GUIDE

DU CHAUFFEUR

ET

DU PROPRIÉTAIRE DE MACHINES A VAPEUR.

Ce volume a été déposé au Ministère de l'Intérieur (Direction de la Librairie), en avril 1859.

PARIS. TYPOGRAPHIE DE HENRI PLON, IMPRIMEUR DE L'EMPEREUR, RUE GARANCIÈRE, 8.

GUIDE

DU

CHAUFFEUR

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PROPRIÉTAIRE DE MACHINES A VAPEUR.

DEUXIÈME PARTIE :

RÈGLES ET MODÈLES DE CONSTRUCTION DES PRINCIPAUX TYPES DE MACHINES A VAPEUR, CONSOMMATIONS, ENTRETIENS ET SERVICES COMPARÉS, ACCIDENTS DE CHAQUE PIÈCE, CALCUL ET MESURE DE LEUR FORCE; MACHINES DES LOCOMOTIVES, DES LOCOMOBILES, DES STEAMERS DE L'ÉTAT ET DES TRANSATLANTIQUES;

PAR MM. GROUVELLE ET LAUNEZ

Ingénieurs civils.

Quatrième édition, entièrement refaite.

PAR M. PH. GROUVELLE

ATLAS

DE LA

Deuxième Partie.

PARIS,

LIBRAIRIE SCIENTIFIQUE INDUSTRIELLE DE LACROIX ET BAUDRY

(ANCIENNE MAISON MATHIAS),

15, QUAI MALAQUAIS, 15.

1859

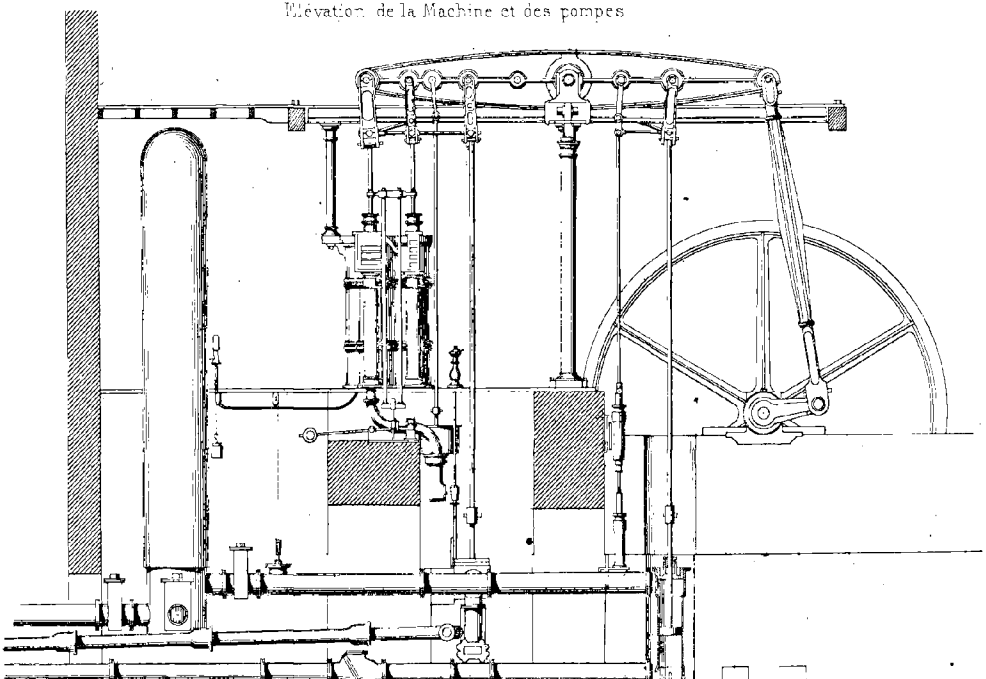
ETABLISSEMENT HYDRAULIQUE DES EAUX DE NANTES

Machine de Windsor et Cie

à 2 cylindres force de 45 chevaux.

Fig. 1re

Elévation de la Machine et des pompes

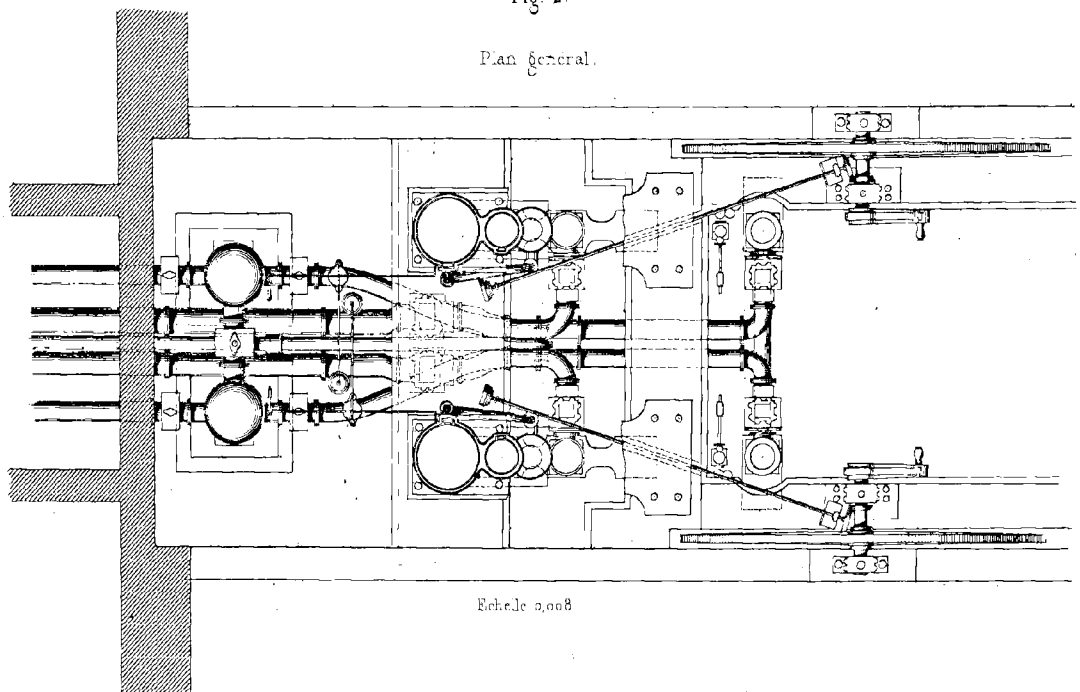


E. Weldon del. Echelle au 0,006 L. Guyet sc.

ETABLISSEMENT HYDRAULIQUE DES EAUX DE NANTES
Machine de Windsor & Cie
à 2 cylindres force de 45 chevaux.

Fig. 2.

Plan général.



Echelle 0,008

E. Beldon del.

L. Guiguet sc.

Machines à 2 cylindres de MM Windsor & Cie
pour les eaux de Nantes.
Détails des cylindres de la détente variable et des pistons

Fig. 4.

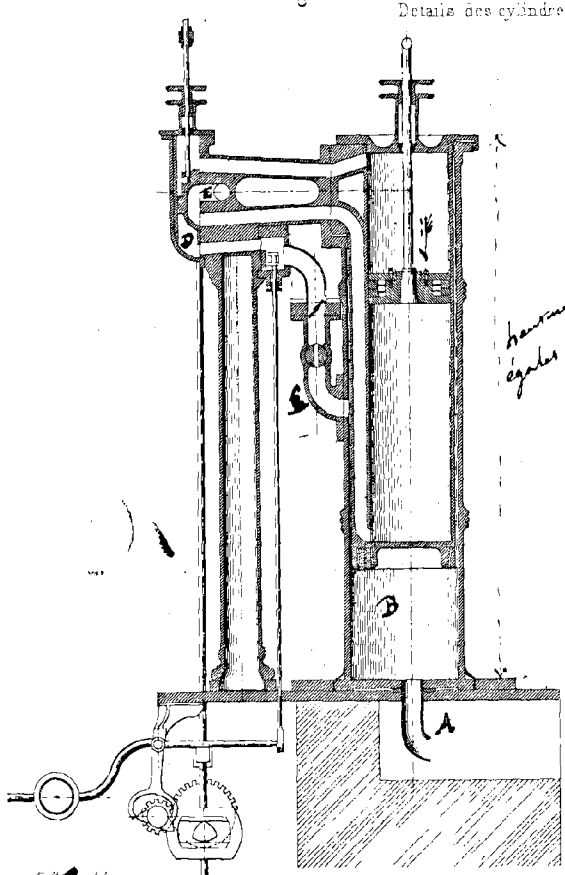


Fig. 5.

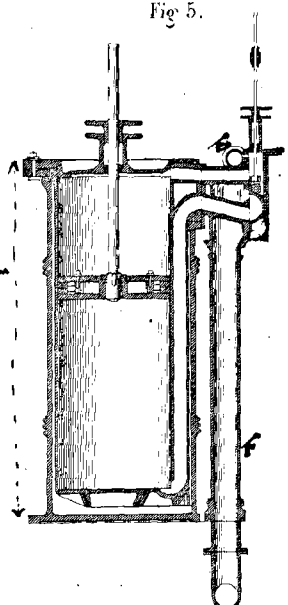
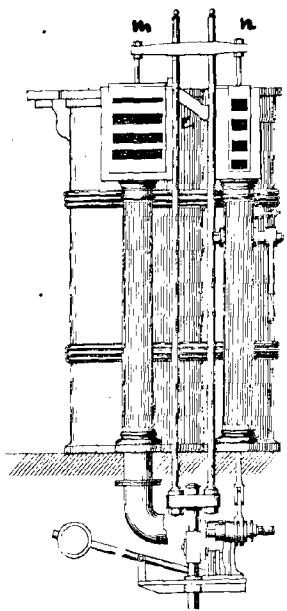


Fig. 6.



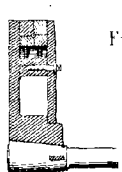
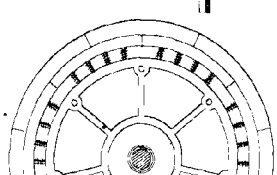


Fig. 7.



Machine horizontale de 50 chevaux à condensation
à detente variable par le regulateur de Farcot

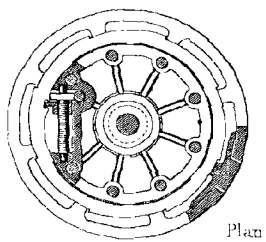
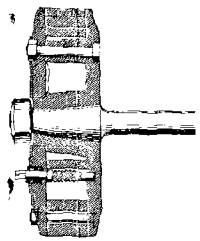


Fig. 8 bis

Echelle 1/20



Plan et coupe du piston

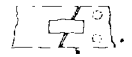


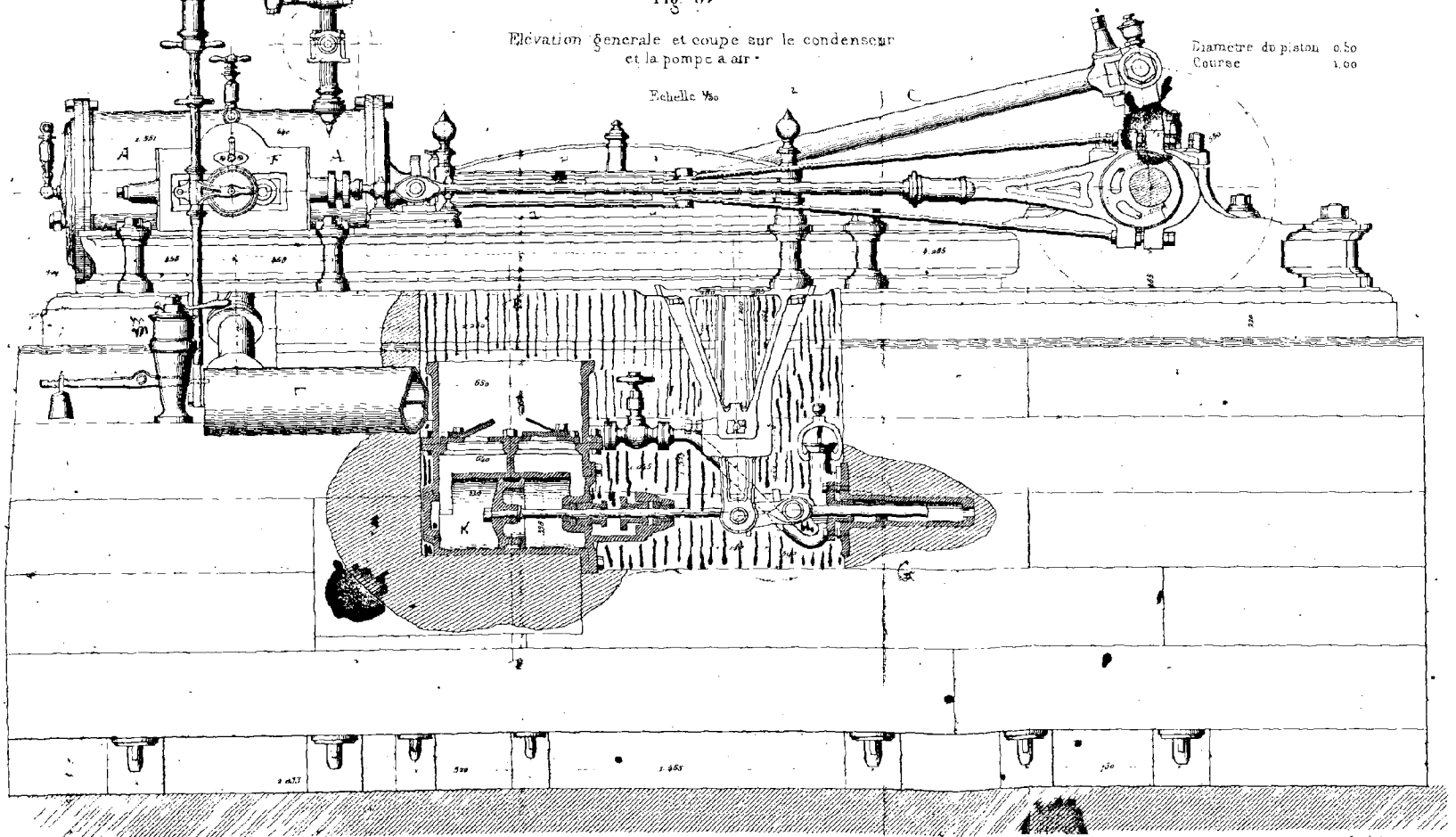
Fig. 8 ter

Fig. 8.

Elevation generale et coupe sur le condenseur
et la pompe à air.

Echelle 1/50

Diametre du piston 0.50
Course 1.00



Machine horizontale à condensation de M.r Farcot
Détente variable par le régulateur

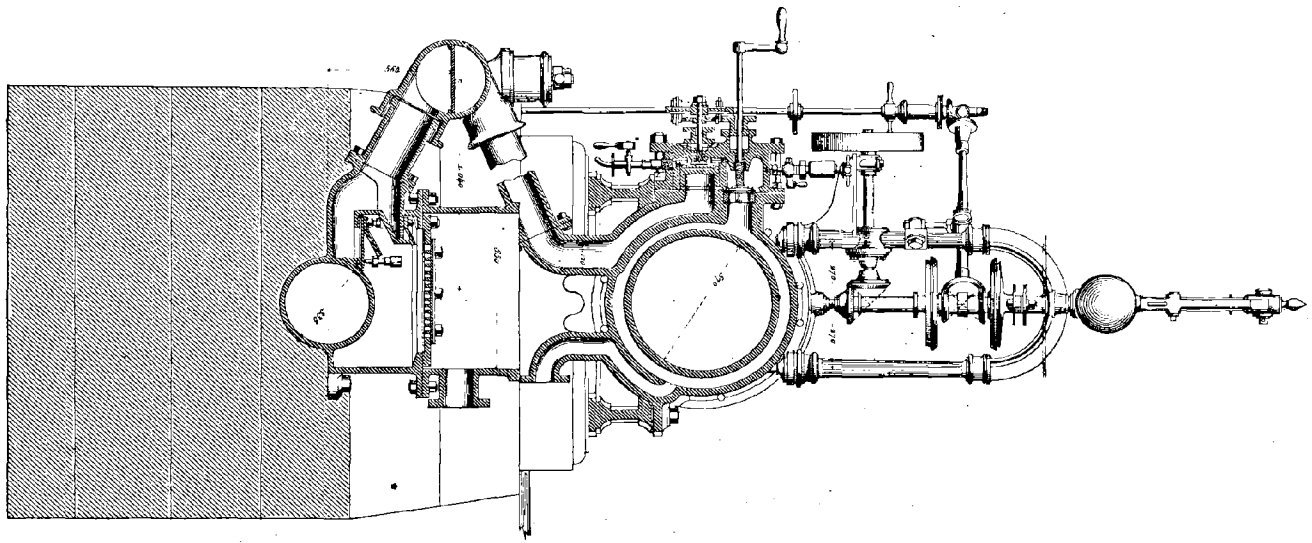
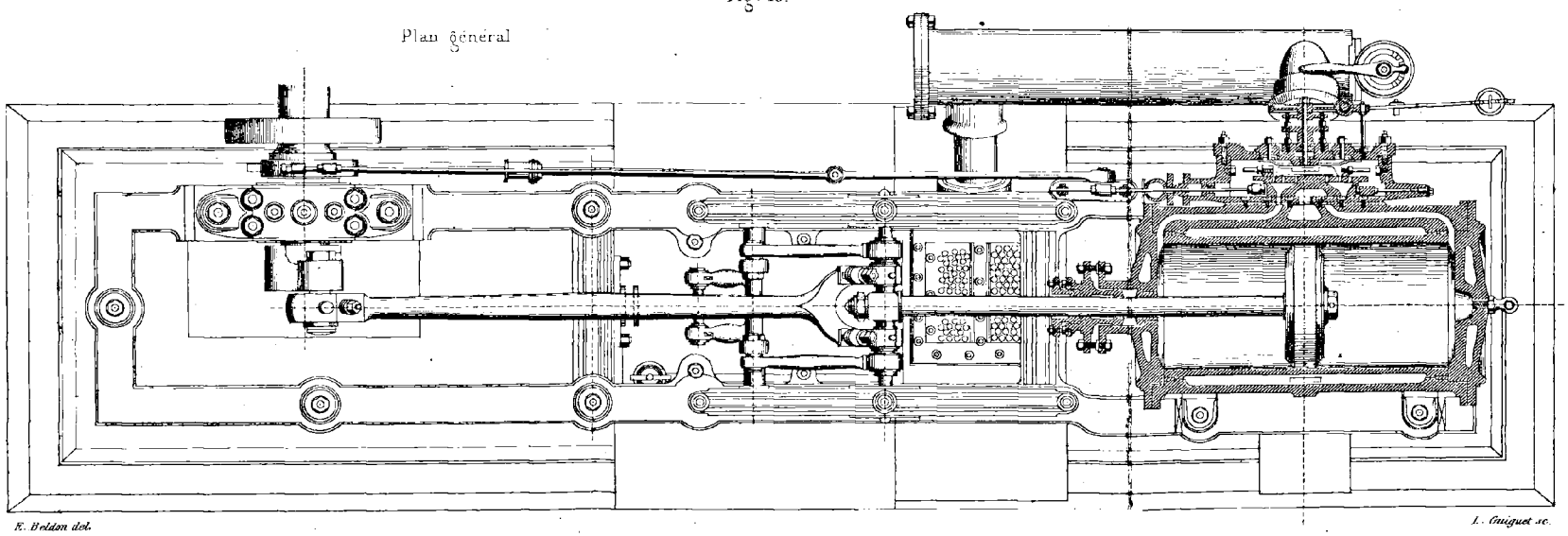


Fig. 9.
Coupe transversale

Echelle ¹/₅₀

Fig. 10.

Plan général



E. Beldon del.

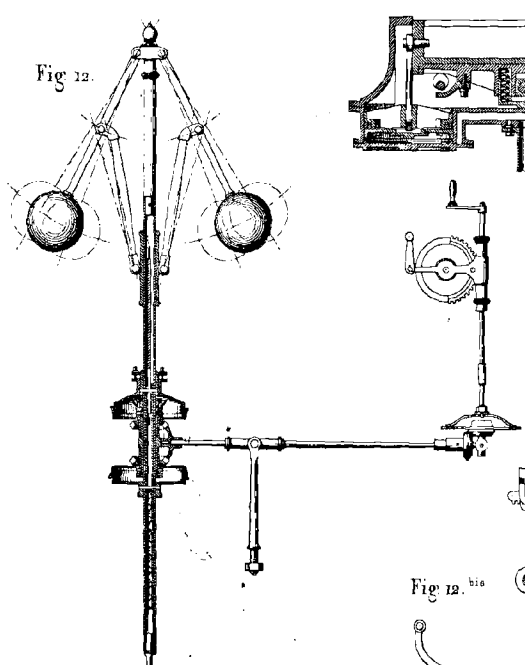
L. Guiguet sc.

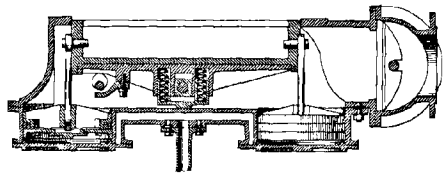
Fig. 12.bis

Détente variable de la Biche, par Mazeline.

Détente variable de l'arcot.

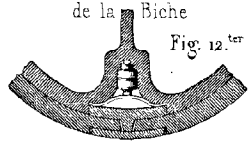
Fig 12.





Piston de la Biche

Fig. 12.ter



Détente variable de la Biche.

Fig 12.bis

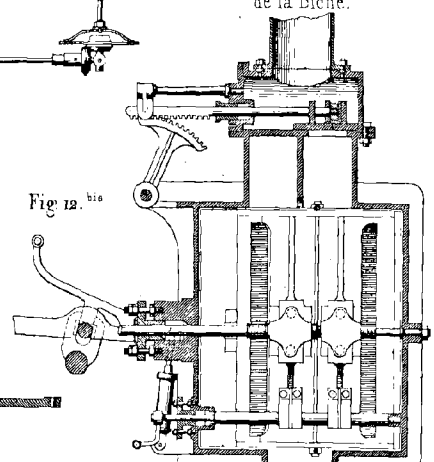
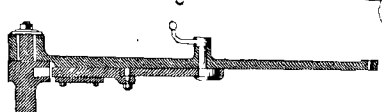


Fig 12.bis



Détente variable de l'arcot.

Fig 12.

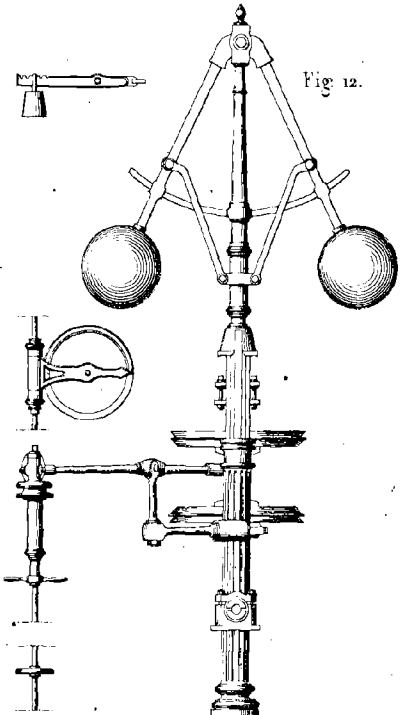


Fig 12.bis

Echelle au 1/10

F. Beldon del.

L. Guiquet et Lallie sc.

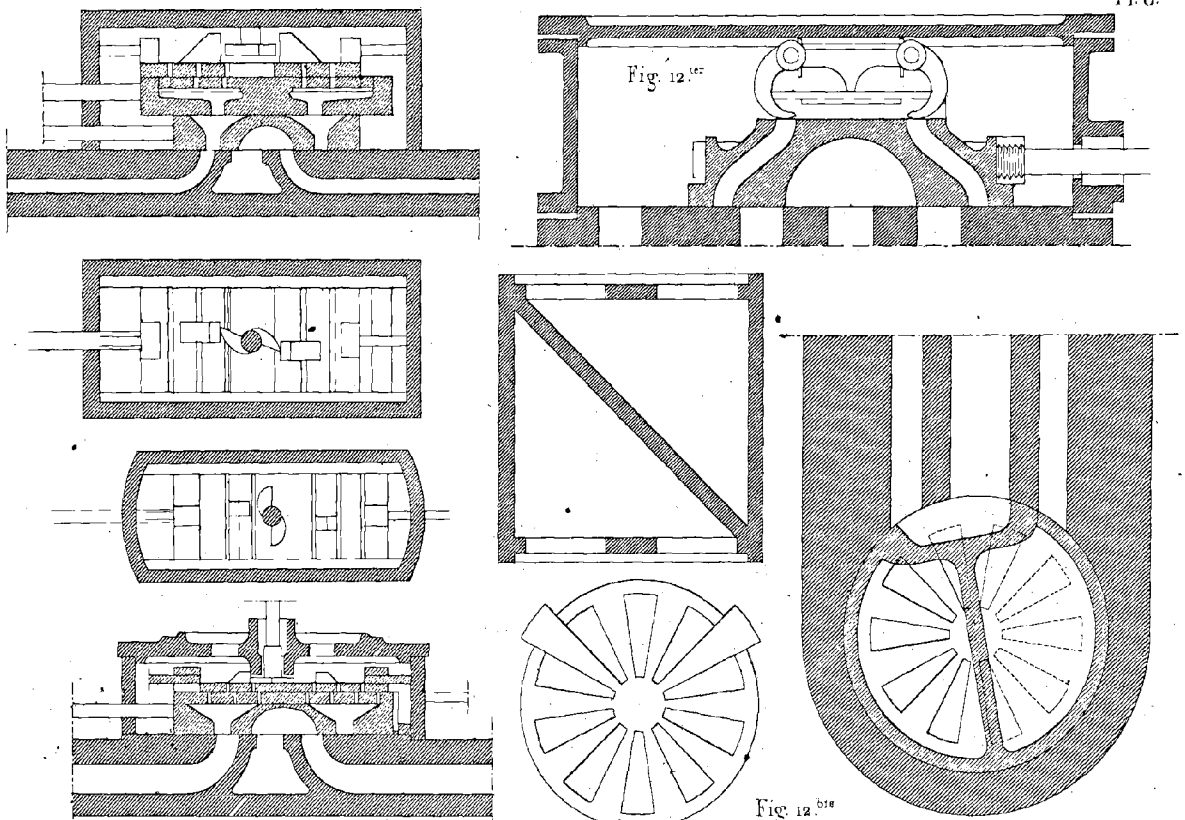


Fig. 12.

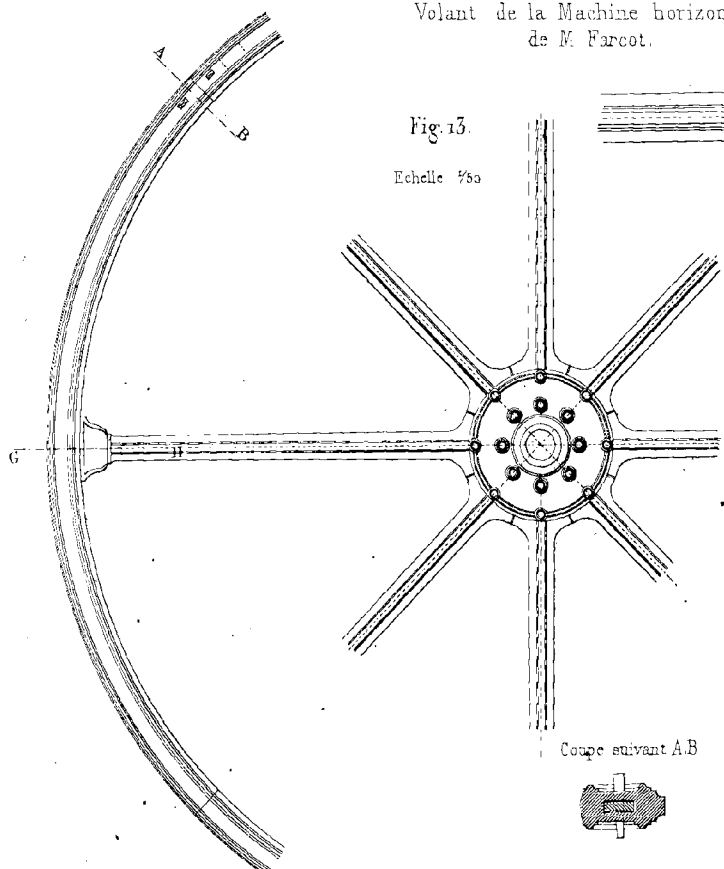
E. Peldon del.

L. Guiguet sc.

Volant de la Machine horizontale
de M. Farcot.

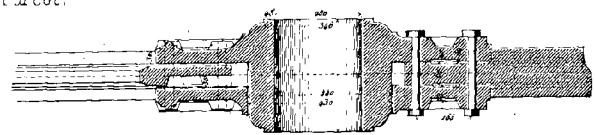
Fig. 13.

Echelle 1/80



Coupe suivant A.B

Fig. 13 ter



Coupe sur C.D.E.

Fig. 13 bis

Echelle 1/20

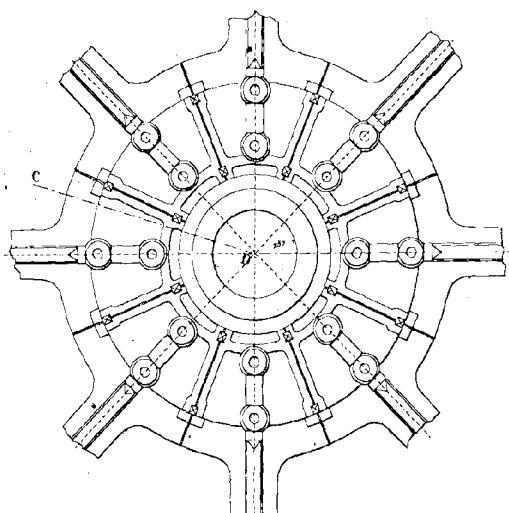


Fig. 14.

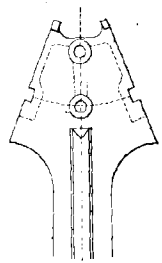
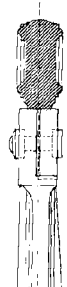


Fig. 13 quater

Coupe suivant G.H.



F. Bolden del.

L. Guiguet sc.

Fig. 15.
Elevation

Fig. 17.
Coupe AB

Machine à détente variable haute pression
et sans condensation
de E. Bourdon

Force 6 chevaux

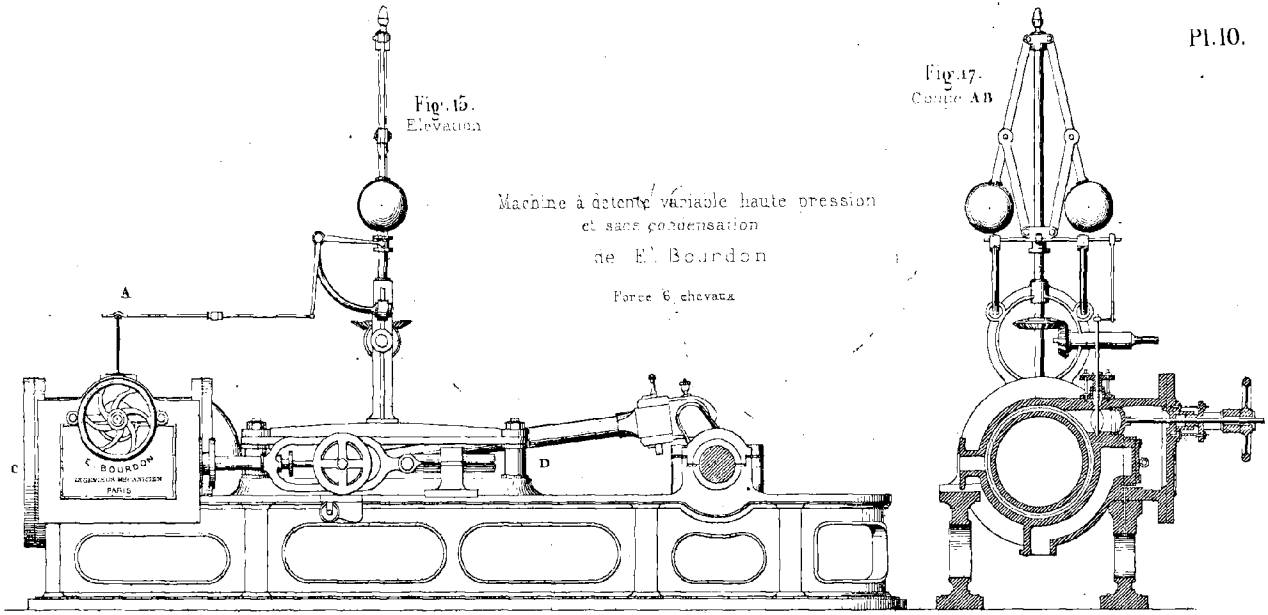
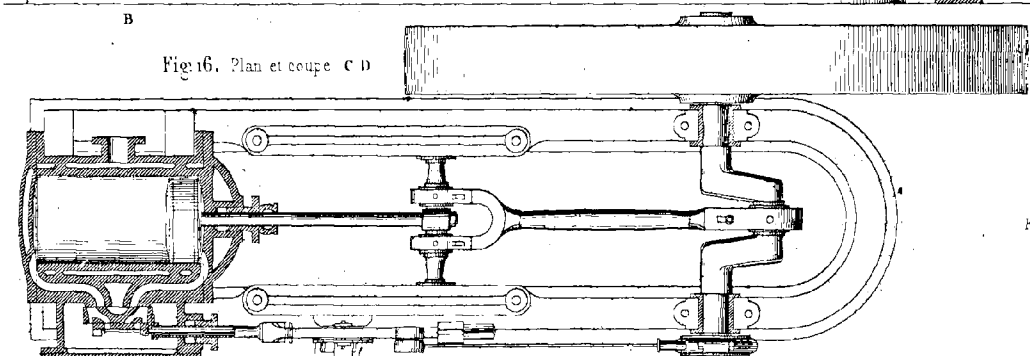


Fig. 16. Plan et coupe C D



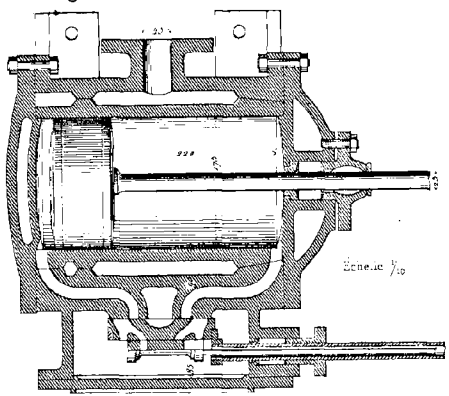
Echelle 1/15

E. Muldon dela

L. Guiguet sc.

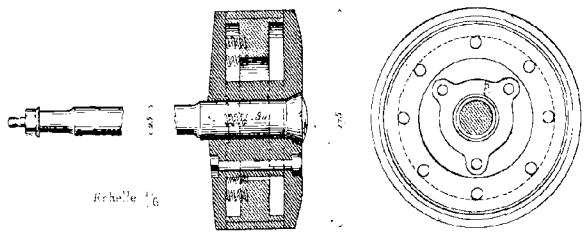
Cylindre et Piston à vapeur de la Machine de Mr E. Bourdon

Fig. 18. Coupe sur le Cylindre



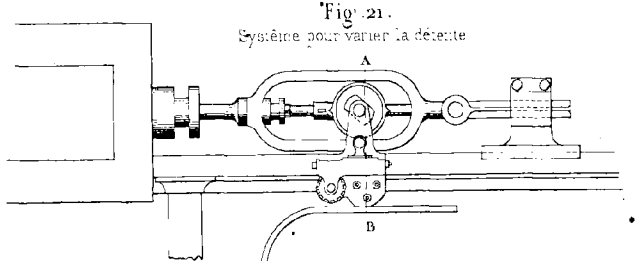
Echelle 1/10

Fig. 19.
Plan et Coupe du Piston



Echelle 1/6

Fig. 21.
Système pour varier la détente



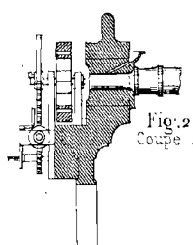
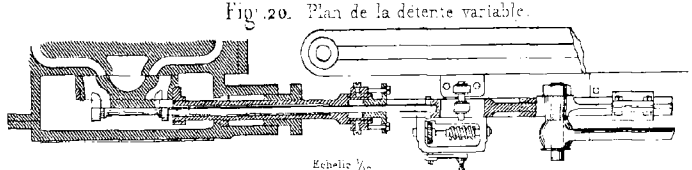


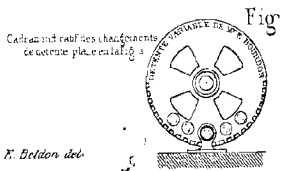
Fig. 22.
Coupe AB.

Fig. 20. Plan de la détente variable.



Echelle 1/10

Fig. 23



F. Beldon del.

L. Gaguet Sc.

Echelle 1/5

Fig:24 Elevation

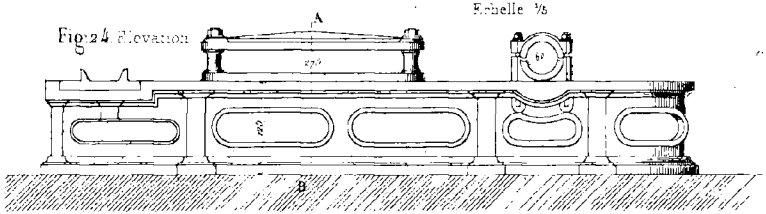


Fig:26. Coupe AB

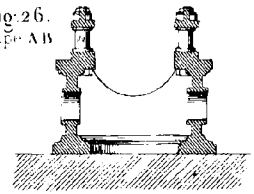


Fig:25. Plan

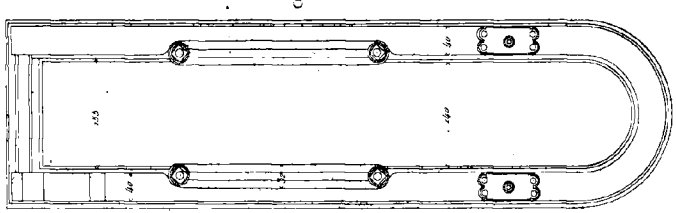
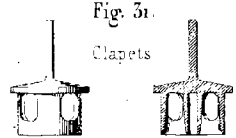


Fig. 31.

Clapets



Echelle 1/10

Echelle 1/10

Fig:29 Manivelle

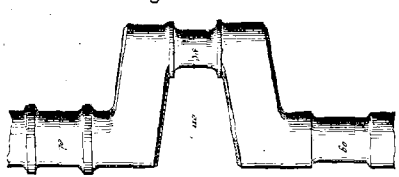


Fig:30. Profil

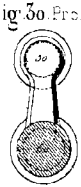


Fig:27. Bielle Motrice Elevation

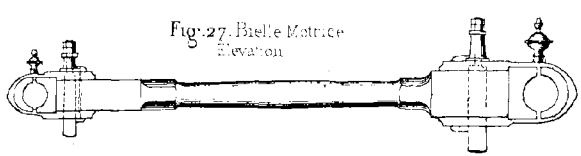
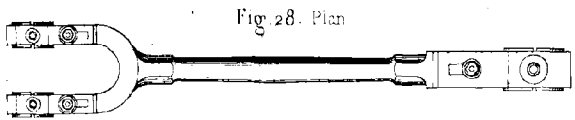


Fig:28. Plan



E. Boldon del.

L. Gaignet & Cie.

Fig. 31.
Elevation

Cheval alimentaire
de M.r E. Bourdon

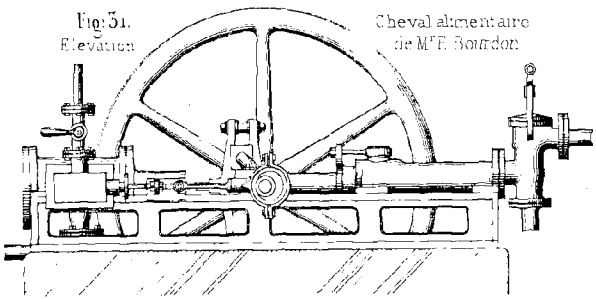


Fig. 32. Plan.

Echelle 1/20

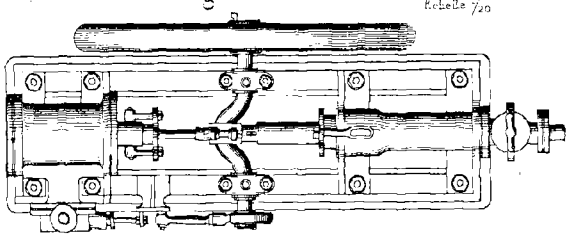
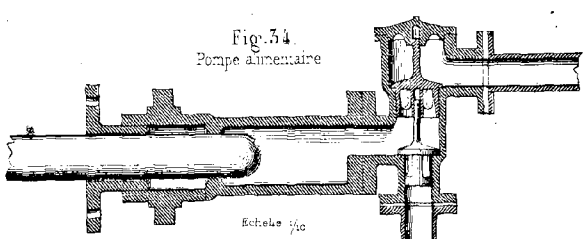


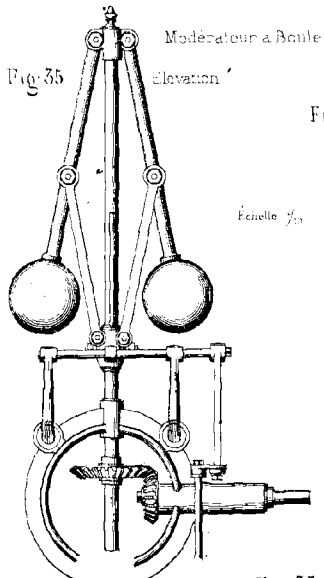
Fig. 34.
Pompe alimentaire



Echelle 1/10

E. Belidor del.

Fig. 35 Modérateur à Boules
Elevation



Echelle 1/10

Fig. 36. Profil

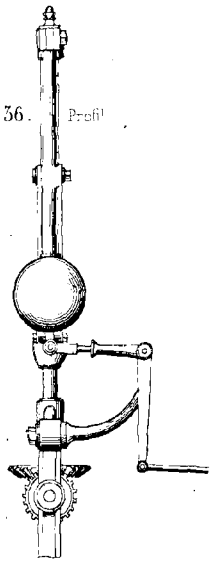
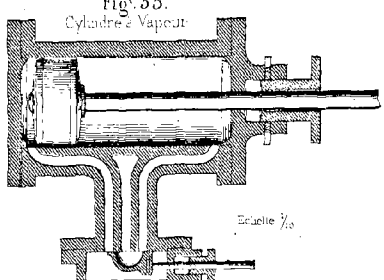


Fig. 33.
Cylindre à Vapeur

Fig. 37.



Echelle 1/10

L. Duquet sc.

Indicateur de Watt et grilles à lignites.

Fig. 37. bis

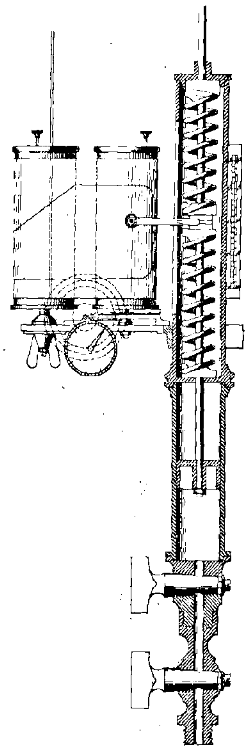
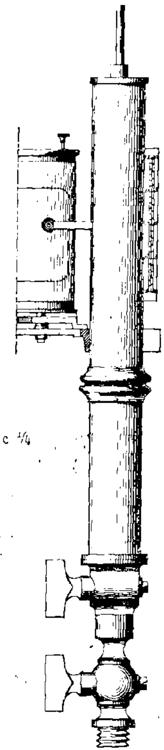


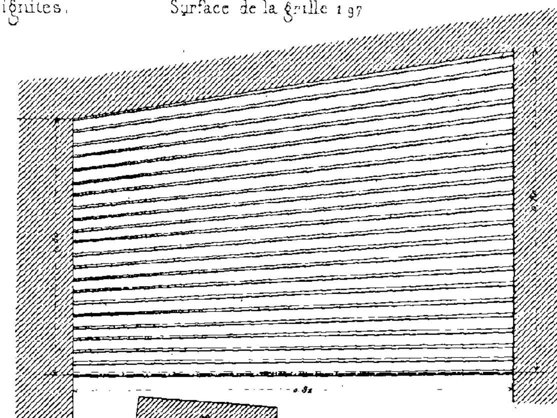
Fig. 37.

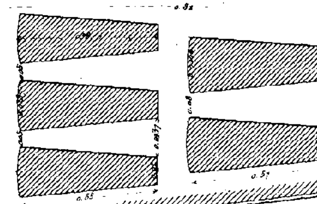


Échelle 1/4

Fig. 38 bis

Surface de la grille 1 97

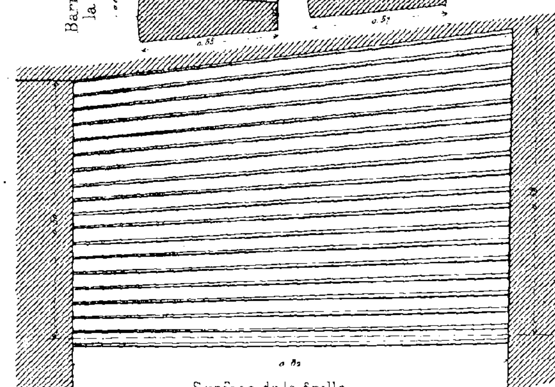




Barreaux de la Fig. 38

Barreaux de la Fig. 38 bis

Fig. 38.



Surface de la grille 0,92

F. Beldon del.

L. Guiguet et Lallie sc.

Retour d'eau alimentaire de l'Hôpital Militaire de Vincennes

Echelle 1/50

Fig. 39.

Elévation générale de l'appareil

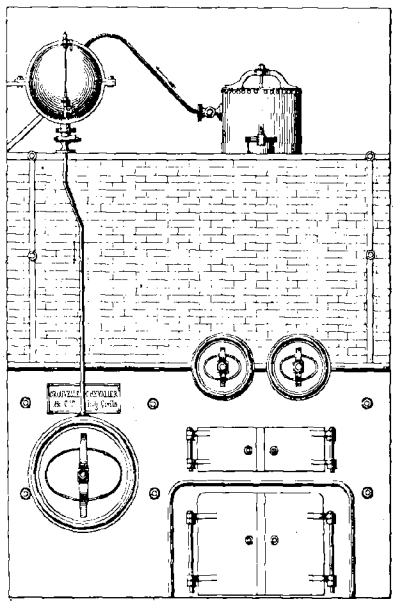
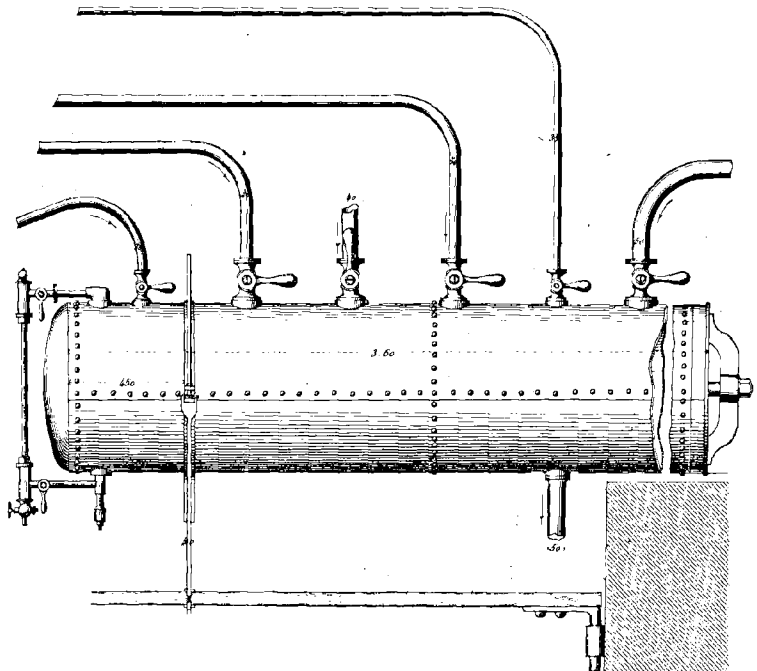


Fig. 40.

Détails du cylindre alimentaire, des robinets et tuyaux

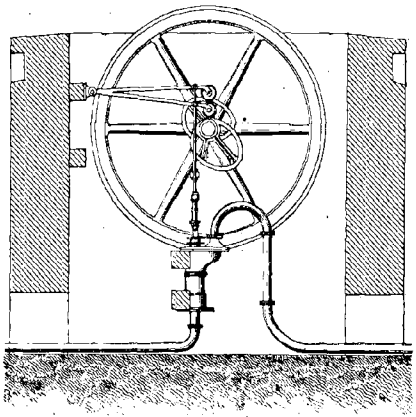


E. Belidor del.

L. Gueguet sc.

Fig. 42.

Disposition des Cames faisant mouvoir les pompes à eau.

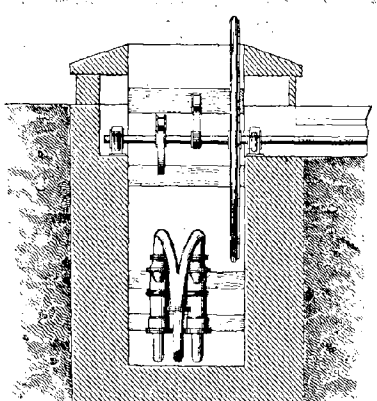


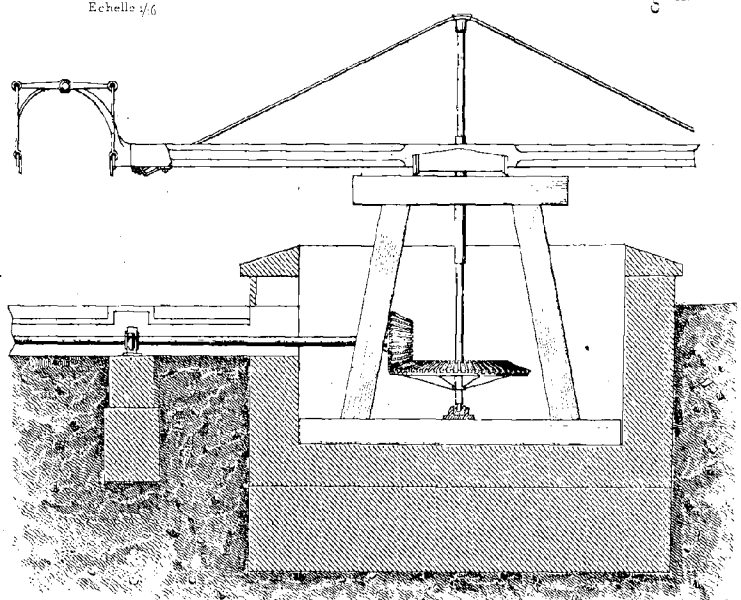
Manège de Mr F. Bourdon, à deux chevaux,
à deux pompes et à ecoulement constant.

Elevation générale
suivant l'axe de l'arbre de transmission

Fig. 41.

Échelle 1/6



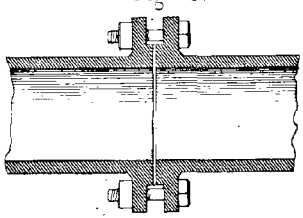


F. Bretton del.

L. Cuquet Sc.

Bride pour tuyau de fonte

Fig. 50.



Bride Monfarine

Fig. 51.

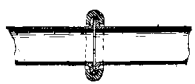


Fig. 43

Fig. 44.

Règle pour dresser les cylindres

Bride d'assemblage pour tuyau de fer ou cuivre

Fig. 50bis

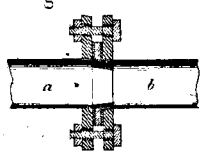


Fig. 48.

Elevation d'un coussinet palier

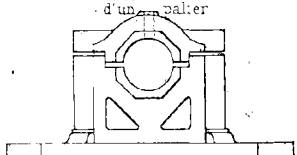


Fig. 45.

Niveau pour dresser l'axe d'un balancier

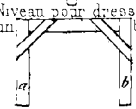
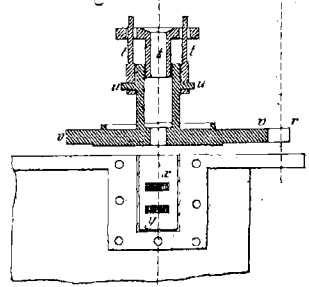


Fig. 43



Frein de Prony

Elon et Coupe

Fig. 46.

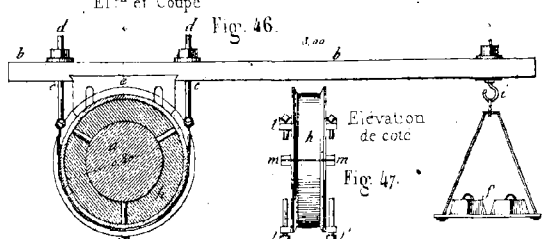


Fig. 48bis

Plan

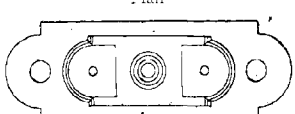
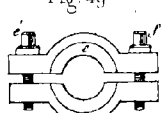


Fig. 49



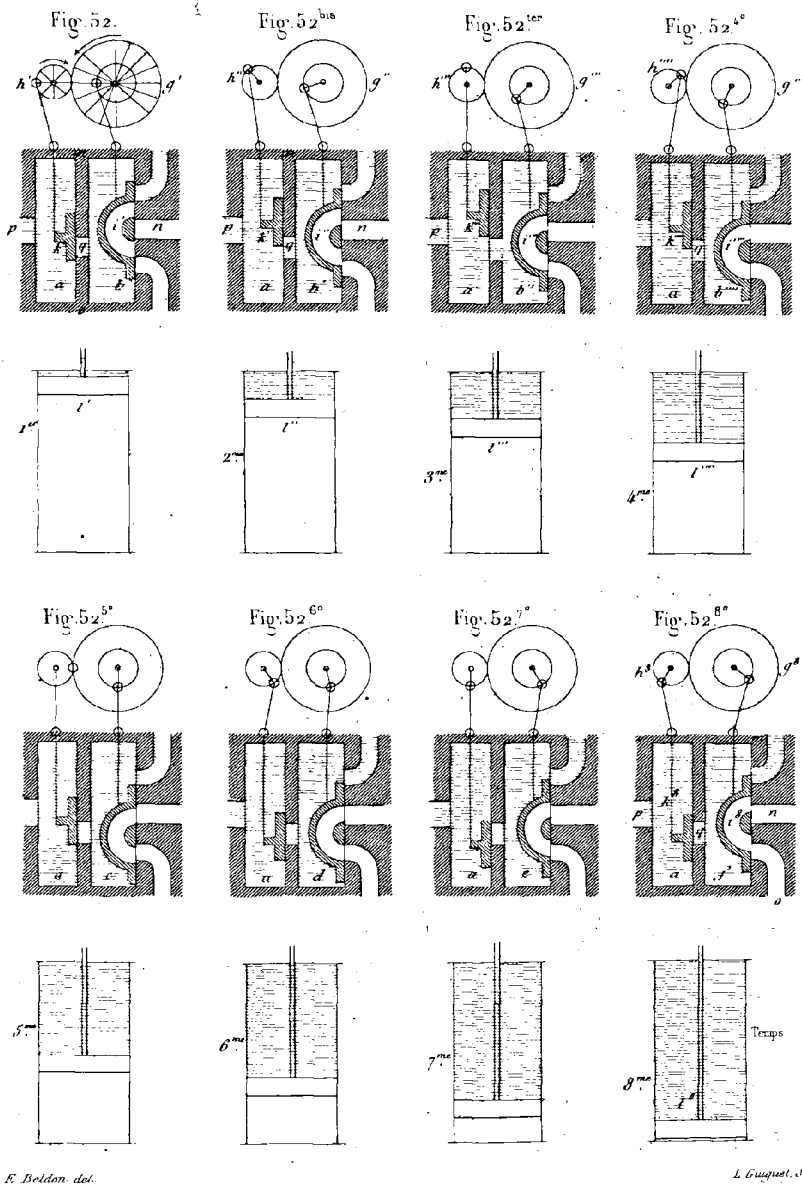
Machoire à vis pour tiges de piston

Elevation de coté

Fig. 47.

Echelle 1/5e

Détente à tiroirs doubles de J.F. Saulnier de la monnaie.



E. Beldon. del.

L. Guiquet. Sc.

Detente variable de Hamm.
à Sarreguemines.
par le moderateur à boules

Fig. 54.

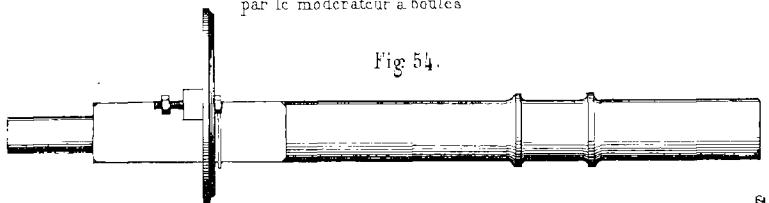


Fig. 54.bis

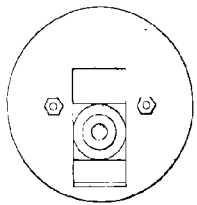


Fig. 54.bis

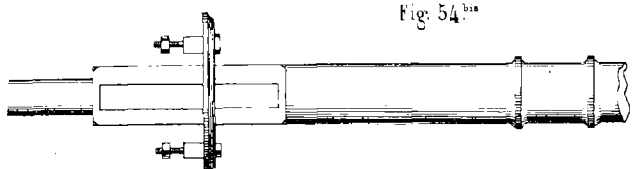


Fig. 55

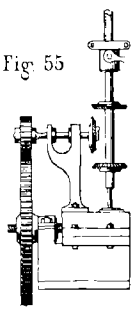


Fig. 55.bis

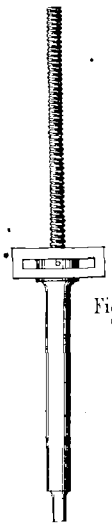


Fig. 56

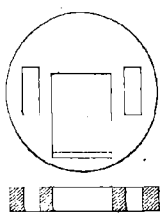


Fig. 55.ter

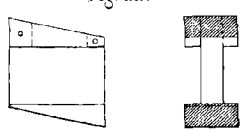


Fig. 57

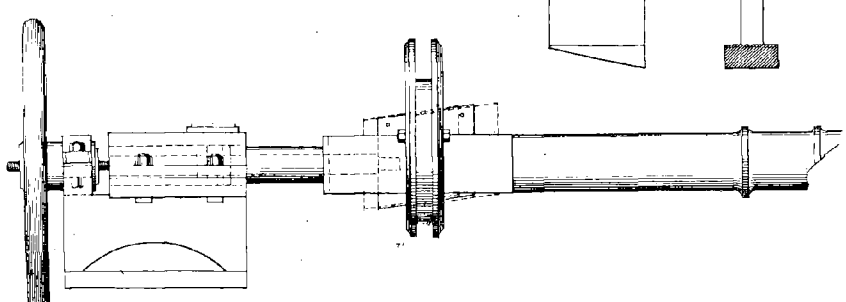
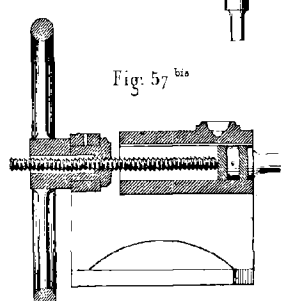


Fig. 57.bis



F. Beldon del.

L. Guignet sc.

E. Bridon del.

Fig. 58.bis

Coupe sur AB

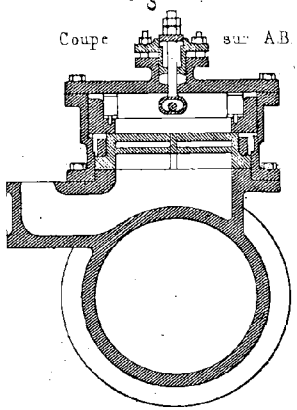
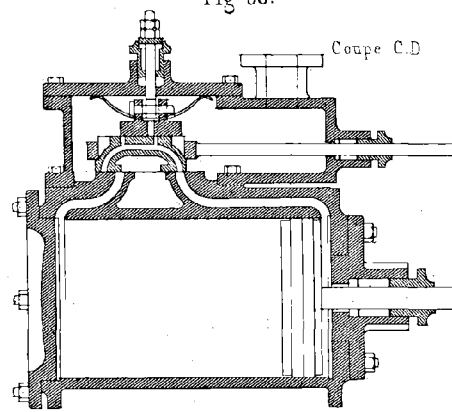


Fig. 58.

Coupe C.D



Détente variable
de Hanrez de Marchiennes

Fig. 58.quater

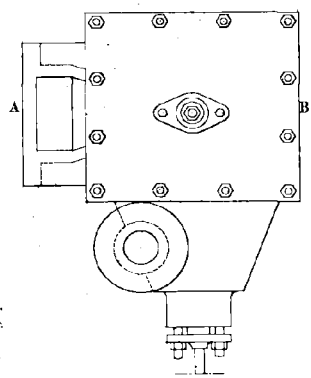
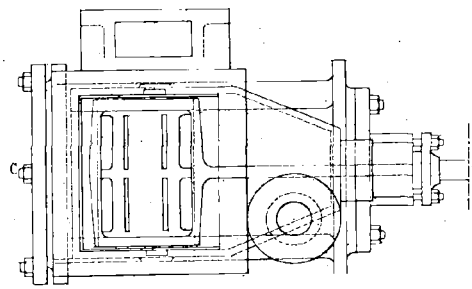


Fig. 58.ter



Echelle 1/100

L. Guignet sc.

Pl. 20.

Pl. 21.

Tiroirs équilibrés
de Mr Jobin.

Fig. 59 bis

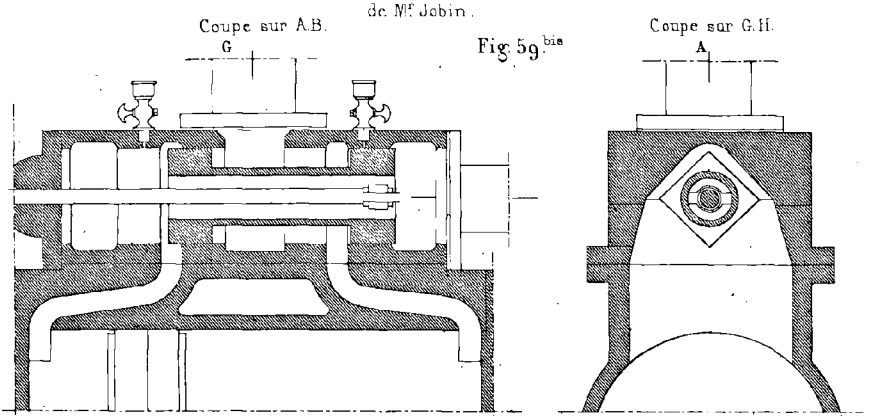


Fig. 59

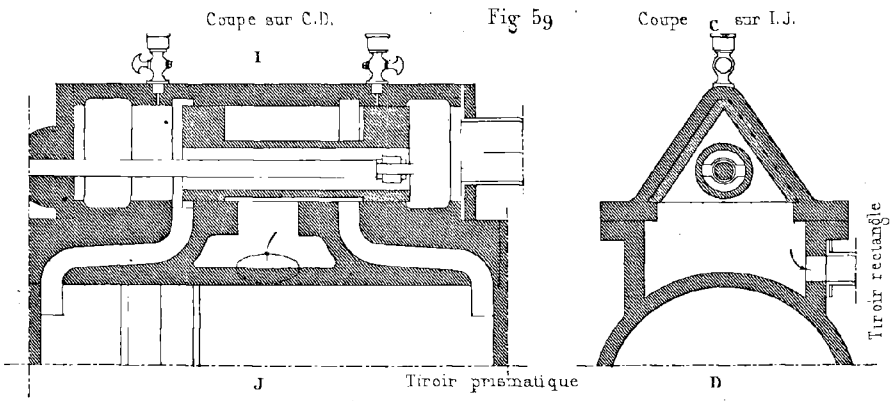
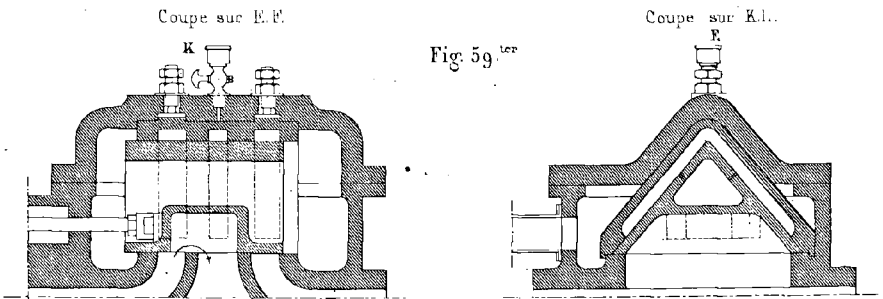


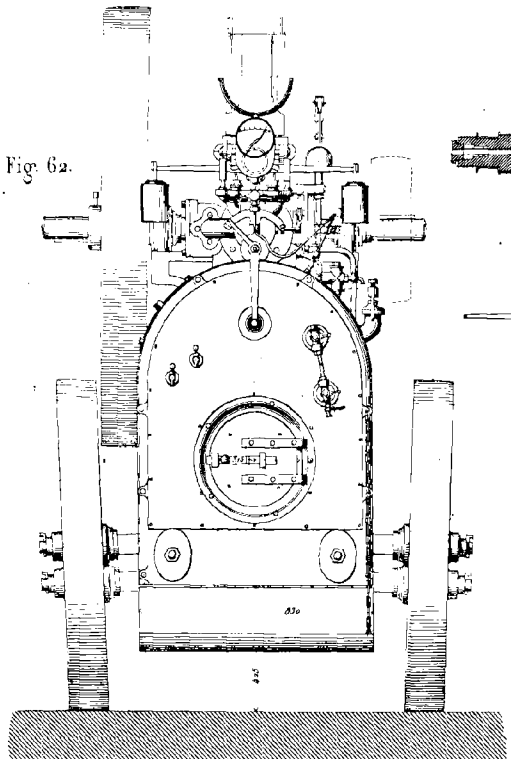
Fig. 59 ter



Distribution des Machines
oscillantes de Mr Cavé

Locomobile Calla
vue par derrière

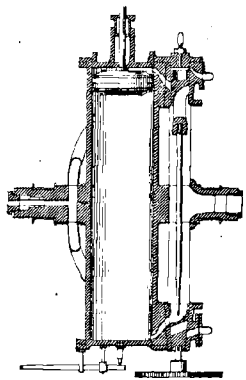
Fig. 62.



E. Belidan del.

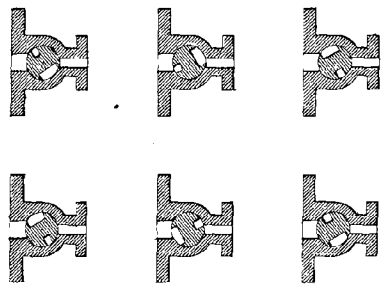
Echelle 0 m10

Fig. 61.bis



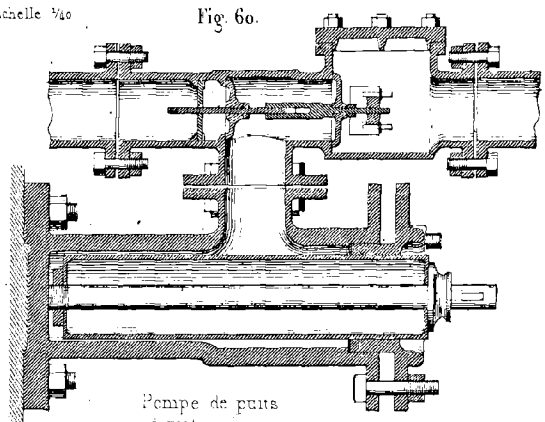
Echelle 1/10

Fig. 61.



Echelle 1/20

Fig. 60.



Pompe de puits
à piston plein

L. Guignet sc.

Pompe de puits et Régulateur à colonne d'eau à force centrifuge de Mr E. Bourdon

Coupe verticale de la pompe de puits

Fig. 64.

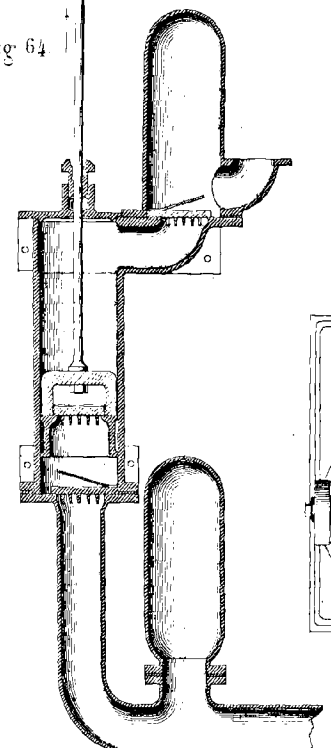
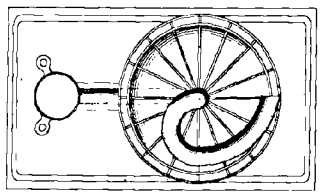


Fig. 67.



Echelle au 1/6

Plan

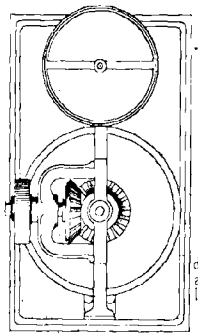


Fig. 68.

Modérateur à force centrifuge et à colonne d'eau

Coupe verticale

Niveau de l'eau variable entraînant le flotteur dans ses mouvements

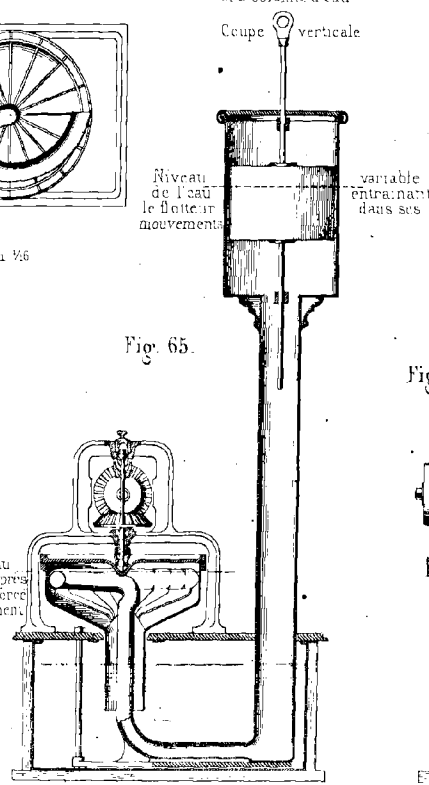


Fig. 65.

Niveau de l'eau après avoir amorcé l'instrument

Elévation par bout

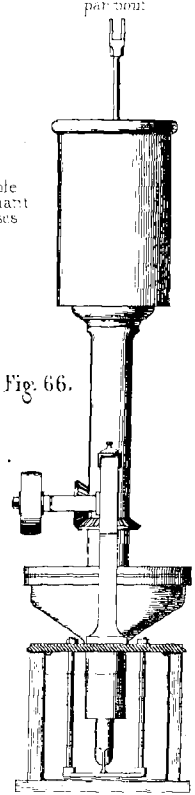


Fig. 66.

E. Dehlon del

L. Ginquet se

Régulateur La Rivière

et tuyères à air chaud des fours Rossi.

Fig. 69.

Echelle au 01.

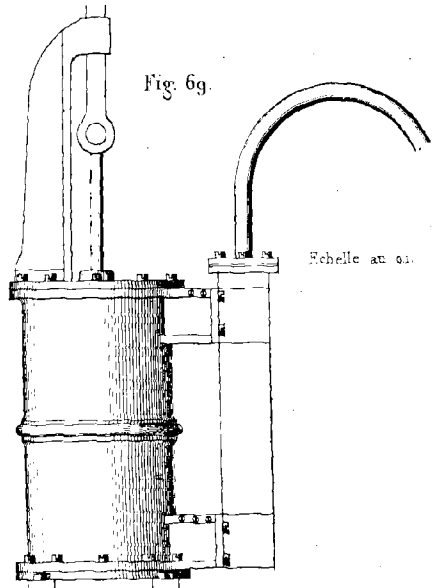


Fig. 69 bis

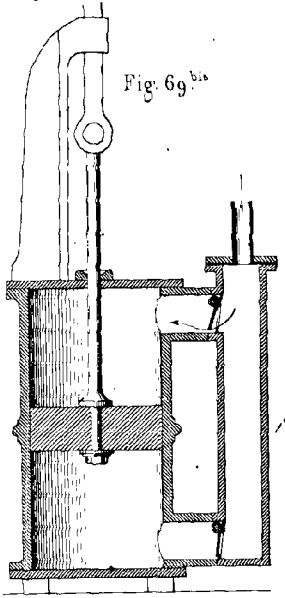


Fig. 70.

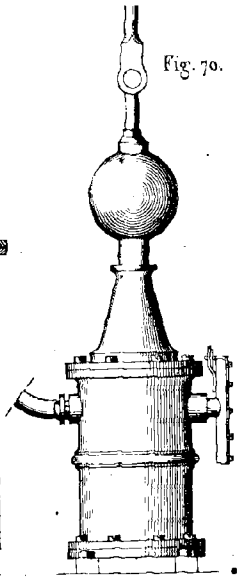
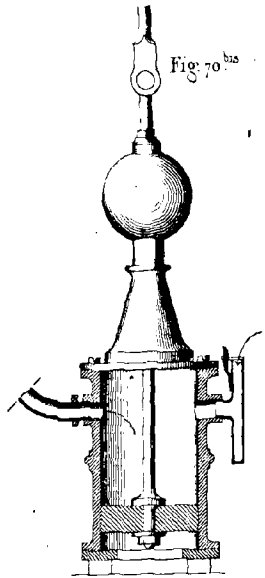


Fig. 70 bis



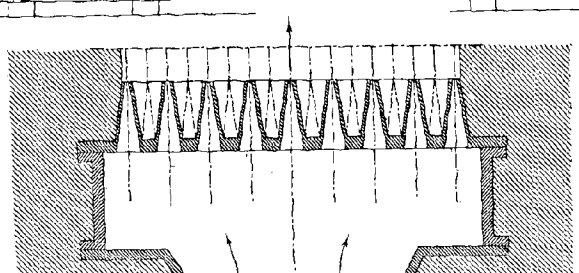


Fig. 71.

Echelle au 0.01

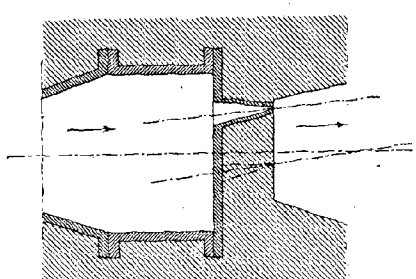
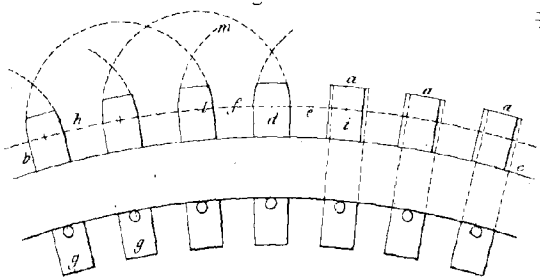


Fig. 71 bis

E. Reidon. del.

L. Guiguet et Ballée sc.

Fig. 73.



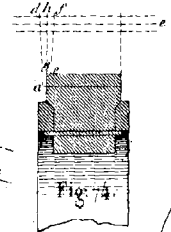


Fig. 74.

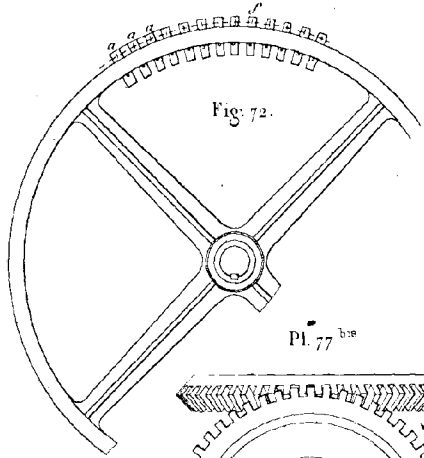


Fig. 72.

Pl. 77 bis

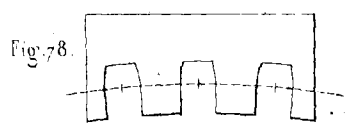


Fig. 78.

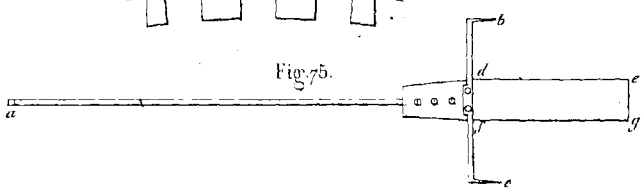


Fig. 75.

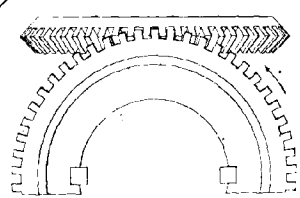


Fig. 77.

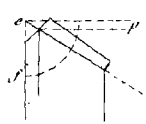
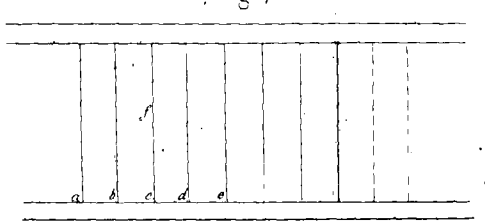
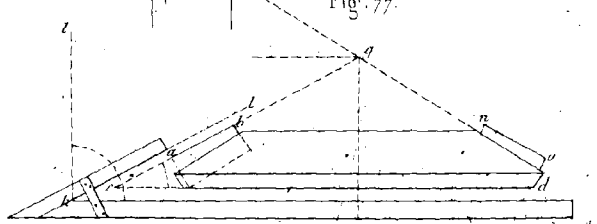


Fig. 76.



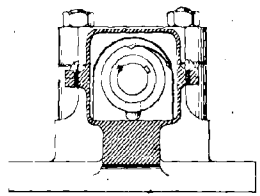


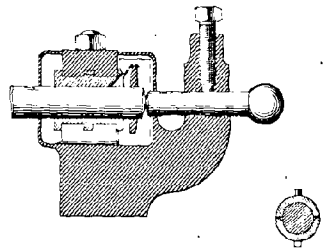
E. Bridon del.

L. Guiguet lith.

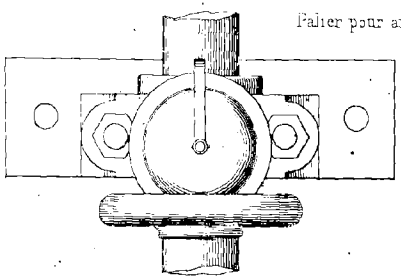
Paliers graisseurs pour arbres moteurs, de Mr E Bourdon

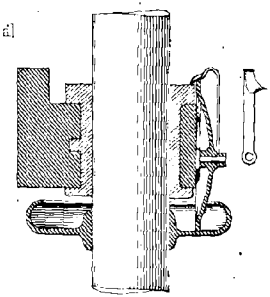
Fig. 80. Pl. 26.



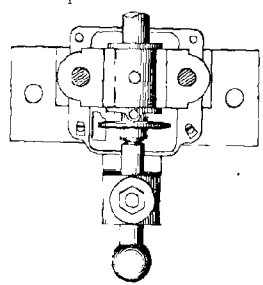


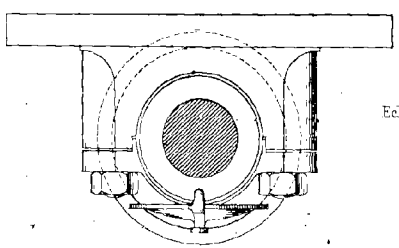
Palier pour arbre vertical



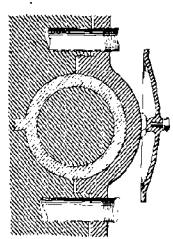


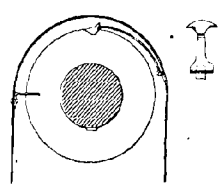
Palier pour arbre horizontal





Echelle ½

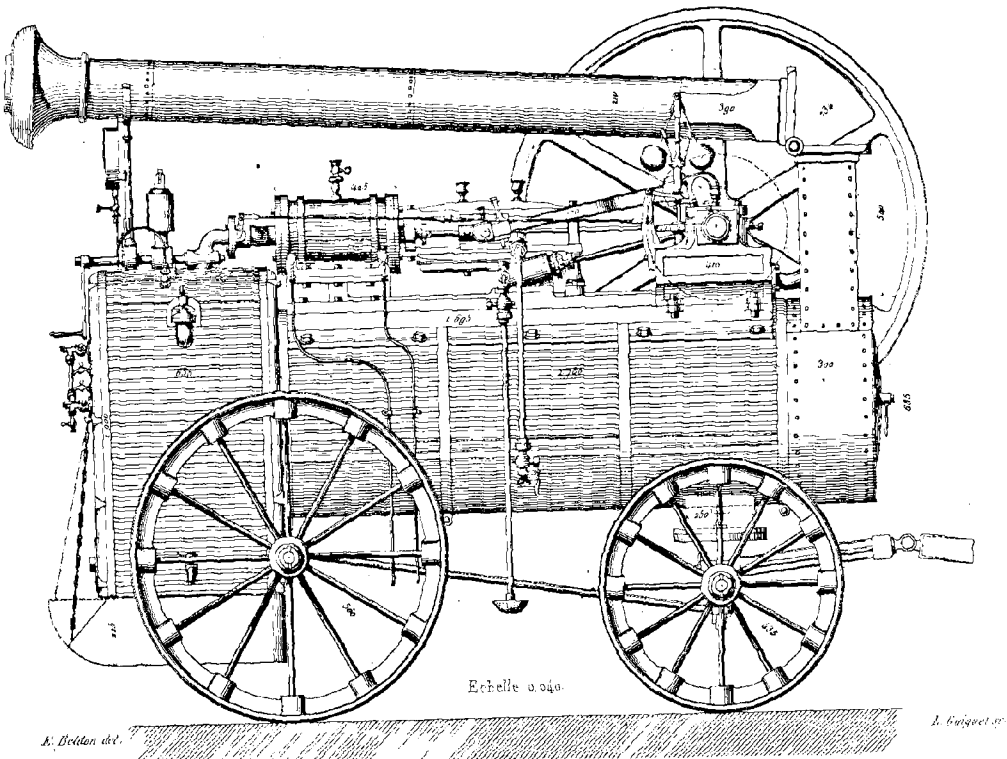




E. Beidon del. Fig. 79. Fig. 79.bis Fig. 79.ter L. Guiquet sc.

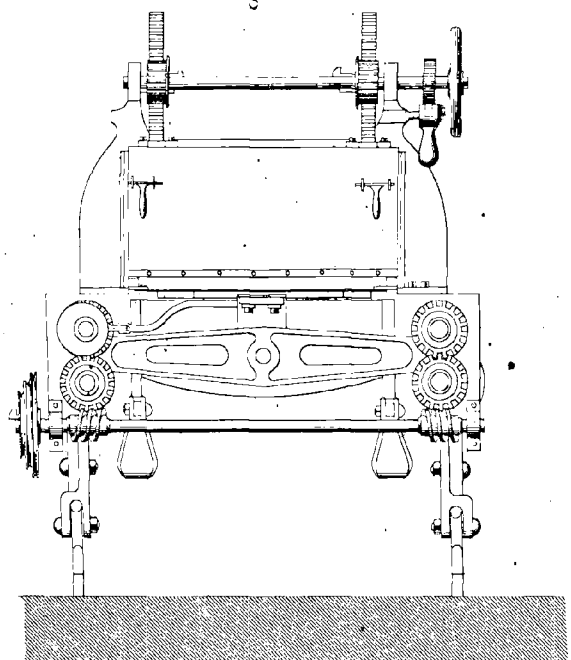
Locomobile de Calla
Elevation generale

Fig. 81.



Appareil mécanique fumivore
de Mr F Guillemet de Nantes.

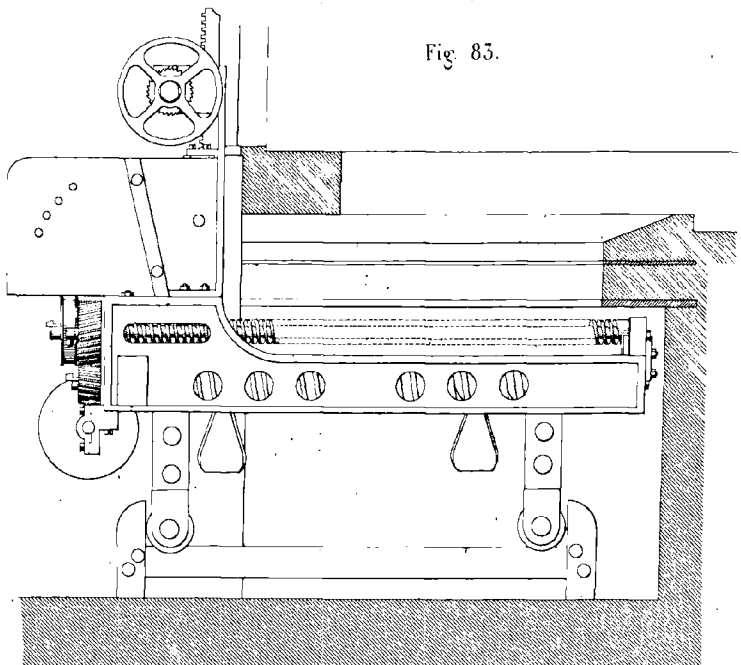
Fig. 82.



Elévation de face

Echelle 1/20.

Fig. 83.



Coupe sur l'axe du foyer

E. Boldon. del.

L. Guiquet sc.

CHEMIN DE FER DU NORD

Machine à marchandises Système Engerth

N° 370-398

Pl. 30 et 31.

Fig. 88.

Elévation

Echelle au 1/10

Fig. 87.

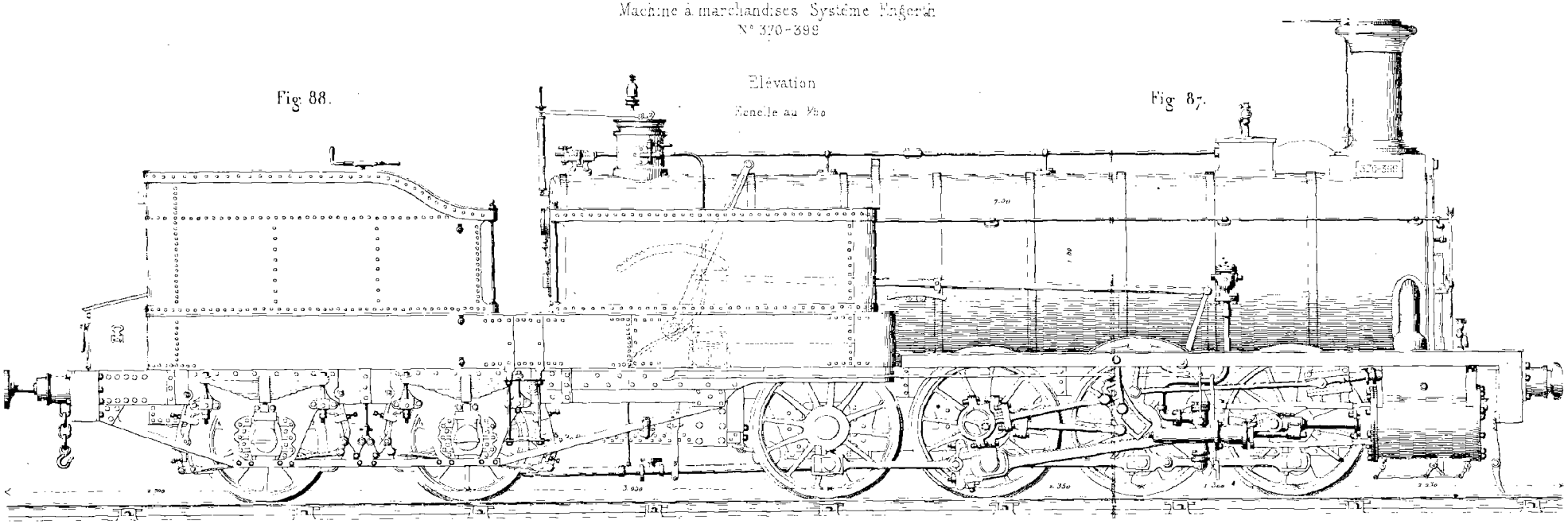
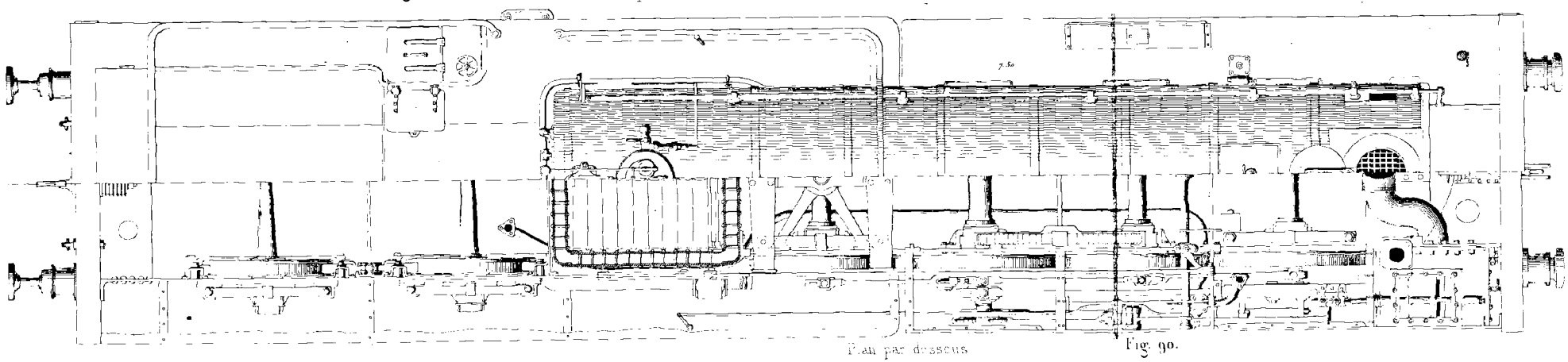


Fig. 91.

Plan par dessus

Fig. 89.



Plan par dessous

Fig. 90.

F. Heldan del.

L. Guiguet et Lallié sc.

Fig. 92.

Cylindre complet de locomotive avec ses tiroirs et son piston

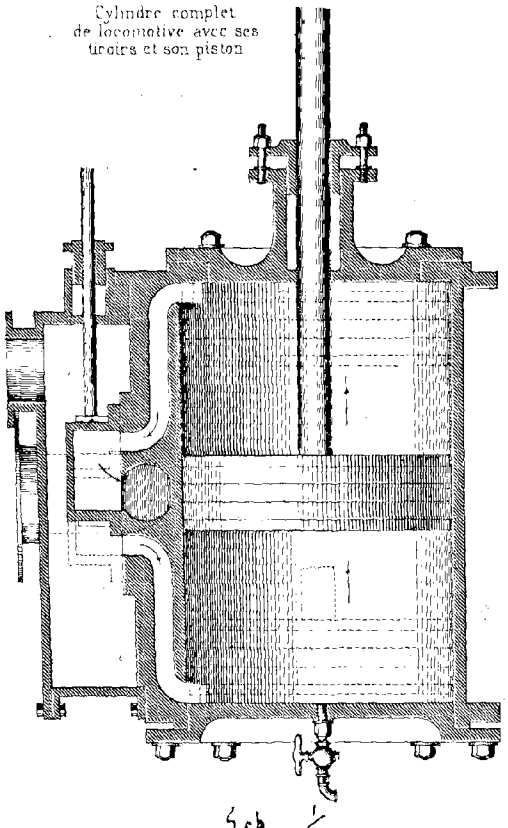
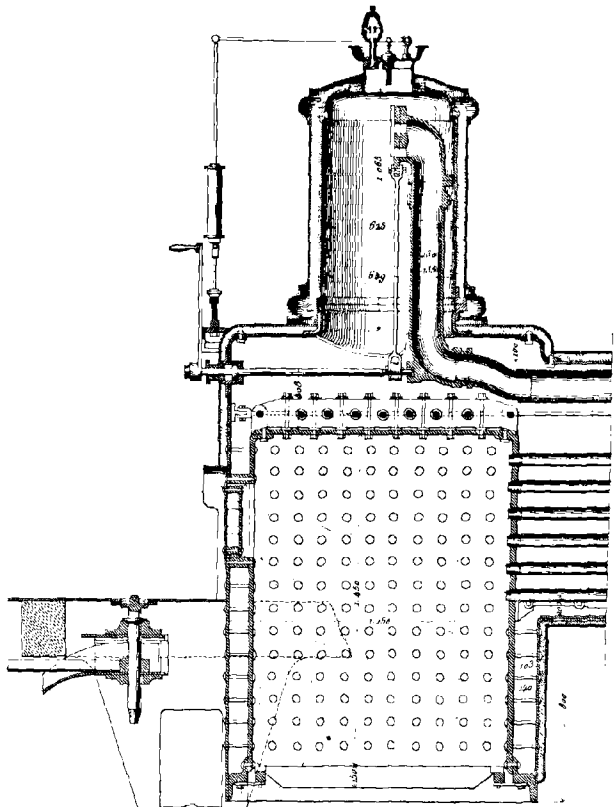


Fig. 93.

Tuyau de prise de vapeur
Réservoir de vapeur
Foyer et soupapes de sureté



Echelle 1/5

(Guide du Constructeur de Locomotives)

E. Beldon del.

L. Gorguet sc.

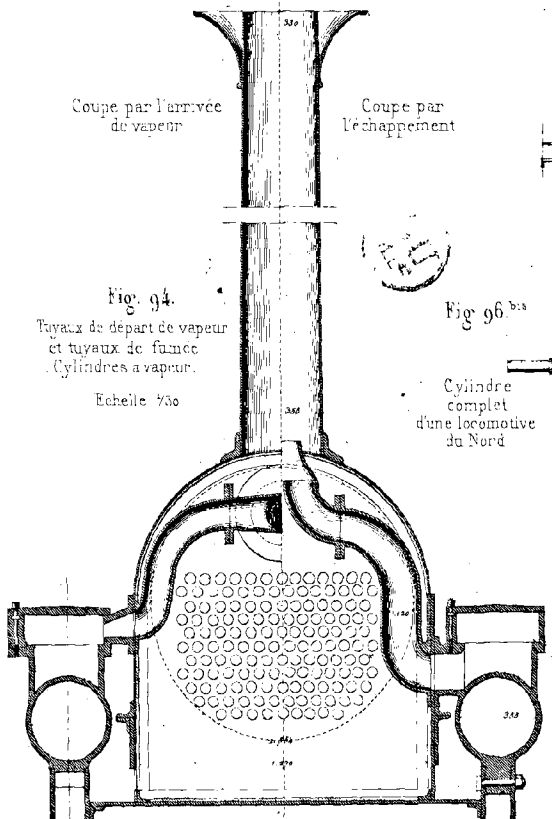


Fig. 94.
Tuyaux de départ de vapeur et tuyaux de fumée. Cylindres à vapeur.
Echelle 1/30

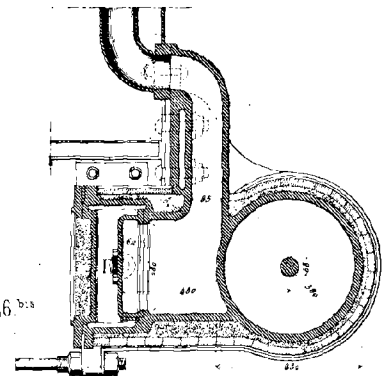


Fig. 96 bis
Cylindre complet d'une locomotive du Nord

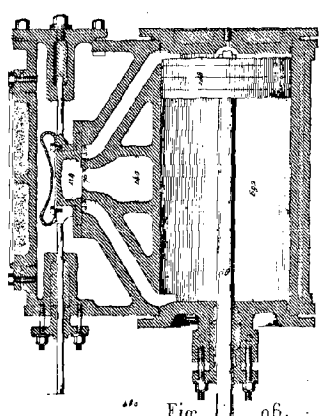


Fig. 96.

Fig. 97.
Plan de piston d'Orléans

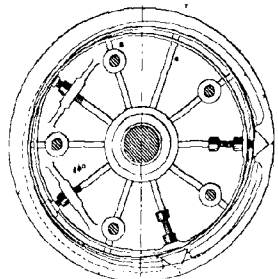
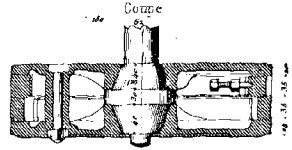
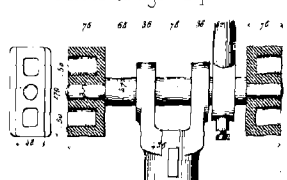


Fig. 98.
Piston d'Orléans
Coupe



Echelle 1/20

Fig. 95.
Guides de tige du piston



P. Holden del.

(Guides du Constructeur de Locomotives)

L. Gueyard sc.

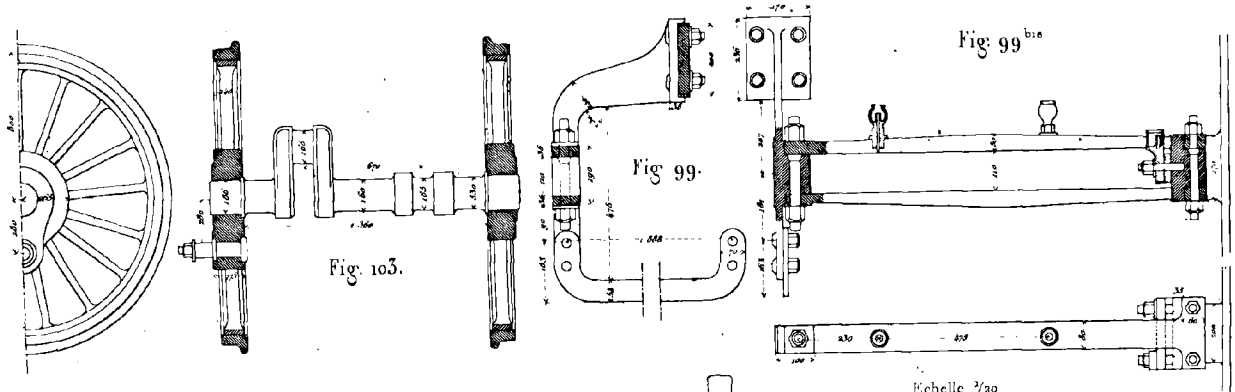


Fig. 103.

Fig. 99.

Fig. 99 bis

Echelle 1/10

Echelle 1/20

Fig. 102.

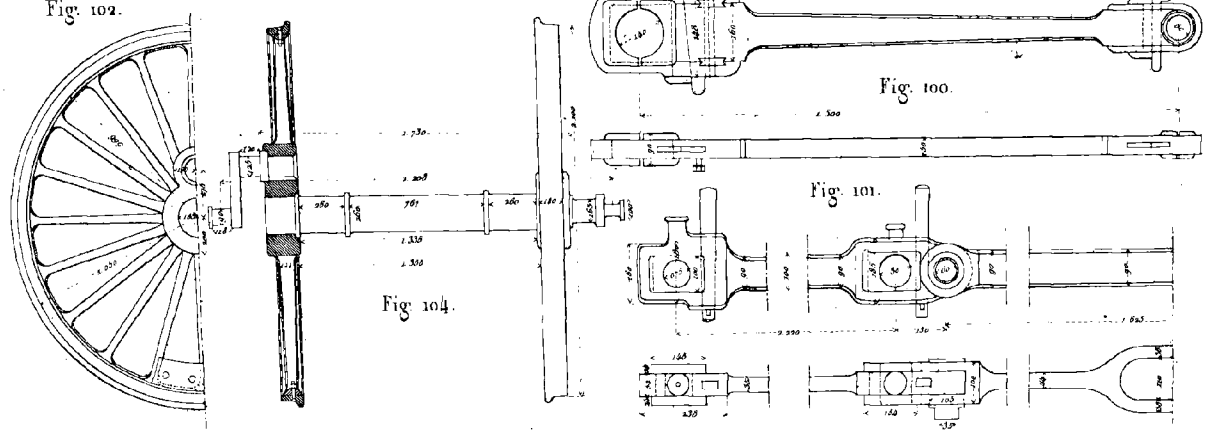


Fig. 104.

Fig. 100.

Fig. 101.

E. Beldon del.

(Guide du Constructeur de locomotives)

L. Guiguet sc.

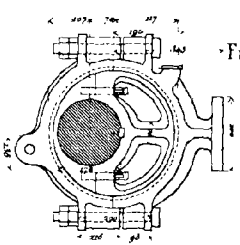


Fig. 107.
Echelle 1/25

Fig. 105.
Echelle 1/20

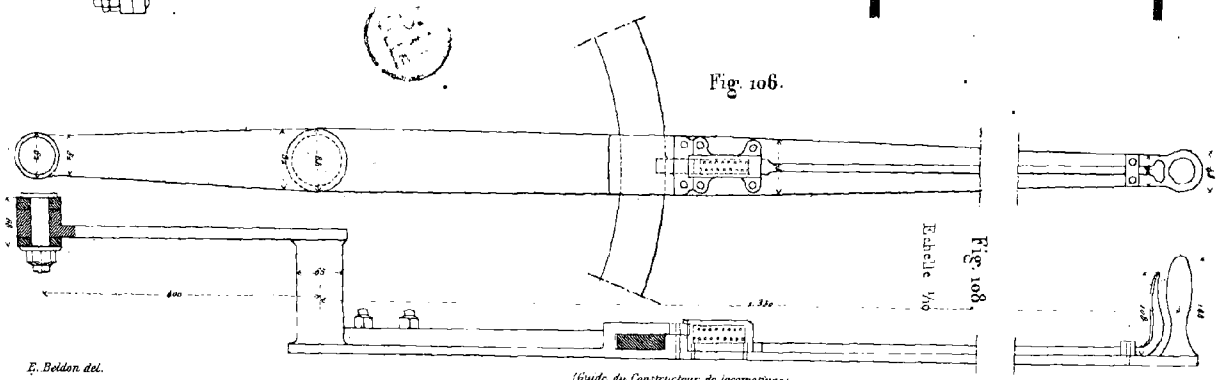


Fig. 106.

Fig. 108.
Echelle 1/10

E. Boldon del.

(Guide du Constructeur de locomotives)

L. Guiguet sc.

Fig. 112. Tender

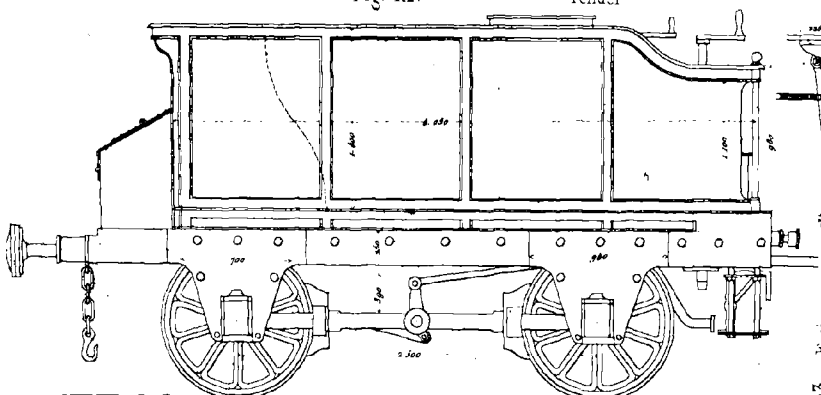


Fig. 109. ½ Plan

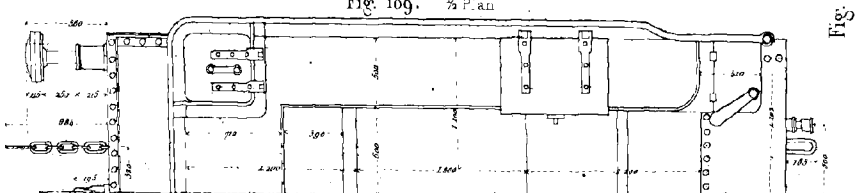
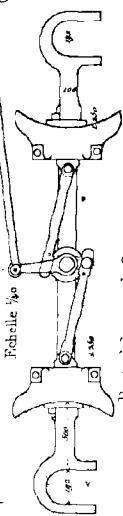


Fig. 113. Frein
Echelle ½0



Boite à graisse de Crampton

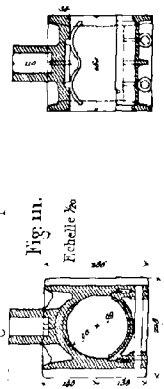
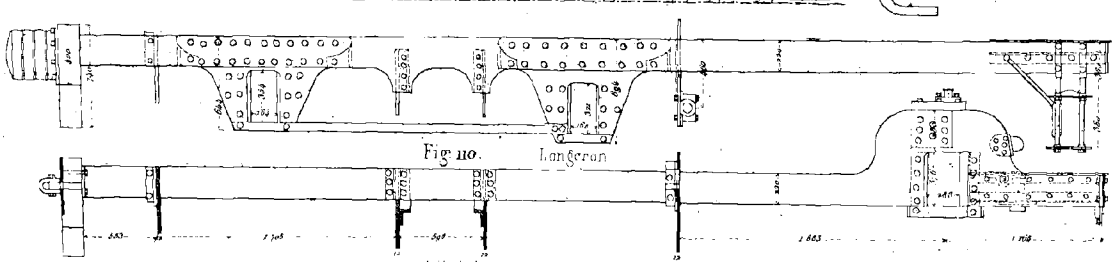


Fig. 111.
Echelle ½0

Fig. 110. Langeron



(Suite du Constructeur de Locomotives)

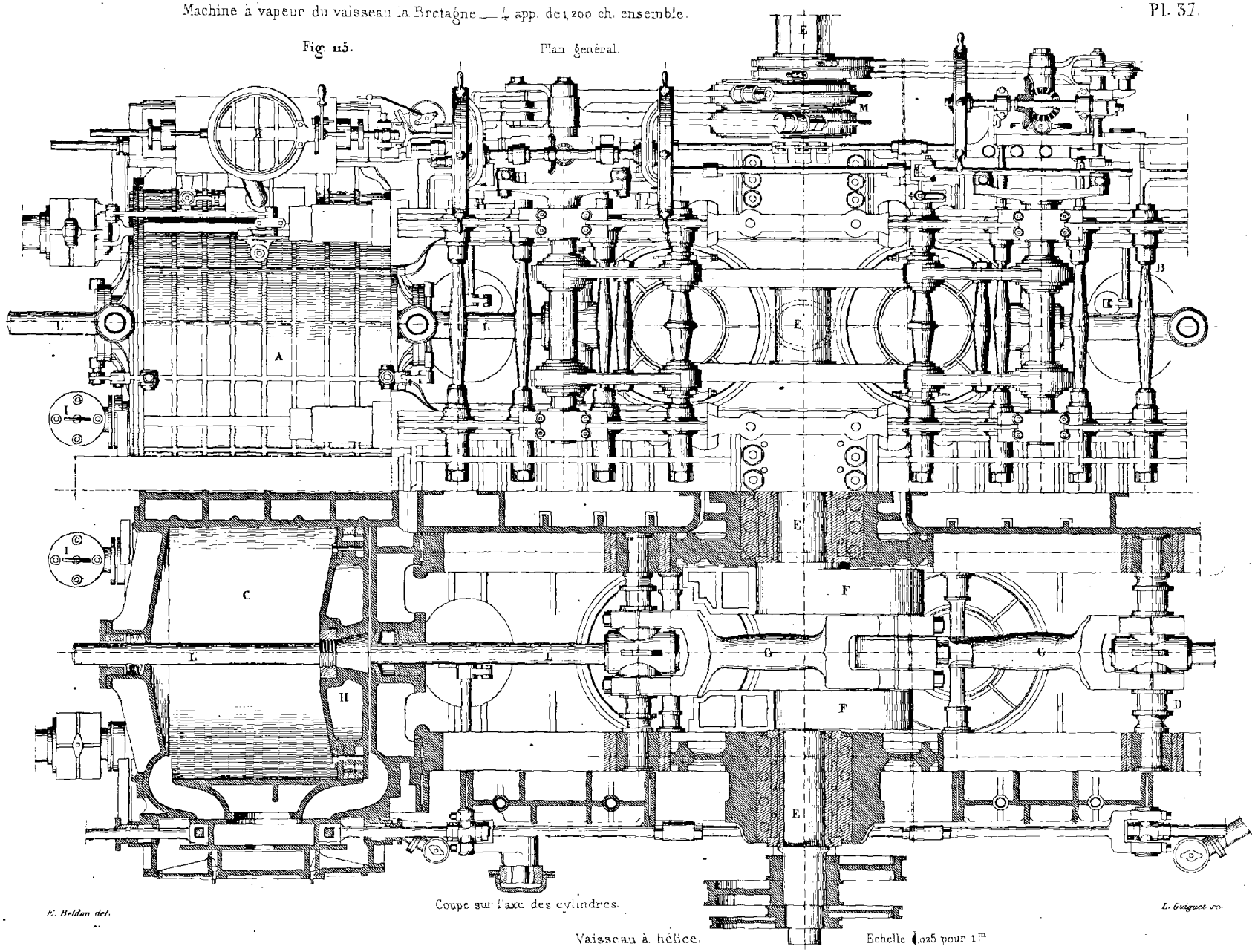
J. Gruguet sc

MARINE IMPÉRIALE.

Machine à vapeur du vaisseau la Bretagne — 4 app. de 1,200 ch. ensemble.

Pl. 37.

Fig. 115. Plan général.



F. Boldon del. Coupe sur l'axe des cylindres. L. Guiguet sc.

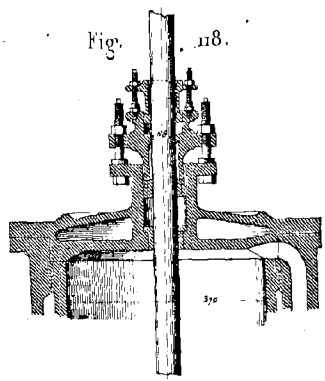
Vaisseau à hélice. Echelle de 0m25 pour 1m

MARINE IMPERIALE

Machines de 1200 chevx de la Bretagne

Cylindre de la Machne horizle de Mr Farcot

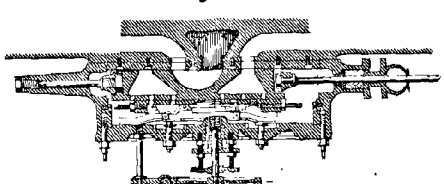
Fig. 118.



Echelle 1/30

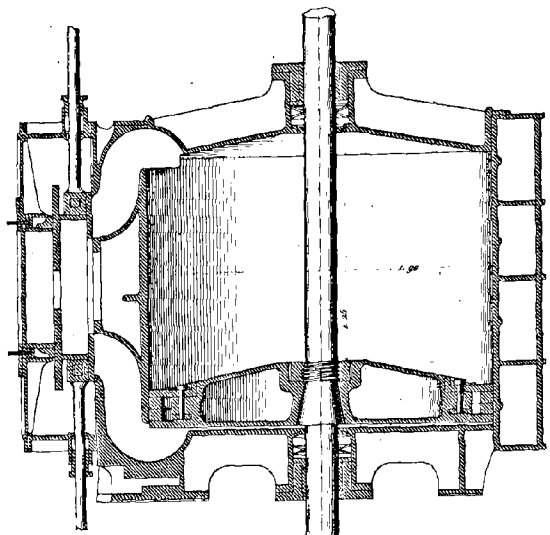
Tiroir de Mr Farcot

Fig. 119.



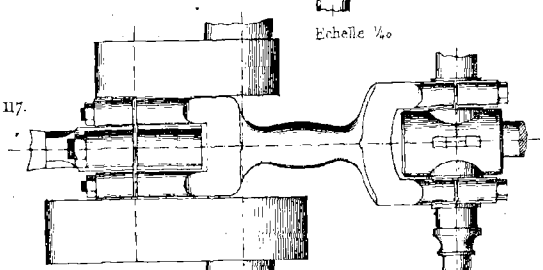
Coupe horizontale d'un cylindre

Fig. 116.



Echelle 1/40

Fig. 117.



Projection horizontale d'une manivelle et d'une bielle

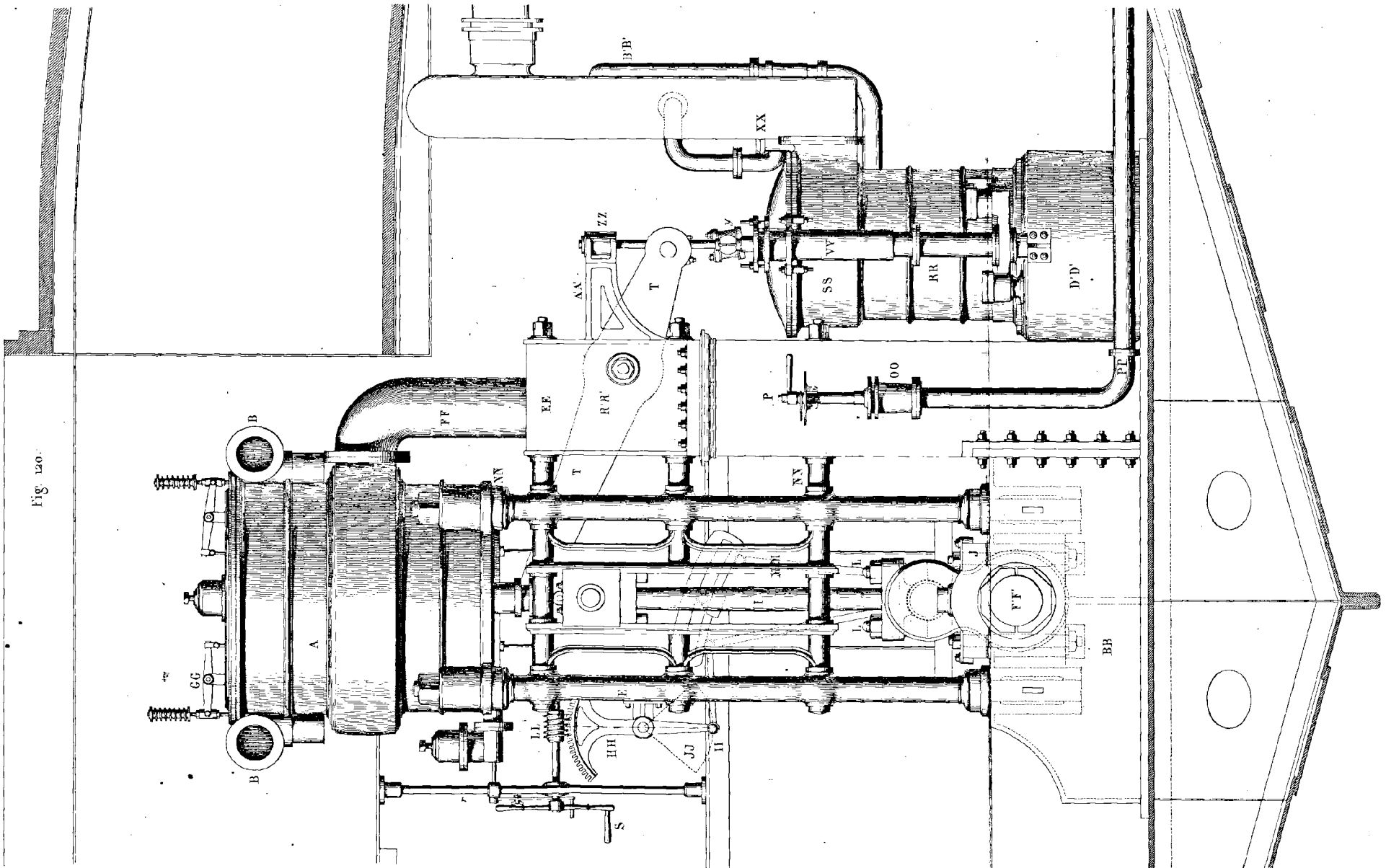
V. Boldon del.

L. Guiguet sc.

Machine de Bateau pour la navigation transatlantique
force de 250 chevaux

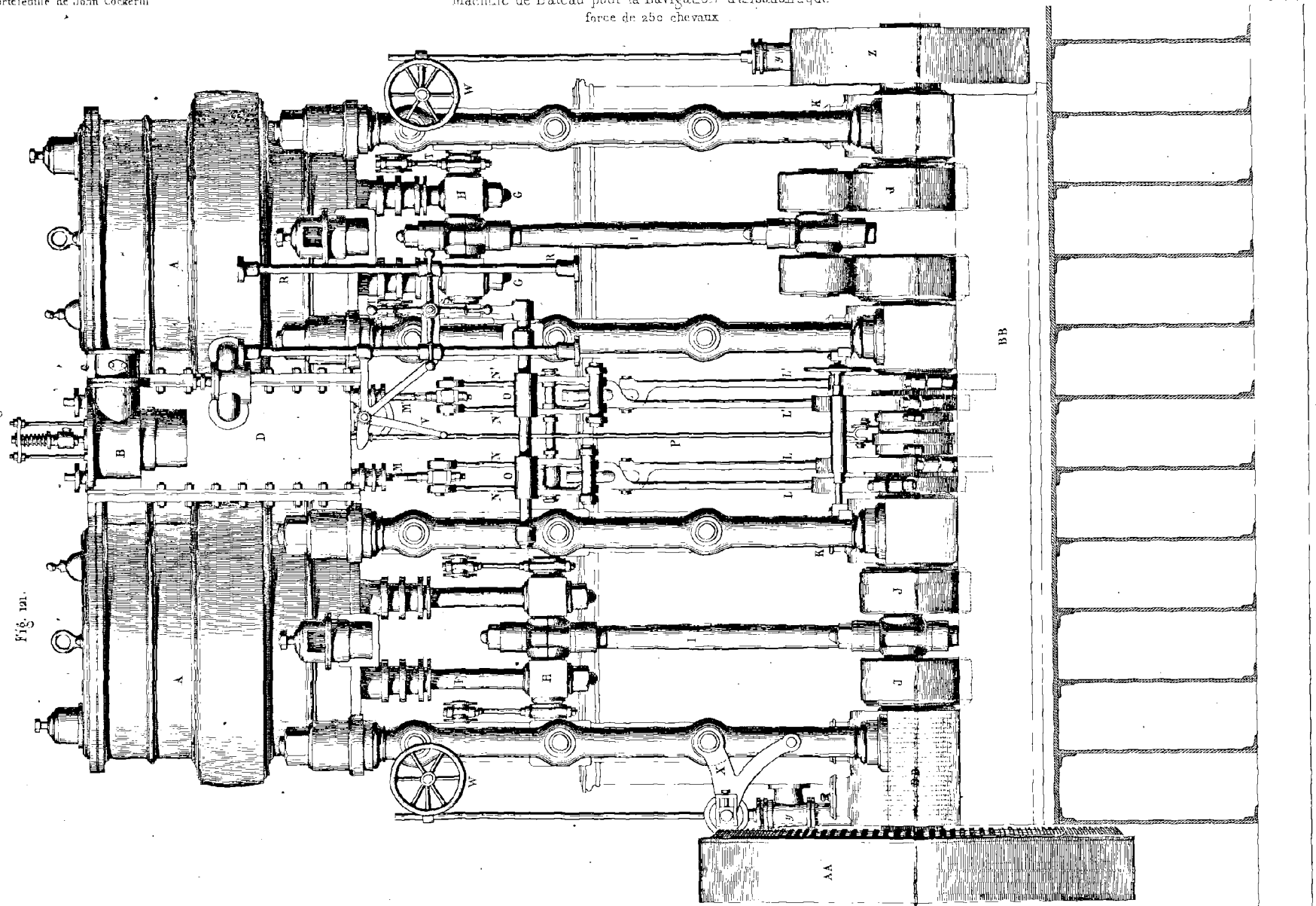
Fig. 120.

Élévation suivant l'axe transversal du navire



Machine de Bateau pour la navigation transatlantique
force de 250 chevaux

Fig. 121. Elévation suivant l'axe longitudinal du navire

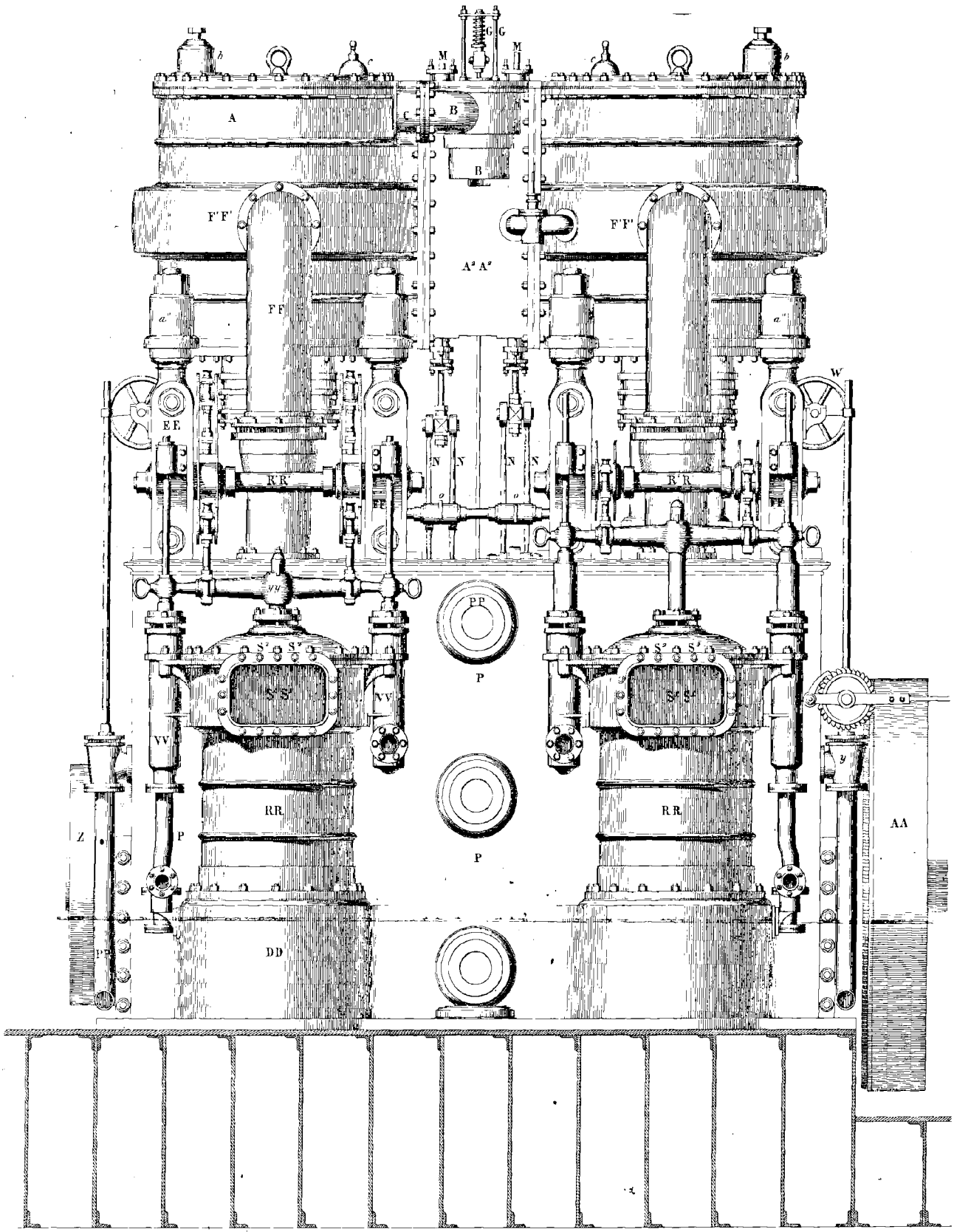


Echelle 0,028 pour 1 mètre

L. Guiquet sc.

MACHINES TRANSATLANTIQUES
de 280 chevaux de Seraing.

Fig. 122.



E. Arbion, del.

Echelle 0,028 pour 1 mètre.

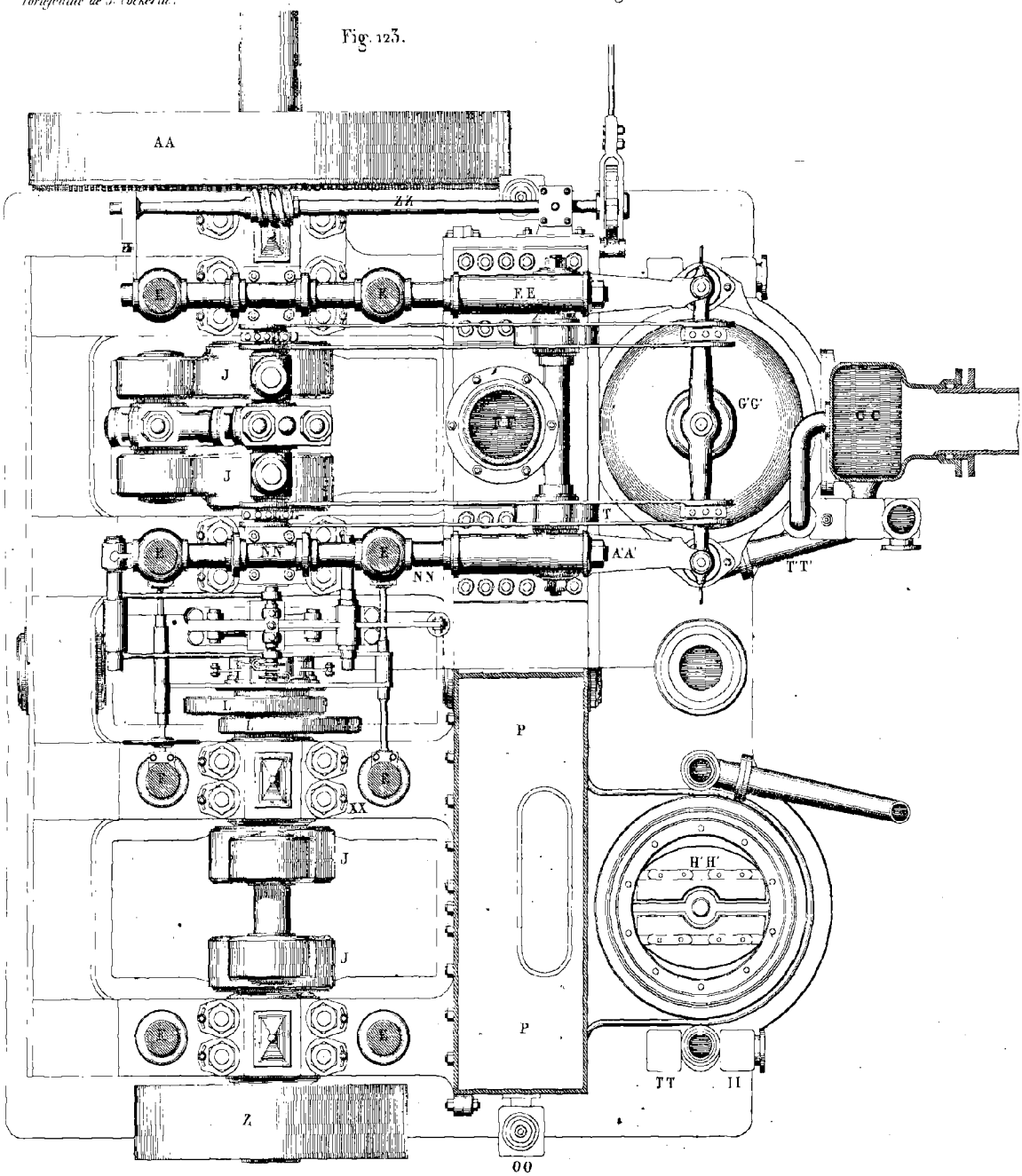
L. Guiguet et Taillé sc.

Portefeuille de J. Cockerill.

MACHINES TRANSATLANTIQUES.
de 250 chevaux, de Seraing.

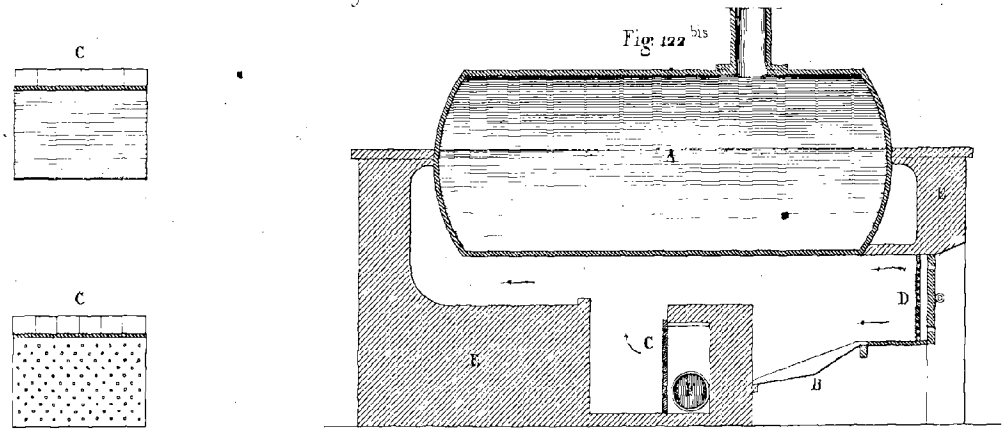
Portefeuille de J. Cockerill.

Fig. 123.



Foyer fumivore de Wie Williams.

Fig. 122 bis



E. Boidan. del.

Echelle 0,028 pour 1 mètre

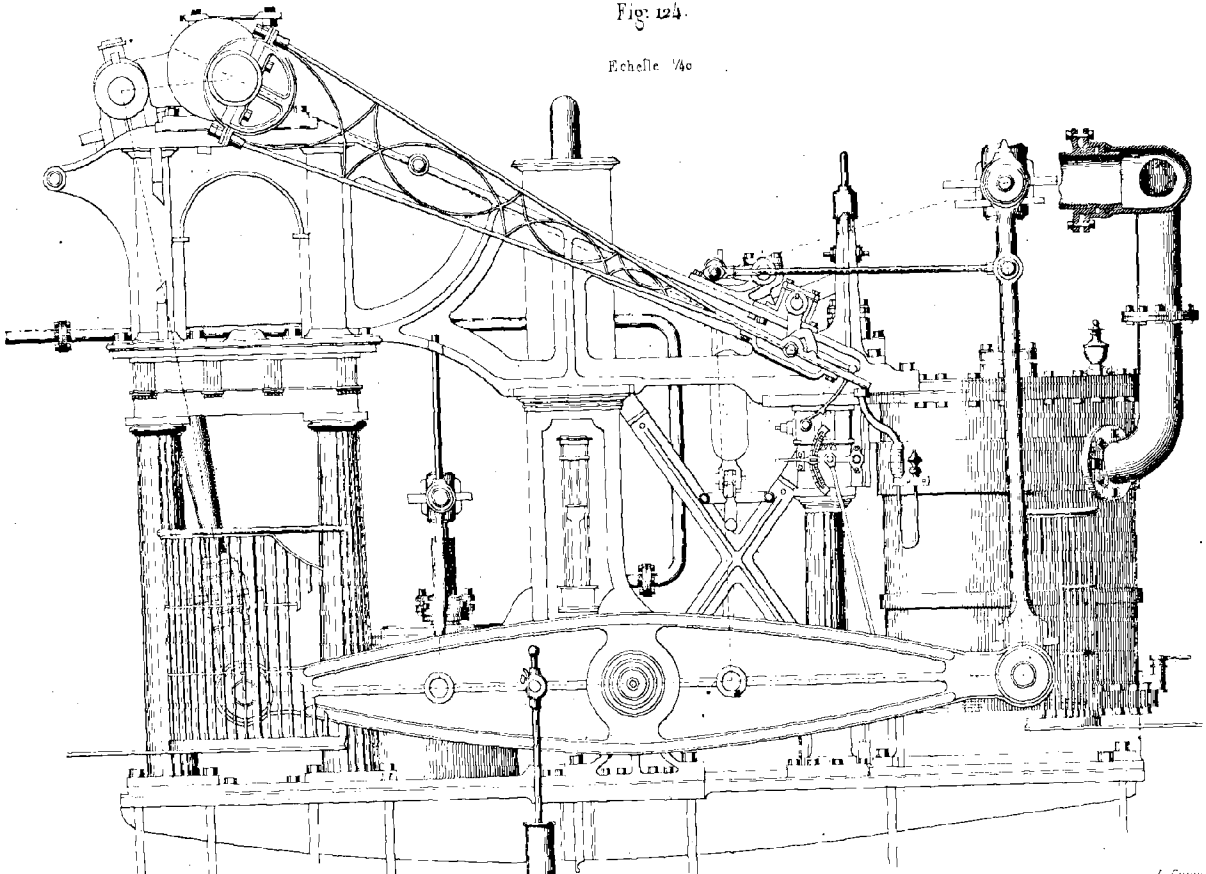
L. Guignet et Lallié sc.

MARINE IMPÉRIALE

Élévation de l'une des machines
du bateau à vapeur le Sphinx

Fig. 124.

Échelle 1/40



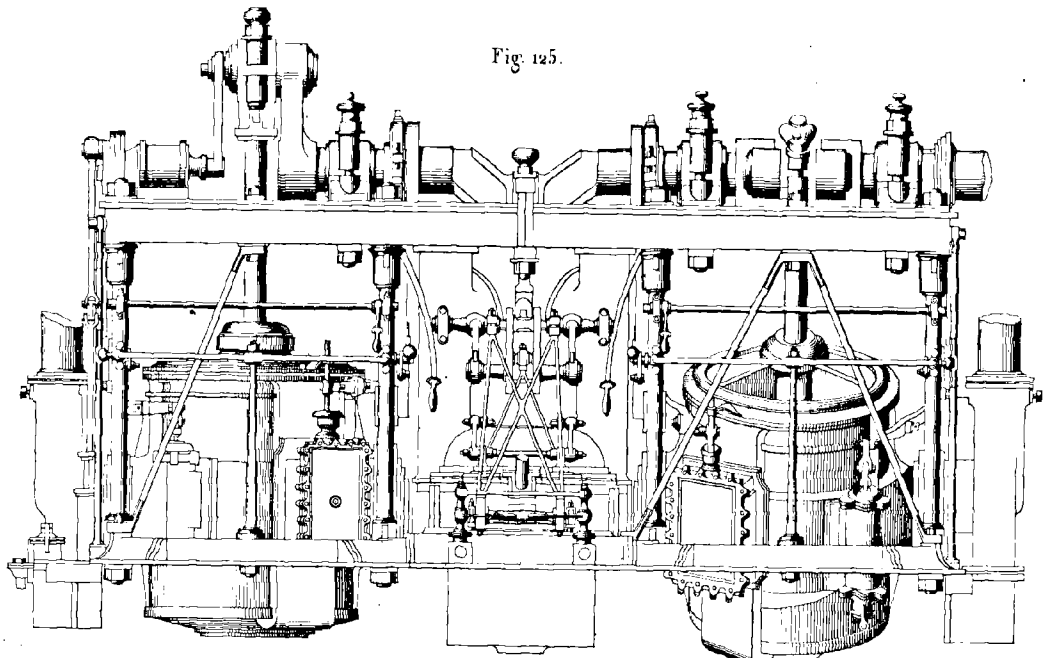
F. Boldoni del.

(École Impériale des Constructions navales)

L. Turquet sc.

MARINE IMPERIALE DE L'ÉTAT
Machine oscillante de l'Ariel
de la force de 160 ch.

Fig. 125.

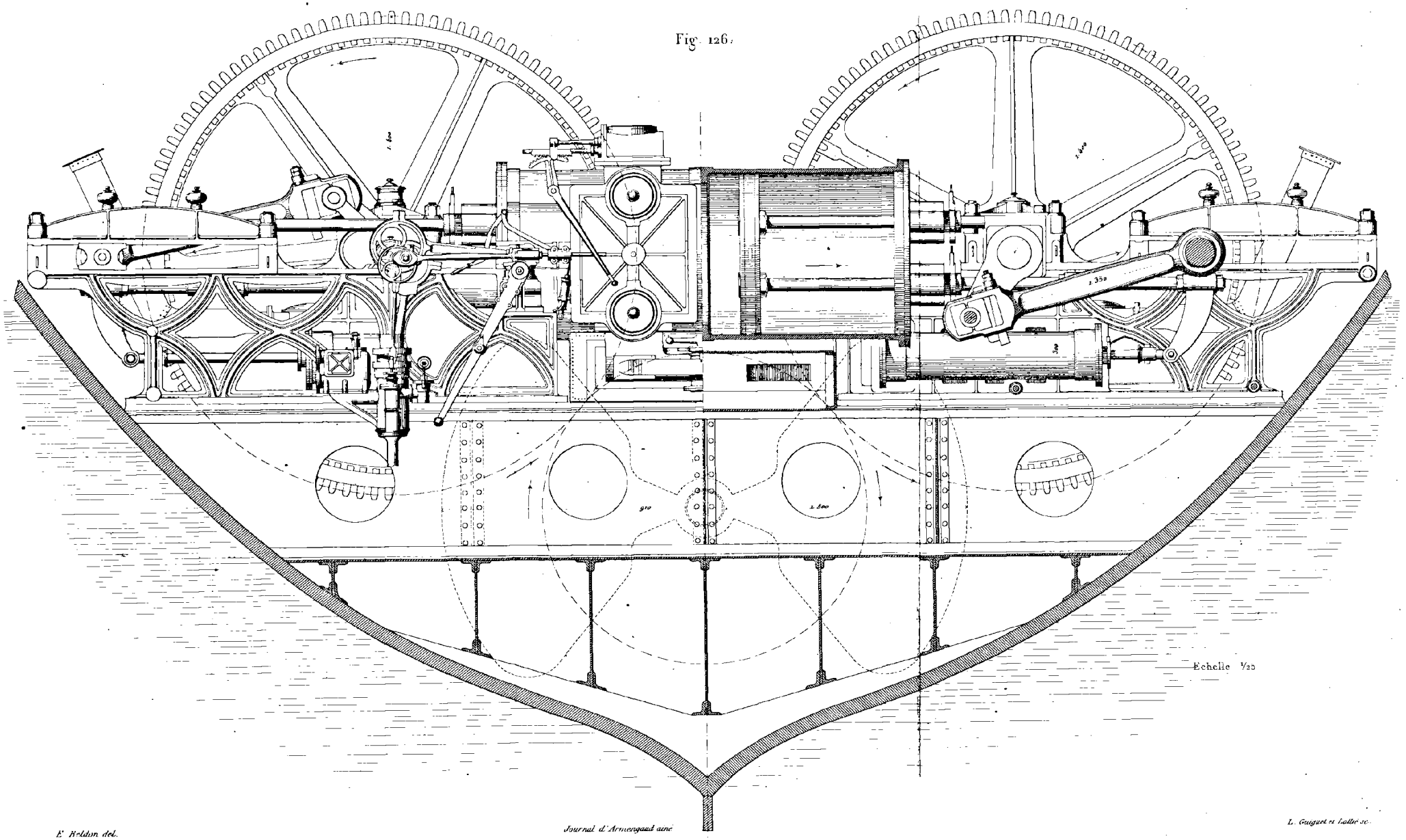


Echelle au 1/40

F. Boldon del. — 2e P. — L. Guiguet et Lallier

Machines horizontales de 120 chevaux de la Biche
par Mazeline du Havre

Fig. 126.



Echelle 1/20

E. Reldon del.

Journal d'Armengaud aine

L. Guyot et Lallier sc.