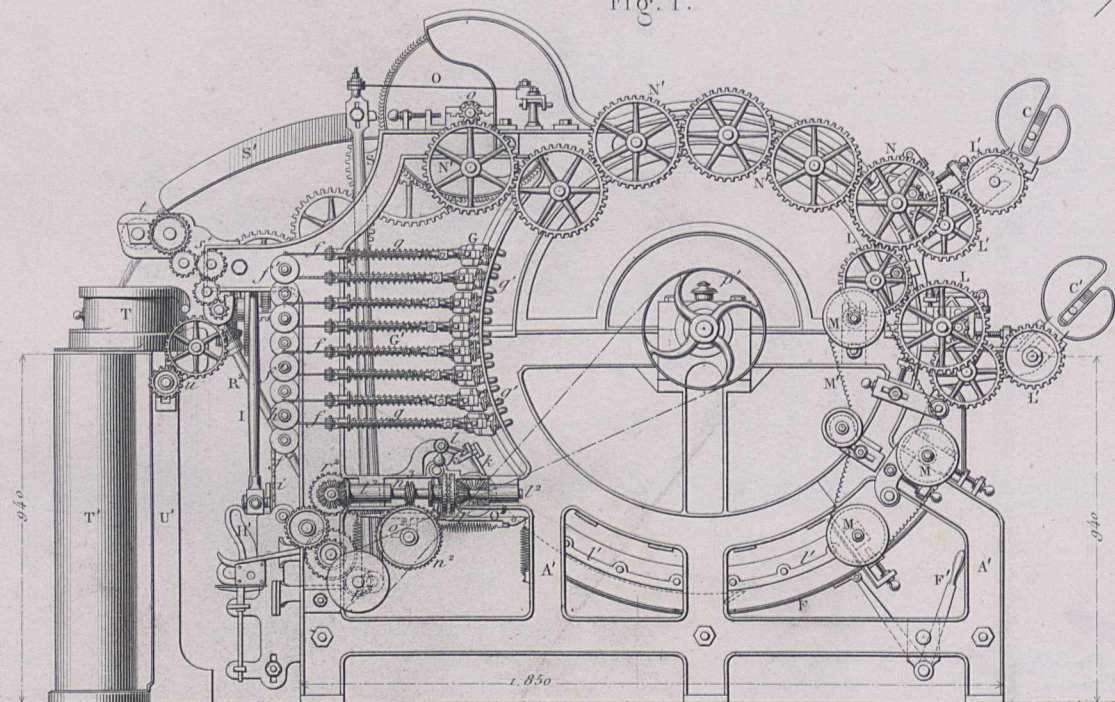


Fig. 2.

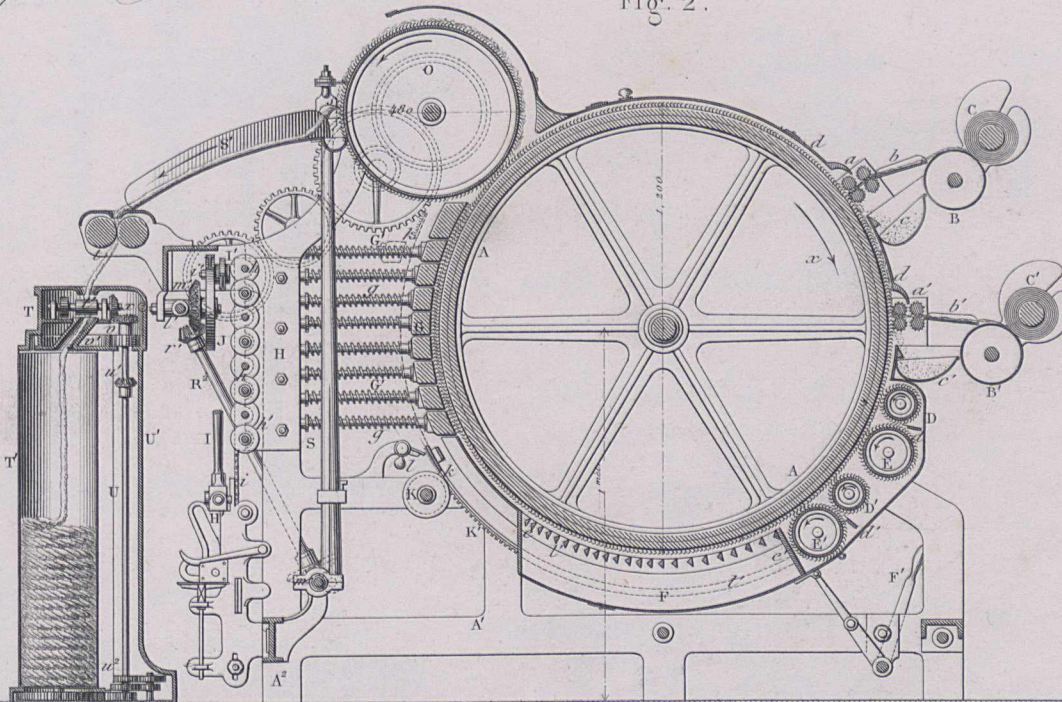


Fig. 4.

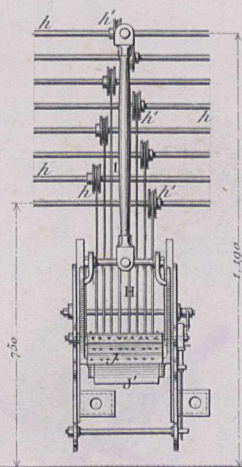


Fig. 3.

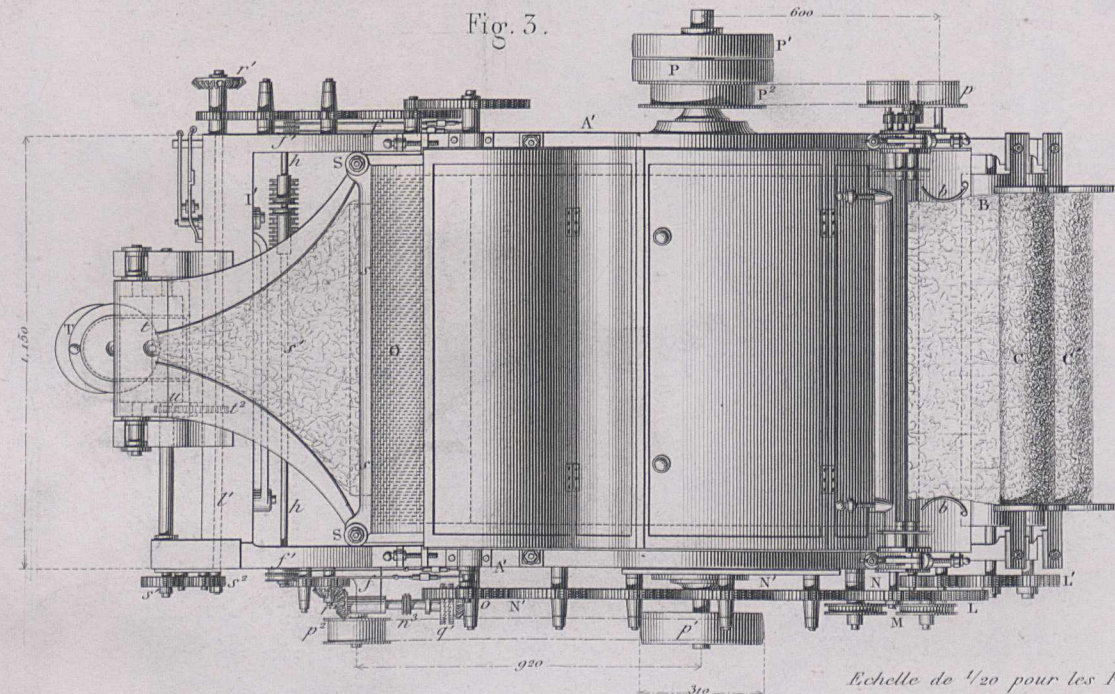


Fig. 5.

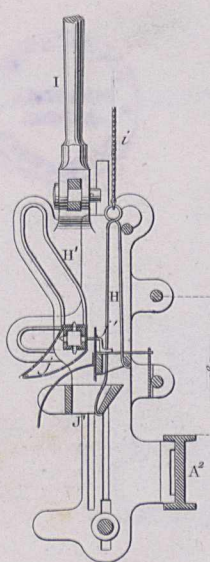


Fig. 6.

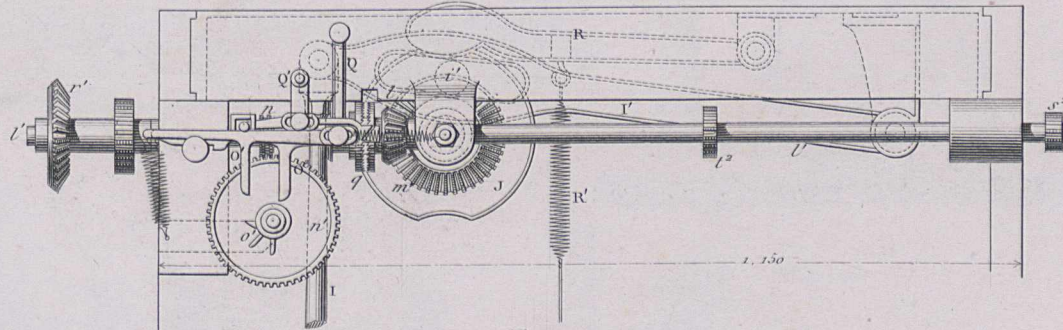
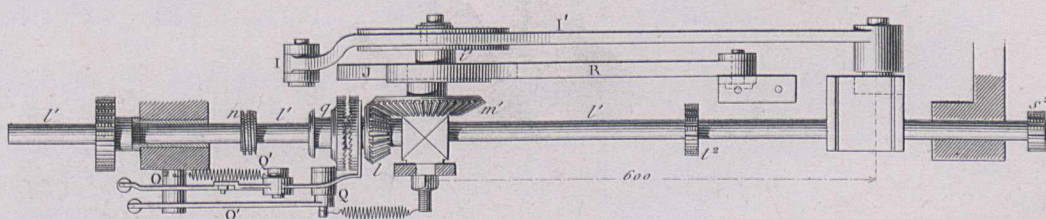


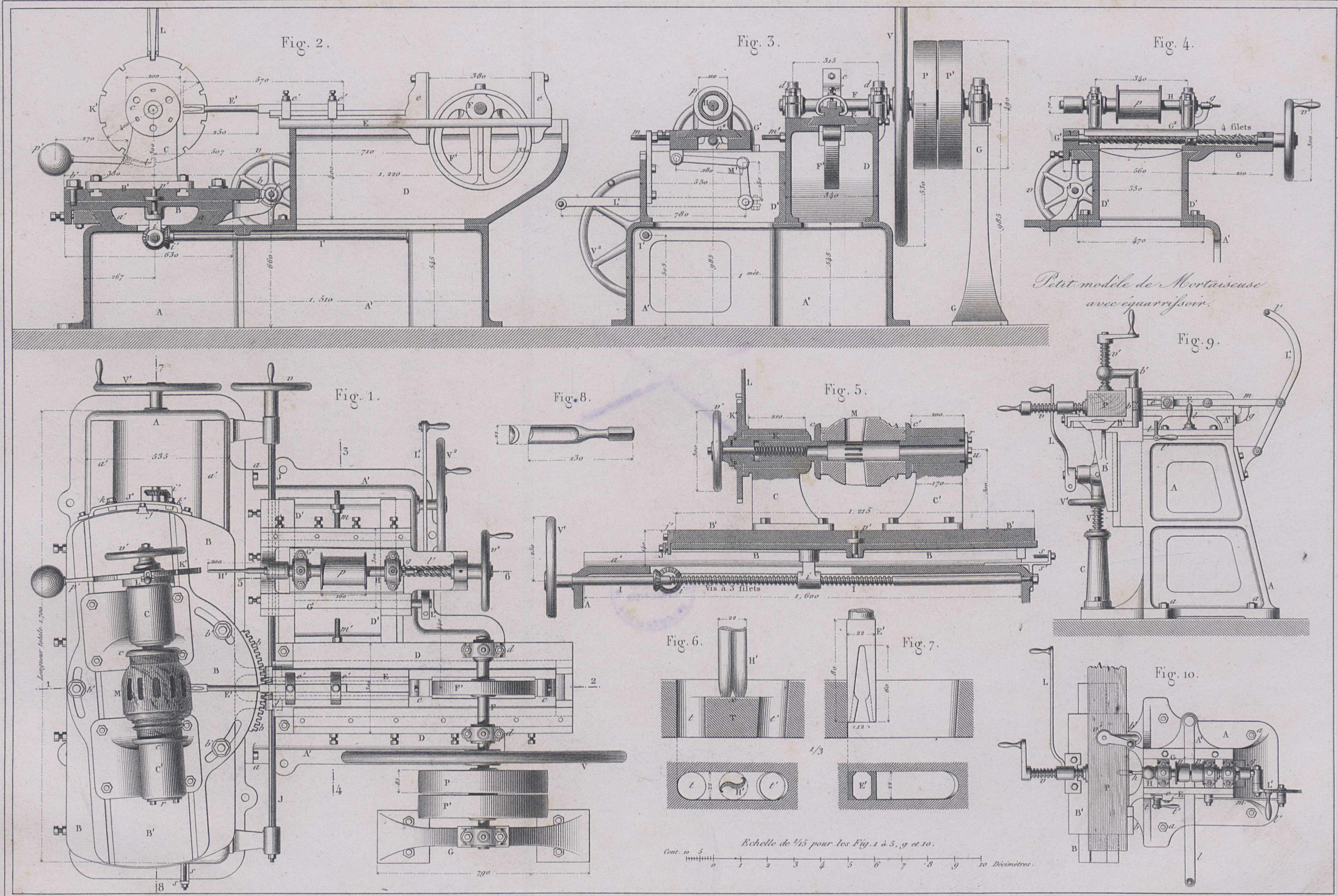
Fig. 7.



Echelle de 1/20 pour les Fig. 1 à 4.

Echelle de 1/10 pour des Fig. 5 à 7.





Petit modèle de Mortaiseuse avec équerre pour.

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



 BIBLIOTEKA GŁÓWNA
R-96m
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