

GRUPE DE TROIS CHAUDIÈRES A BOUTILLEURS.

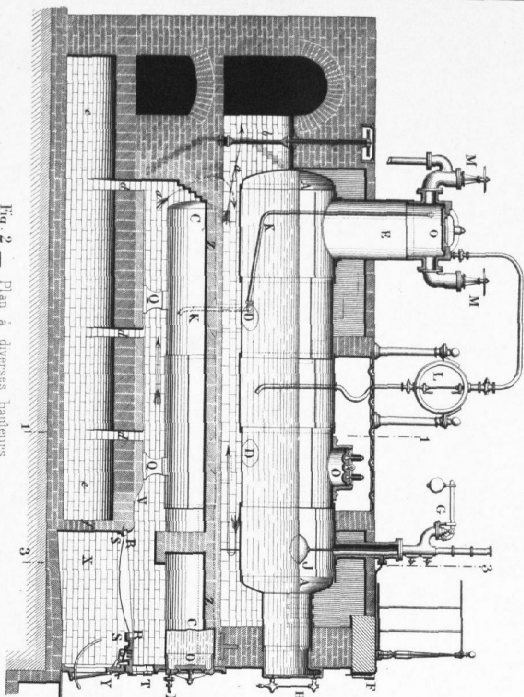
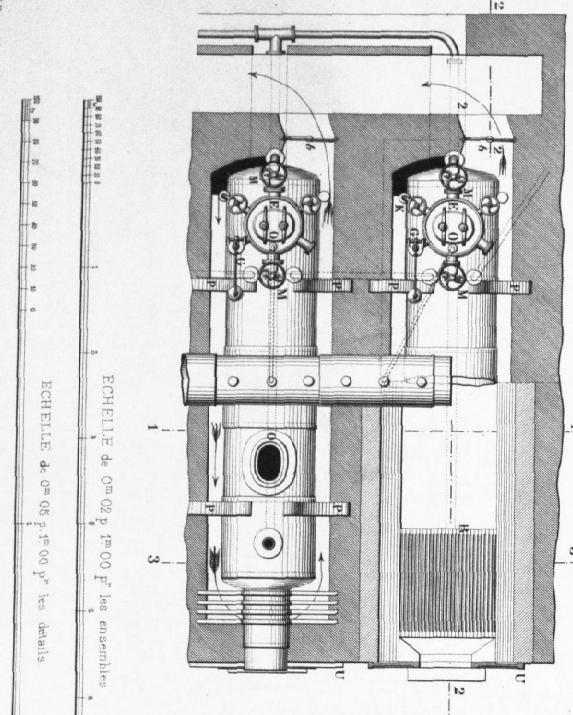


Fig. 1 — Coupe longitudinale suivant 2-2.

Fig. 2 — Plan à diverses hauteurs.



Echelle de 0m 02 p. 1m 00 p. les ensembles
 Echelle de 0m 05 p. 1m 00 p. les détails
 J.M.

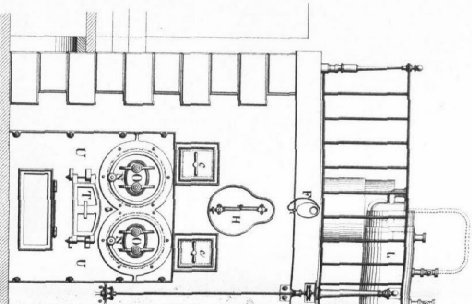


Fig. 3 — Elevation.

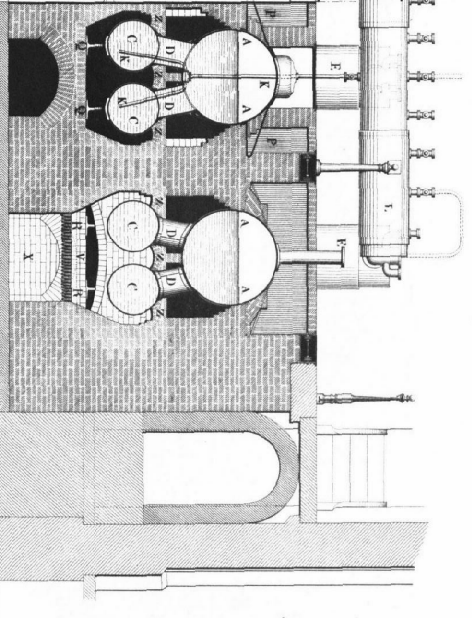


Fig. 4 — S'ouvre 1-1.

Coupes Verticales

Fig. 5 — S'ouvre 3-3.

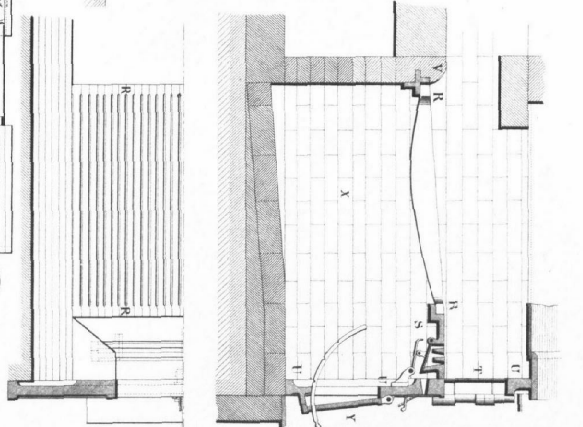


Fig. 6 — Poyer

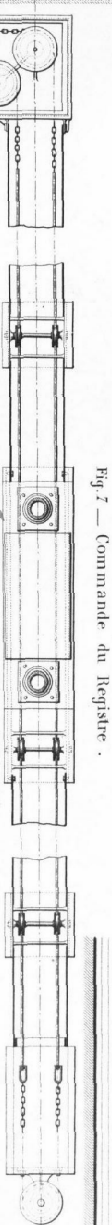


Fig. 7 — Commande du Registre.

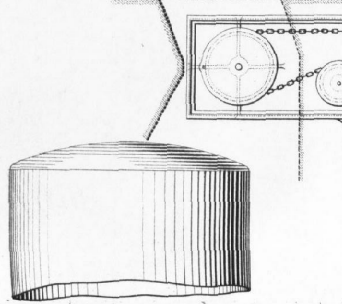


Fig. 8 — Registre.

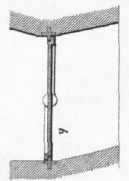


Fig. 9 — Orelles.

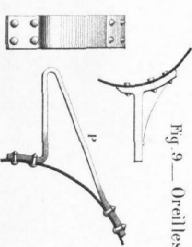


Fig. 10 — Tiroir d'homme

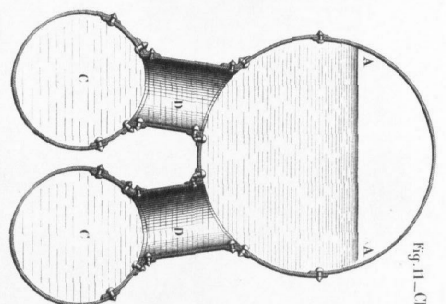


Fig. 11 — Chaudière

MACHINE A VAPEUR HORIZONTALE A CONDENSEUR DIRECTE.

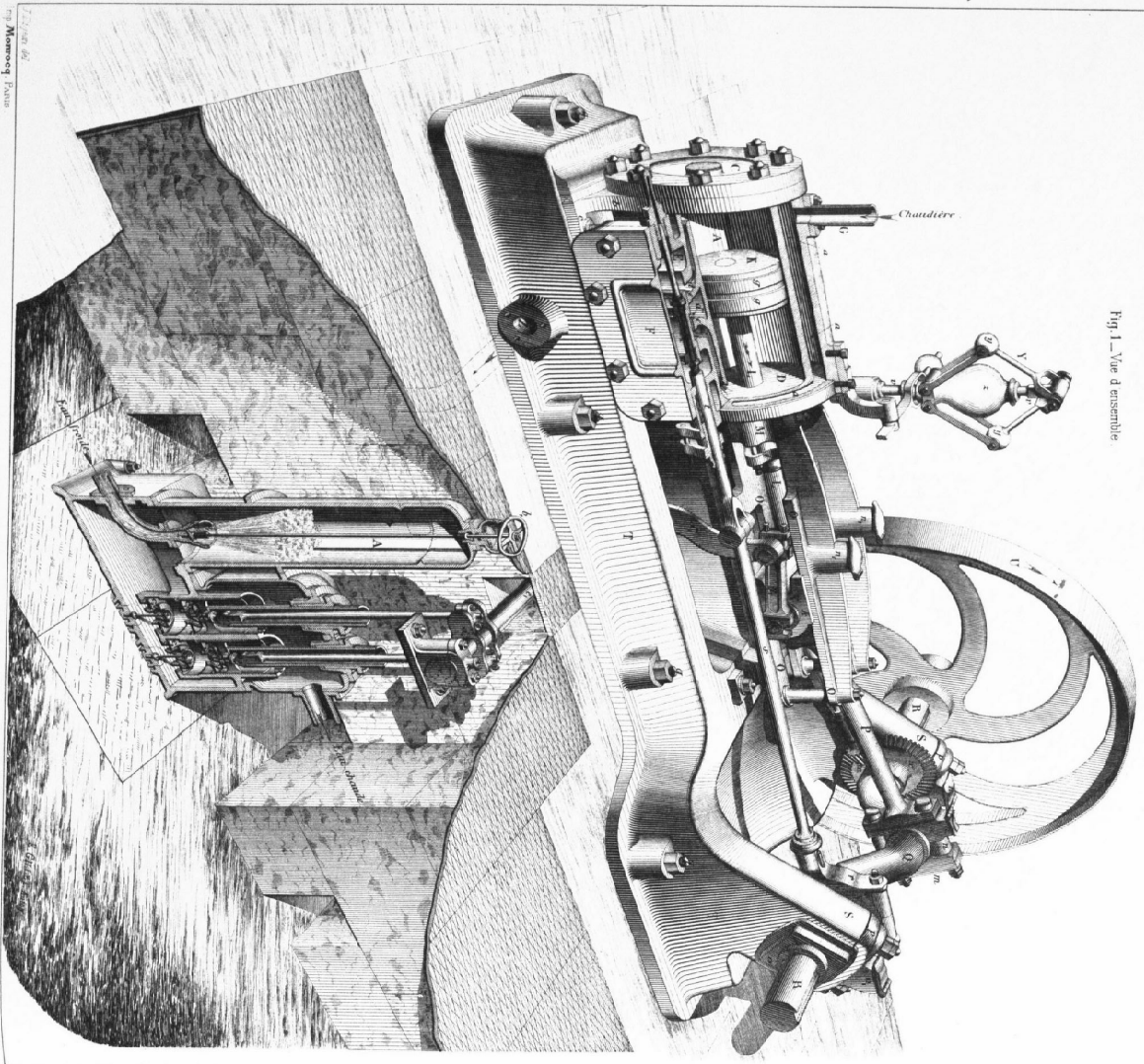


Fig. 1 - Vue d'ensemble.

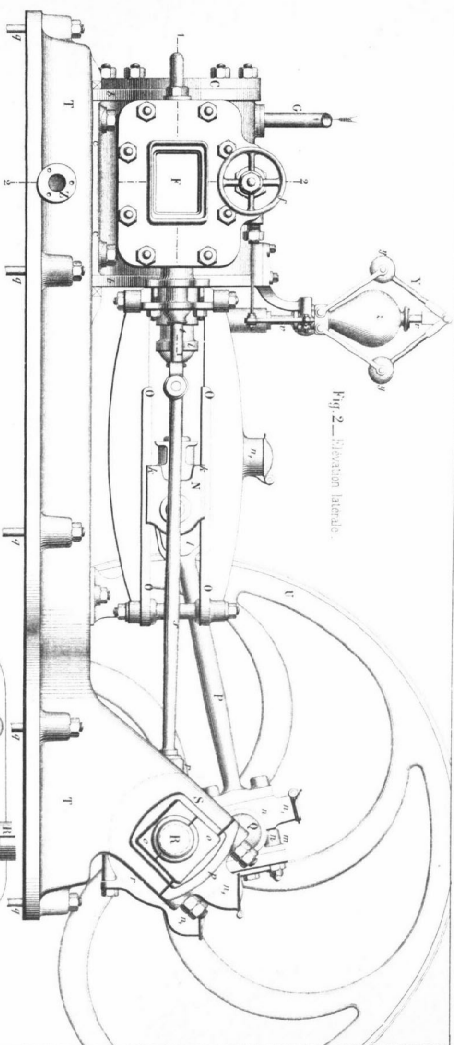


Fig. 2 - Elevation latérale.

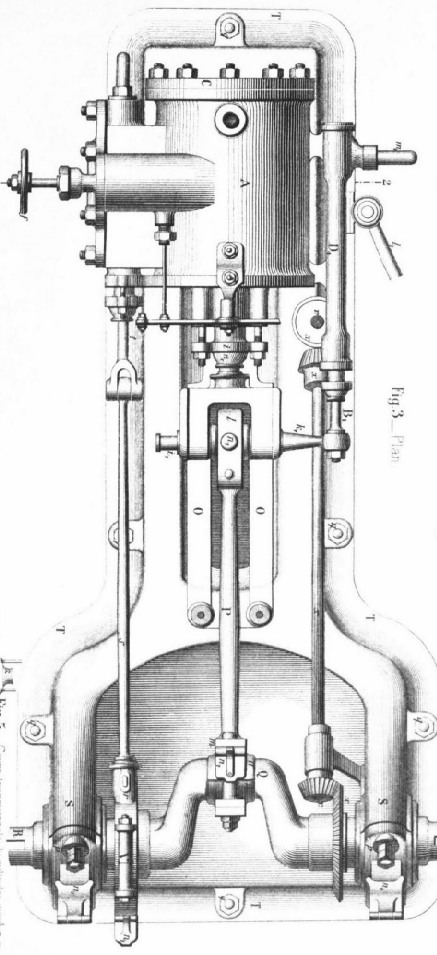


Fig. 3 - Plan.

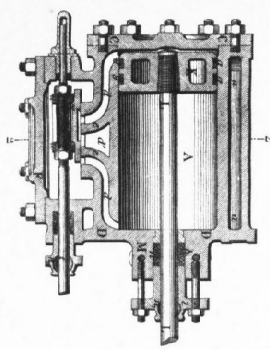


Fig. 4 - Coupe longitudinale du cylindre sup. 1-1.

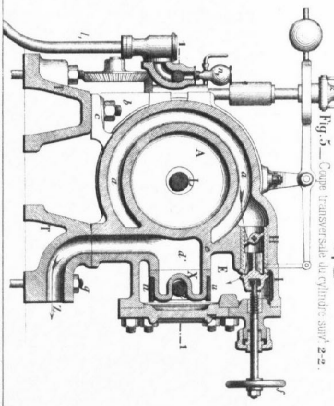


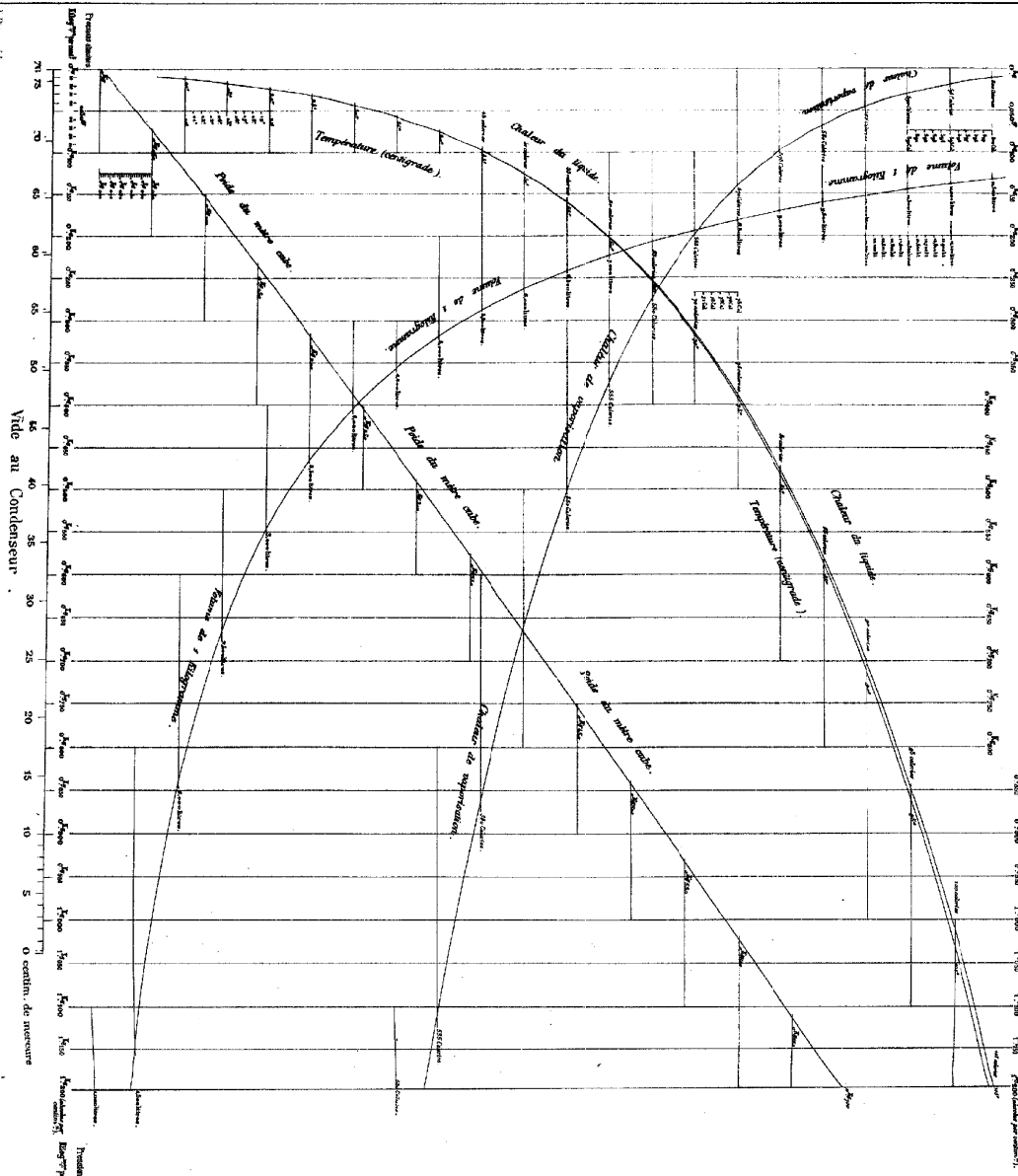
Fig. 5 - Coupe transversale du cylindre sup. 2-2.

Ed. 1860
M. M. Hirsch & Deuze

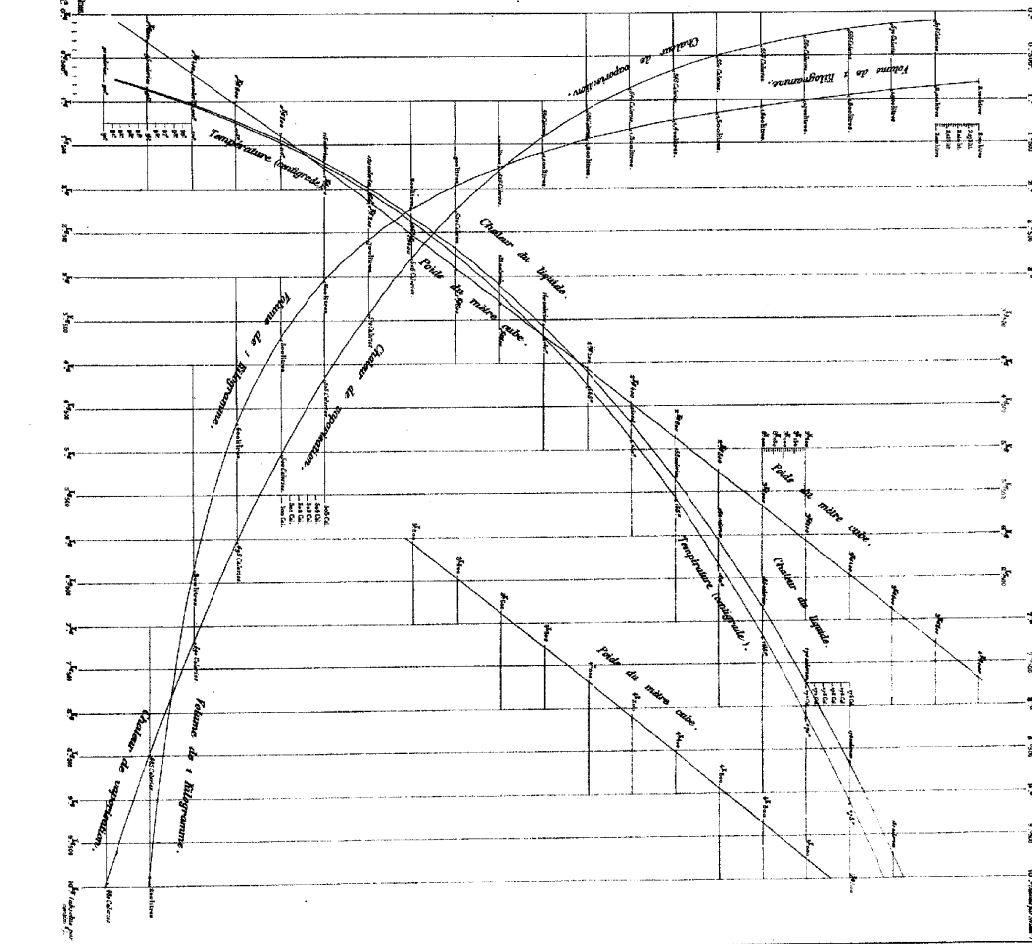
Paris, chez E. Bachevalier, Palais National, 1860.

TABLES DE LA VAPEUR D'EAU - BASSES ET MOYENNES PRESSIONS.

VAPEUR D'EAU SATURÉE.
BASSES PRESSIONS.
(de 0^m à 1^m 200 par centimètre carré).



VAPEUR D'EAU SATURÉE.
MOYENNES PRESSIONS.
(de 0^m à 10^m par centimètre carré).

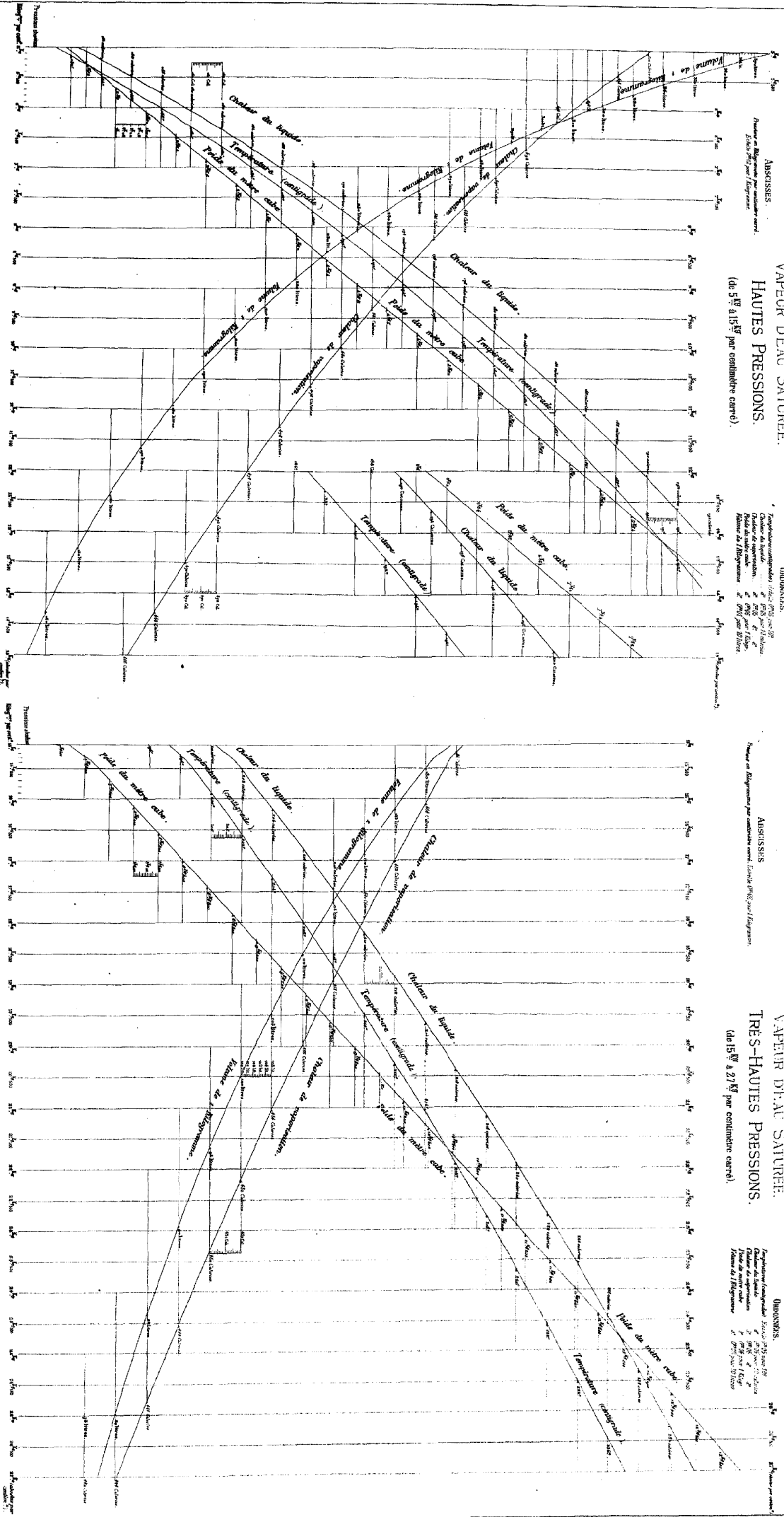


Les Pressions indiquées sont en centimètres de mercure. Les Températures indiquées sont en degrés centigrades. Les Volumes indiqués sont en mètres cubes par kilogramme d'eau.

TABLES DE LA VAPEUR D'EAU - HAUTES ET TRÈS-HAUTES PRESSIONS.

HAUTES PRESSIONS.
 (de 5^M à 15^M par centimètre carré.)

TRÈS-HAUTES PRESSIONS.
 (de 15^M à 27^M par centimètre carré.)



Ang. J. Sauerbrunn Paris

Ang. J. Sauerbrunn Paris

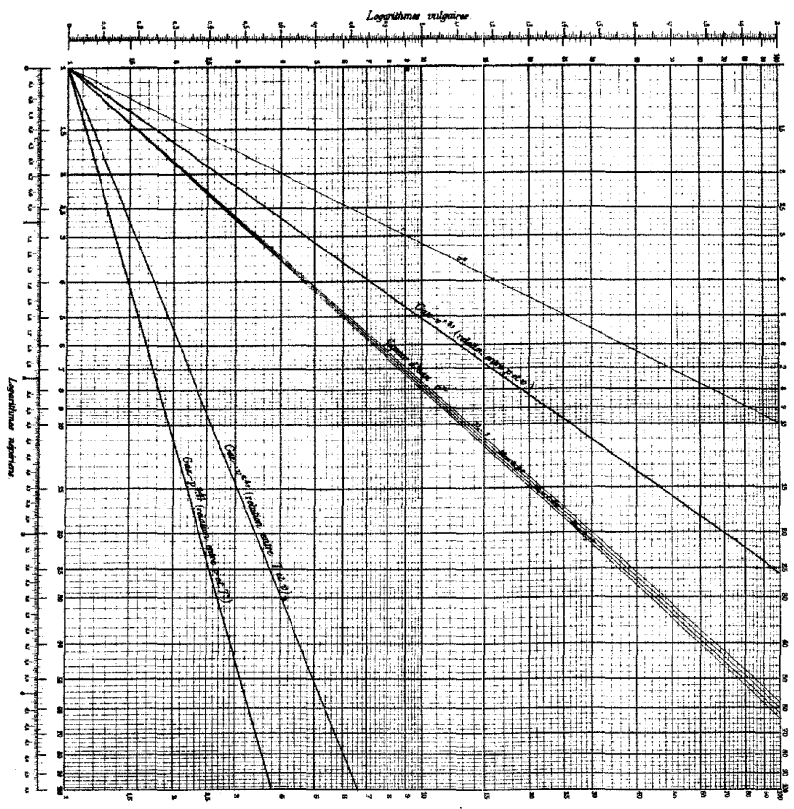
DETENTE ADIABATIQUE
DES GAZ PERMANENTS ET DE LA VAPEUR D'EAU

Notations.
 p_1, v_1 pression, volume température absolue des com. ; p_2, v_2 = état
 moment de la détente.
 P, V, T pression, volume température relative à la fin
 de la détente.
 α , proportion de vapeur dans la vapeur humide.
 ou composition de la vapeur.

Gaz permanents.
 $p_1^{1/\gamma} = \text{const.}$
 $T_1^{1/\gamma} = \text{const.}$
 $\frac{p_1}{p_2} = \left(\frac{V_2}{V_1}\right)^\gamma$
 $T_2 = \frac{p_2}{p_1} T_1$

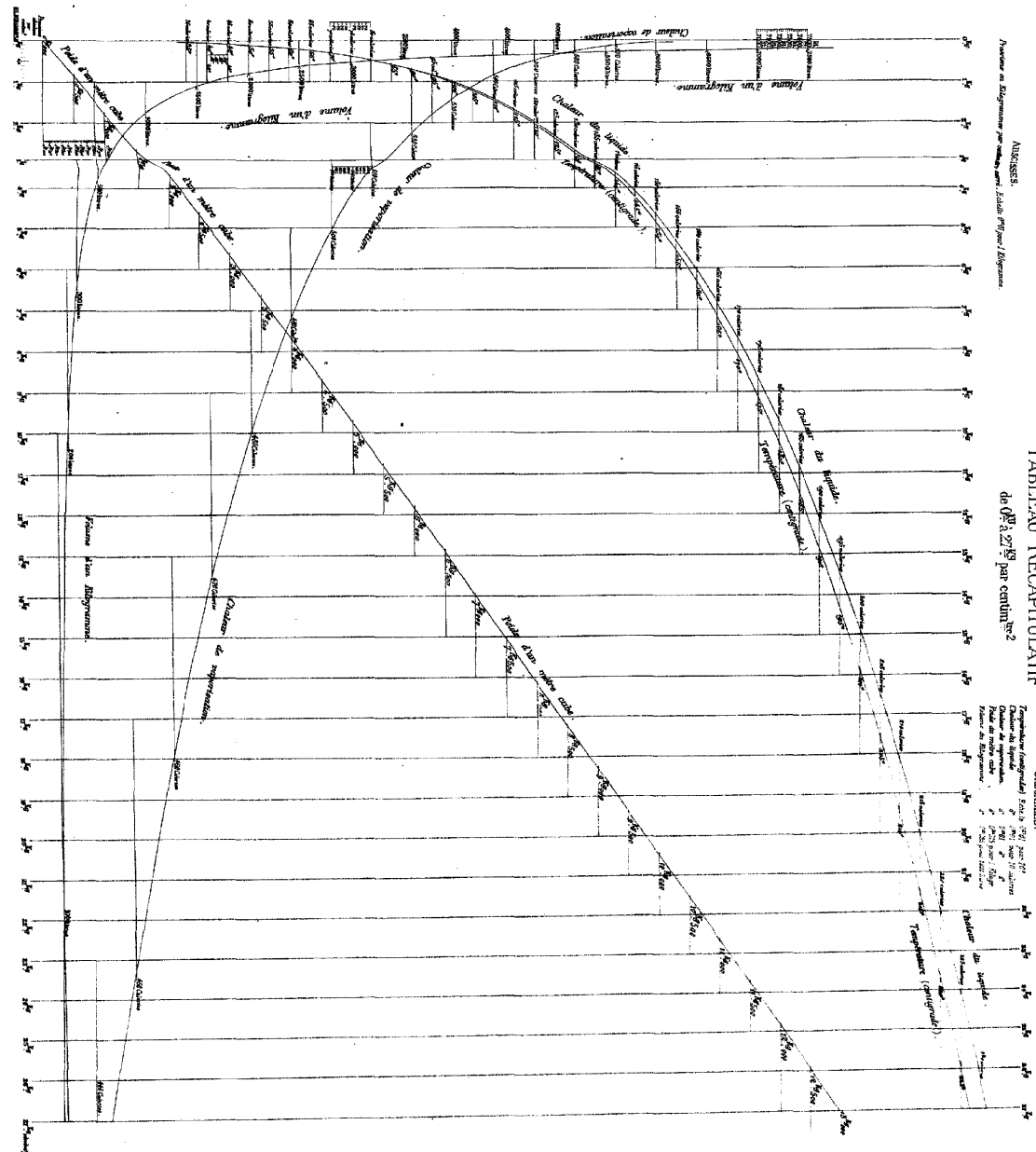
Vapeur d'eau (Zéon).
 $\gamma = 1,685 + 0,0002 \dots$
 $T_2 = \frac{p_2}{p_1} T_1$

Logarithmes népériens et logarithmes vulgaires
 $T_2 = \frac{p_2}{p_1} T_1$
 $\alpha = \frac{p_2}{p_1} \left[\frac{p_1}{p_2} - 1 \right]$



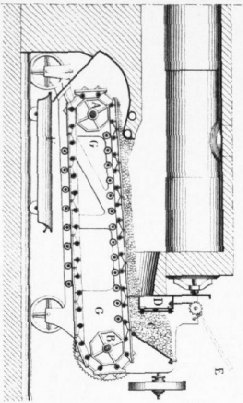
VAPEUR D'EAU SATURÉE
TABLEAU RÉCAPITULATIF

de 0° à 212° par centimètres



FOYERS

Fig. 1 — Grille mobile de Juckes.



Foyer Ten - Brink pour Locomotive.

Fig. 3 — Coupe transversale

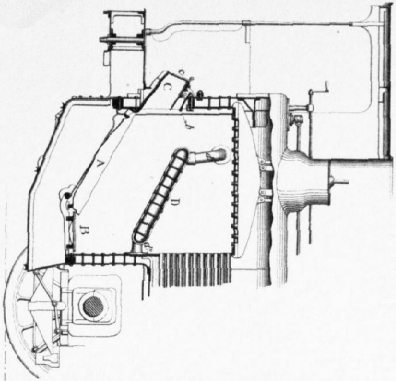
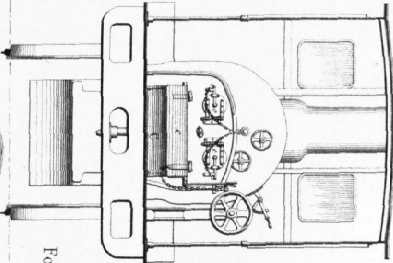


Fig. 4 — Vue d'arrière



Foyer funivore Turck.

Fig. 5 — Plan

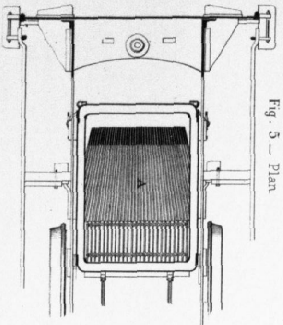


Fig. 9 — Elevation

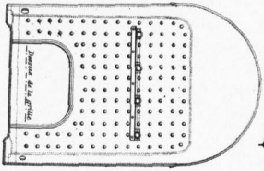


Fig. 2 — Grille Langen.

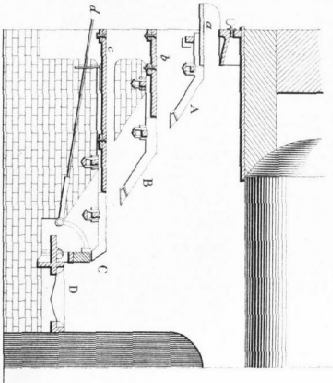


Fig. 7 — Grille à Gradins de M. de Marseille et Chodzinski.

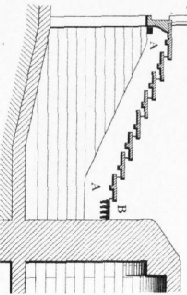


Fig. 10 — Coupe

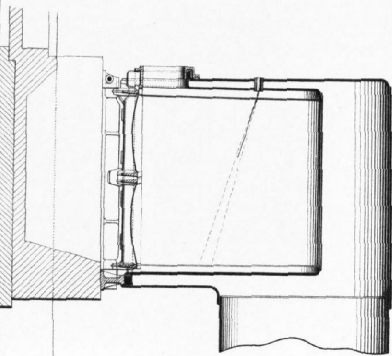
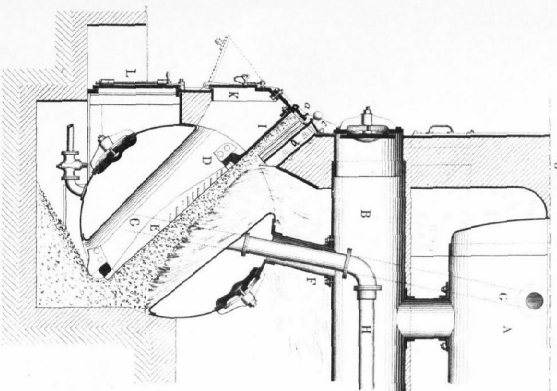


Fig. 6 — Coupe transversale



Foyer Ten - Brink pour Chaudière fixe.

Fig. 7 — Elevation

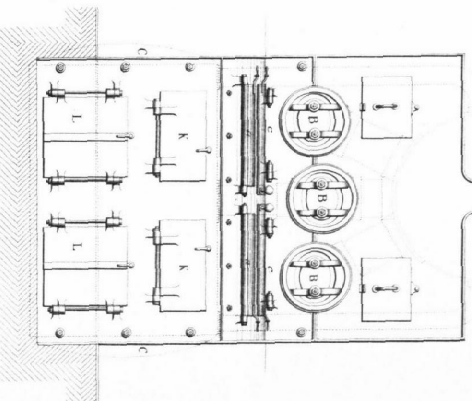


Fig. 8 — Plan & Coupe horizontale

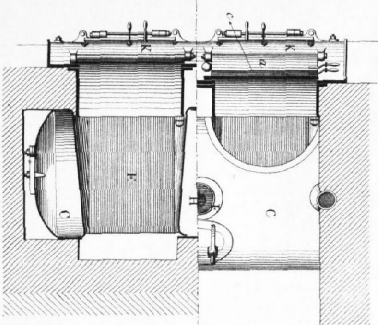


Fig. 11 — Injecteur Turck

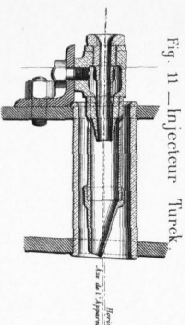
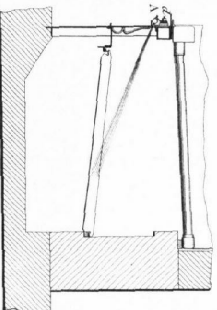


Fig. 12 — Coupe transversale



Funivore

Belleville.

Fig. 13 — Elevation

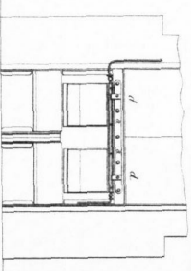


Fig. 14 — Coupe horizontale

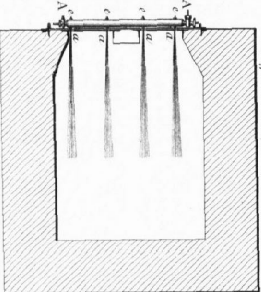


Fig. 15 — Détails

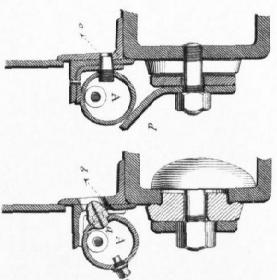


Fig. 1 - Cheminée en briques.

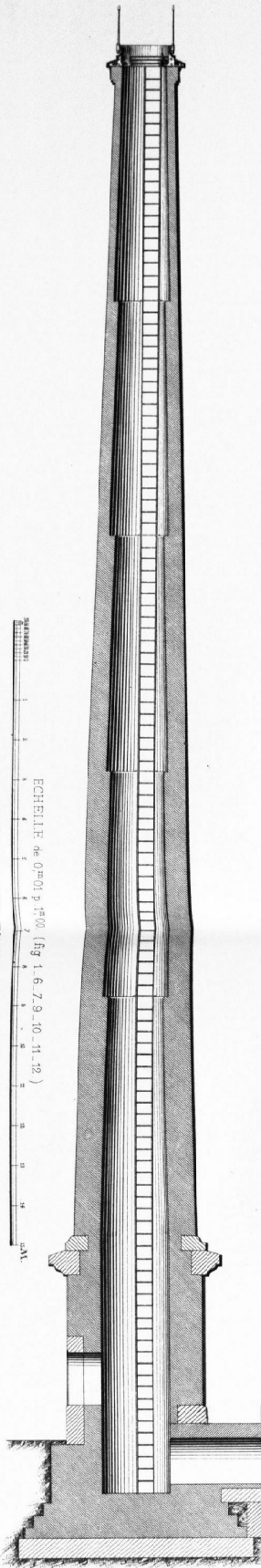


Fig. 7 - Plan du Piédestal.

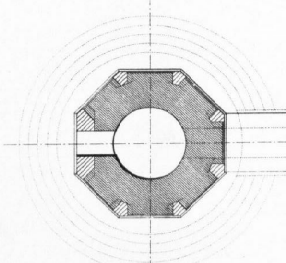


Fig. 2 - Chapiteau avec Couronnement en fonte.

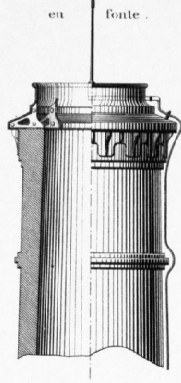


Fig. 3 - Plan du Couronnement en fonte.

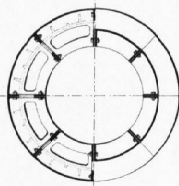


Fig. 5 - Détails de l'échelle.

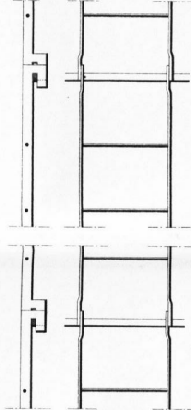


Fig. 6 - Elevation du Piédestal.

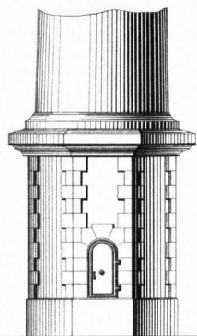


Fig. 8 - Détails du Piédestal.

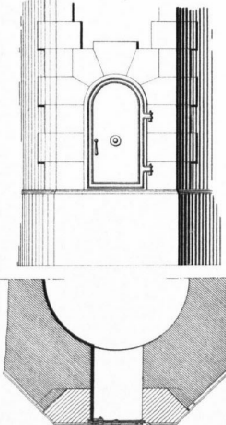


Fig. 4 - Chapiteau en pierre de taille.

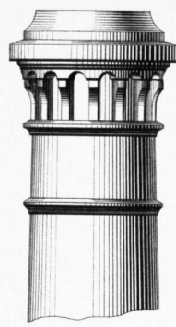


Fig. 13 - Chapiteau de la Cheminée en métal.

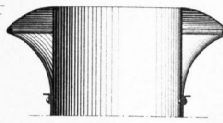


Fig. 10 - Cheminée en métal Coupe verticale.

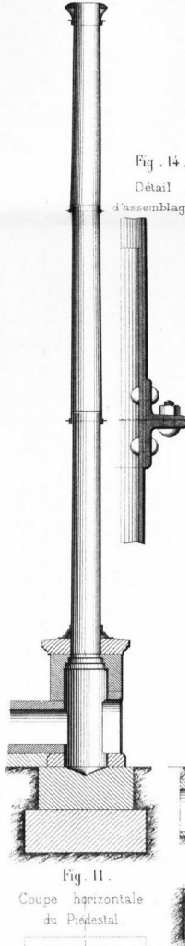


Fig. 14 - Détail d'assemblage.

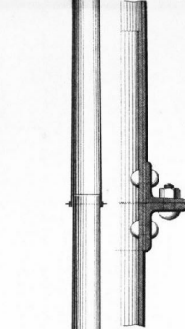


Fig. 11 - Coupe horizontale du Piédestal.

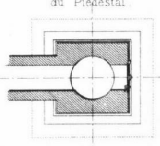


Fig. 12 - Coupe par la Cheminée.

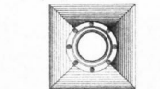
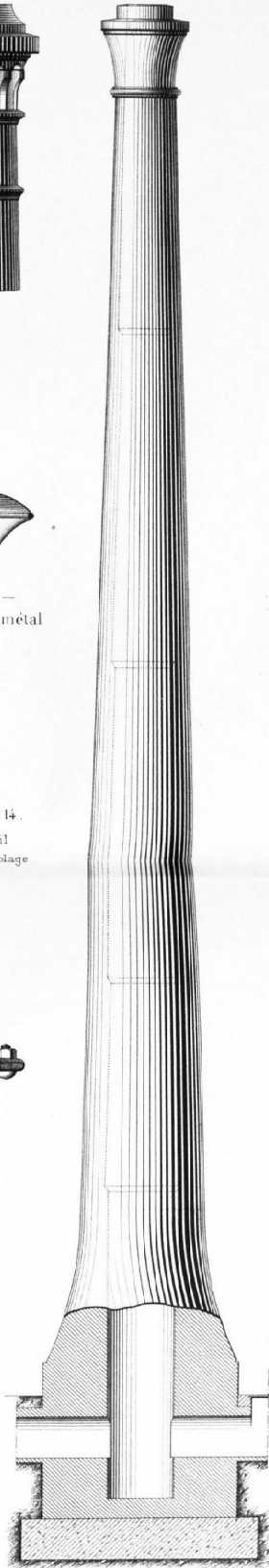


Fig. 9 - Cheminée en briques.



CHAUDIÈRES À Foyer INTÉRIEUR.

Chaudière Chevalier. Grond et bronz.

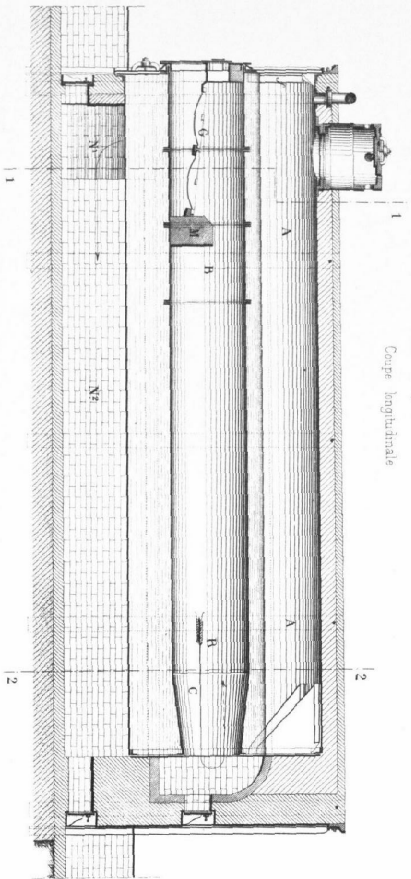


Fig. 4.

Coupe longitudinale

Fig. 5.

Elevation de face

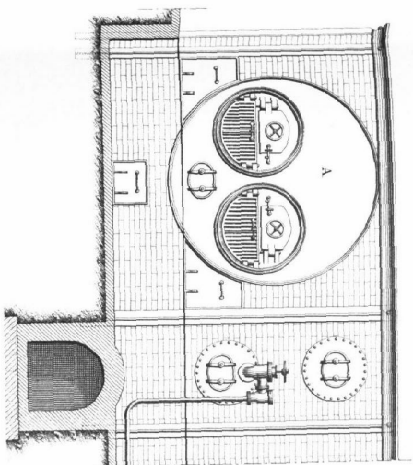


Fig. 6. Coupes horizontales

suivant 1-1 (Fig. 4 & 5.)

suivant 2-2 (Fig. 4 & 5.)

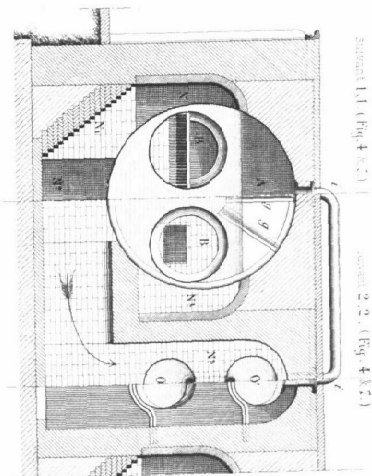


Fig. 7. Coupe horizontale

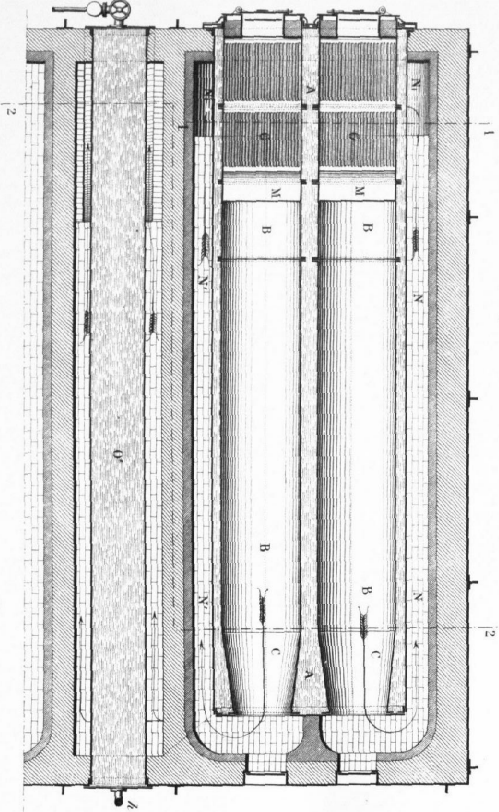


Fig. 1. - Coupe

longitudinale

Type à un seul foyer.

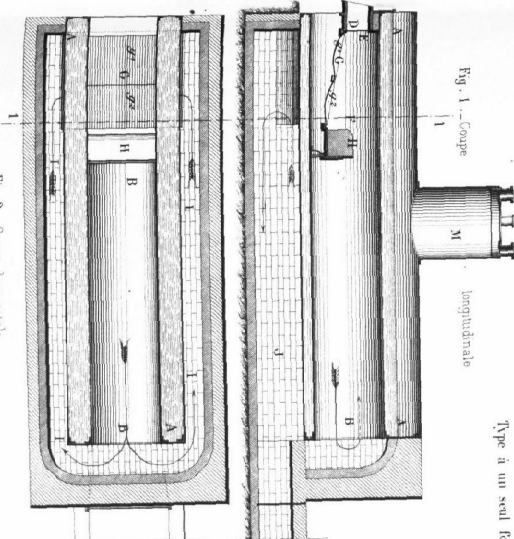


Fig. 2. - Coupe horizontale

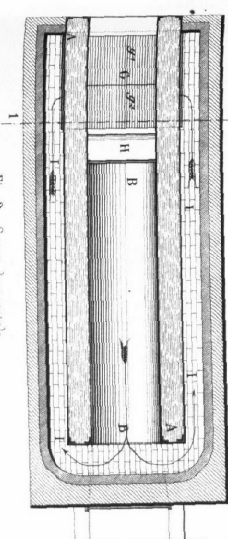
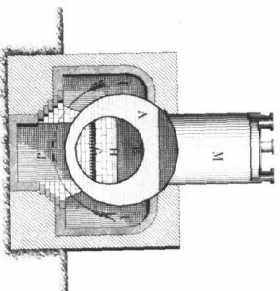


Fig. 3. Coupe horizontale suivant 1-1. (Fig. 1 & 2.)

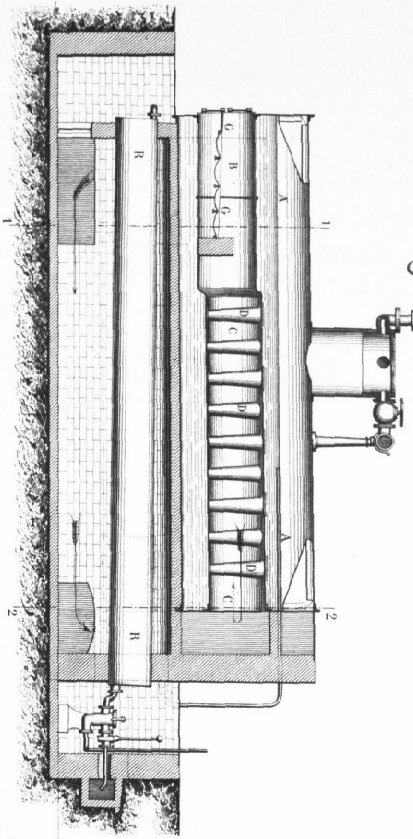


ECHELLE de 0m02 p. 1m00



Chaudière Galloway.

Fig. 7. — Coupe Longitudinale suivant 3.3. (Fig. 9).



Type dit: de lancastre.

Fig. 1. — Coupe Longitudinale.

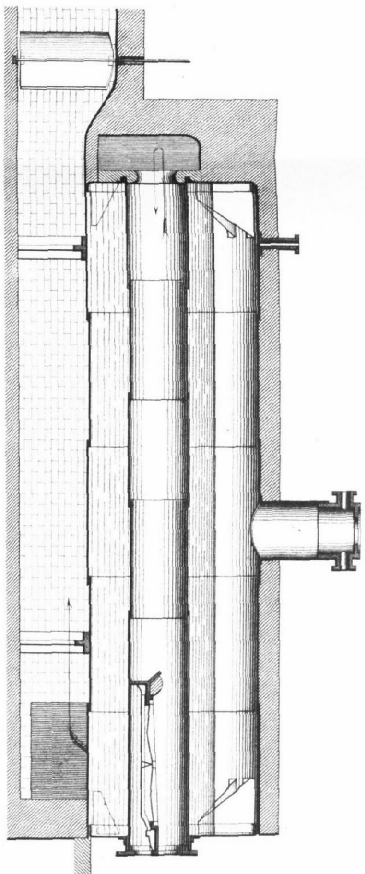


Fig. 2. — Demi-Elevation. Demi-Coupe.

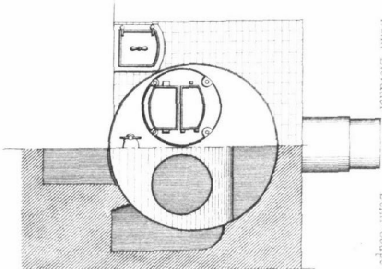


Fig. 8. — Demi-Elevation. Demi-Coupe s^t 1.1. (Fig. 7).

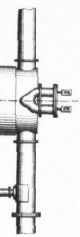


Fig. 9.

Coupe suivant 2.2. (Fig. 7).

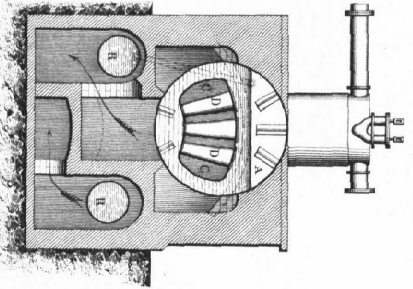


Fig. 4. — Coupe Longitudinale.

Type Fairbairn.

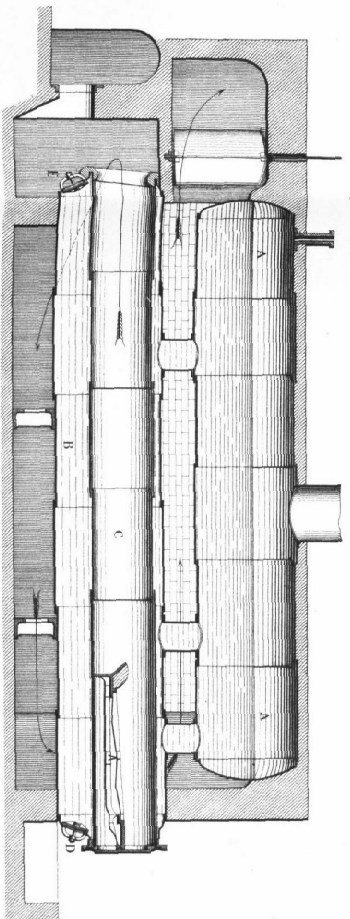


Fig. 5.

Demi-Elevation.

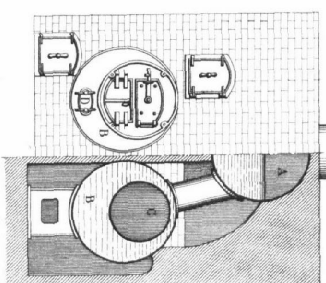


Fig. 6.

Demi-Coupe.

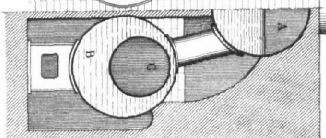
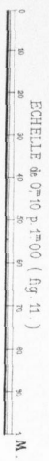
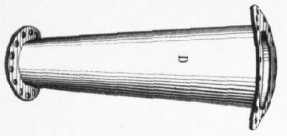


Fig. 11.

Tube Galloway.



CHAUDIÈRES TUBULAIRES ET VARIÉTÉS.

Chaudière tubulaire de la Cie de Fives - Lille.

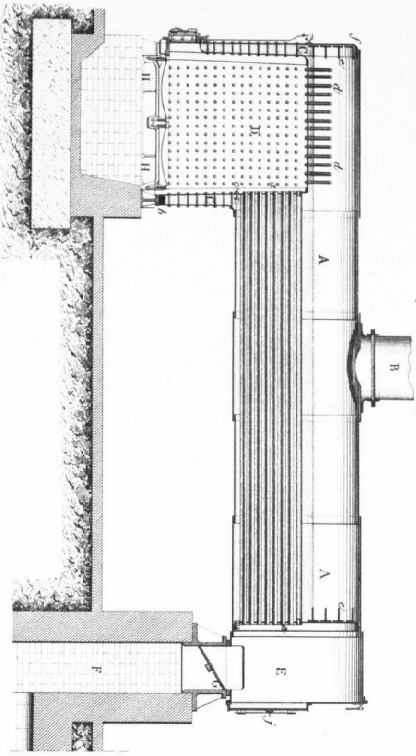
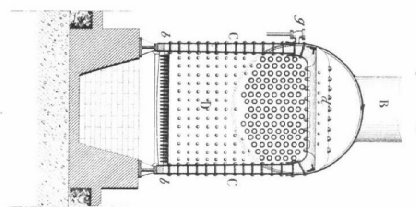


Fig. 1. - Coupe longitudinale.

Fig. 2. Coupe transversale par le foyer.



Chaudière semi-tubulaire.

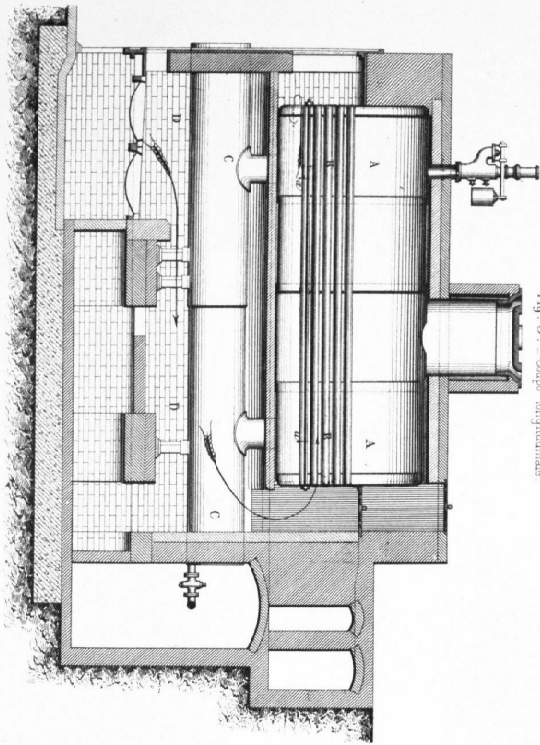
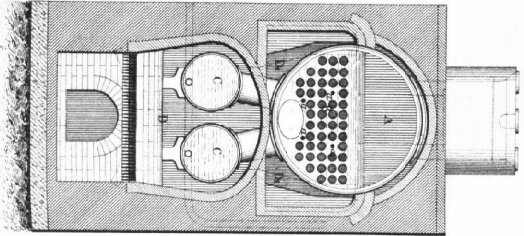


Fig. 3. - Coupe longitudinale.

Fig. 4. - Coupe transversale.



Chaudière à foyer amovible de la Société de Pannin.

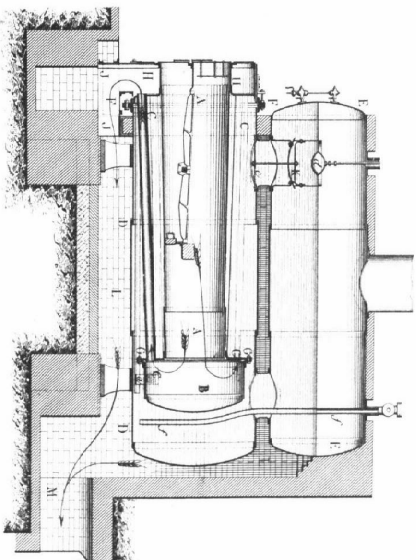
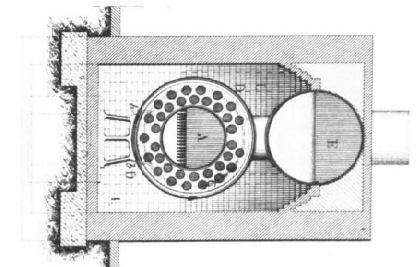


Fig. 5. - Coupe longitudinale.

Fig. 6. Coupe transversale.



Chaudière à foyer amovible de M. J. Perrot.

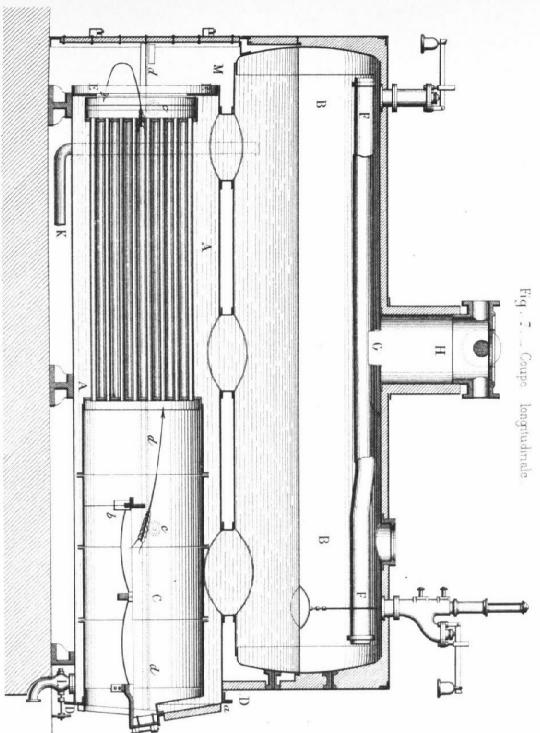
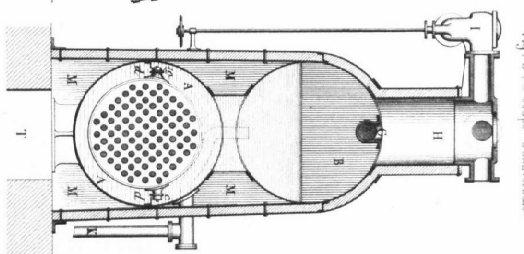


Fig. 7. - Coupe longitudinale.

Fig. 8. - Coupe transversale.



ECHELLE à l'échelle de 1/1000.

CHAUDIÈRES A ÉLÉMENTS MULTIPLES.

Générateur Belleville.
Modèle de 1877

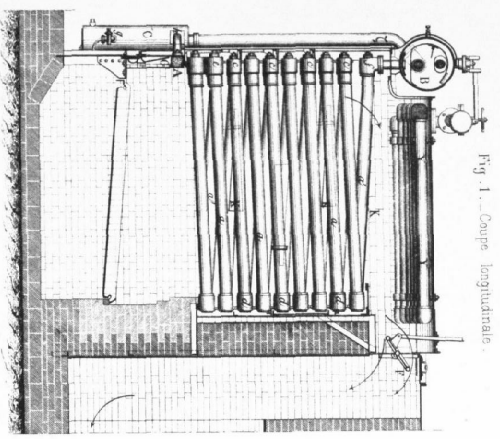
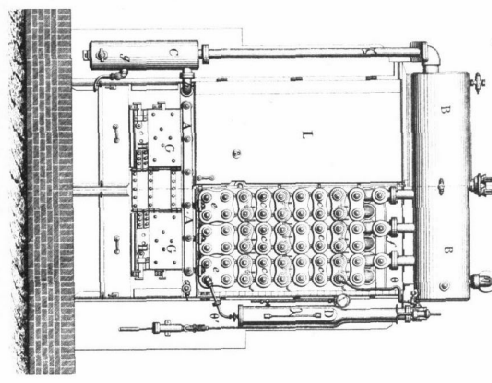


Fig. 2. Vue de face.
(Les parties enlevées)



Chaudière Field

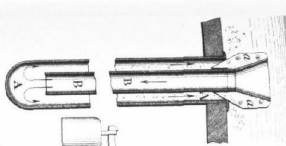


Fig. 9. Coupe transversale

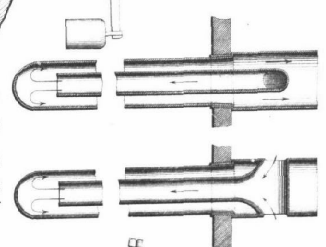


Fig. 13. Variété de Tube Field

Fig. 10. Demi Coupe
surmont 1.1

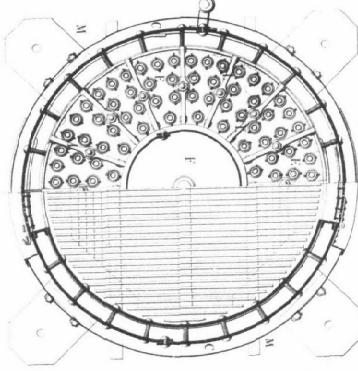


Fig. 11. Demi Coupe
surmont 2.2

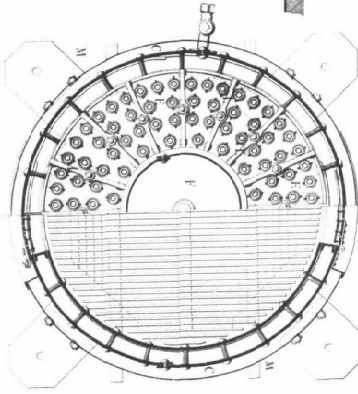


Fig. 4. Collecteur epurateur d'eau d'alimentation.

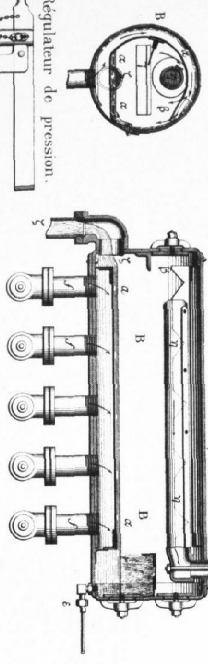


Fig. 8. Regulateur d'alimentation.

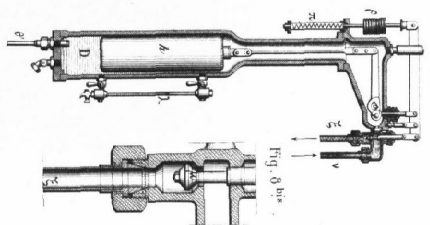


Fig. 5. Assemblage du Collecteur d'alimentation.

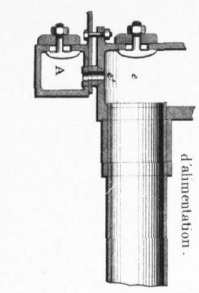


Fig. 6. Grille

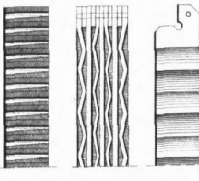


Fig. 7. Regulateur de pression.

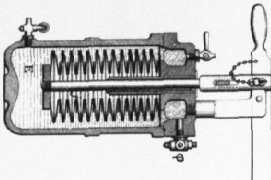
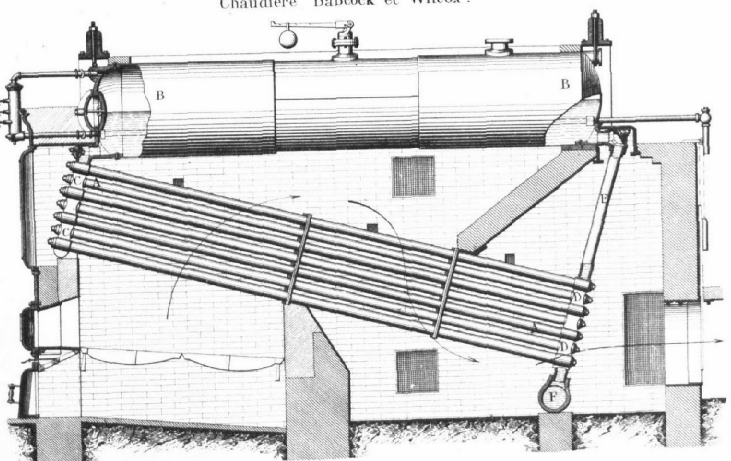


Fig. 14. Chaudière Babcock et Wilcox.



ECHELLE de 0m025 p. 1m00 (Fig. 1, 2, 3, 4, 4)

ECHELLE de 0m05 p. 1m00 (Fig. 4, 5, 6, 7, 8)

ECHELLE de 0m50 p. 1m00 (Fig. 9, 10, 11, 12, 13)

Chaudière Field.
chauffée par des flammes perdues.

Fig. 4.
Demi-Coupe Verticale

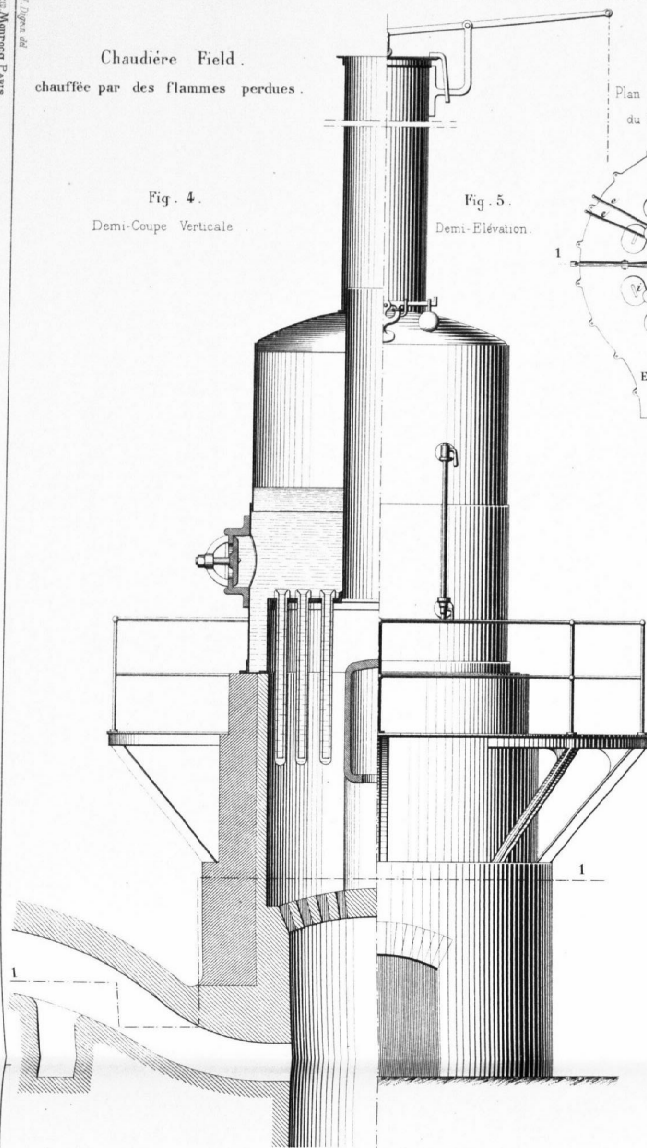
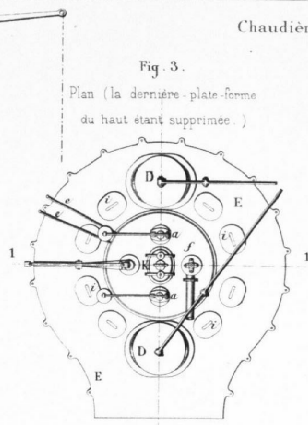


Fig. 5.
Demi-Élévation



Chaudière du Creusot.

Fig. 3.
Plan (la dernière plate-forme
du haut étant supprimée.)

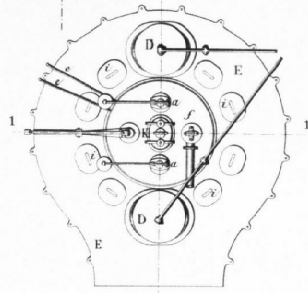


Fig. 1.
Coupe suivant 1.1. (Fig. 2 & 3)

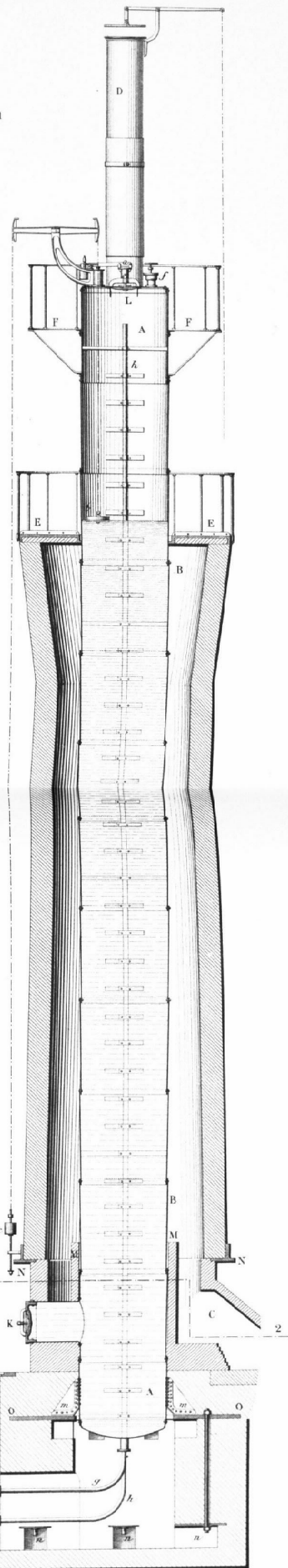


Fig. 6.
Coupe horizontale suivant 1.1. (Fig 4 & 5.)

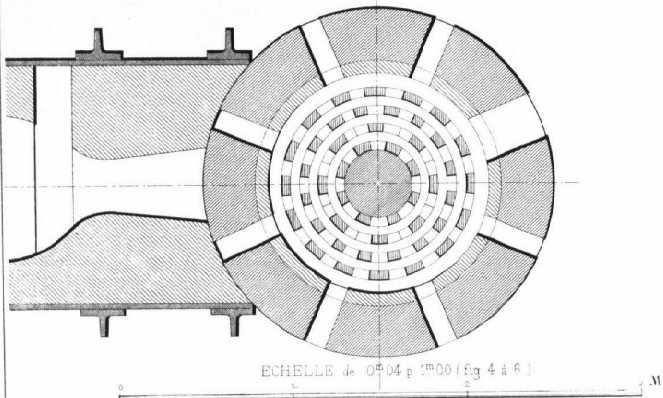
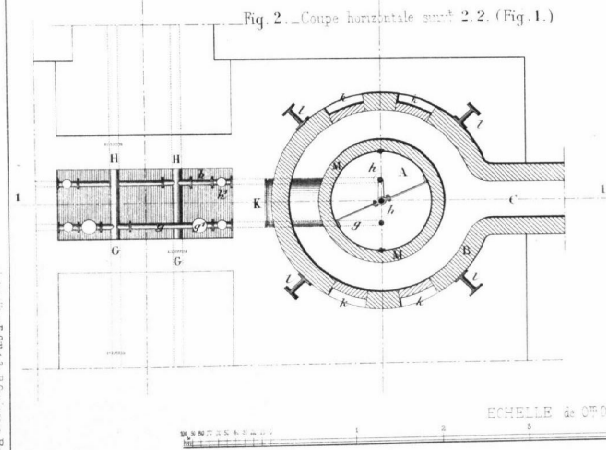


Fig. 2. Coupe horizontale suivant 2.2. (Fig. 1.)



RÉCHAUFFEURS D'EAU D'ALIMENTATION.

Caudière cylindrique avec réchauffeur

Fig. 1. — Coupe longitudinale suivant 1, 1.

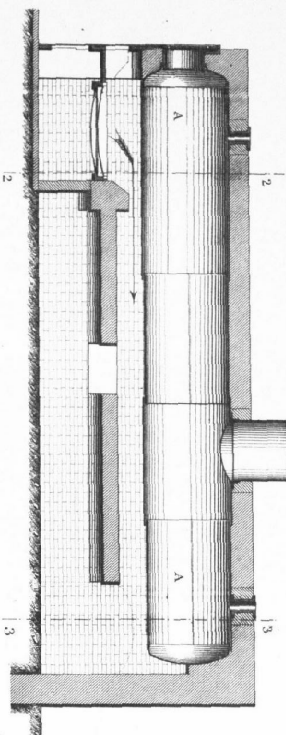


Fig. 4. — Plan supérieur de la chaudière & du réchauffeur.

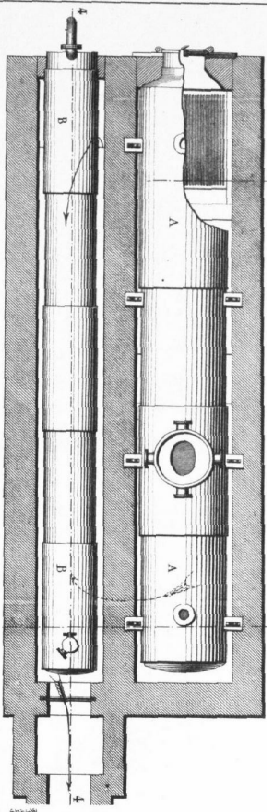


Fig. 2. — Demi-coupe transversale suivant 2, 2.

Fig. 3. — Demi-Élévation transversale suivant 2, 2.

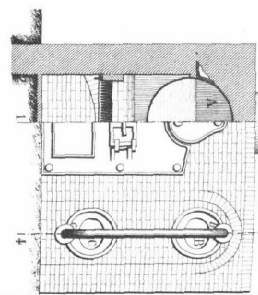


Fig. 5. — Coupe transversale suivant 3, 3.

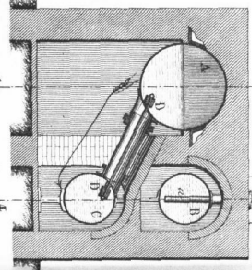


Fig. 6. — Coupe longitudinale suivant 4, 4.

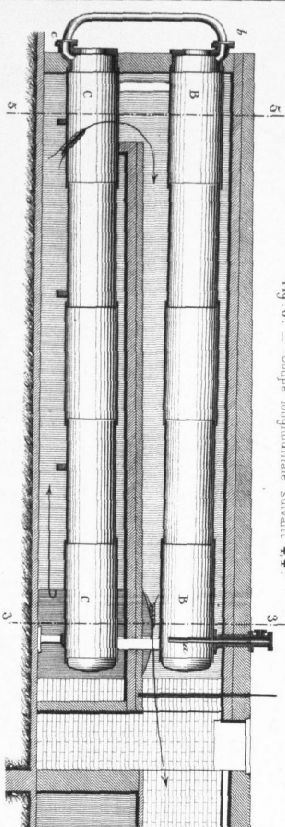
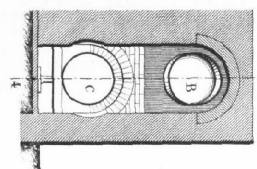


Fig. 7. — Coupe transversale du réchauffeur suivant 5, 5.



Caudière avec réchauffeur horizontal.

Fig. 8. — Coupe longitudinale suivant 1, 1.

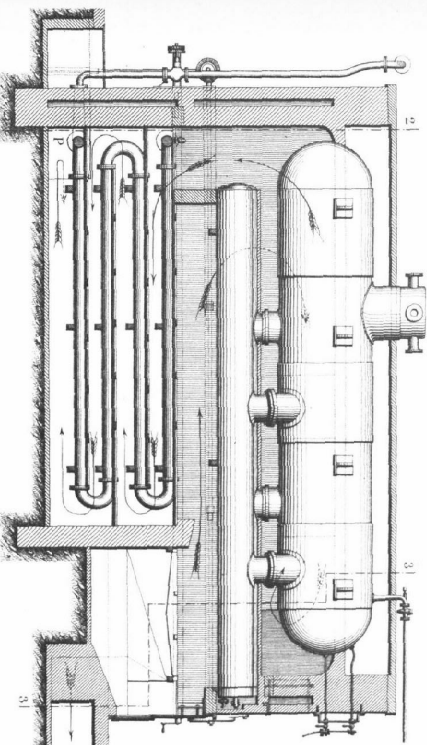


Fig. 9. — Coupe transversale suivant 2, 2.

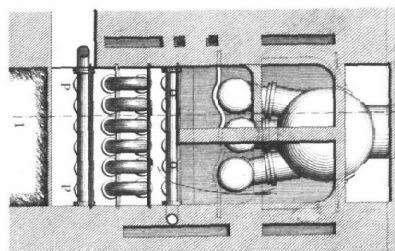
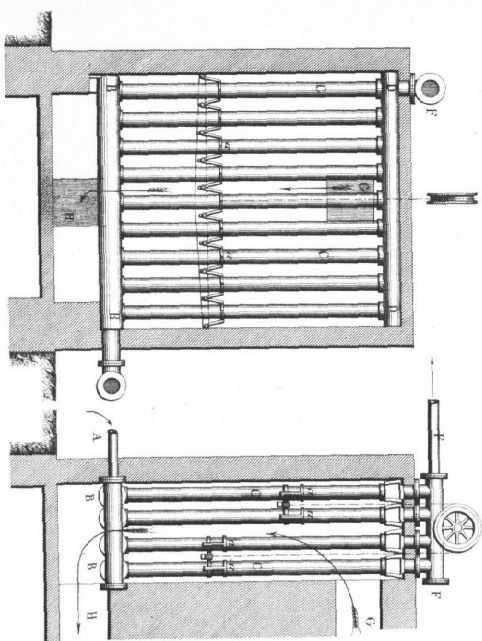


Fig. 11. — Coupe longitudinale



Economizer Green.

Fig. 12. — Coupe transversale

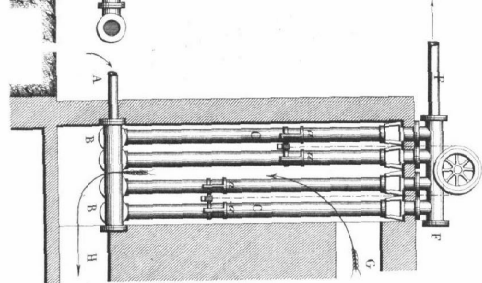
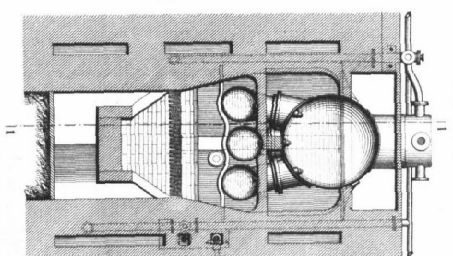


Fig. 10. — Coupe transversale suivant 3, 3.



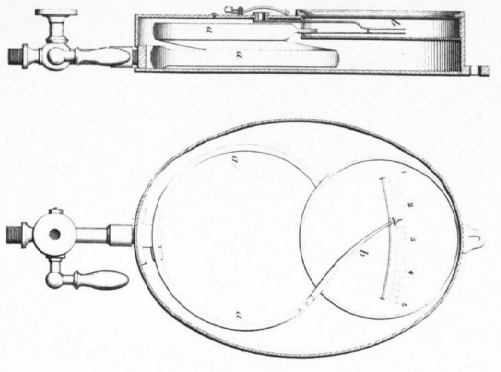


Fig. 1. - Manomètre Bourdon.

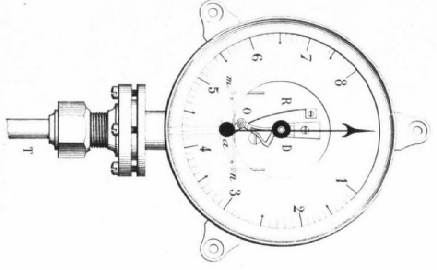


Fig. 2. - Manomètre Desroches.

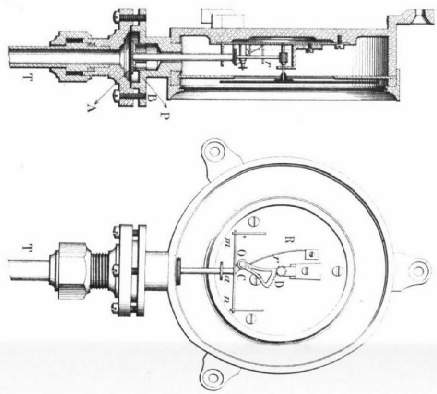


Fig. 3. - Manomètre Guichard.

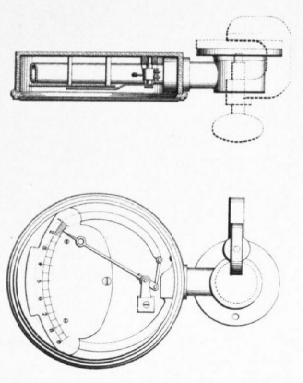


Fig. 4. - Manomètre étalon.
(Système Bourdon.)

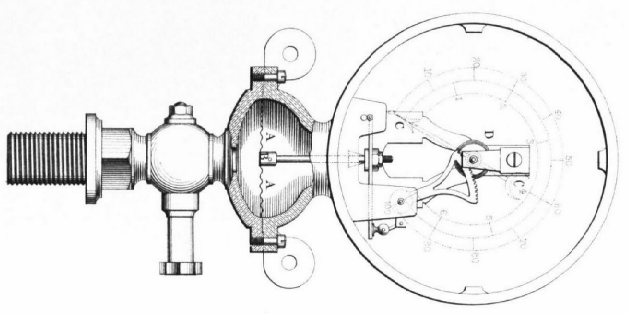
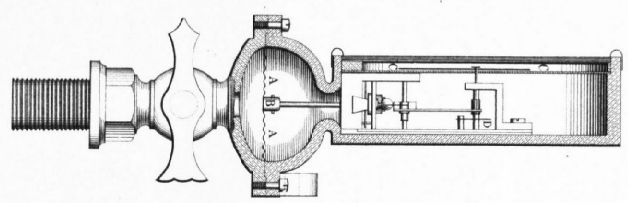


Fig. 5. - Soupape de Sécurité.

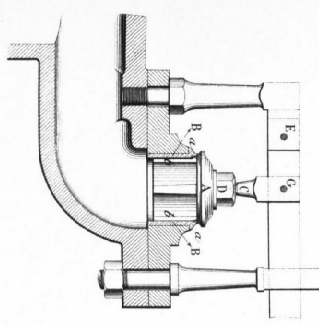


Fig. 7. - Soupape Adams.

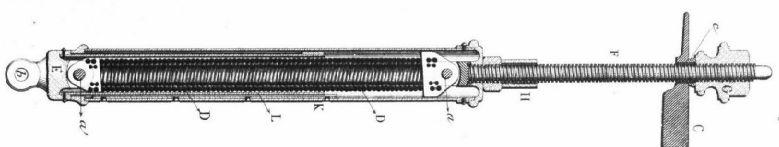
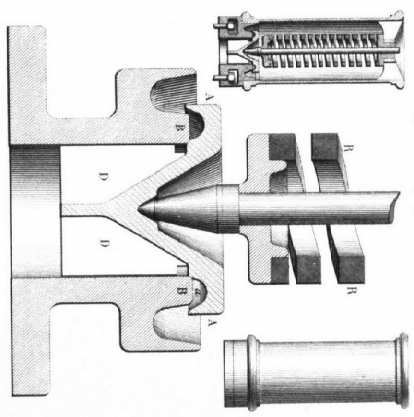


Fig. 6. - Soupape de Sécurité pour Locomotives.

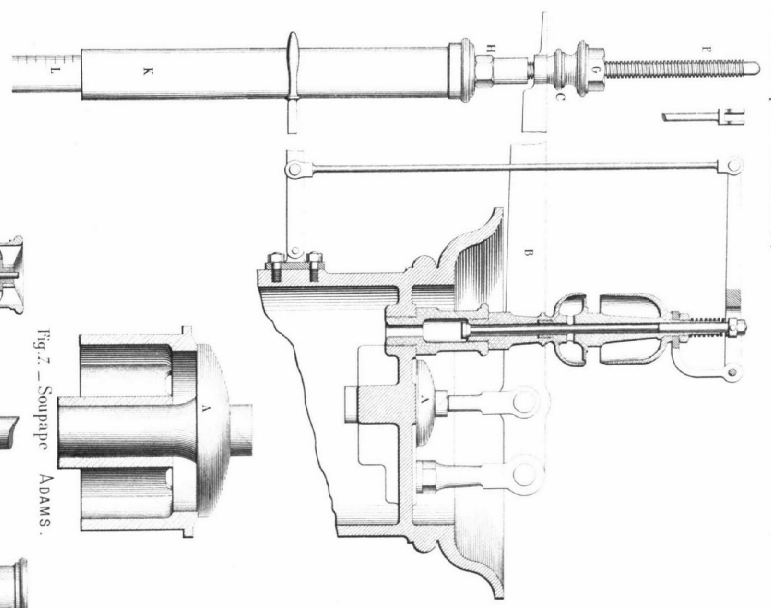


Fig. 1. - Bourdon

Aug. 1877. E. Goussier, Paris.

Fig. 1. - Tube indicateur du niveau de l'eau.

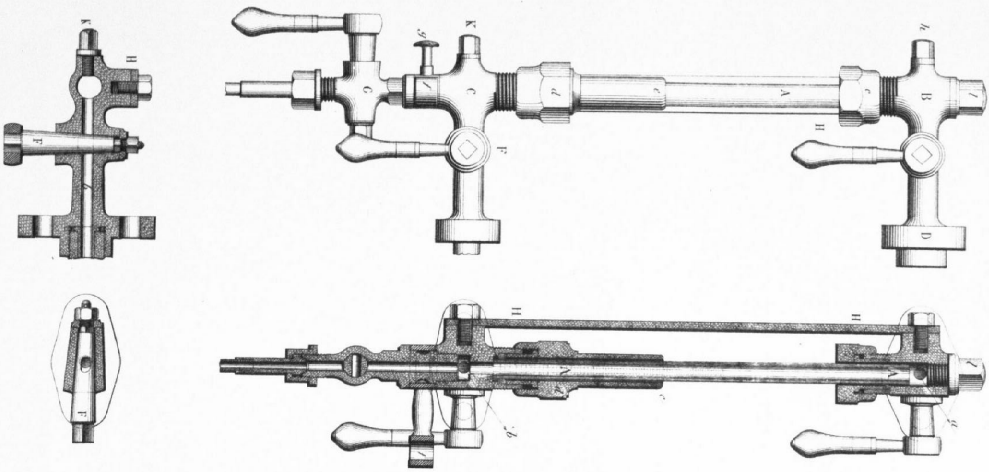


Fig. 2. - Flotteur FARROT.

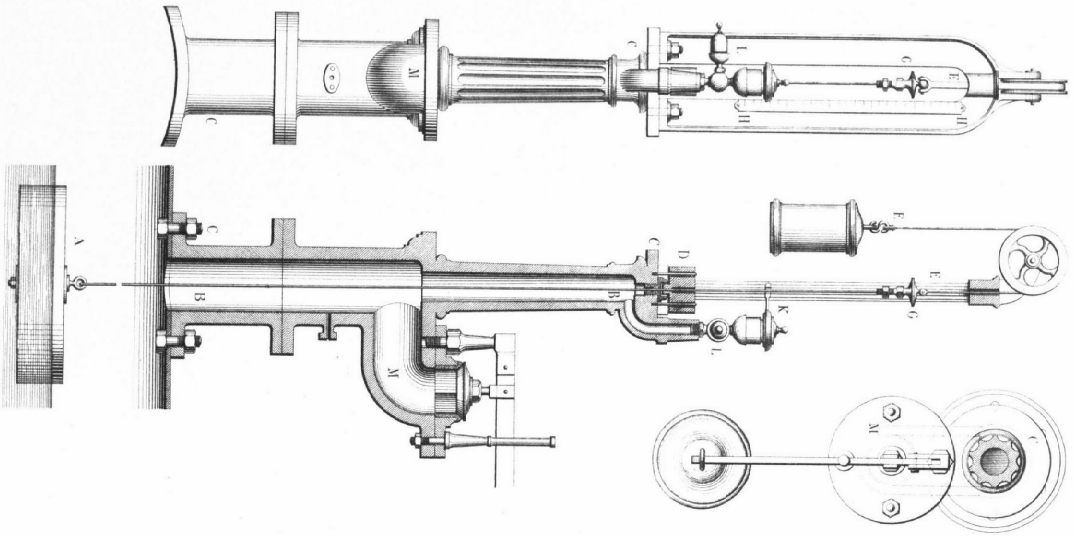


Fig. 3. - Indicateur magnétique LETHILLIER-PINEL.

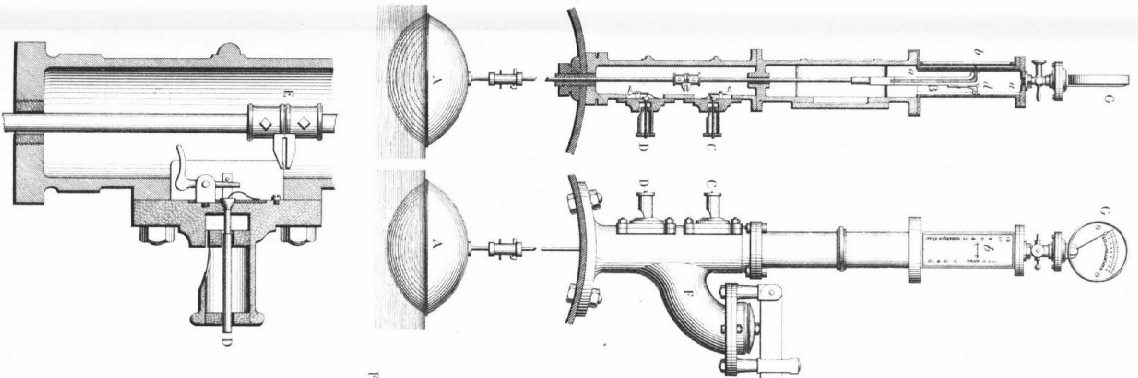


Fig. 4. - Flotteur BOURDON.

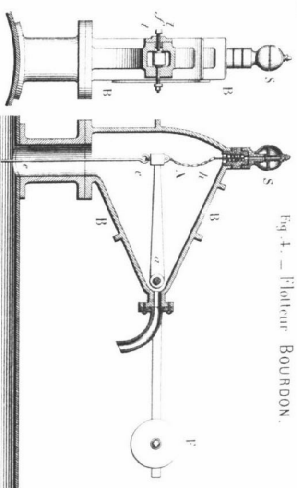


Fig. 5. - Indicateur PERRONTE.

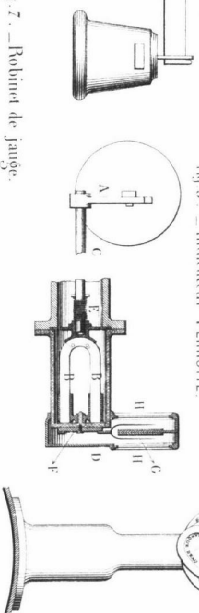


Fig. 7. - Robinet de jauge.

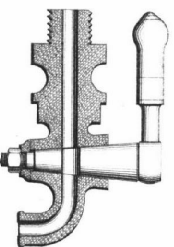


Fig. 6. - Indicateur CHAUDRÉ.

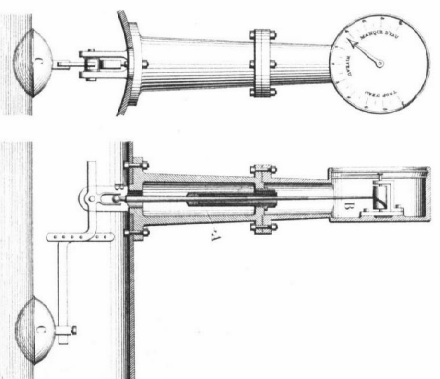


Fig. 8. - Niveau à tube séparateur.

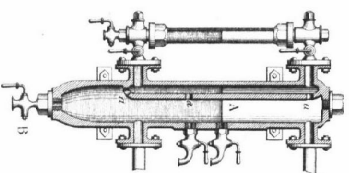


Fig. 1. - Robinet à trois voies.

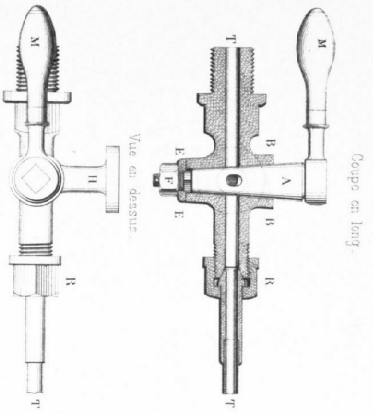


Fig. 3. Robinet MALLINSON. Coupe verticale sans la clef.

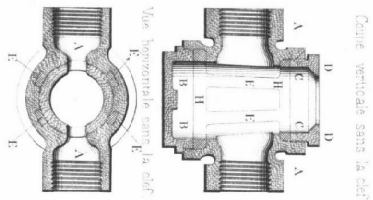


Fig. 2. - Robinet à boisseau.

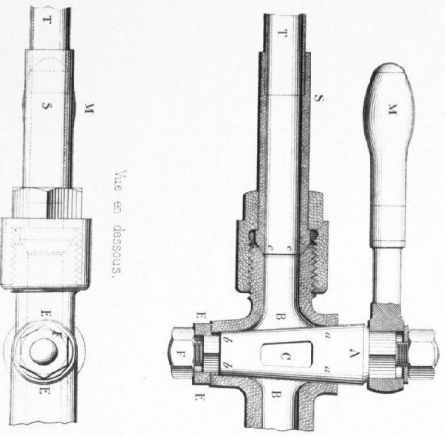


Fig. 4. Robinet d'inflection.

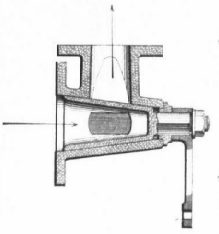


Fig. 5. Robinet soupape.

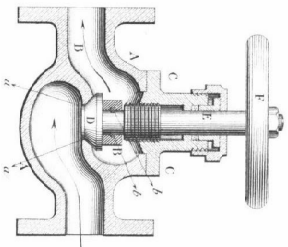


Fig. 7. - Robinet à soupape DUPUCH.

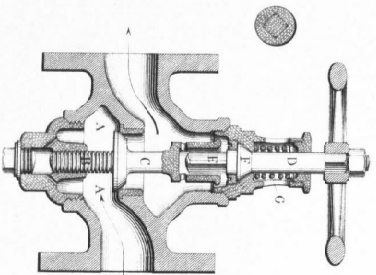


Fig. 8. - Robinet - valve. LEFHUILLER - PINEL.

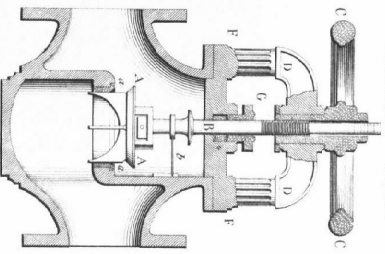


Fig. 9. Robinet CHÂTEL.

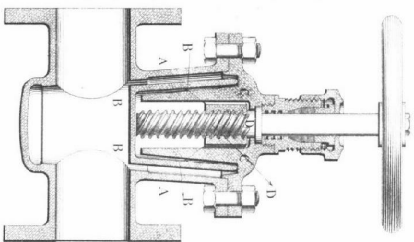


Fig. 12. - Robinet à vis.

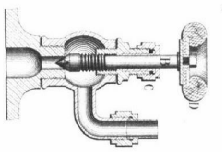


Fig. 14. - Robinet SEUERS.

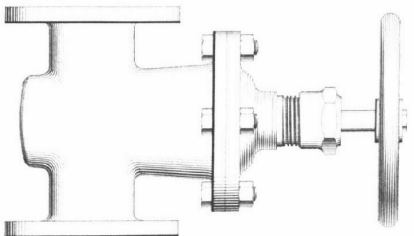


Fig. 10. - PEET - Valve.

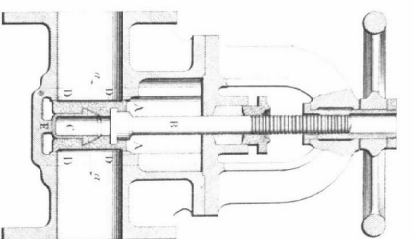


Fig. 16. - Clapet de retenue avec robinet d'arrêt.

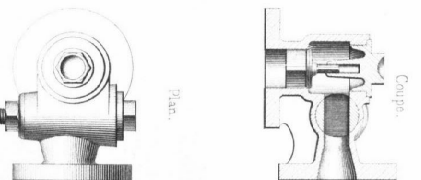


Fig. 13. Robinet à vis.

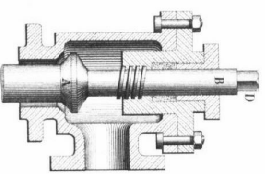
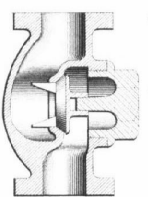


Fig. 15. - Clapet de retenue.



FOURNETTERIE.

INJECTERS.

Fig. 1. - Joint à bride ronde.

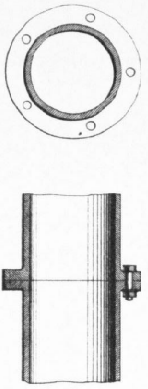


Fig. 2. - Bride ovale.

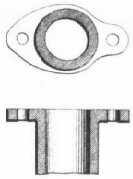


Fig. 3. - Bride carrée.

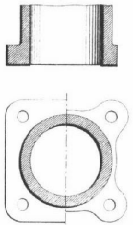


Fig. 4. - Joint à emboîtement.



Fig. 5. - Raccord en bronze.

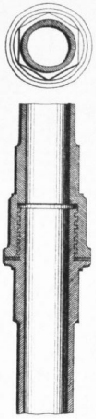


Fig. 6. - Joint PETIT.

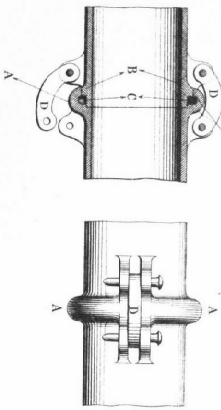


Fig. 7. - Joint de NORMANDY.

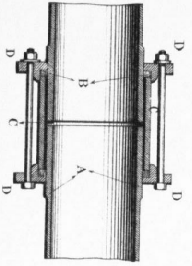


Fig. 8. - Joint LAMRIL.

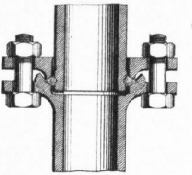


Fig. 9. - Joint LEGAT.

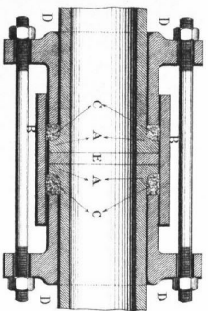


Fig. 10. - Brides en fer pour tuyaux en tôle.

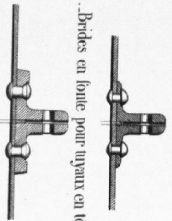


Fig. 11. - Brides en fonte pour tuyaux en tôle.

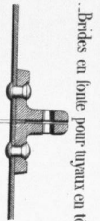


Fig. 12. - Manchon à vis.

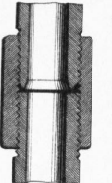


Fig. 13. - Joints à bride mobile.

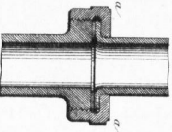


Fig. 14. - Joint TAVERDON.

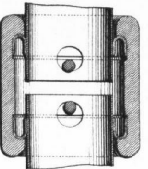


Fig. 15. - Injecteur GIRARD.

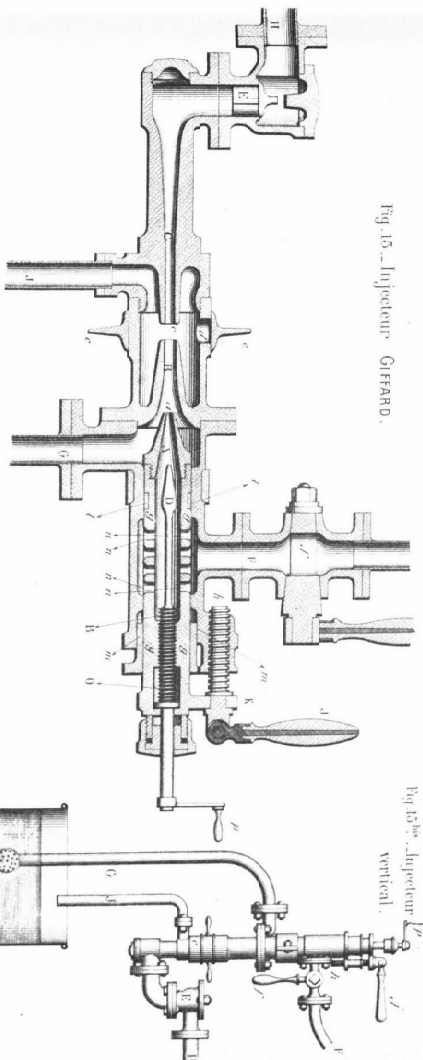


Fig. 15^{bis}. - Injecteur vertical.

Fig. 16. - Injecteur BOHLER.

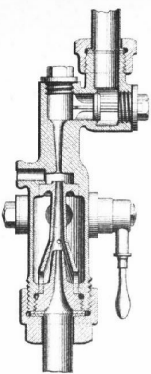


Fig. 17. - Injecteur HANCOCK.

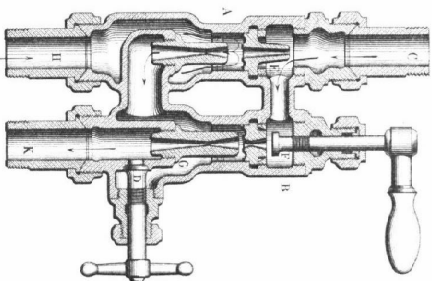


Fig. 18. - Injecteur HANCOCK.

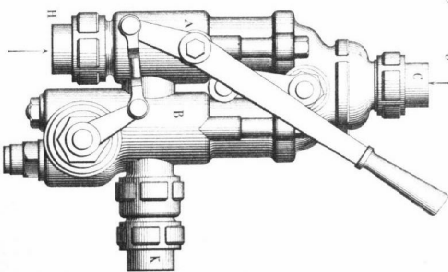


Fig. 19. - Injecteur KRAUSS.

