

DIBUJO PROFESIONAL

CURSO ELEMENTAL PRACTICO

D.E

DIBUJO DE MÁQUINAS

PARA USO

DE LAS ESCUELAS, ENSEÑANZA DE ALDUTOS, OBREROS, CONTRAMAESTRES, MODELISTAS, etc

Y

de los alumnos que se preparan para los concursos de admision

de las escuelas especiales: CENTRAL, ANGERS, AIX etc

POR

MAURICIO TIXIER, INGENIERO



PARIS

MONROCC, FRÈRES, Éditeurs, 3, RUE SUGER

F.A.S.
308



Elements conventionnels

Hachures

fonte $e = 1^{\text{m}}/_{\text{m}} \frac{1}{4}$



grandes surfaces



fer $e = 3/_{\text{m}} \frac{1}{\text{m}}$



acier doux $e = 1/_{\text{m}} \text{ à } 1/_{\text{m}} \frac{1}{2}$



acier trempé $e = 1/_{\text{m}} \text{ à } 1/_{\text{m}} \frac{1}{2}$



bronze cuivre $e = 1^{\text{m}}/_{\text{m}}$



plomb zinc étain $e = 1^{\text{m}}/_{\text{m}} \frac{1}{2}$



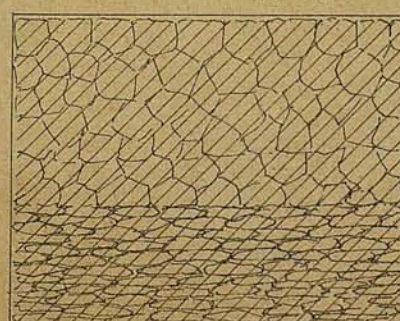
bois $e = 1^{\text{m}}/_{\text{m}} \frac{1}{4}$



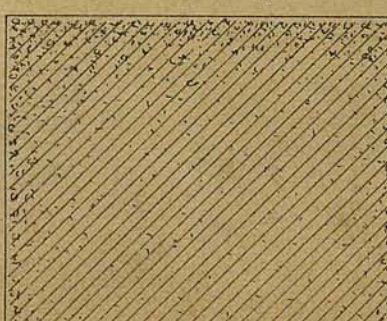
pierre $e = 1^{\text{m}}/_{\text{m}} \frac{1}{2} \text{ à } 2^{\text{m}}/_{\text{m}}$



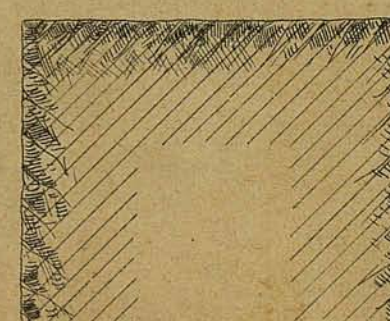
moellons meulière $e = 1^{\text{m}}/_{\text{m}} \frac{1}{2}$



béton $e = 1^{\text{m}}/_{\text{m}} \frac{1}{2}$



terrain.



Nota.

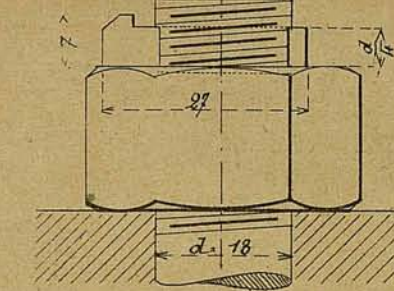
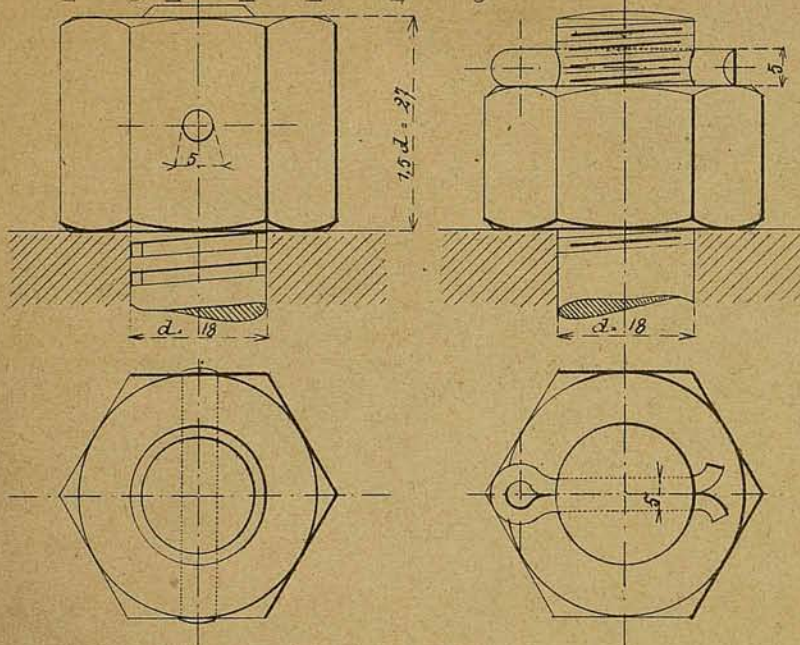
Laisser un liseré blanc de $1/_{\text{m}} \frac{1}{2}$ à $1^{\text{m}}/_{\text{m}}$ dans les coupes le long des traits éclairés

e - espacement des hachures

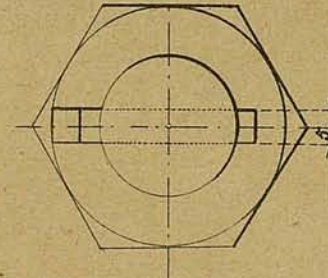
Assemblages par boulons

Dispositifs de sûreté

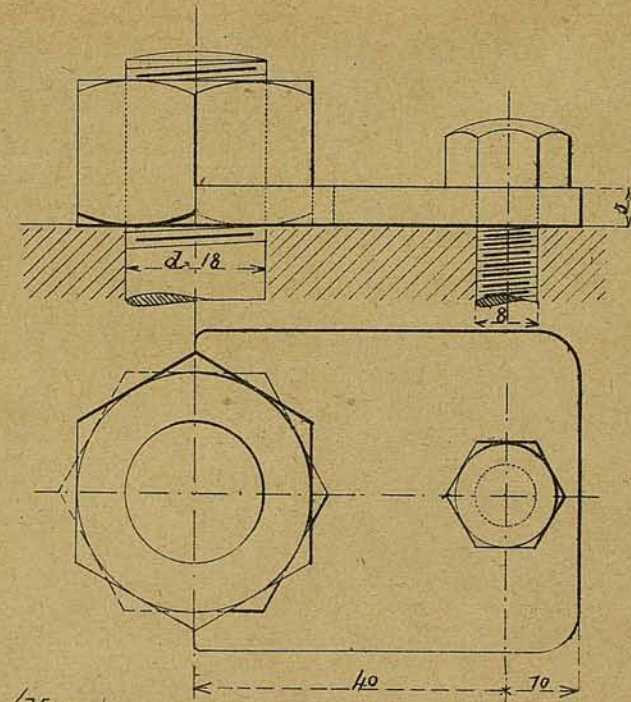
par goupilles pour pièces peu sujettes à usure



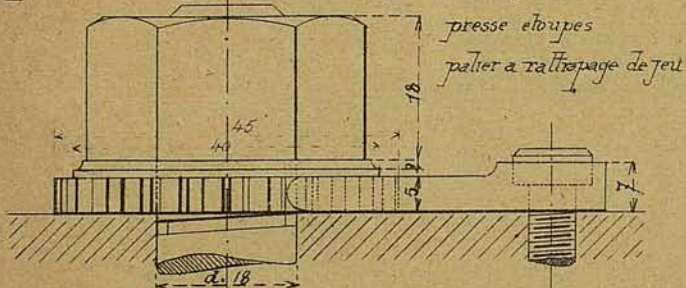
par clavette permettant un léger serrage



par plaque de sûreté permettant un resserrage

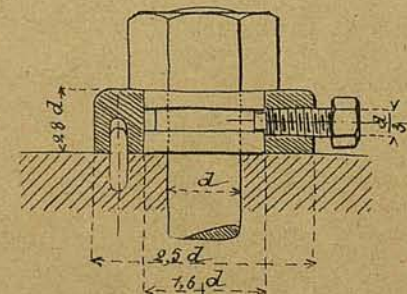


par un cliquet à ressort pour serrage gradué



presse-étoupes
palier à rattrapage de jeu

dispositif de Pell (Marine)

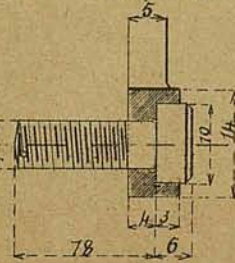


Echelle Vieillard

par rondelle élastique



Coupe ab

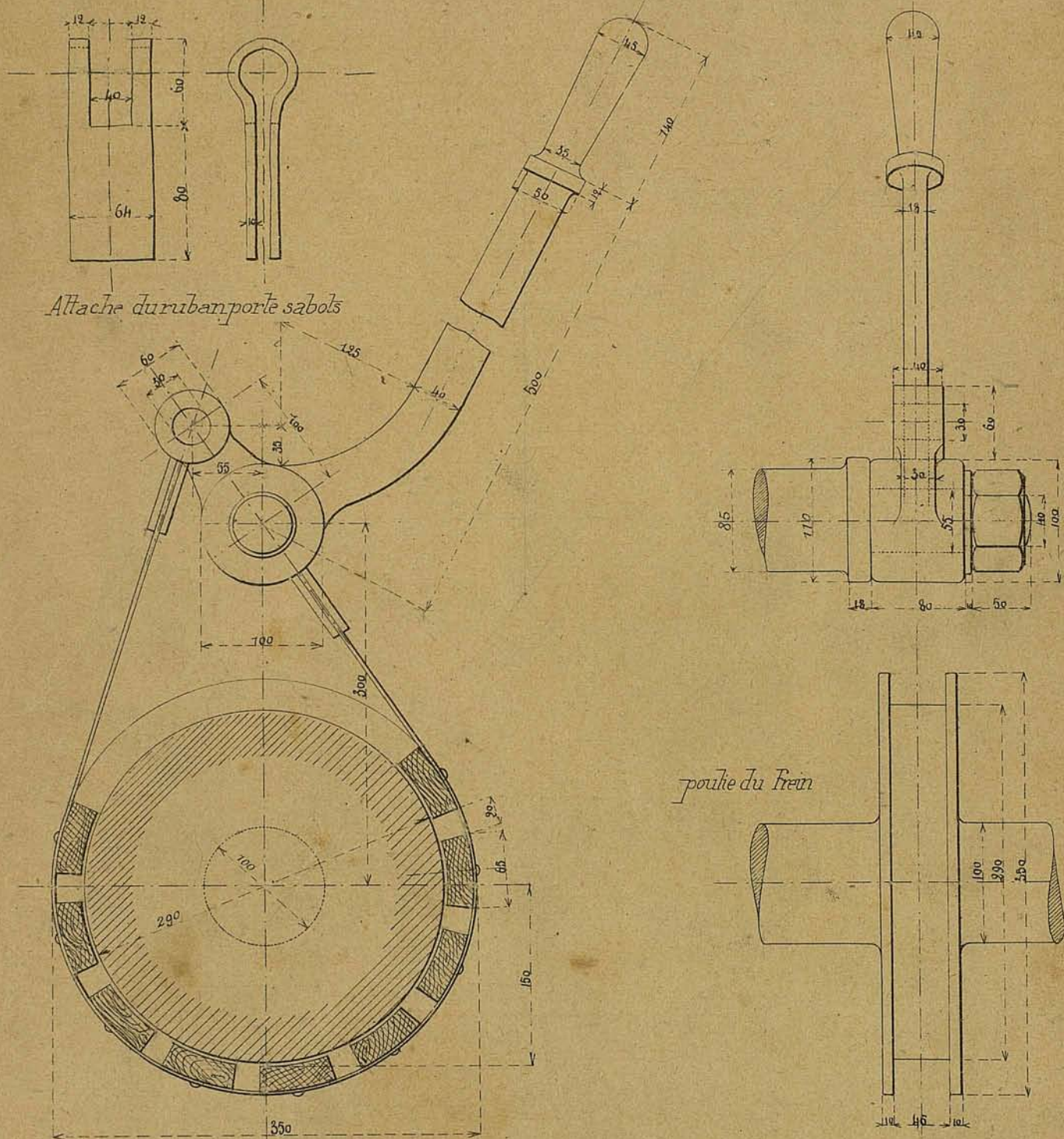


Faire exécuter ces dispositifs à diverses échelles

(Croquis)

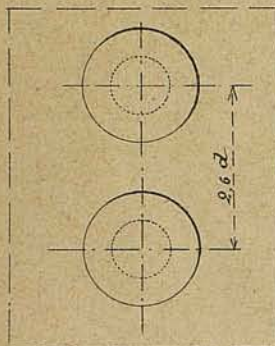
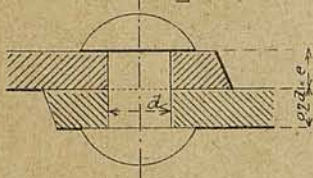
Levier coudé

pour frein à collier
para freno de collar

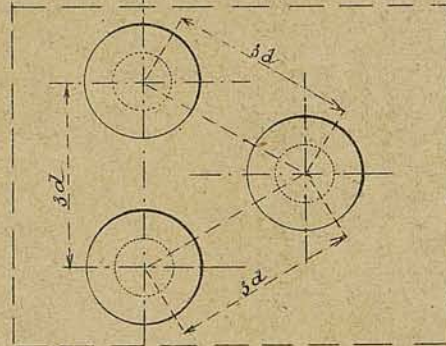
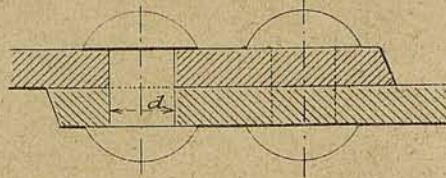
Echelle 0^m20 pour 1^m

Assemblages de tôles

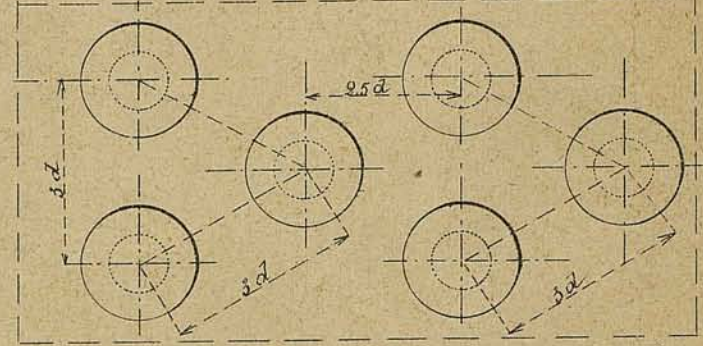
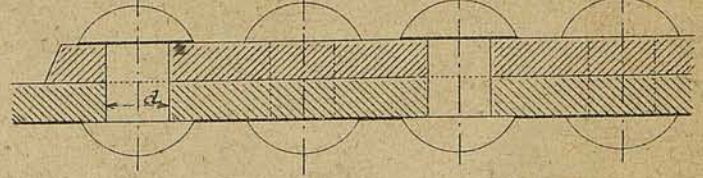
Rivure simple



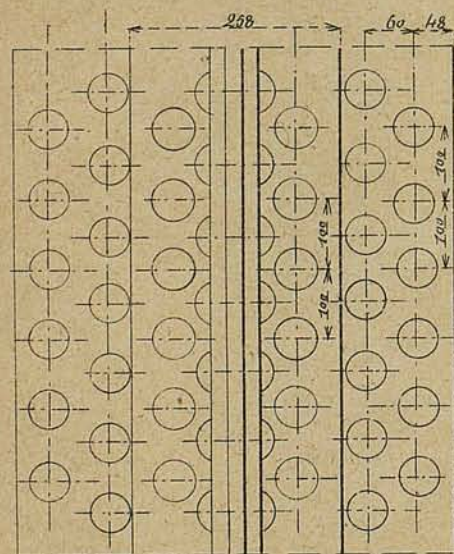
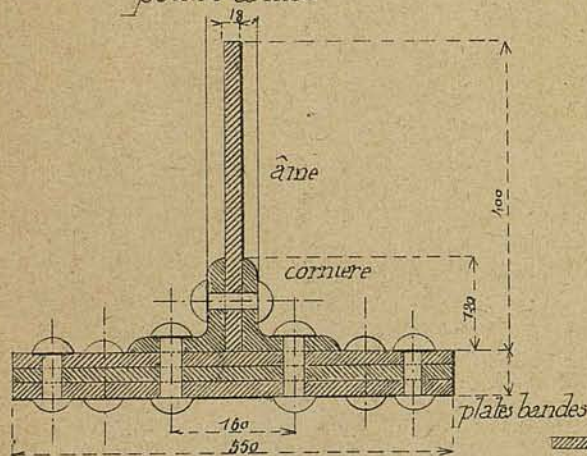
Rivure double



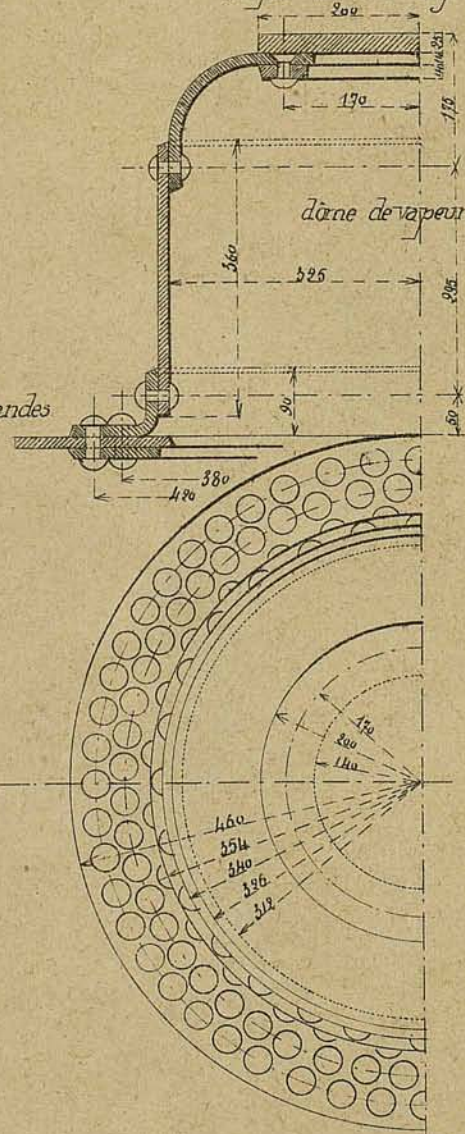
Rivure à chaîne



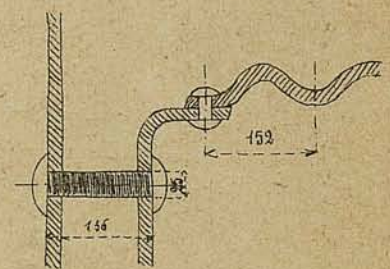
poutre armée



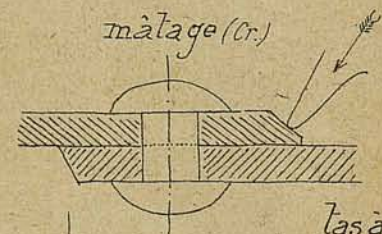
Corps de tôle cylindrique (chaudière de locomotive)



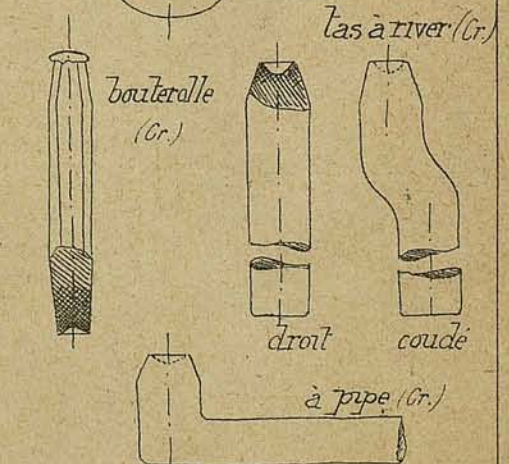
ciel du foyer ondulé (Cr.)



entrelasse fileté rivée (Cr.)



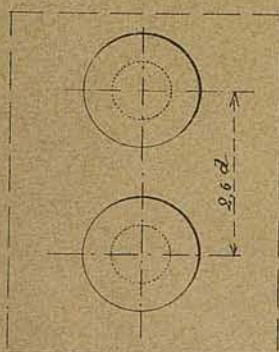
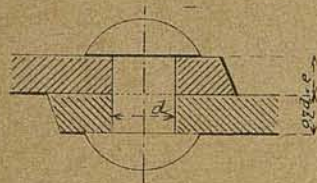
mâtage (Cr.)

Echelle 0^m10 pour 1^m

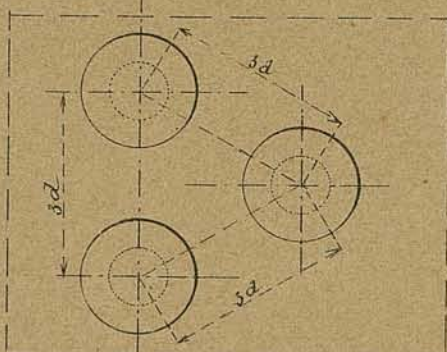
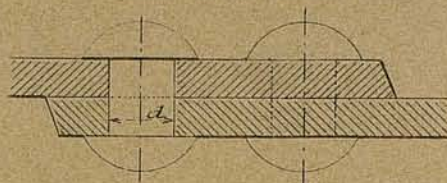
le nombre et l'espacement des rivets sont calculés d'après
la résistance que doit avoir la poutre

Ensambladuras de palastro

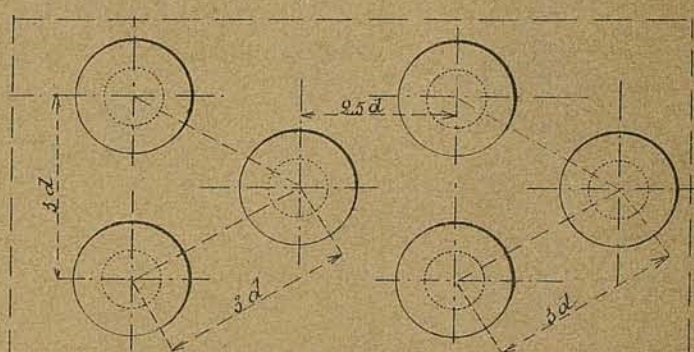
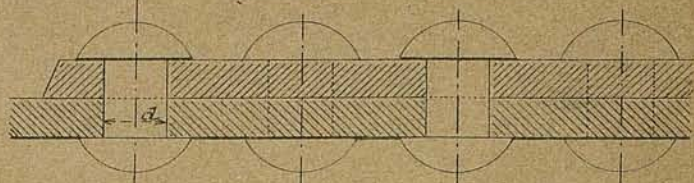
Roblonado sencillo



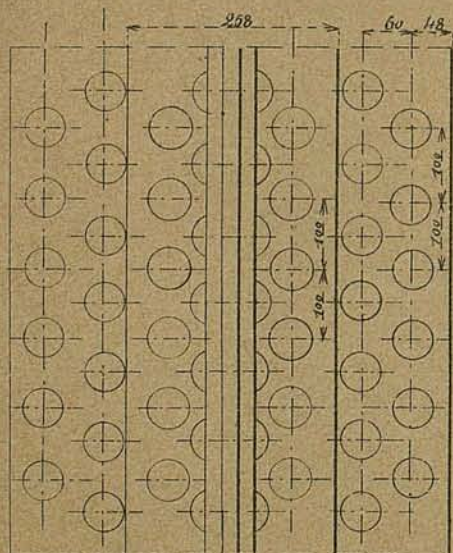
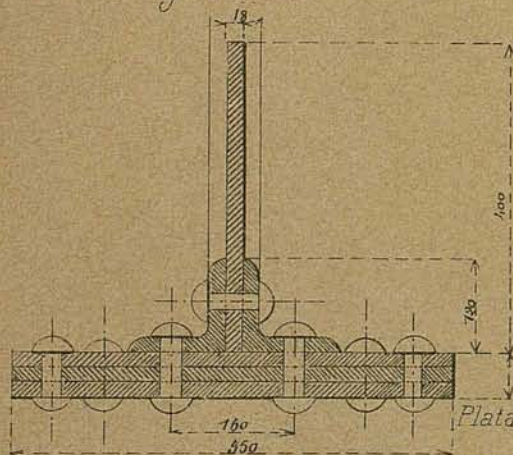
Roblonado doble



Roblonado á tresbolillo



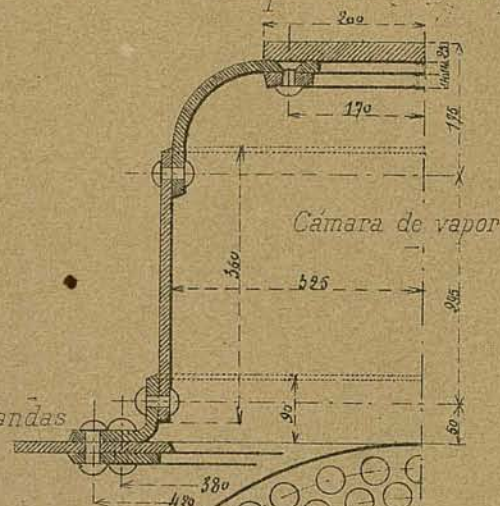
Viga armada



Escala 0^m10 por 1^m00

El número y separación de los roblones se calculan por la resistencia que la viga ha de tener

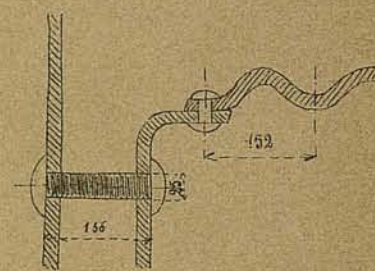
Cuerpo cilindrico de palastro (Caldera de locomotora)



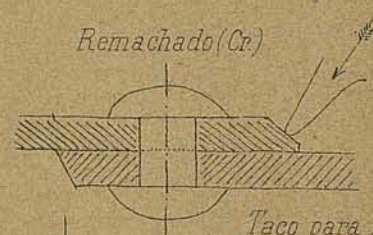
Cámara de vapor

Platabandas

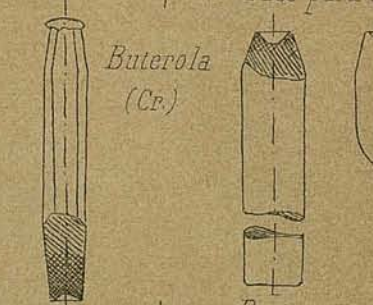
Cielo ondulado del hogar (Cr.)



Riostra fileteada y remachada (Cr.)



Remachado (Cr.)

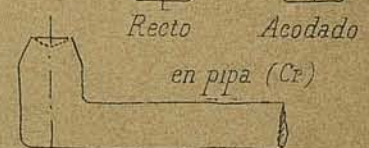


Buterola (Cr.)

Taco para remachar (Cr.)

Recto

Acodado



Supports d'arbres

Paliers

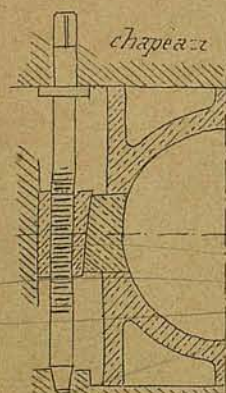
Crapaudine pour arbre vertical
vraie grandeur

élévation et demi-coupe a b

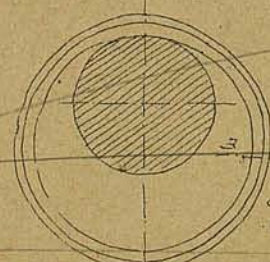
demi-plan

demi-coupe c d

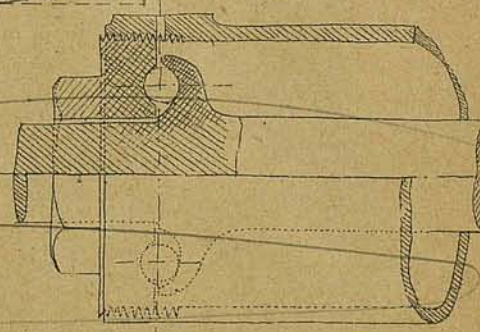
rattrapage de jeu



coussinet en quatre parties



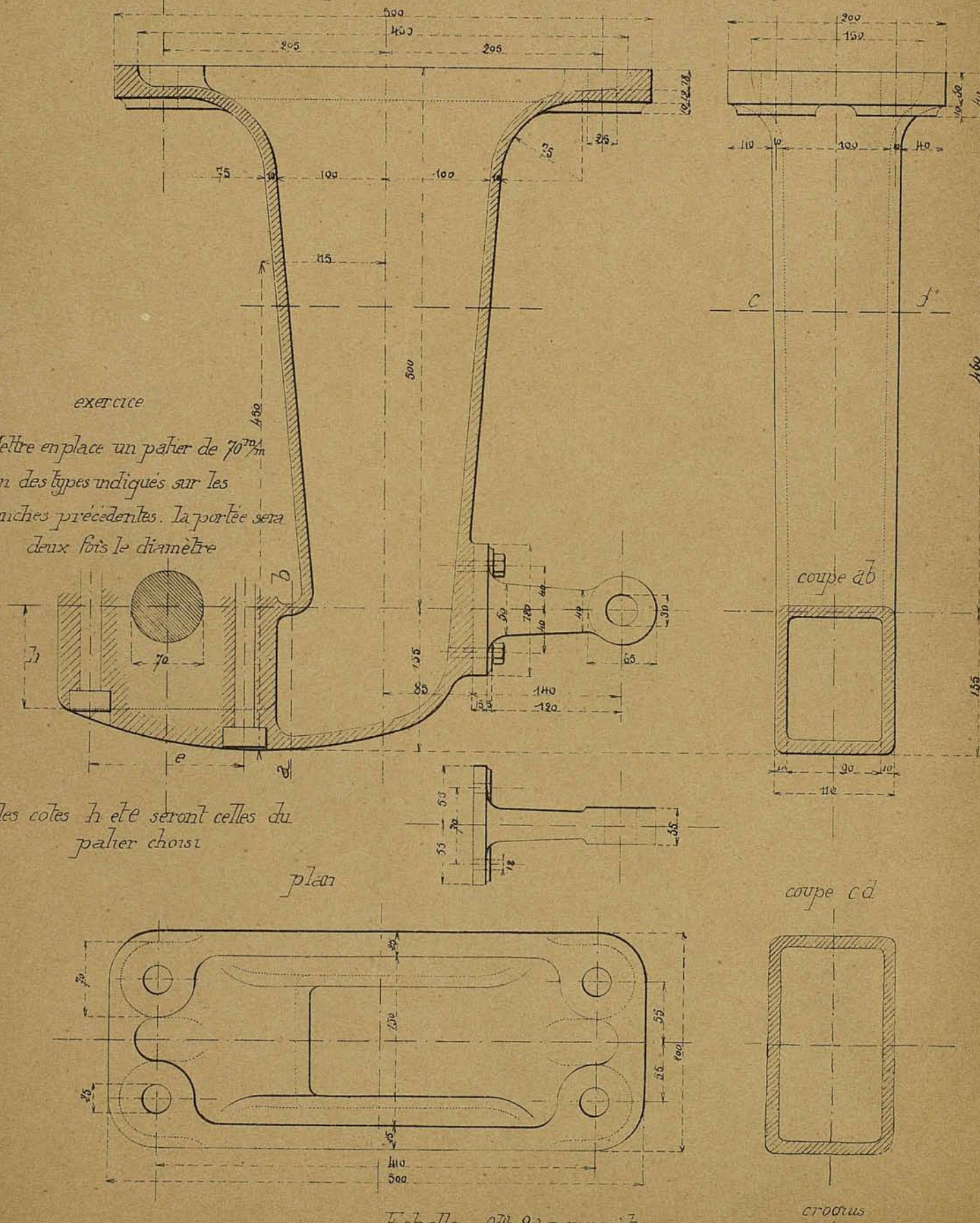
bague de graissage



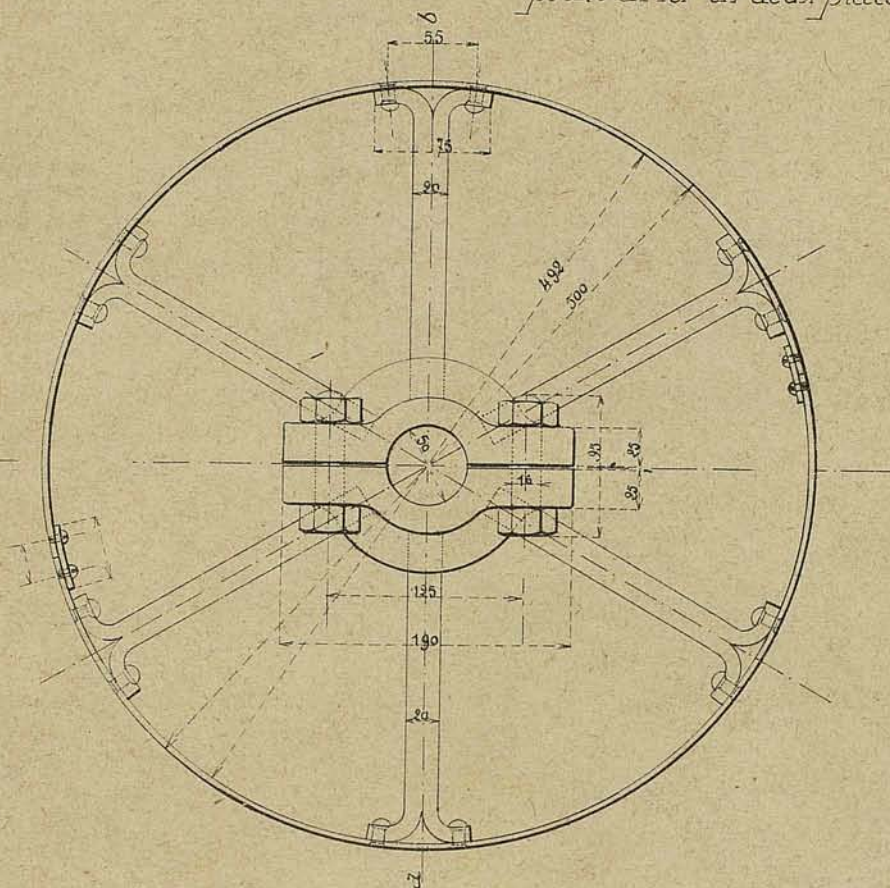
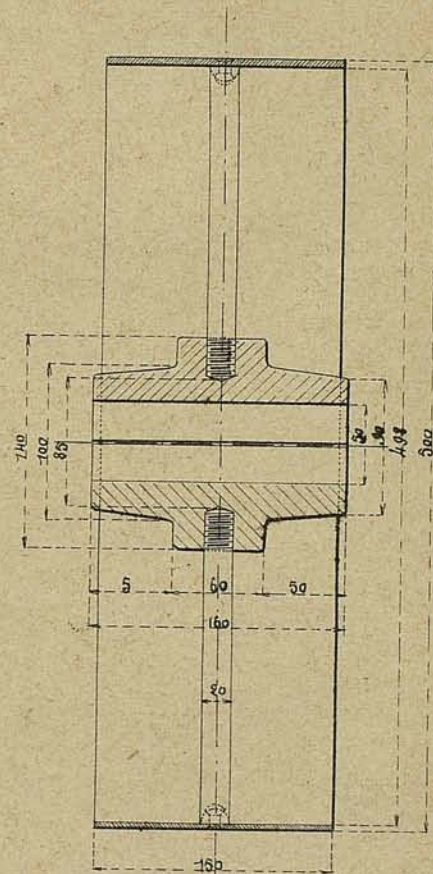
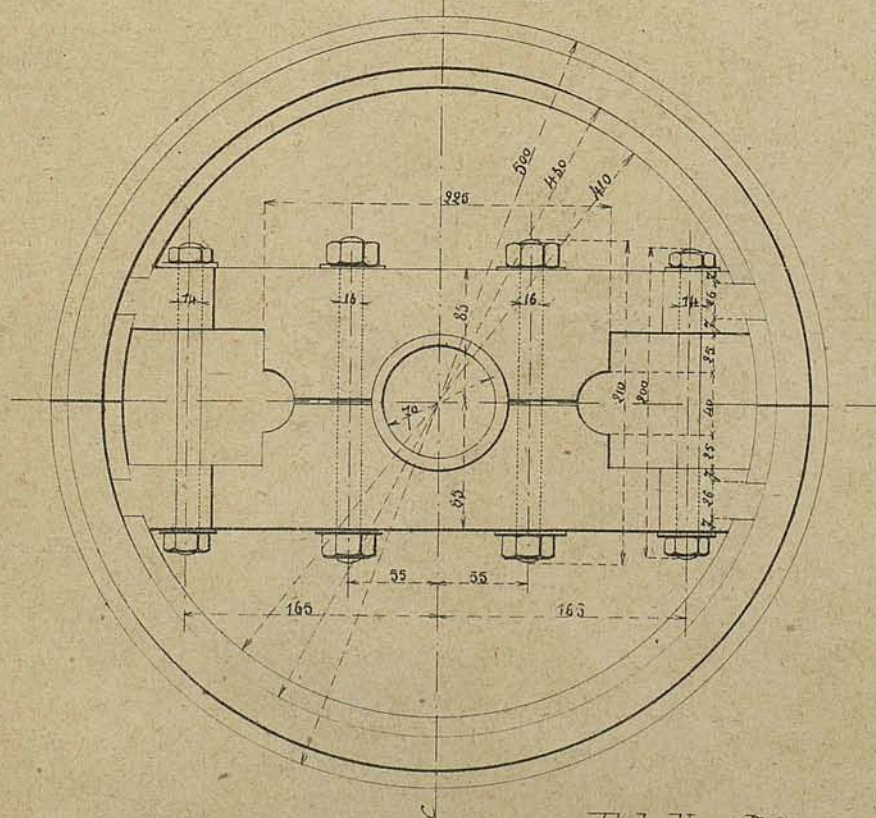
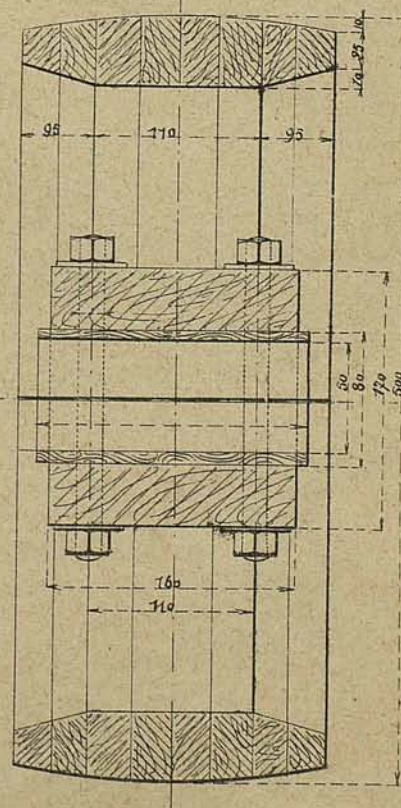
roulement à billes de bicyclette

Supports de paliers

Chaise pendante ouverte avec renvoi pour débrayage

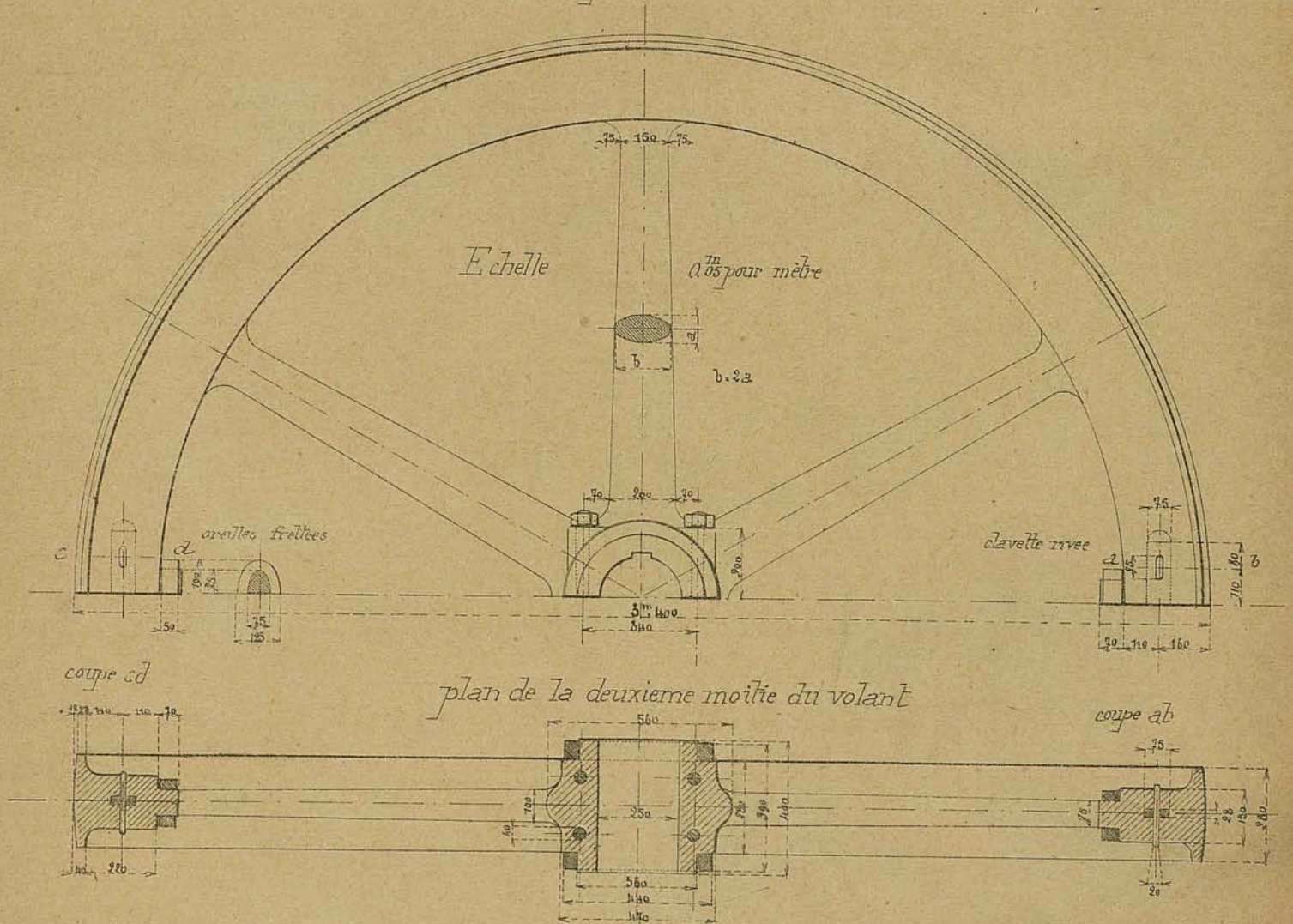


Poulies

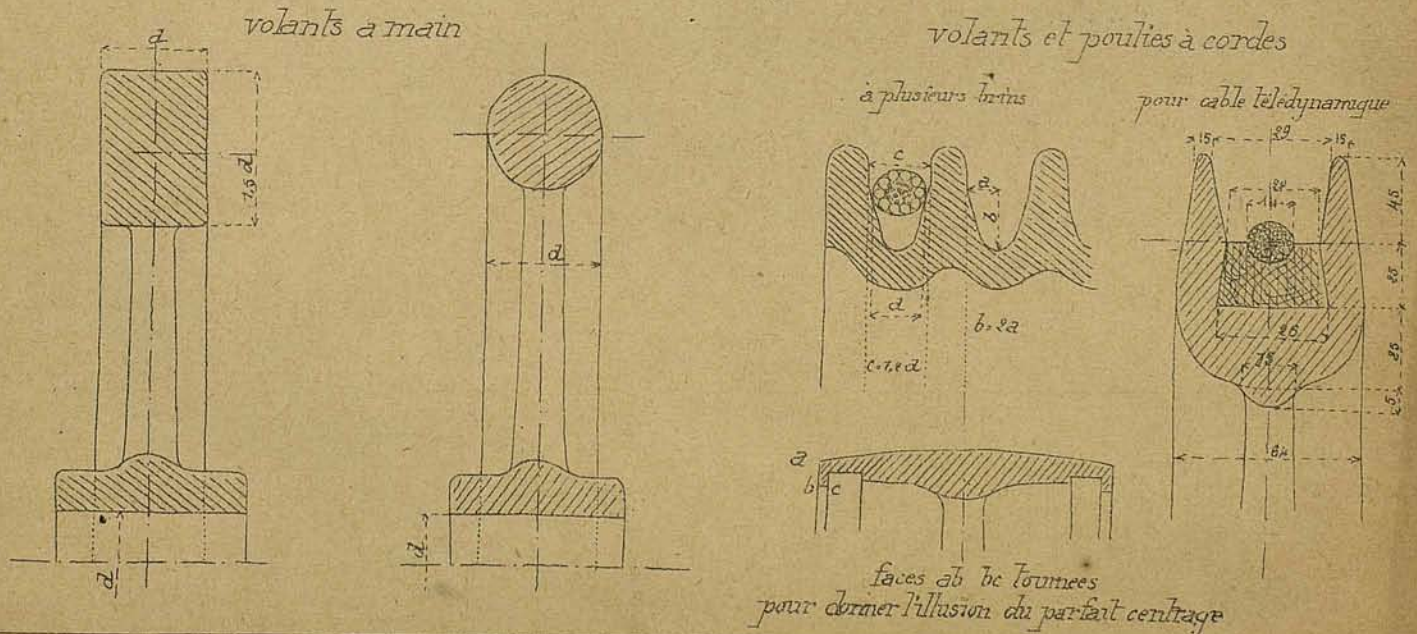
poulie en fer en deux pièces*coupe ab**d**poulie en bois en deux pièces**coupe cd**Echelle 0^m20 pour mètre*

Volants

Volant en deux pièces boulonnées et frellées

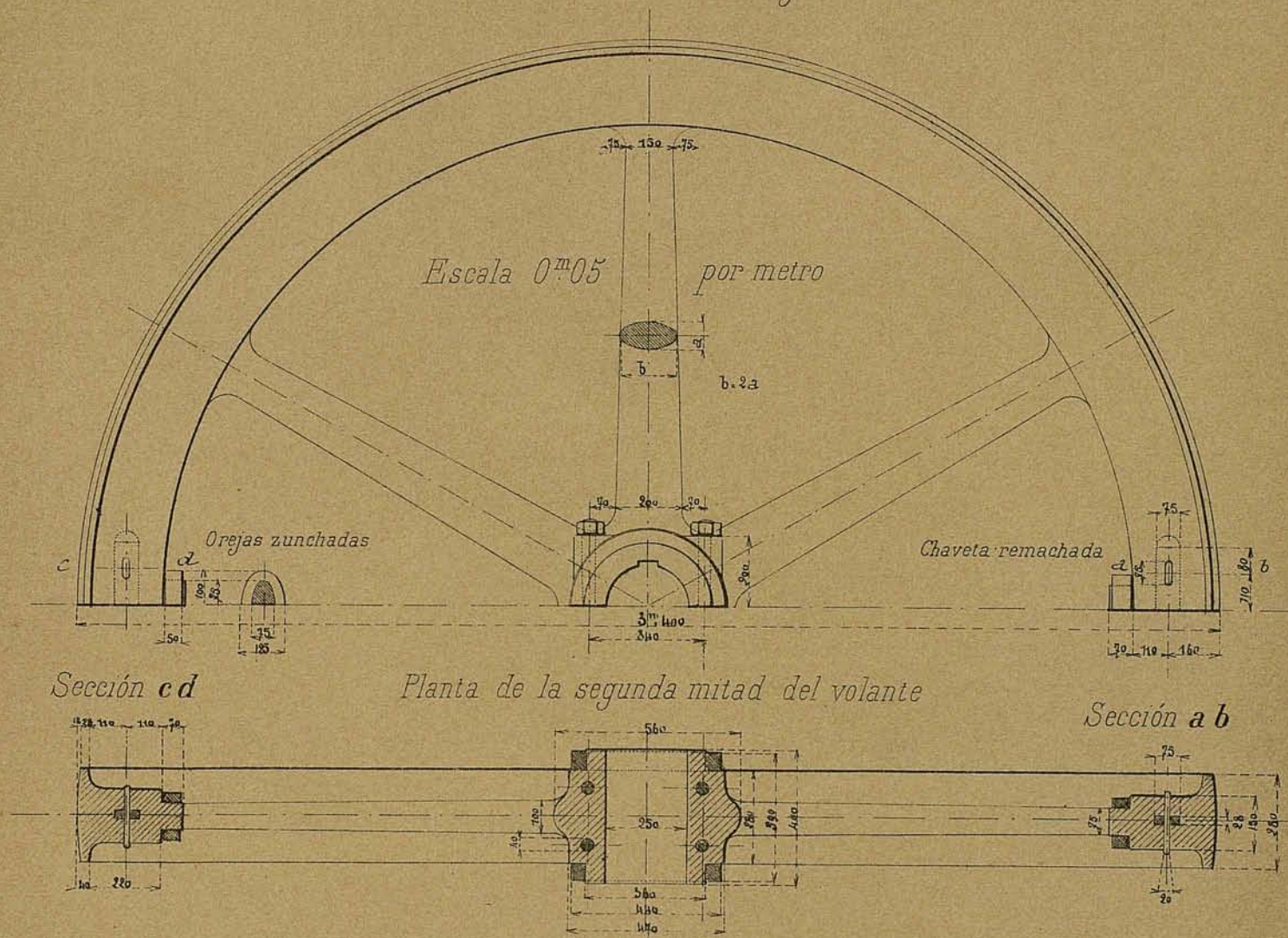


Diverses formes de jantes



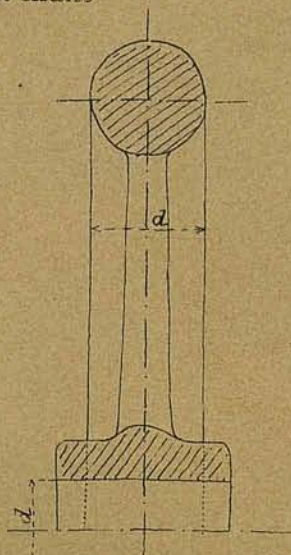
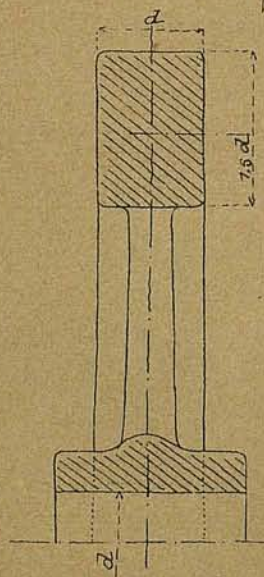
Volantes

Volante en dos trozos atornillados y zunchados



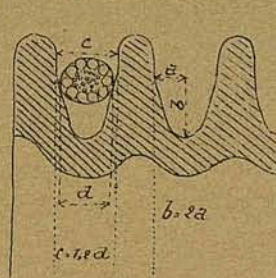
Formas variadas de las llantas

Volantes de mano

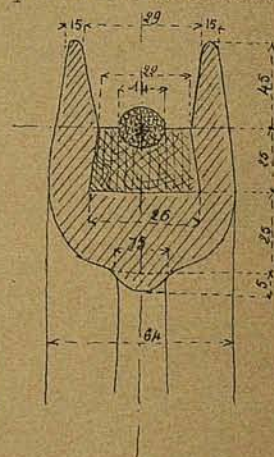


Volantes y poleas de cuerdas

de varios cabos



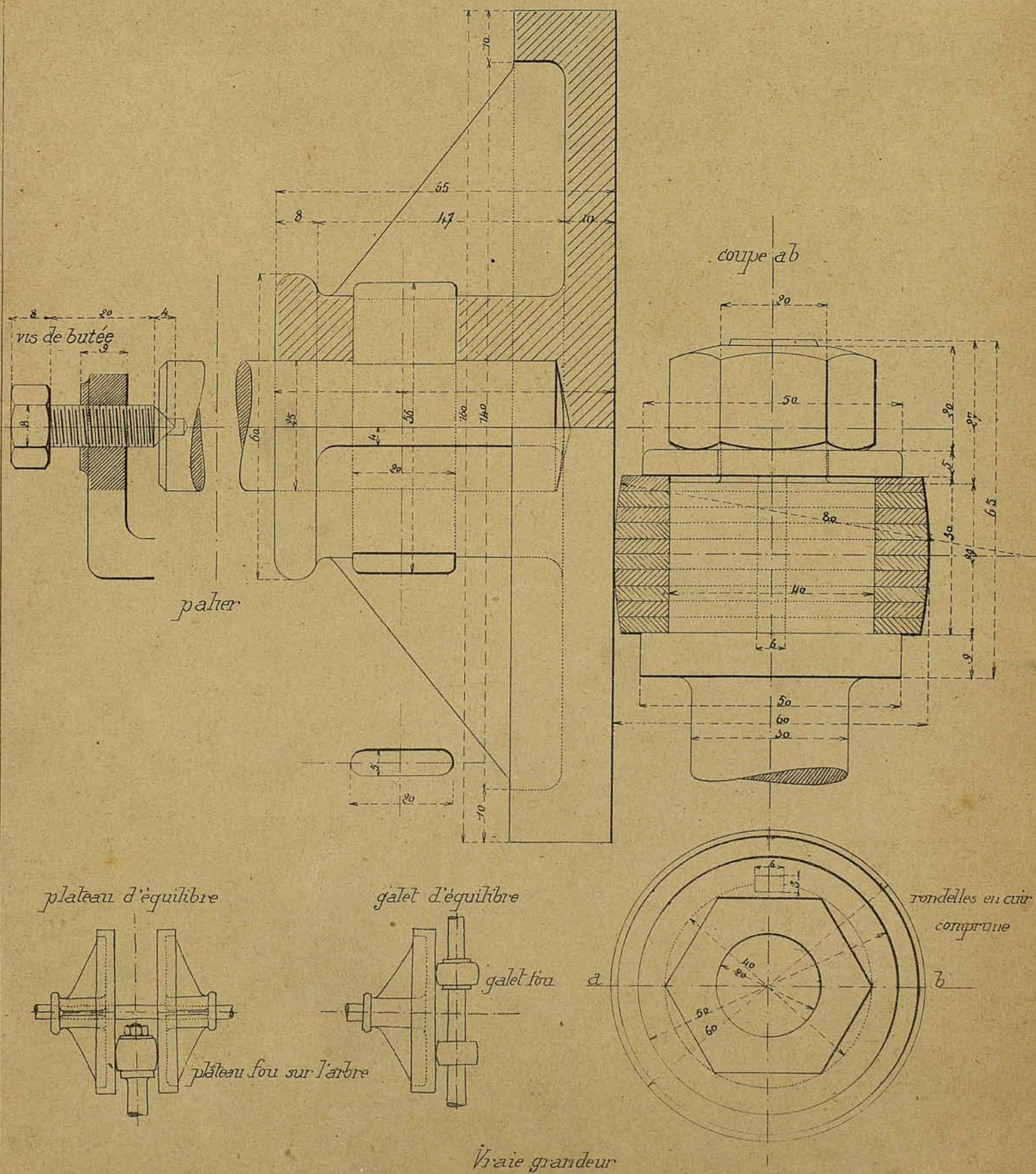
para cable teledinámico



Caras *ab* y *bc* vueltas
para dar idea del perfecto centrado

Plateau de friction

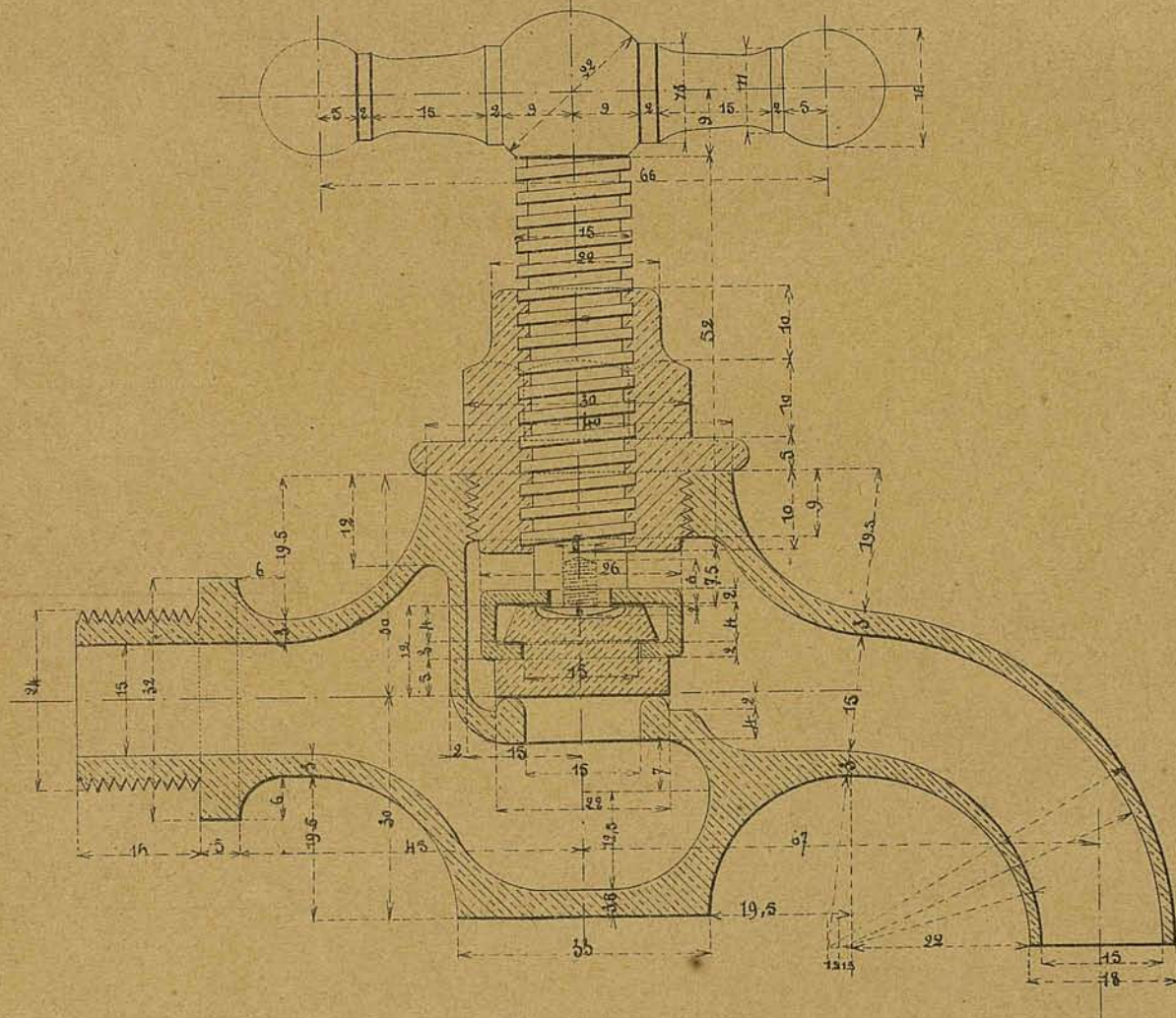
pour transmettre de petits efforts



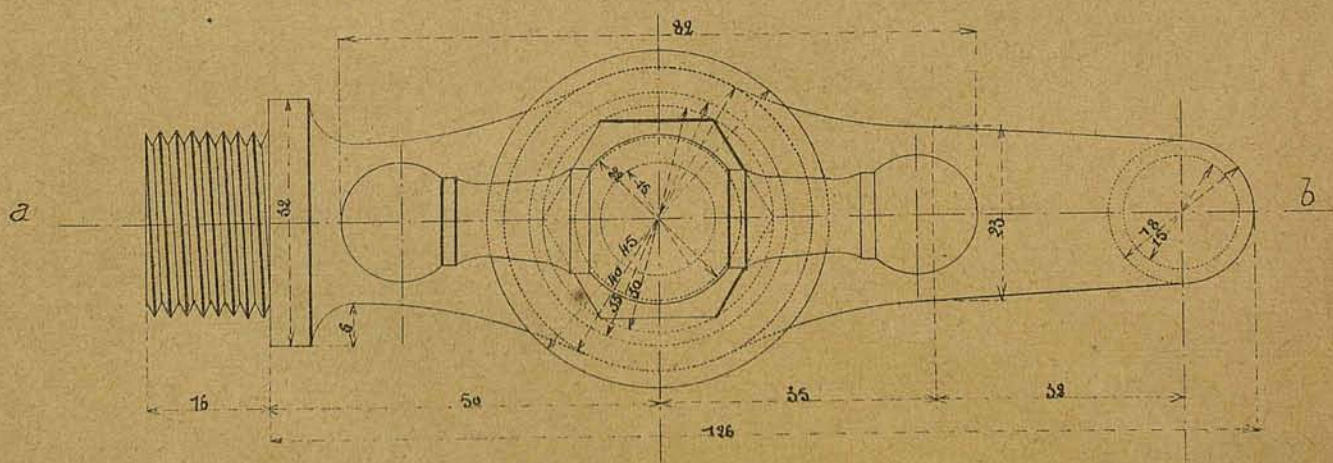
Robinet pour eau

fermeture à vis à caoutchouc

coupe ab



plan

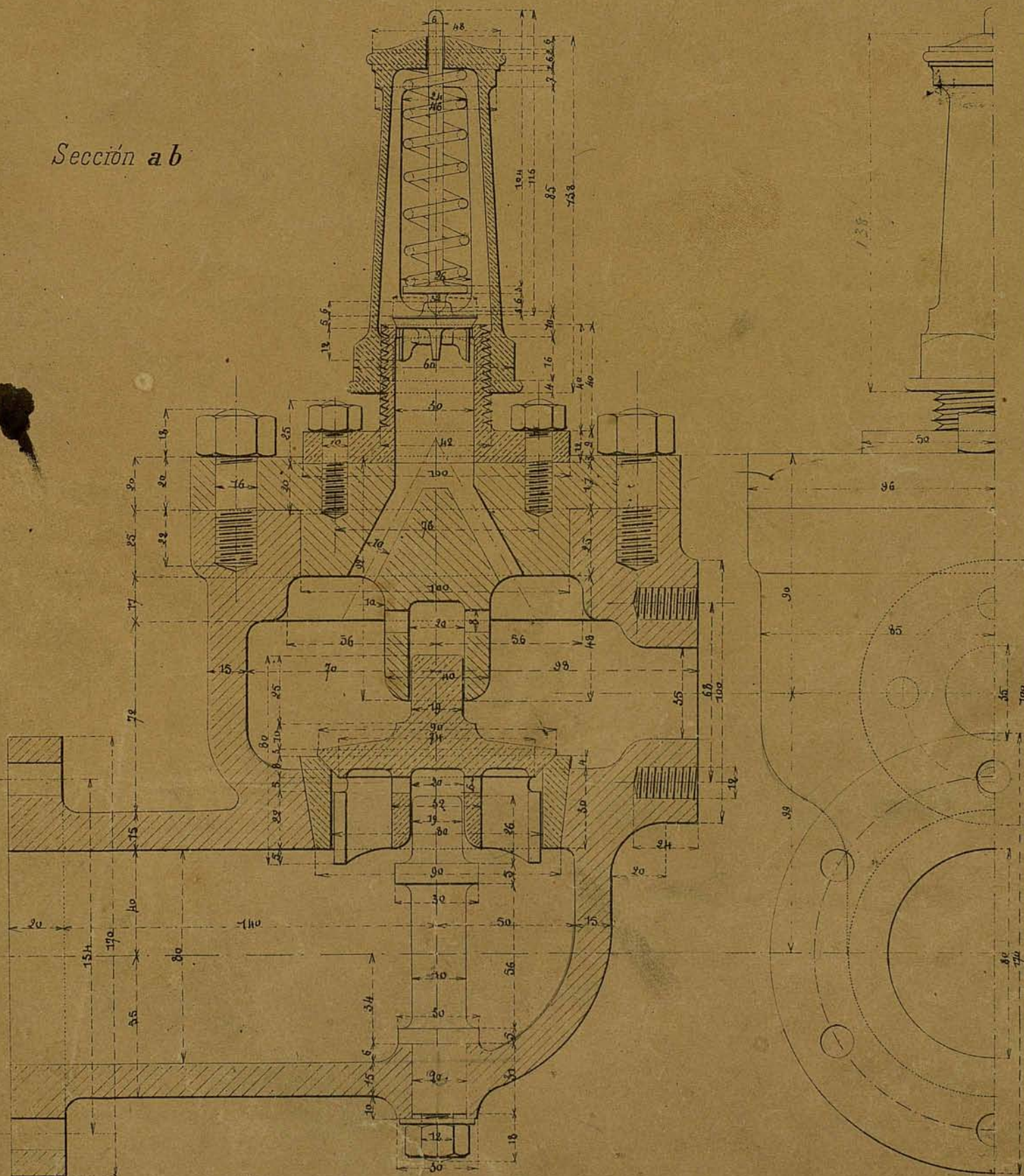


Vraie grandeur

Caja de válvula de asiento con válvula de seguridad

sobre la impulsión de una bomba de alimentación

Sección a b



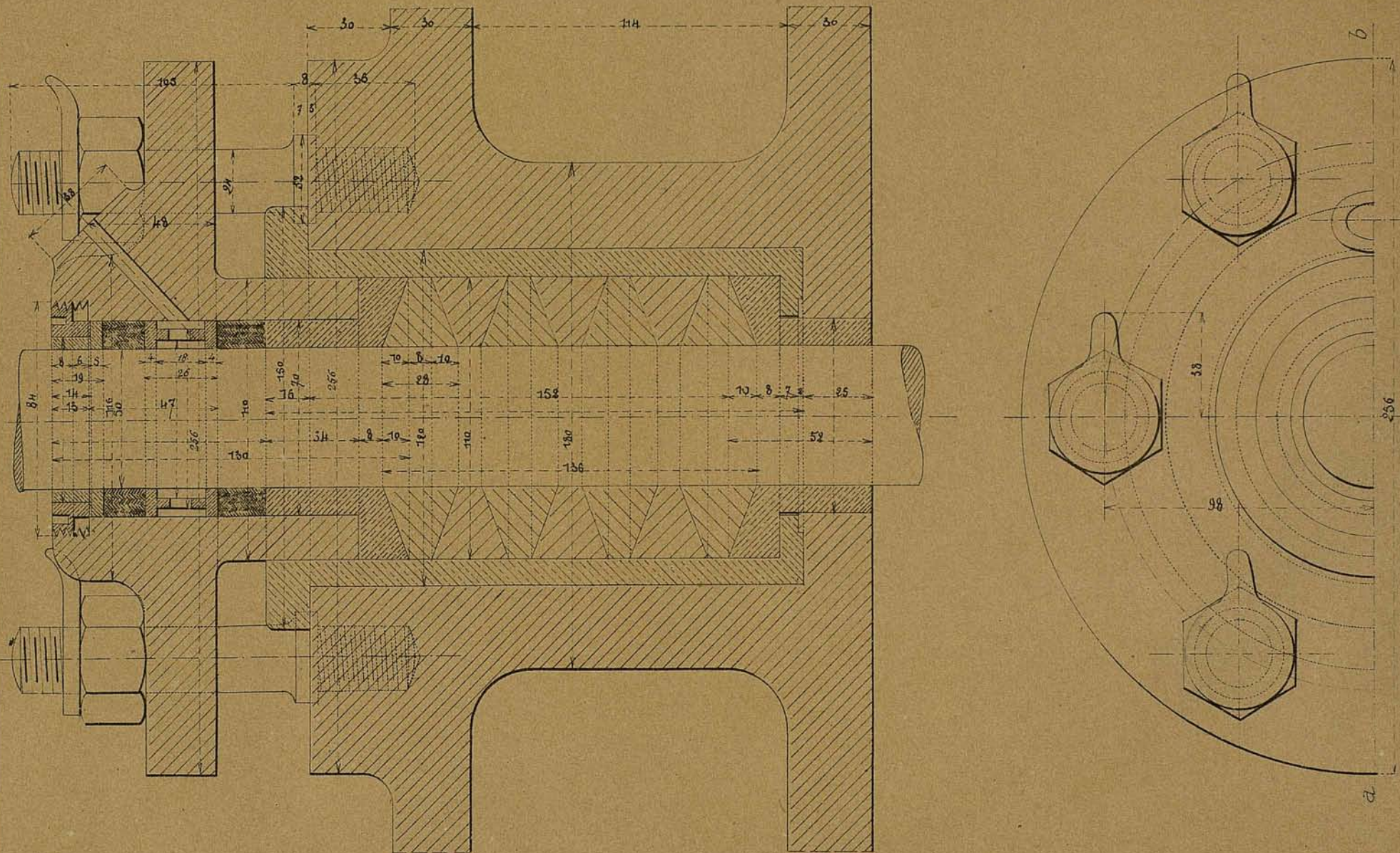
Escala 0^m50 por metro

Prensa-estopas

con guarnición metálica y disco horadado por máquina horizontal

Sección *ab*

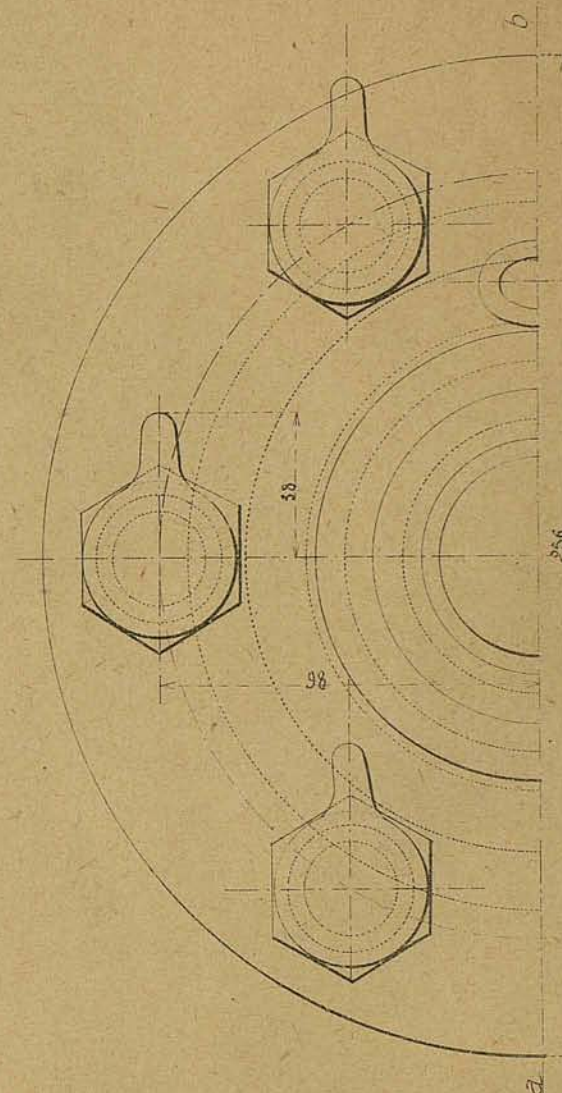
$\frac{1}{2}$ proyección del extremo



Escala 0^m50 por metro

avec garniture métallique et bague évidée
pour machine horizontale

$\frac{1}{2}$ vue en bout



Echelle 0^m50 pour mètre

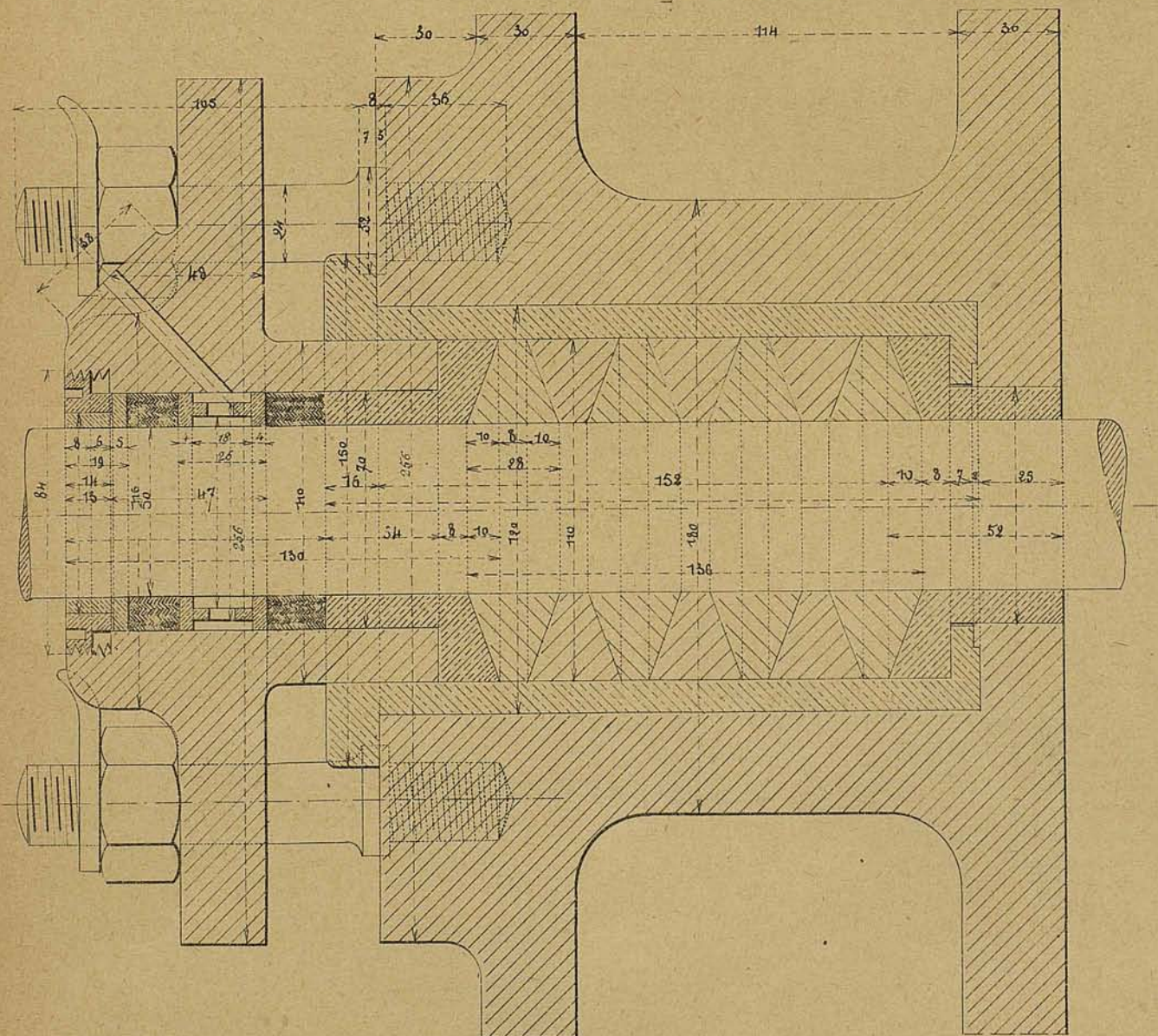
Presse-etoupe

avec garniture métallique et bague évidée

pour machine horizontale

coupe ab

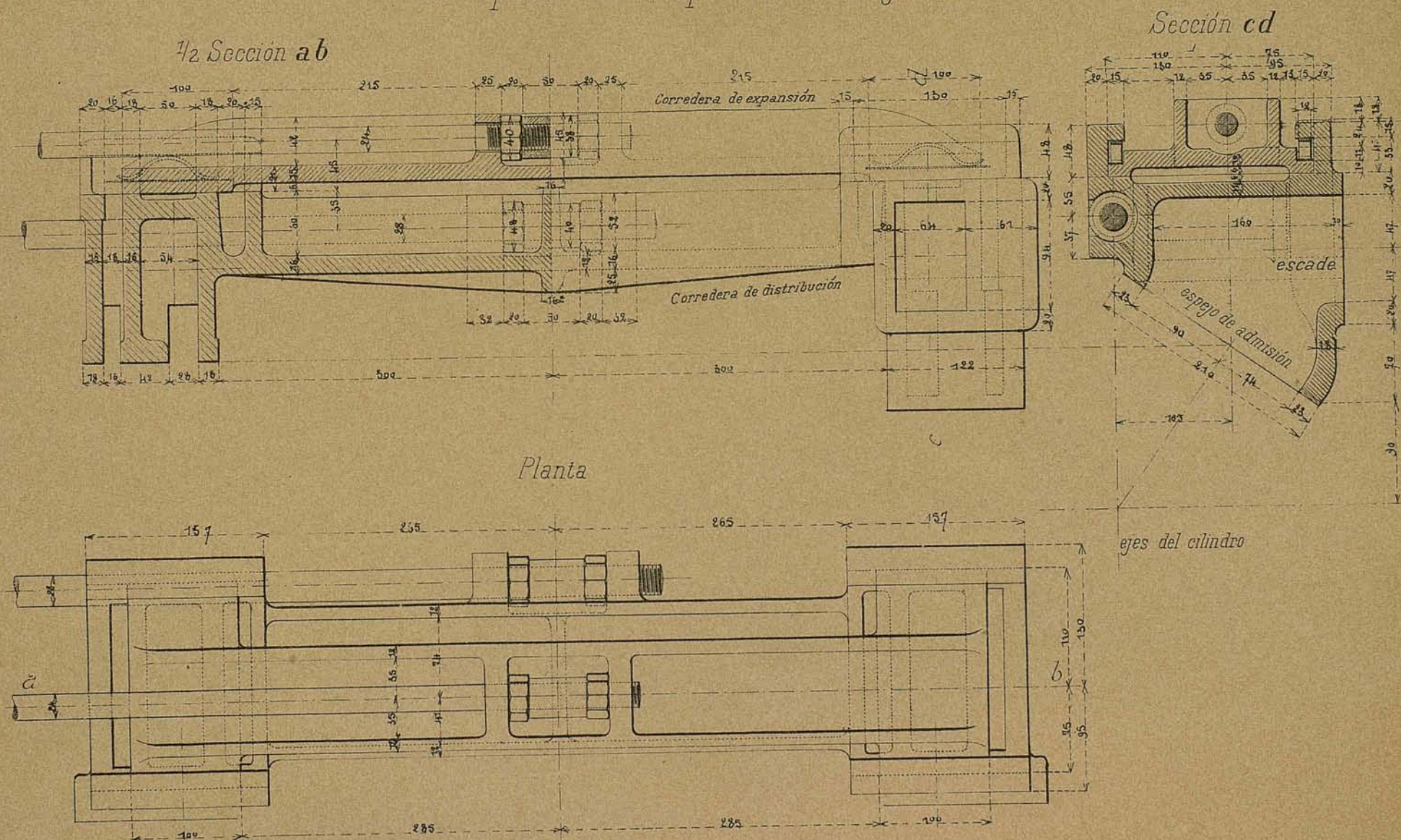
$\frac{1}{2}$ vue en bout



Echelle 0^m50 pour mètre

Corredera de distribución

con expansión variable por medio del regulador

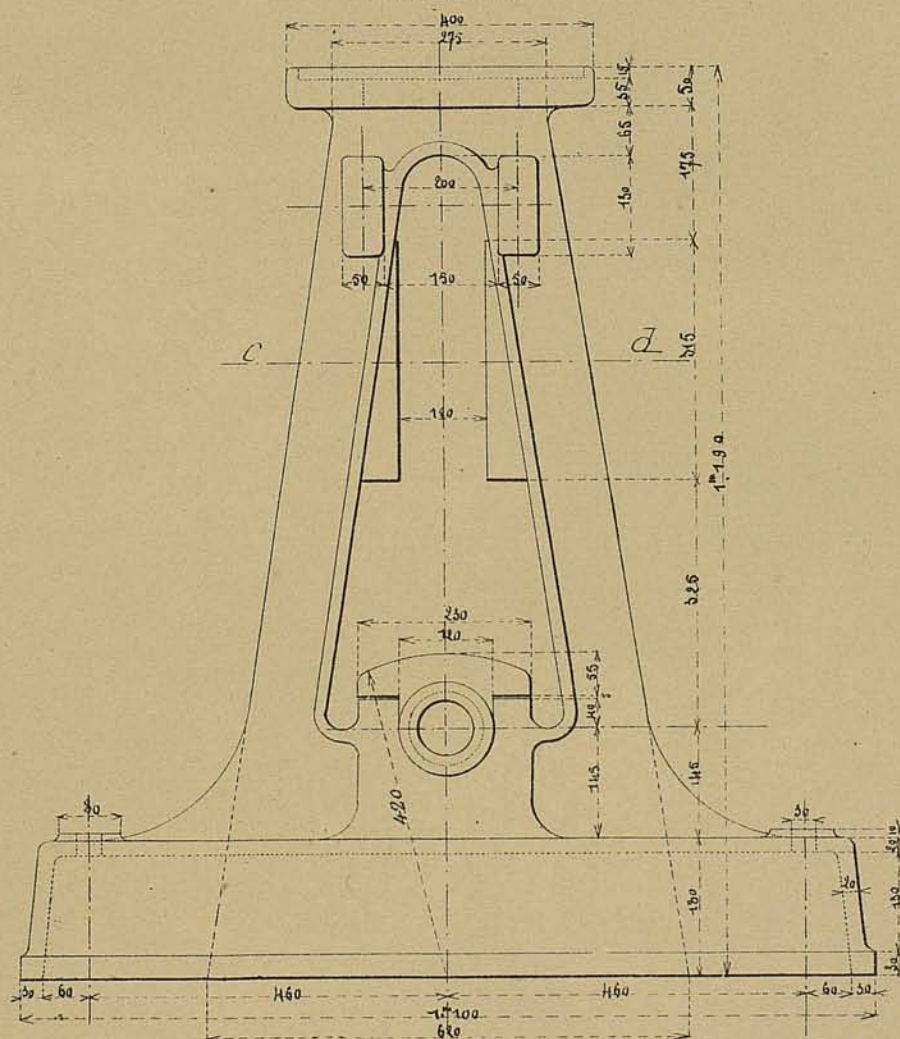


Escala 0^m20 por metro

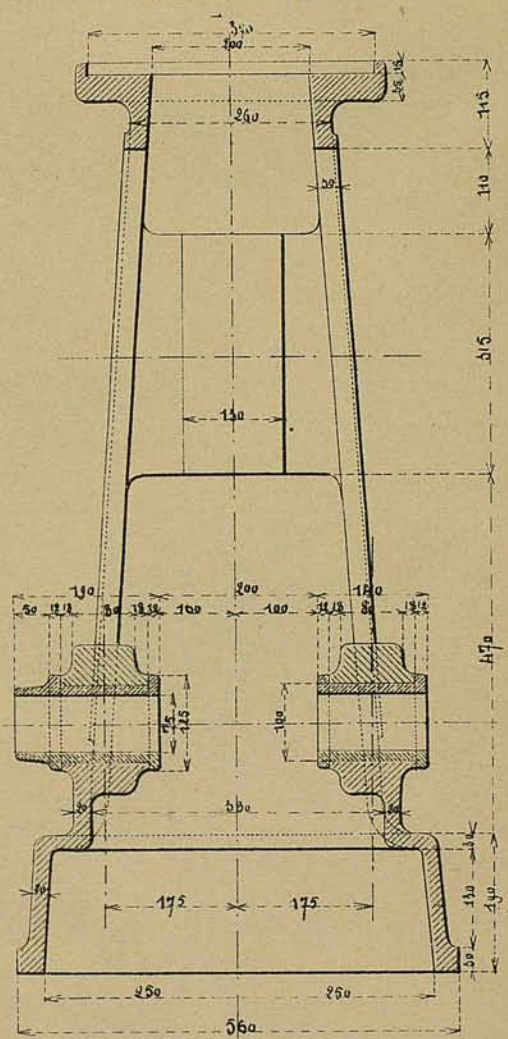
Armazón vertical

para máquina de vapor

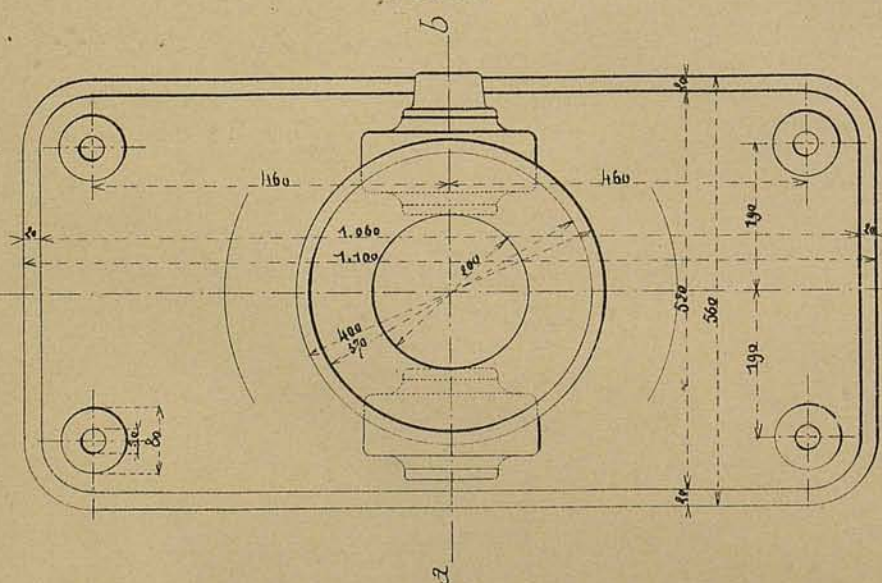
Elevación



Sección a b

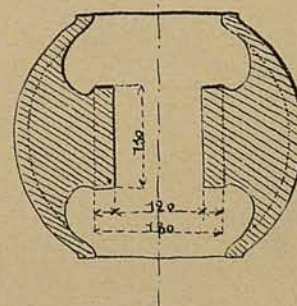


Planta



Sección c d

Croquis

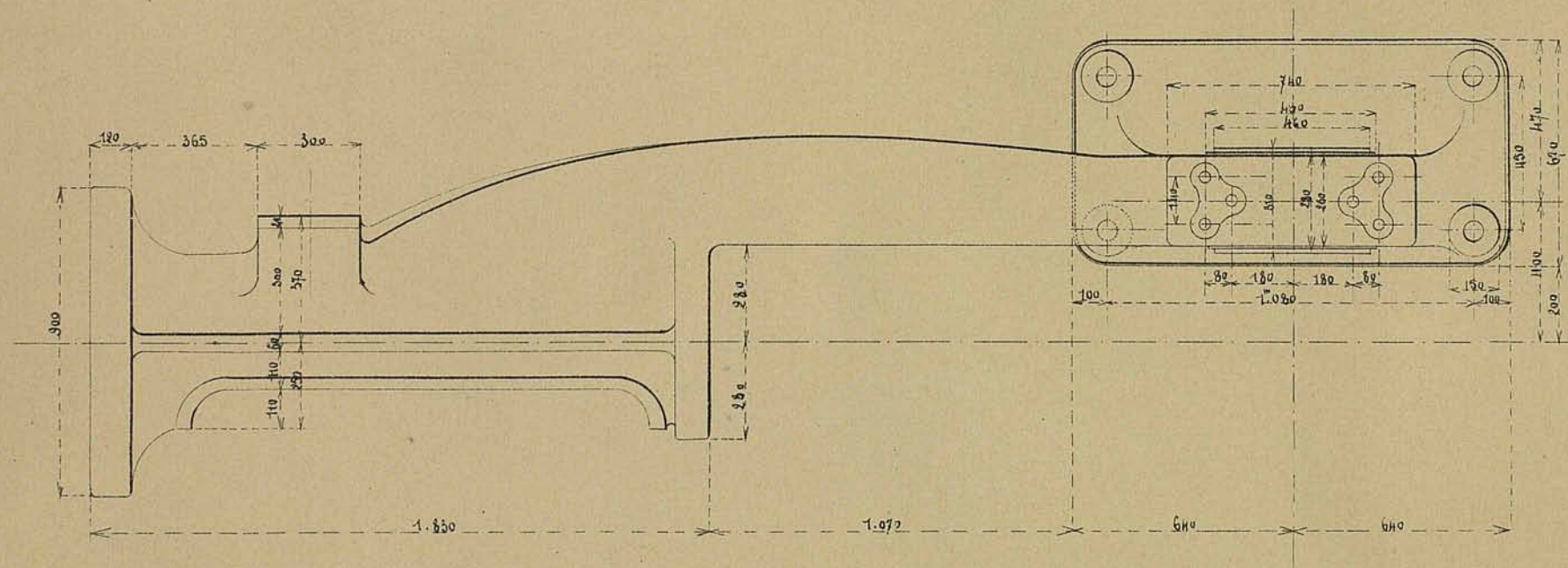
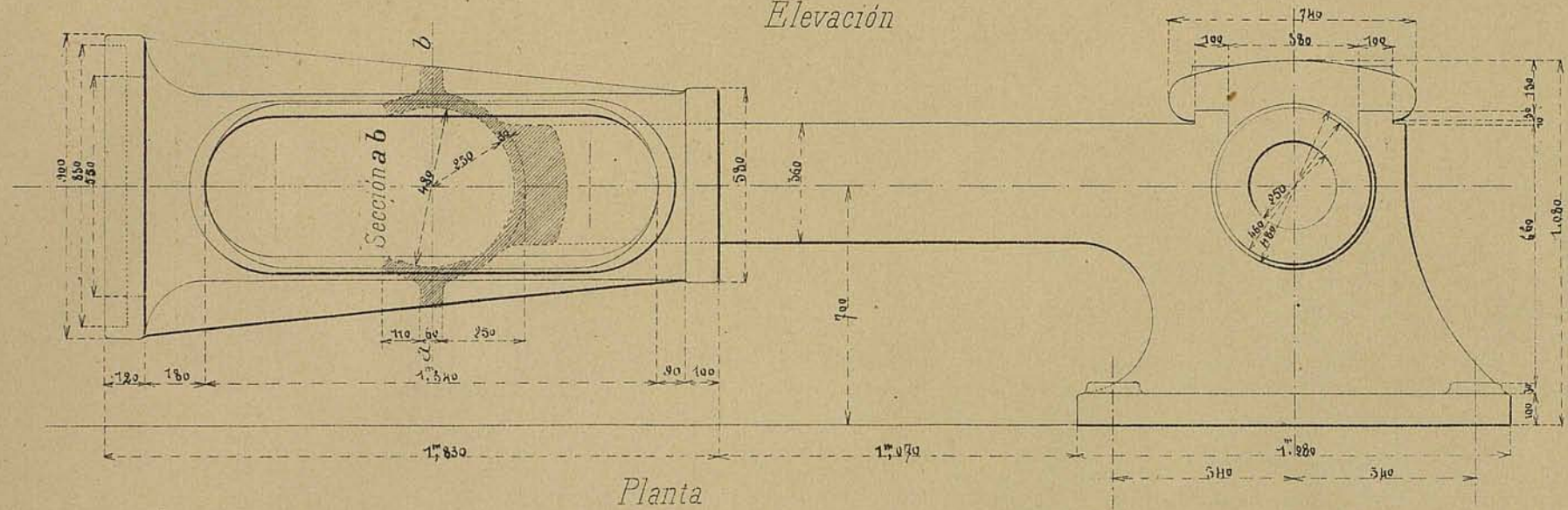


Escala 0^m10 por metro

Amazón horizontal

para máquina de vapor

Elevación

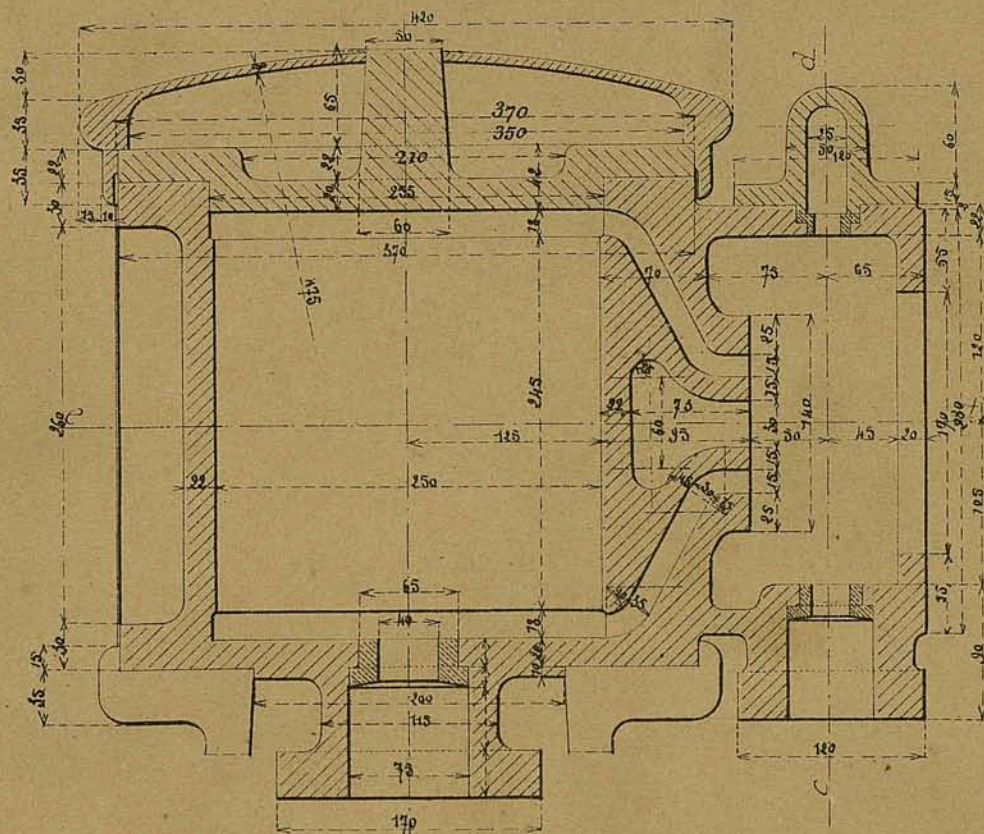


Escala 0^m.05 por metro

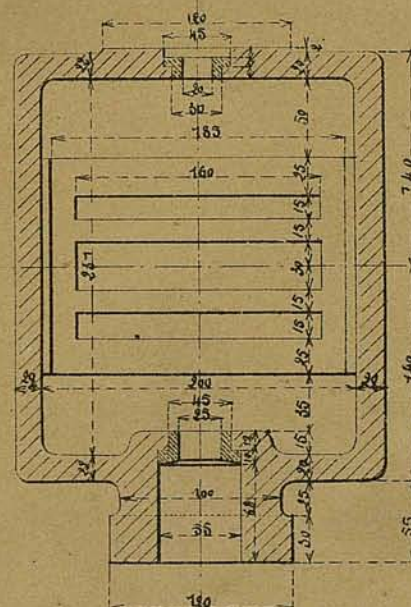
Cilindro

para maquina de vapor vertical de

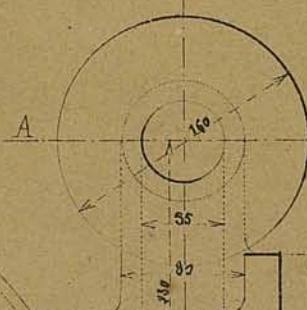
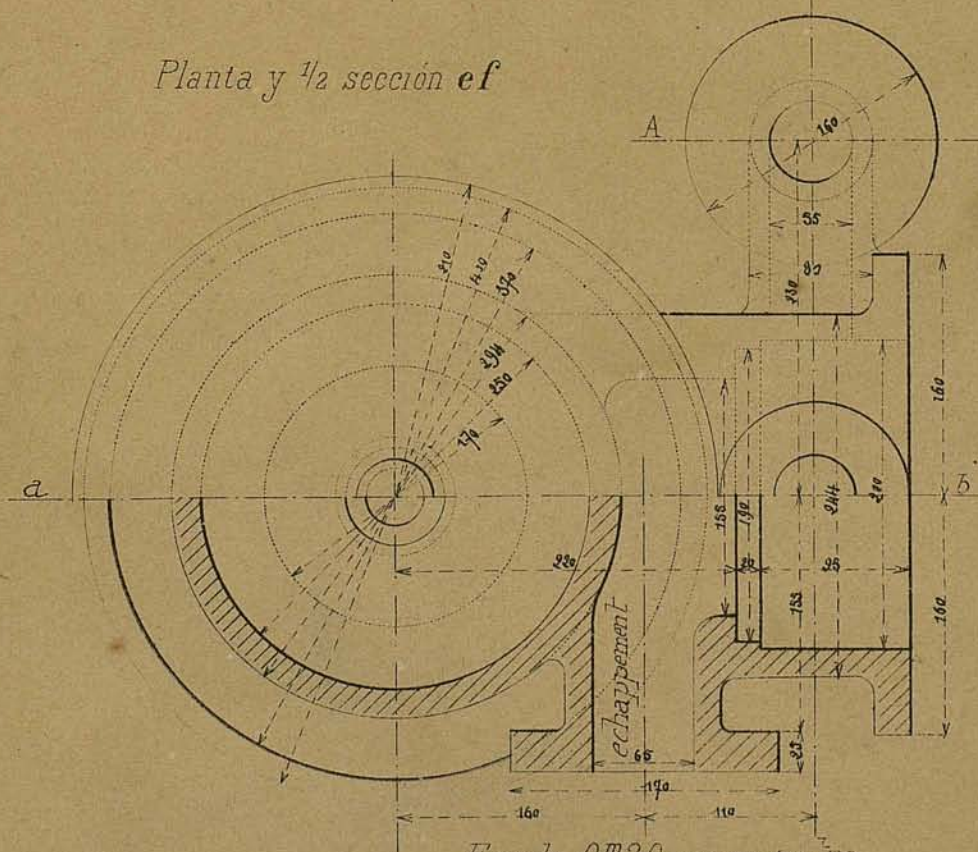
Sección *ab*



Sección *cd*



Planta y 1/2 sección *ef*



Admisión

Nota :

Sobre el tubo *A* que sirve para la admisión se coloca una válvula de vapor de mariposa accionada por el regulador

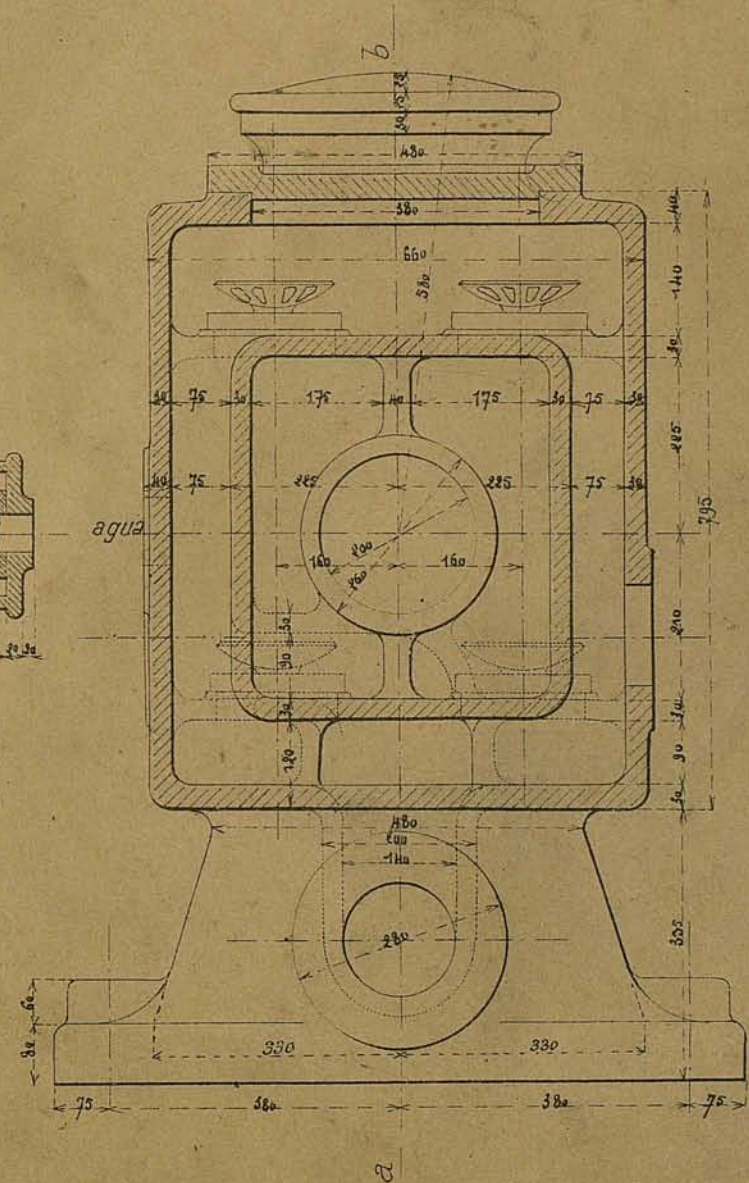
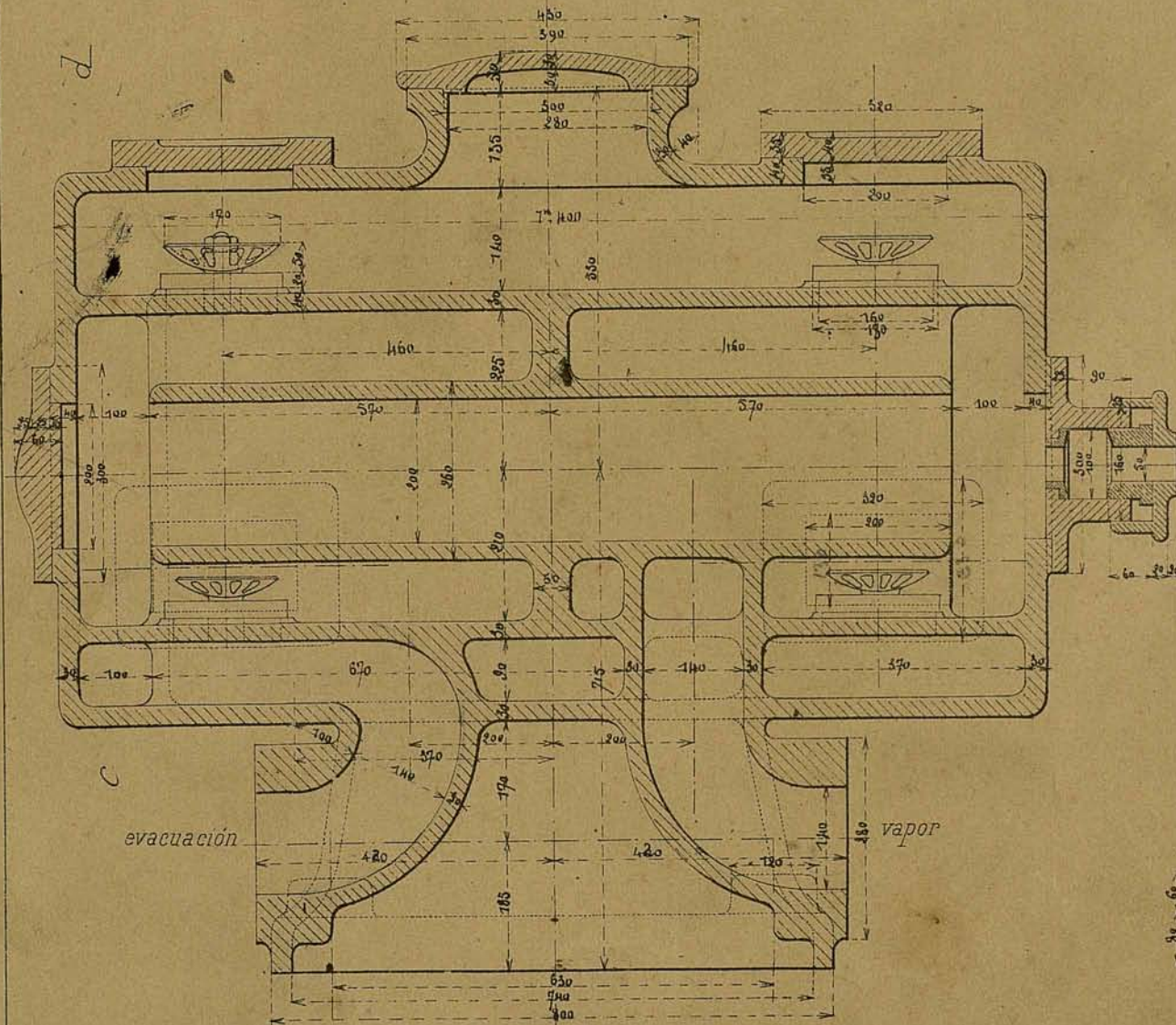
Escala 0^m20 por metro

Condensador de inyección

para máquina de vapor

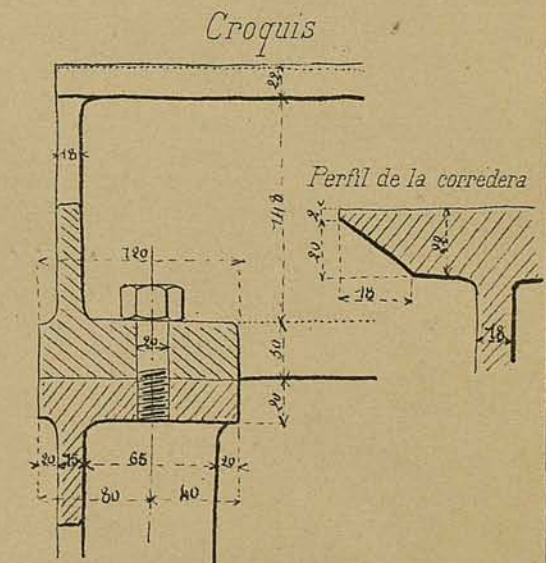
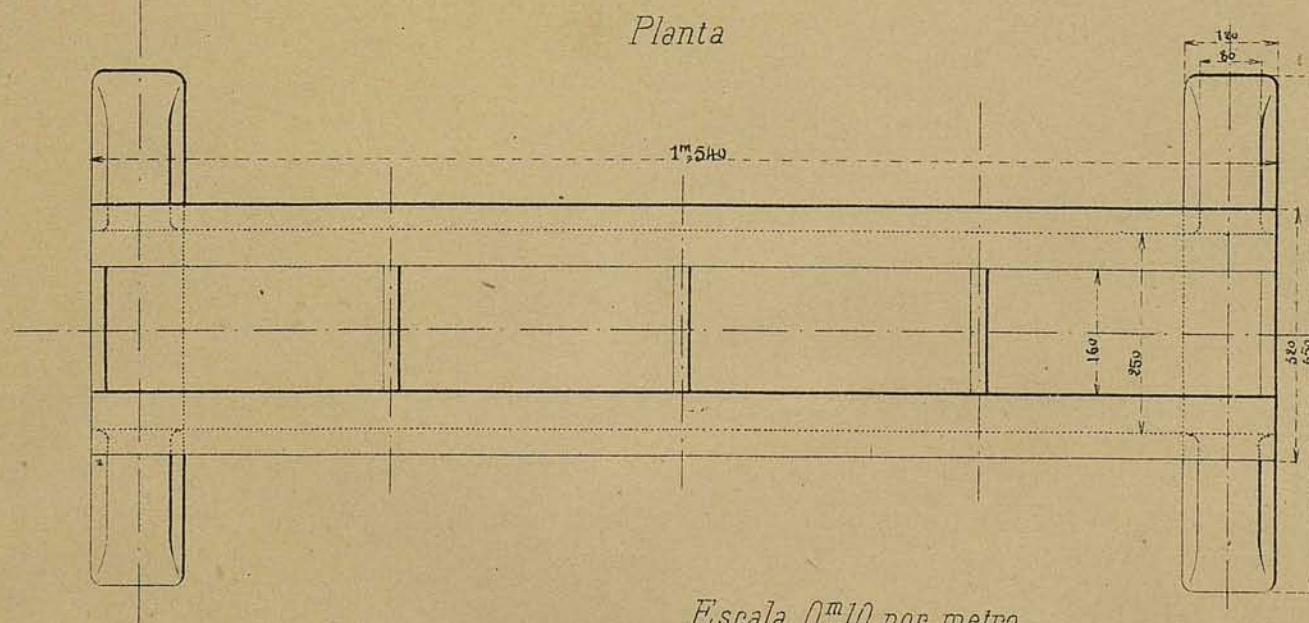
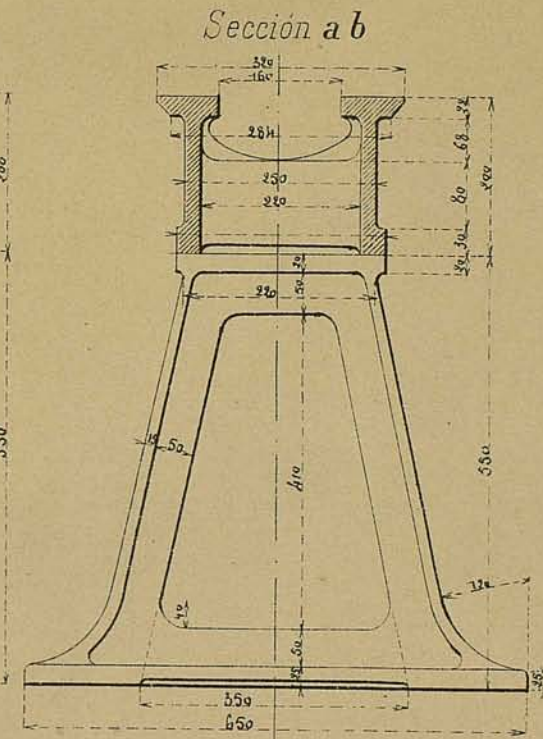
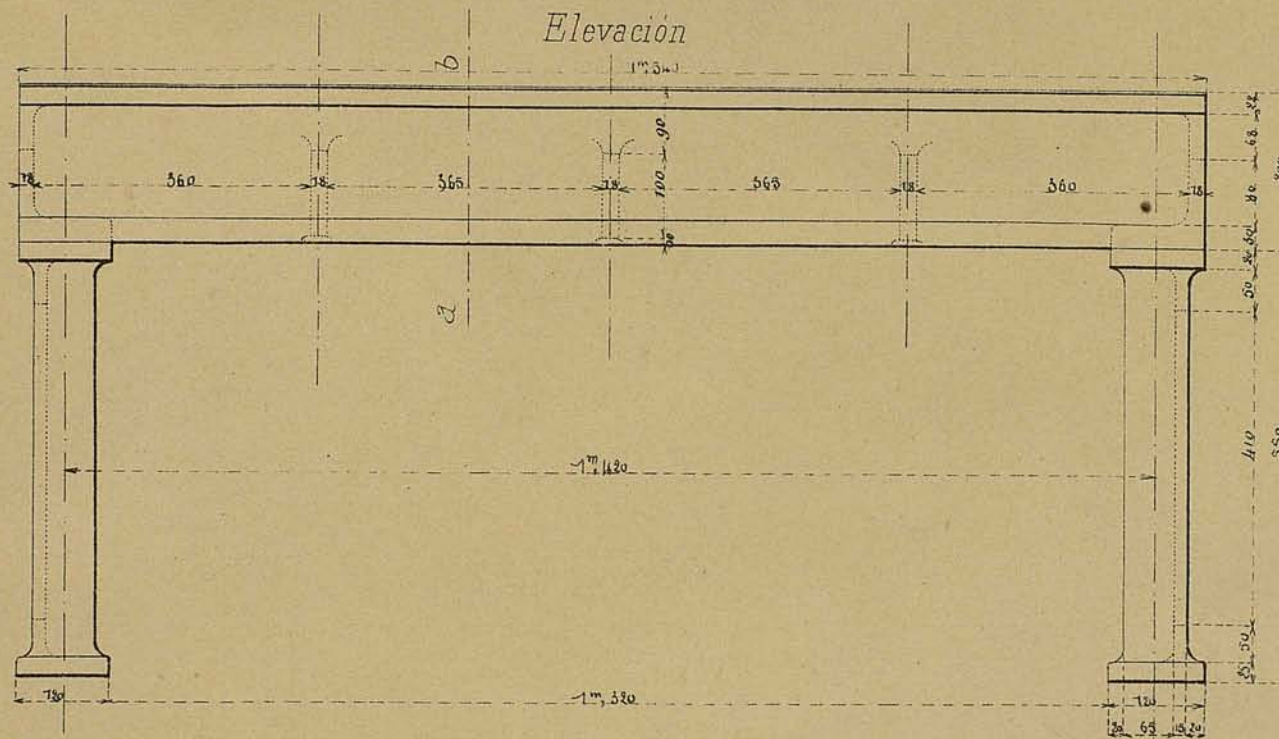
Sección ab

Sección cd



Escala 0^m10 por metro

Banco de torno

Escala 0^m10 por metro

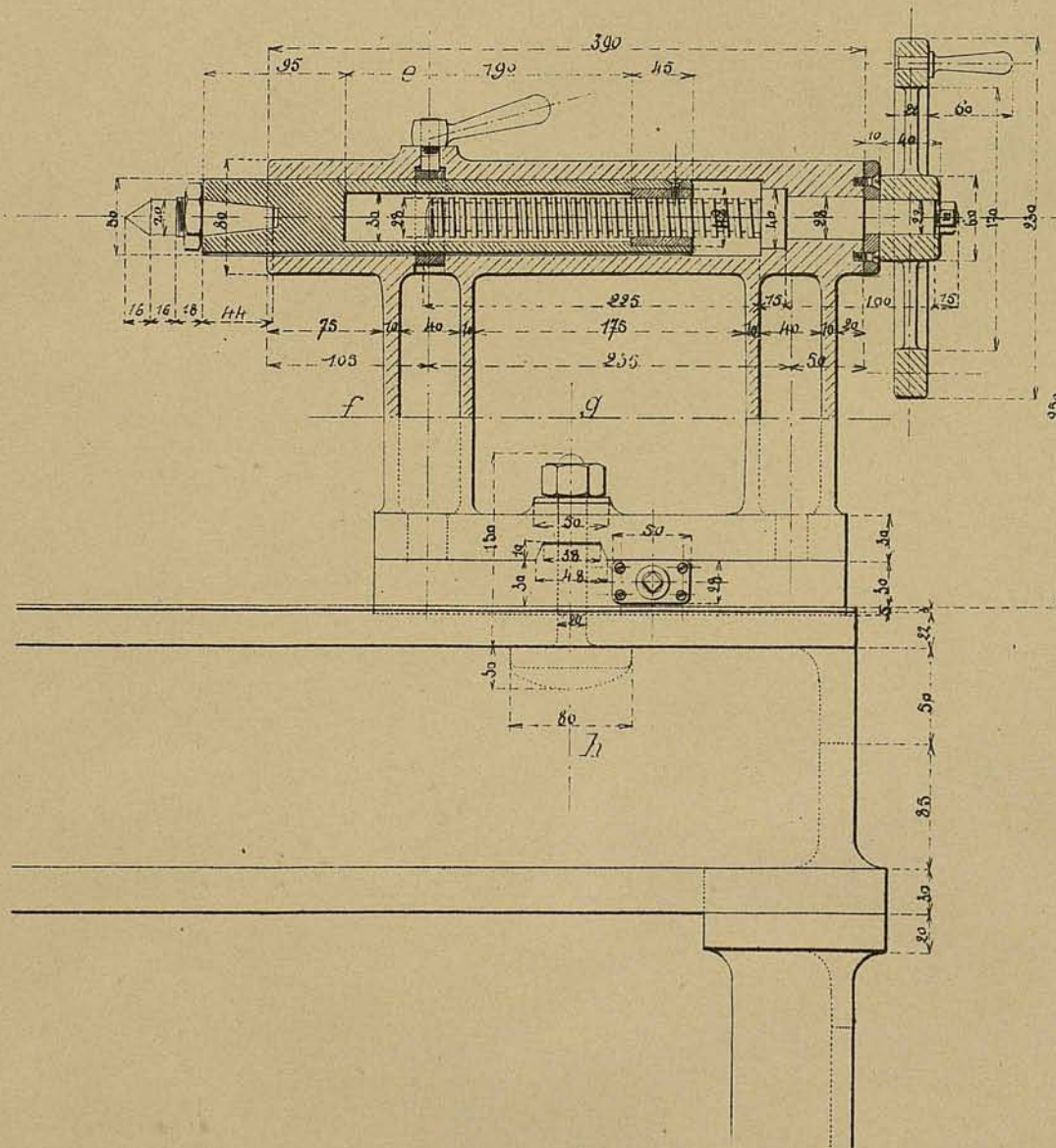
Ensambladura del banco de torno y sus pies

Punto de torno

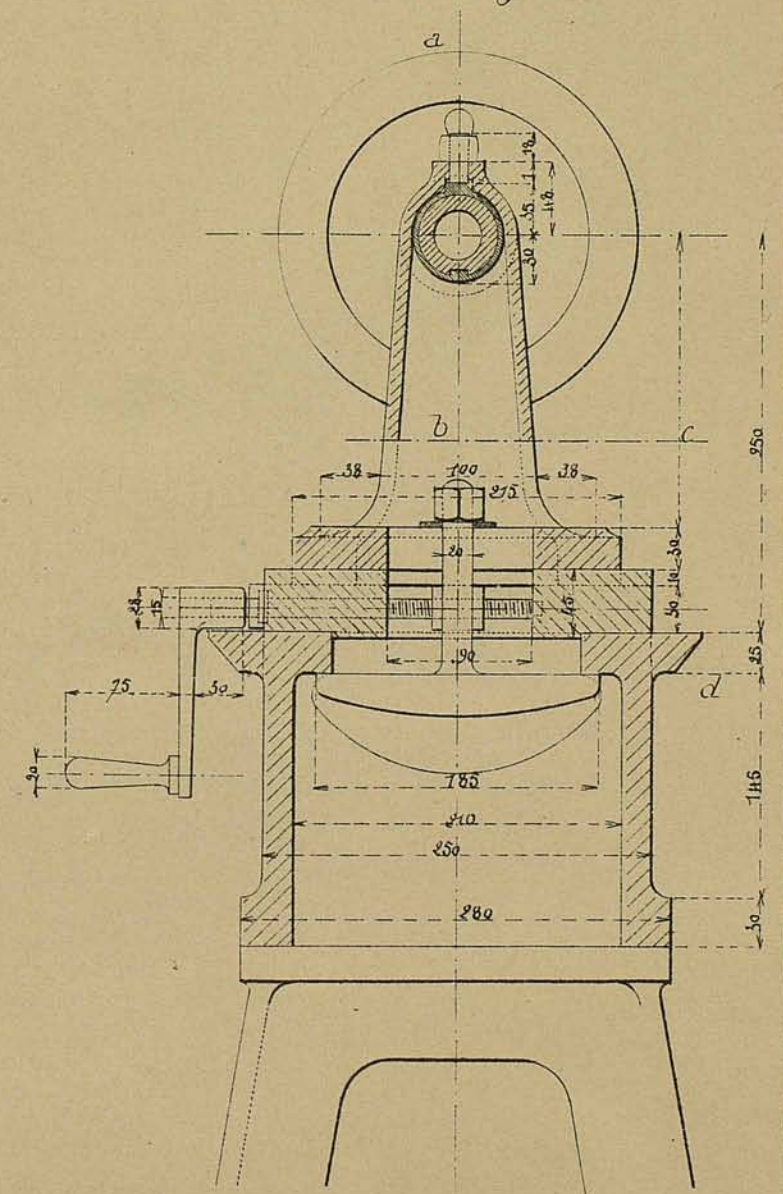
movible que permite el torneado cónico

altura de los puntos 0^m25

Sección abcd



Sección efgh



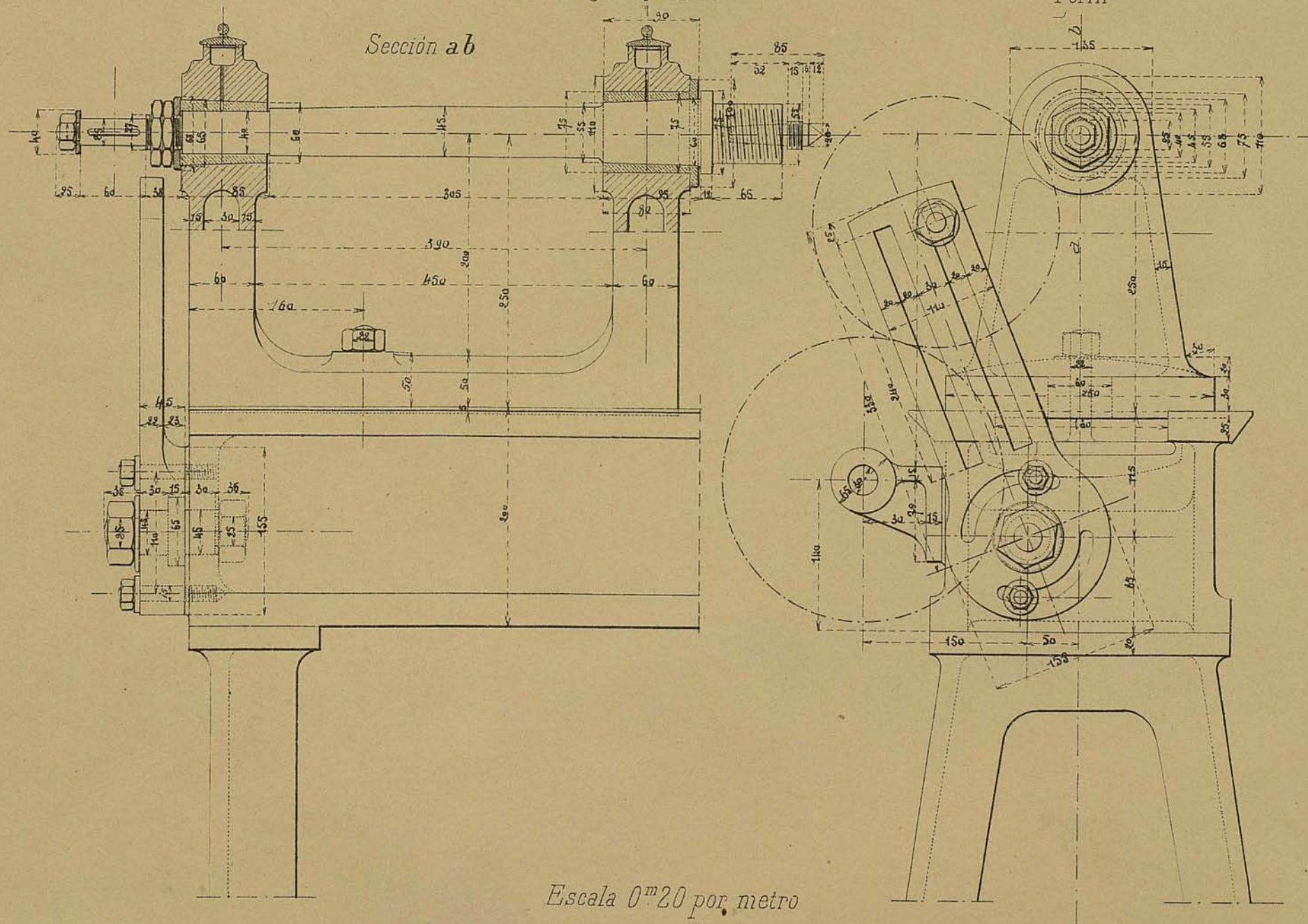
Escala 0^m20 por metro

Punto fijo

Tren de engranajes para mover el carro

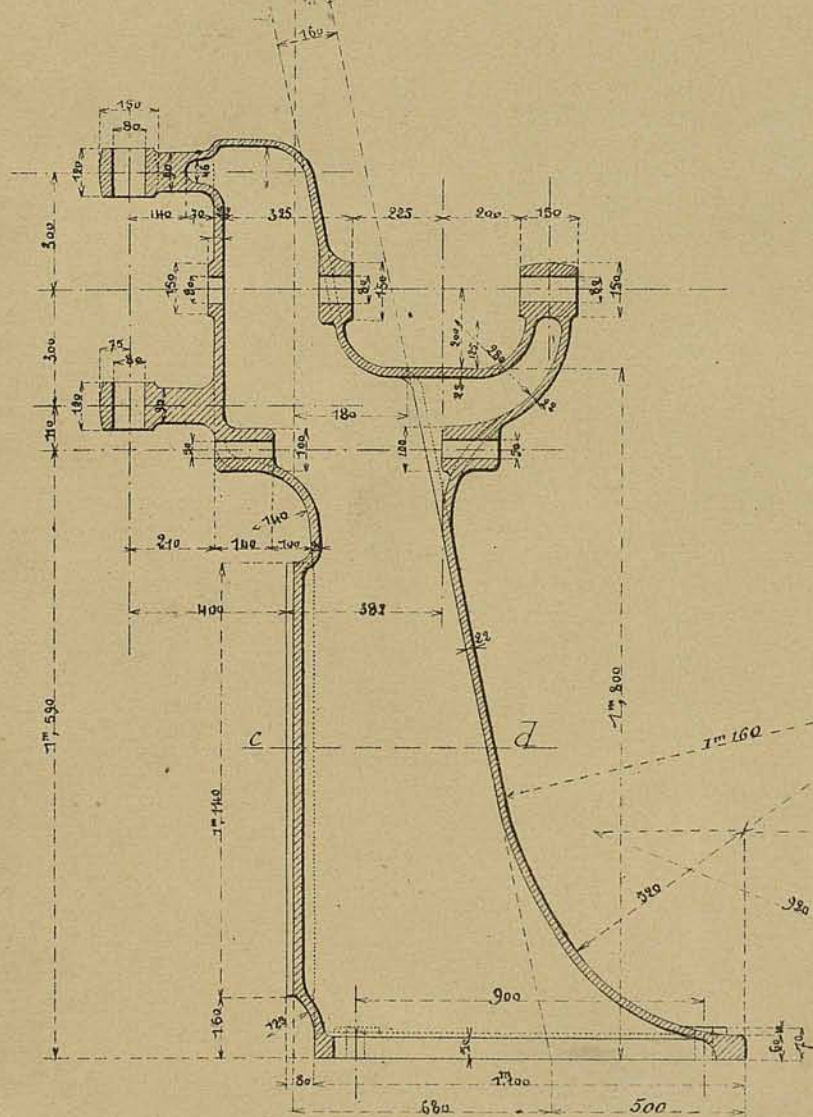
Perfil

Sección ab

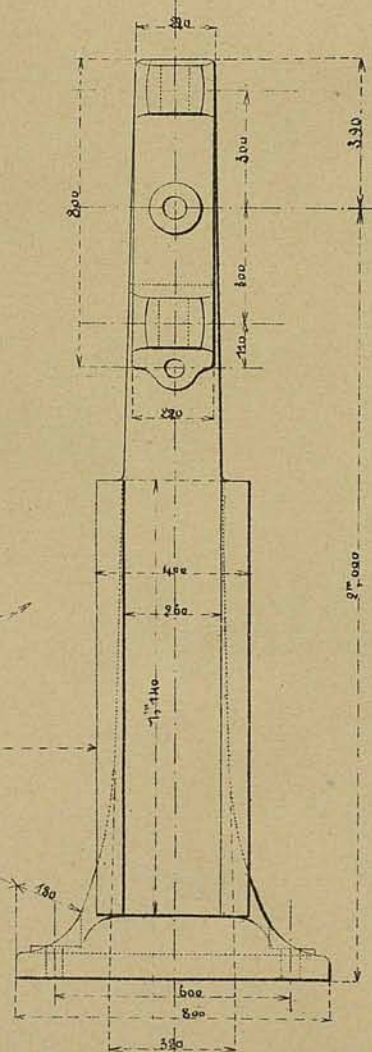


Armazón de taladro

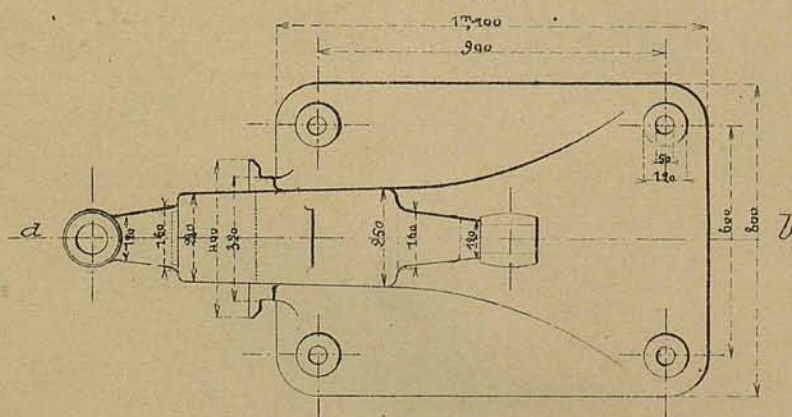
Sección *ab*



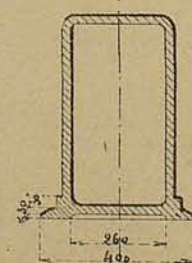
Perfil



Planta



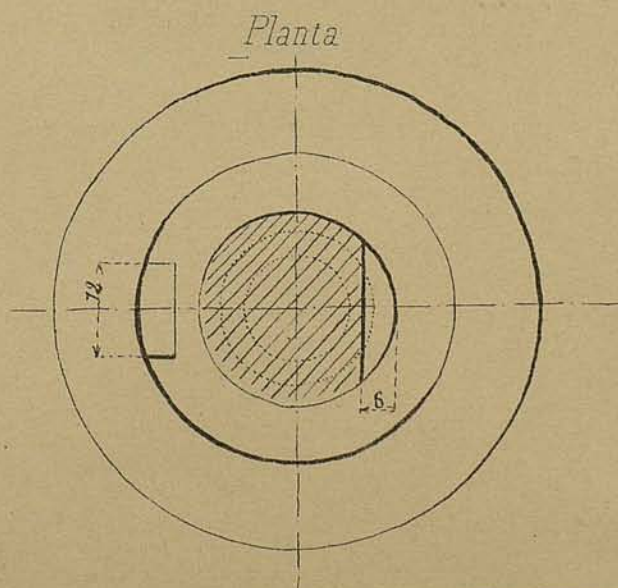
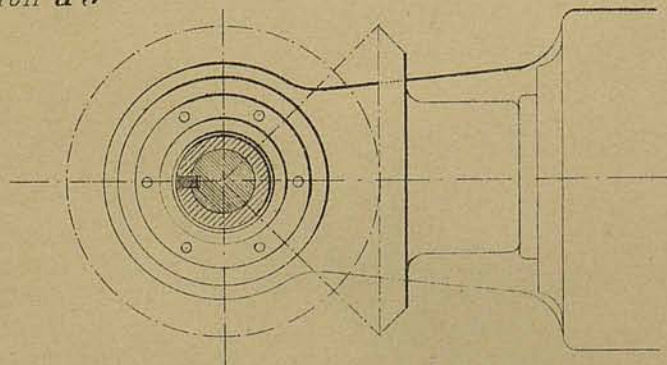
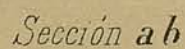
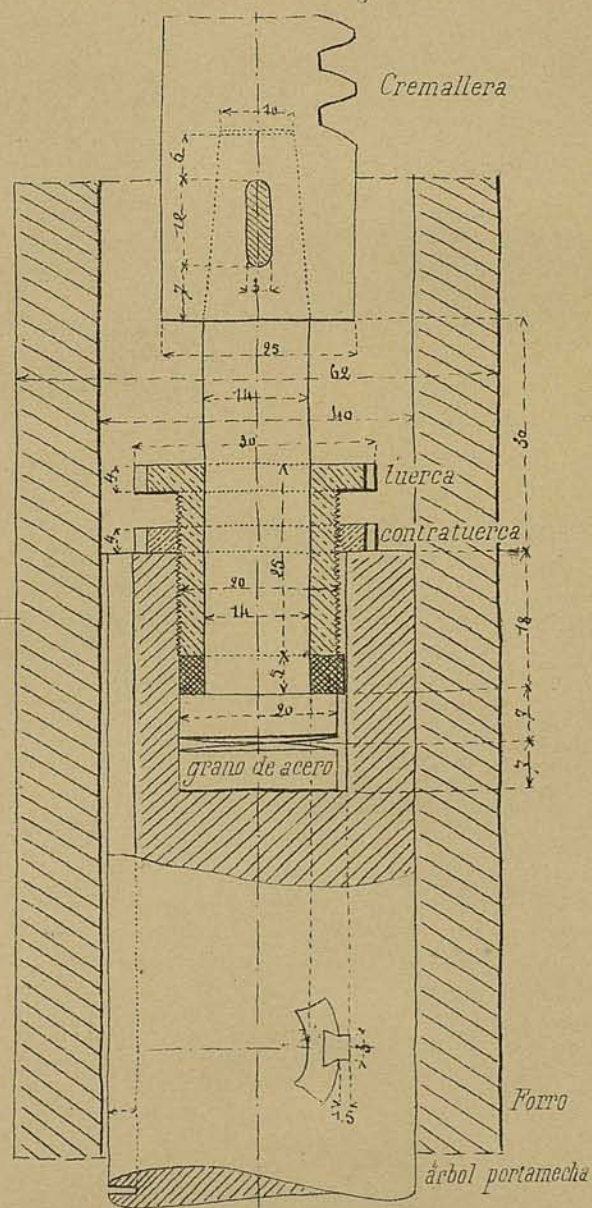
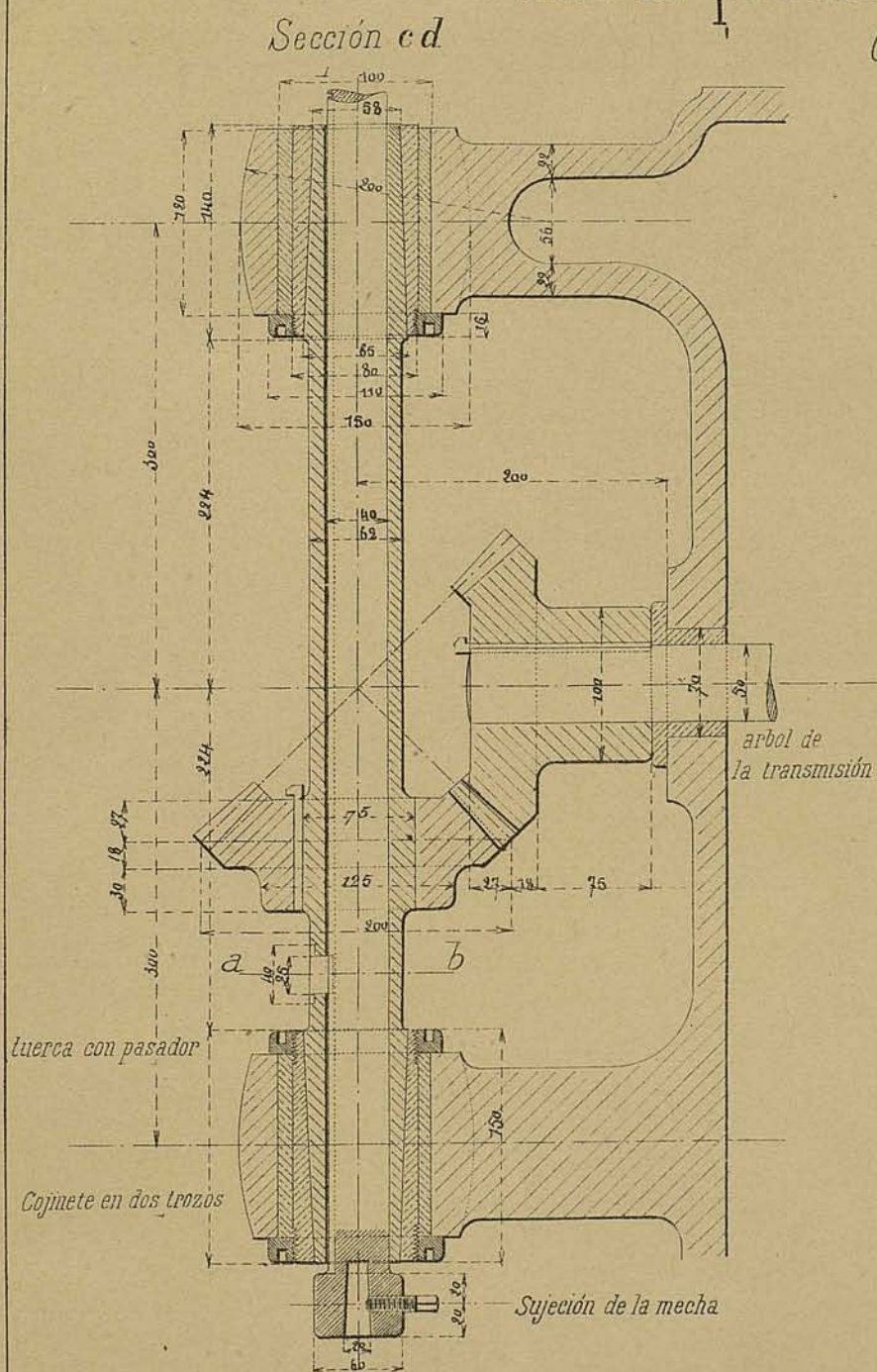
Sección *cd*



Escala 0^m05 por metro

Arbol portamecha

Conexión de la cremallera y del árbol • (Croquis)

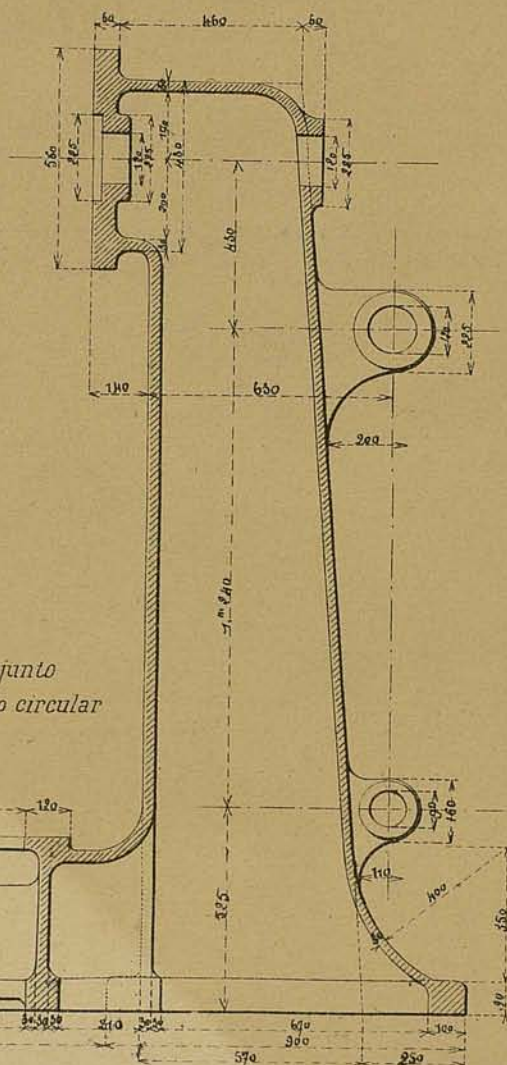


Escala 0^m20 por metro

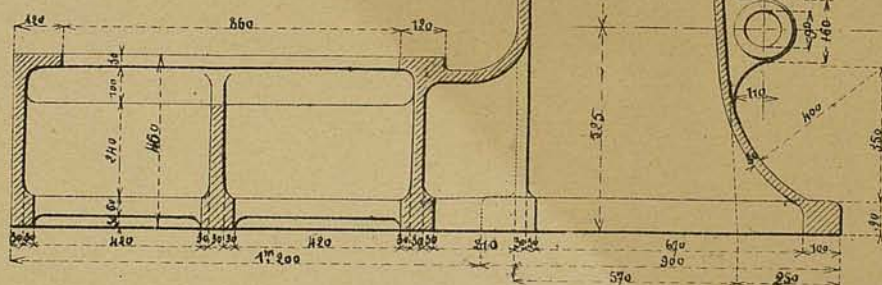
Cajeadora

armazón

Sección ab

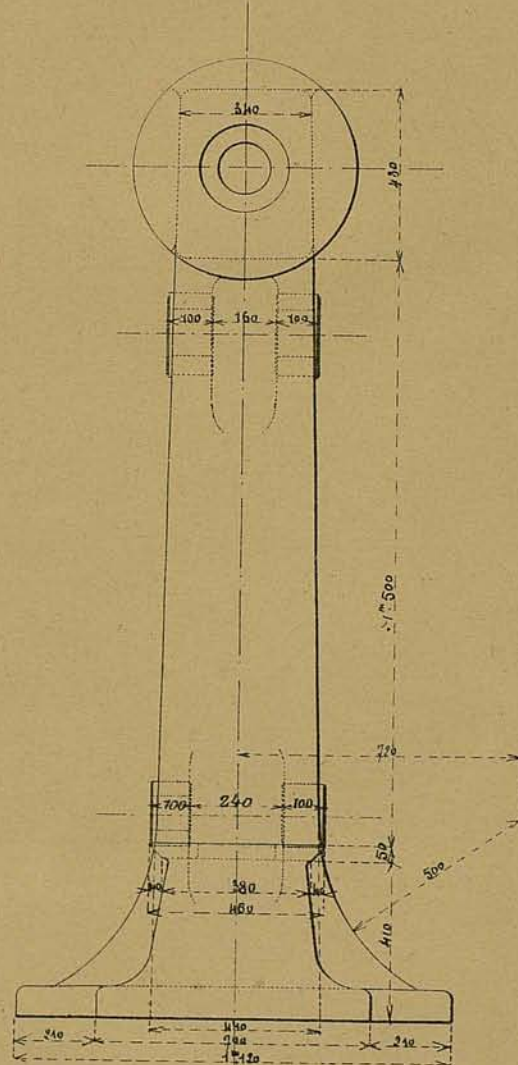


Sobre el banco se mueve un conjunto de carros que sostienen un plato circular de rotación



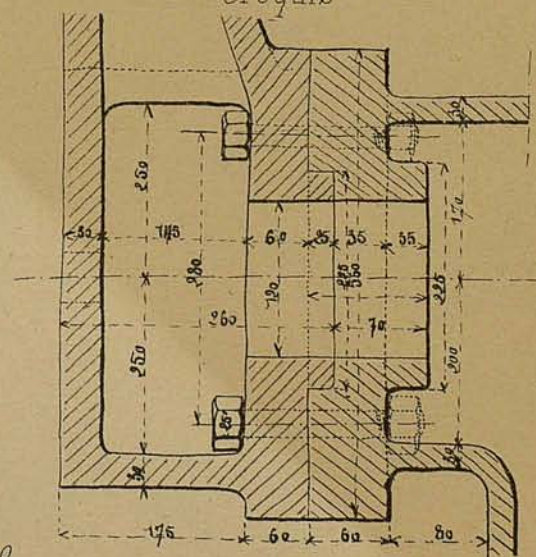
Planta

Frente



Cabeza giratoria

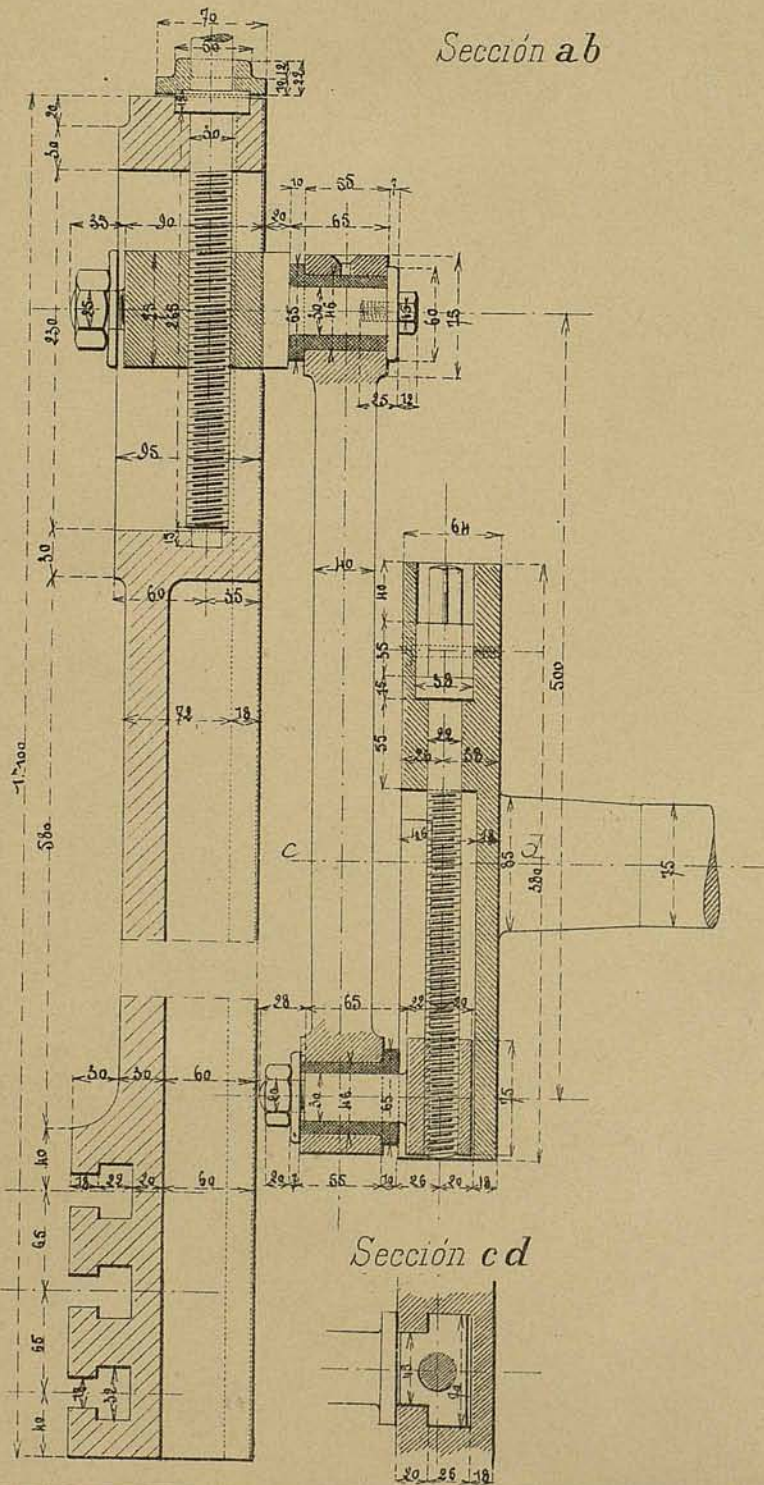
Croquis



Escala 0^m05 por metro

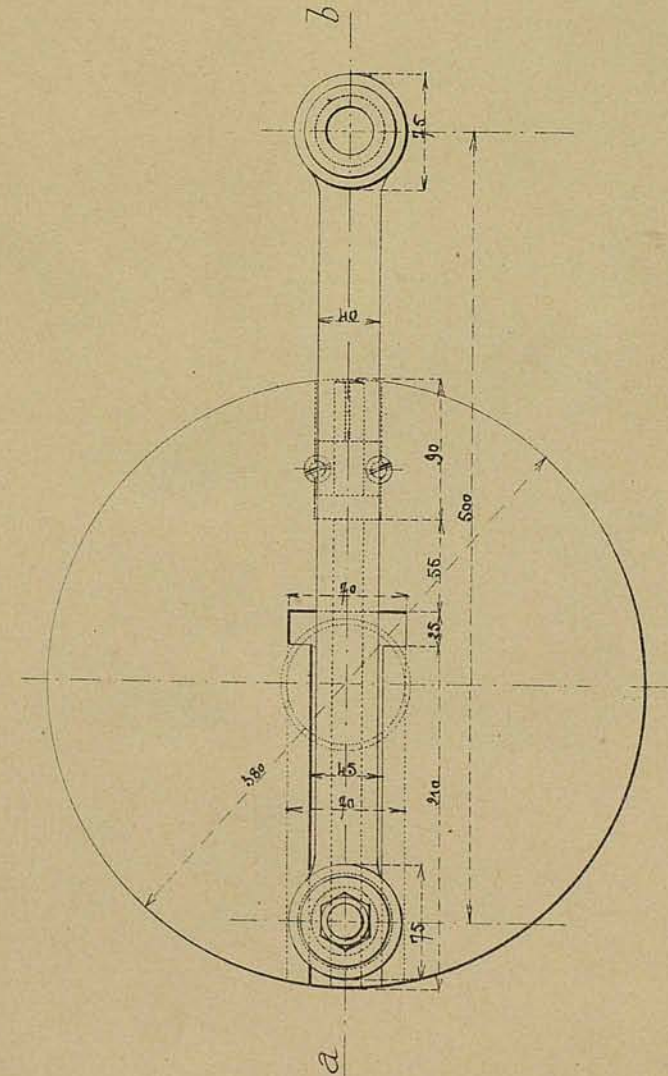
Cajeadora

Sección ab



Sección cd

Frente

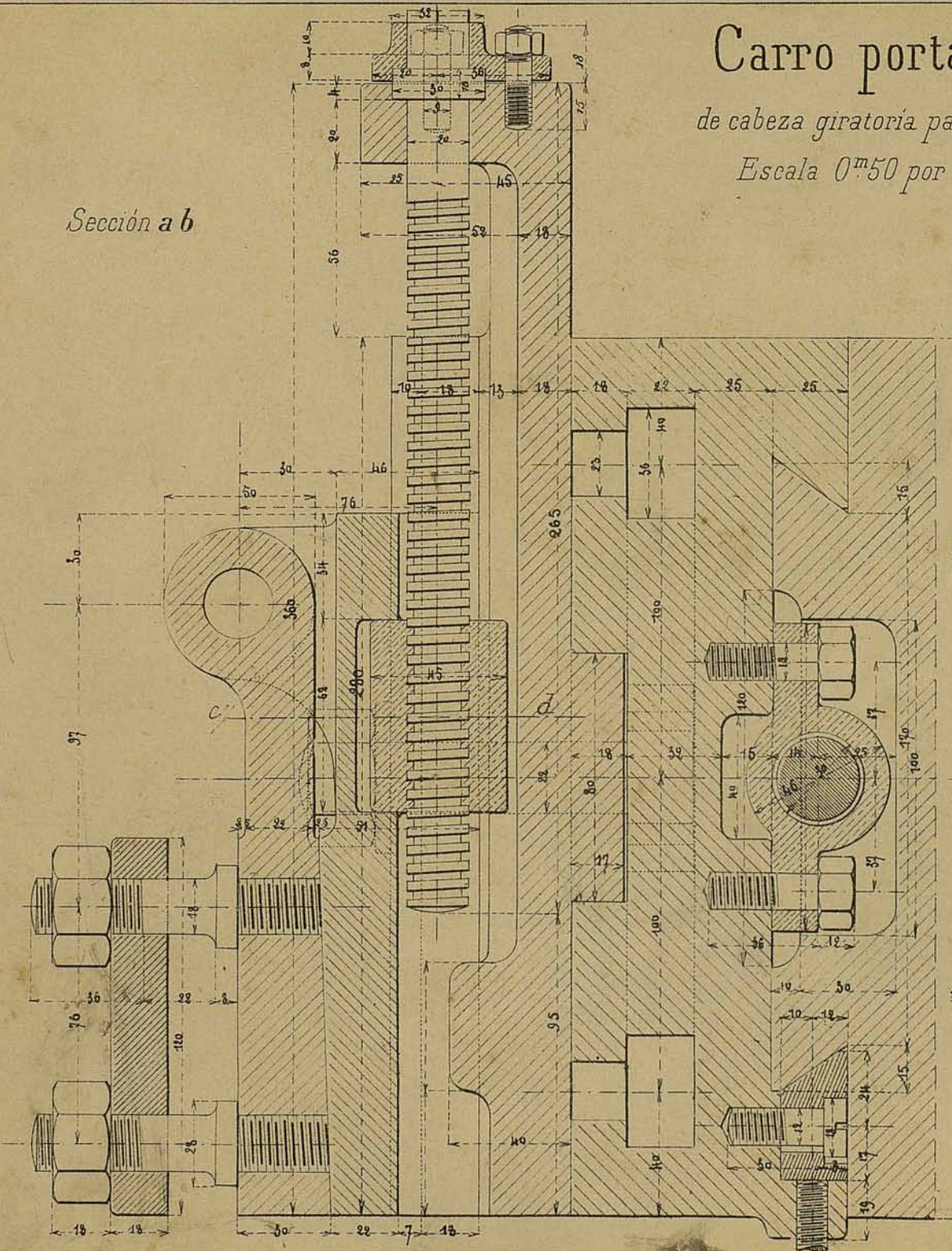


Movimiento vertical de la flecha portáutil

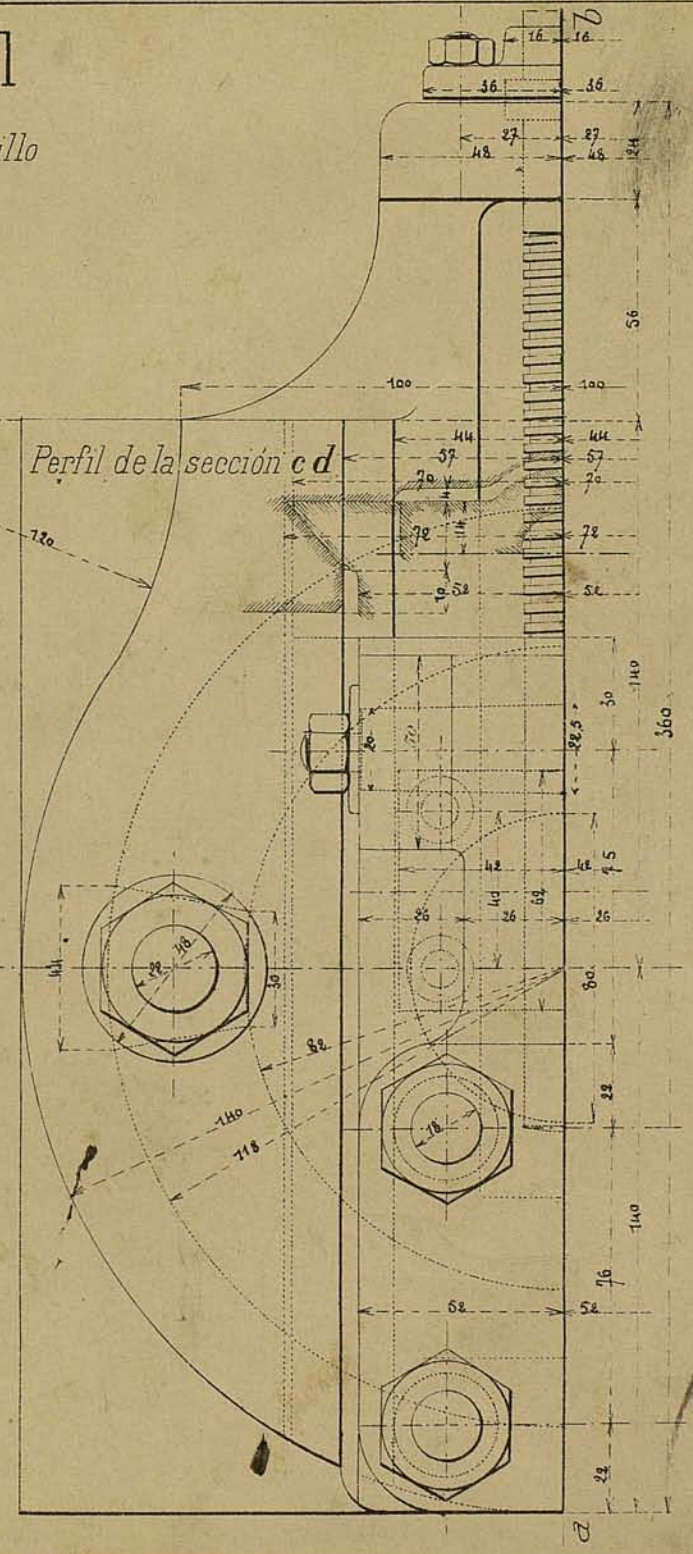
Escala 0^m20 por metro

Carro portaútil de cabeza giratoria para cepillo Escala 0^m50 por metro

Sección a b



Perfil de la sección c d

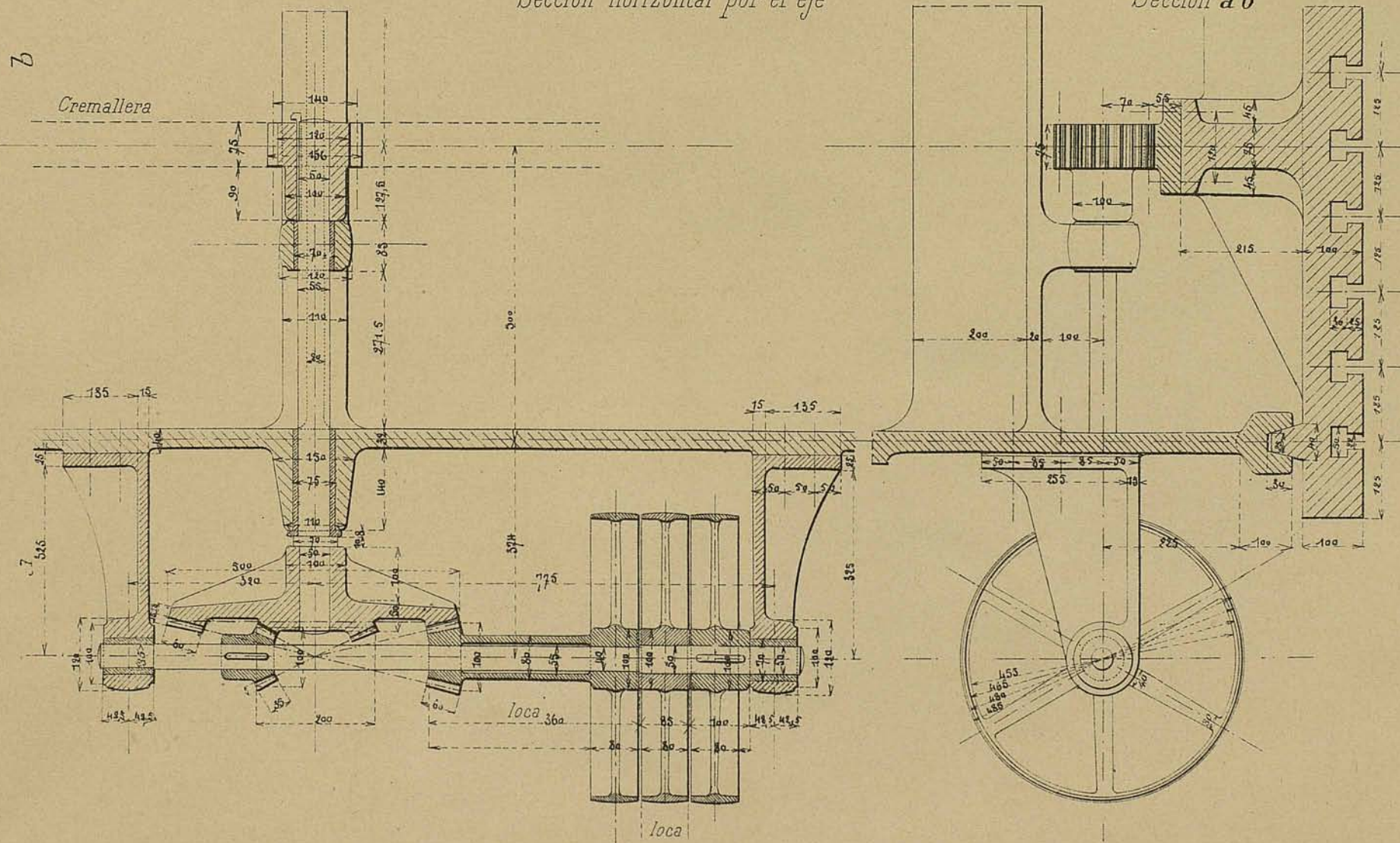


Movimiento del plato

con retroceso rápido

Sección horizontal por el eje

Sección a b

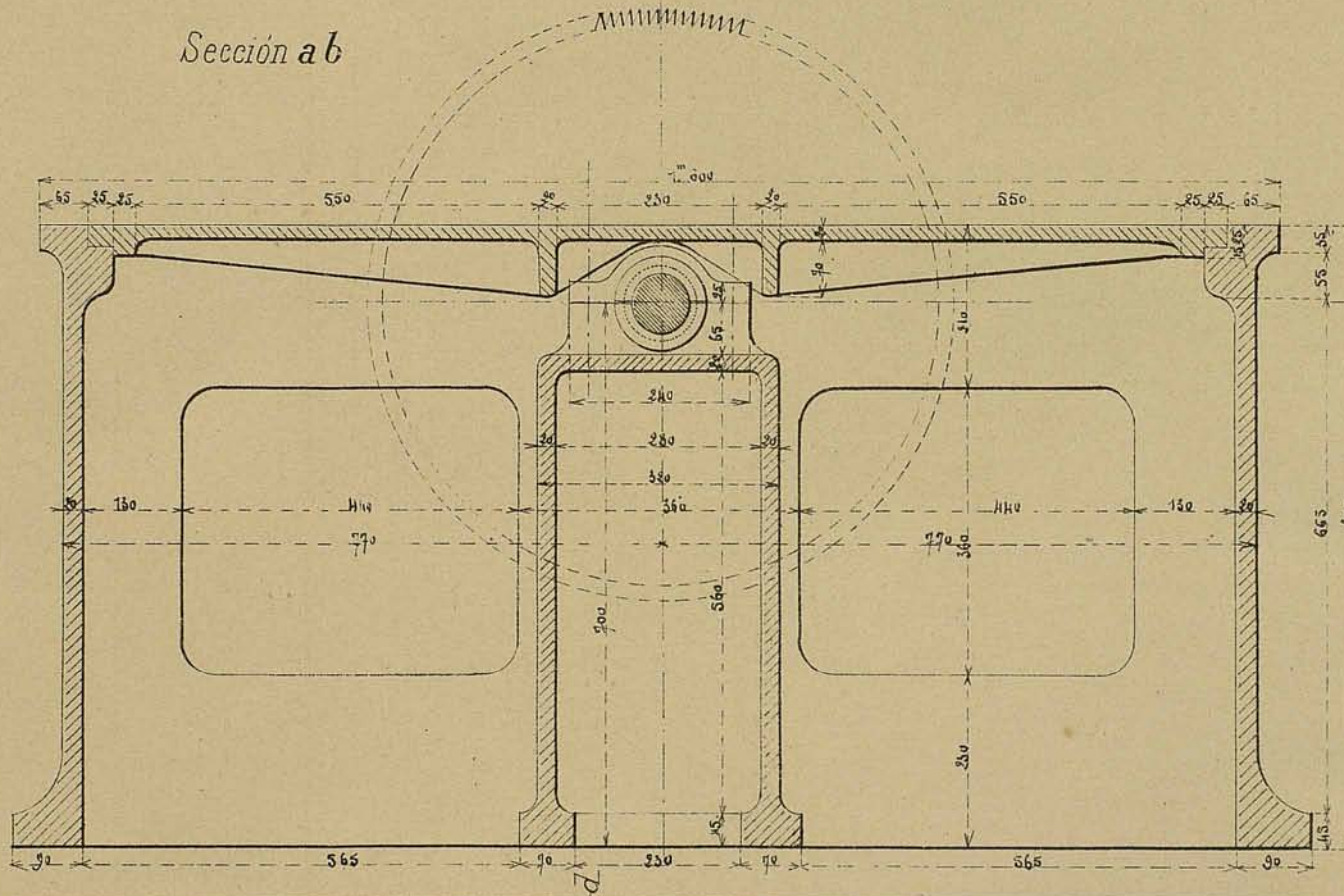


Escala 0^m10 por metro

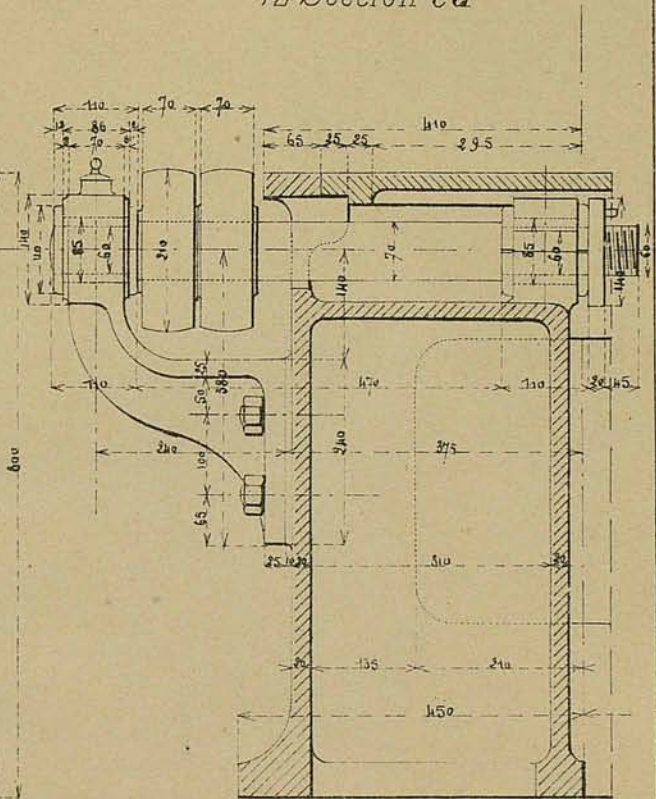
Sierra circular

Escala 0^m10 por metro

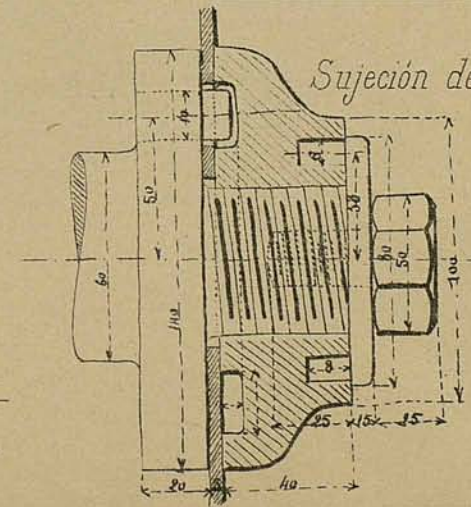
Sección a b



1/2 Sección c d



Sujeción de la Sierra
Croquis

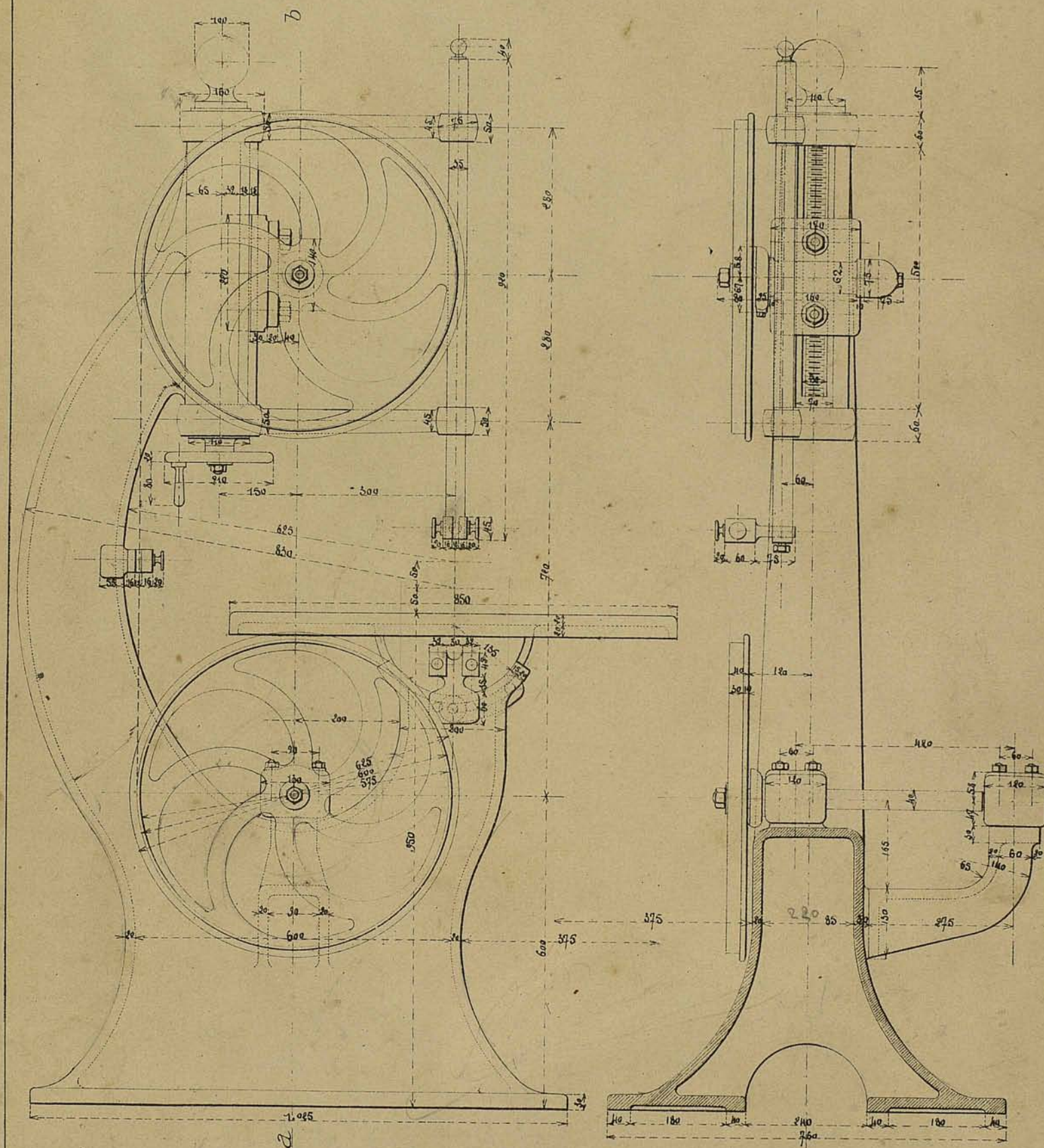


Sierra de cinta

con tablero movable para el trabajo de la madera

Elevación

Sección ab

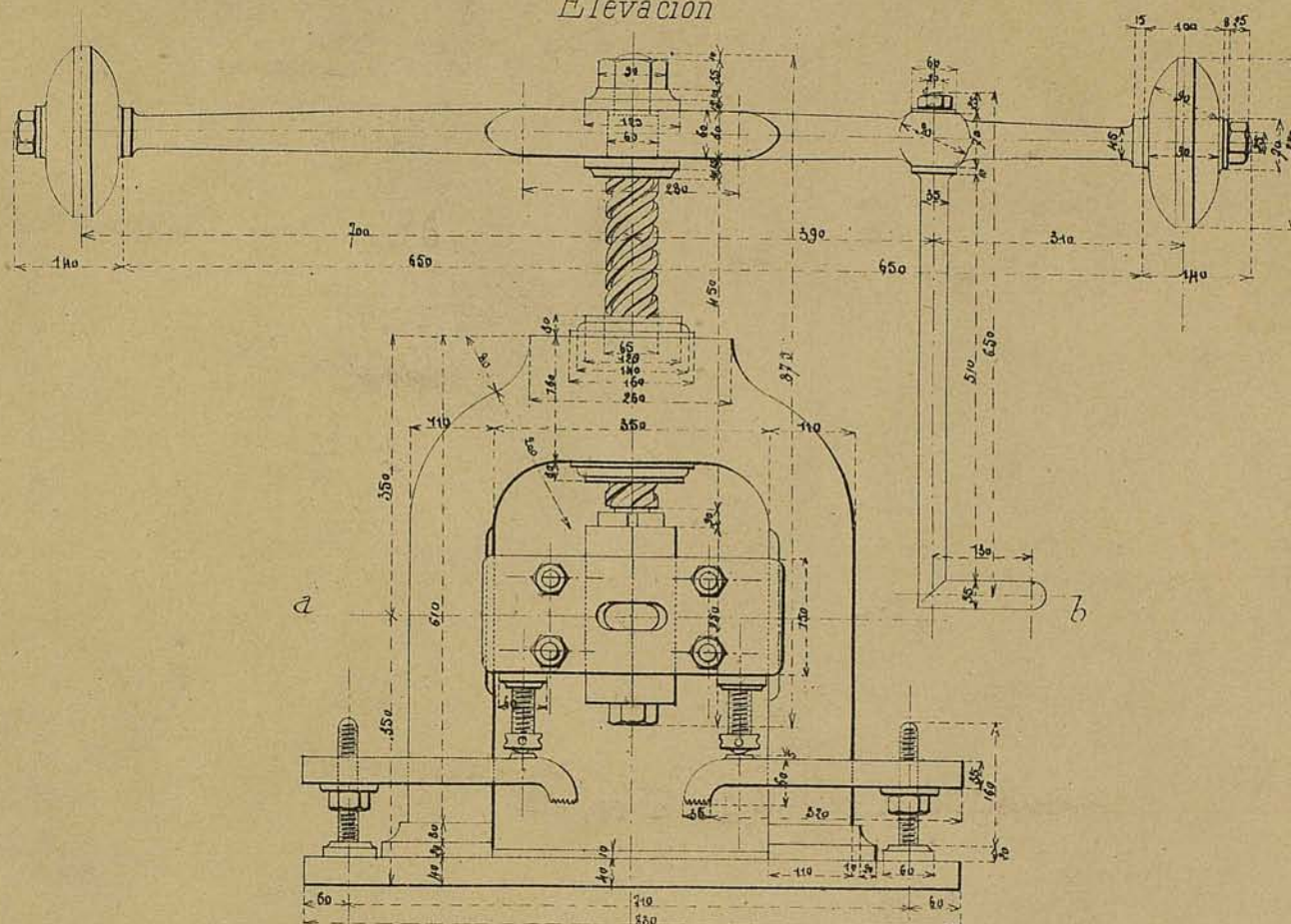


M. TIXIER, del

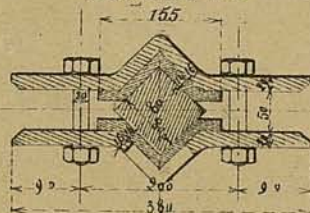
Monrocq, fr. Edit. Imp. 3, rue Suger. PARIS

Balancín para recortar metales

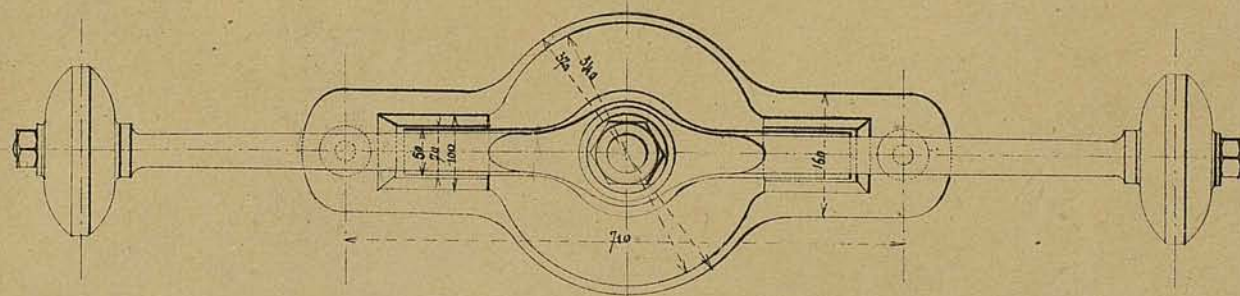
Elevación



Sección a b



Planta

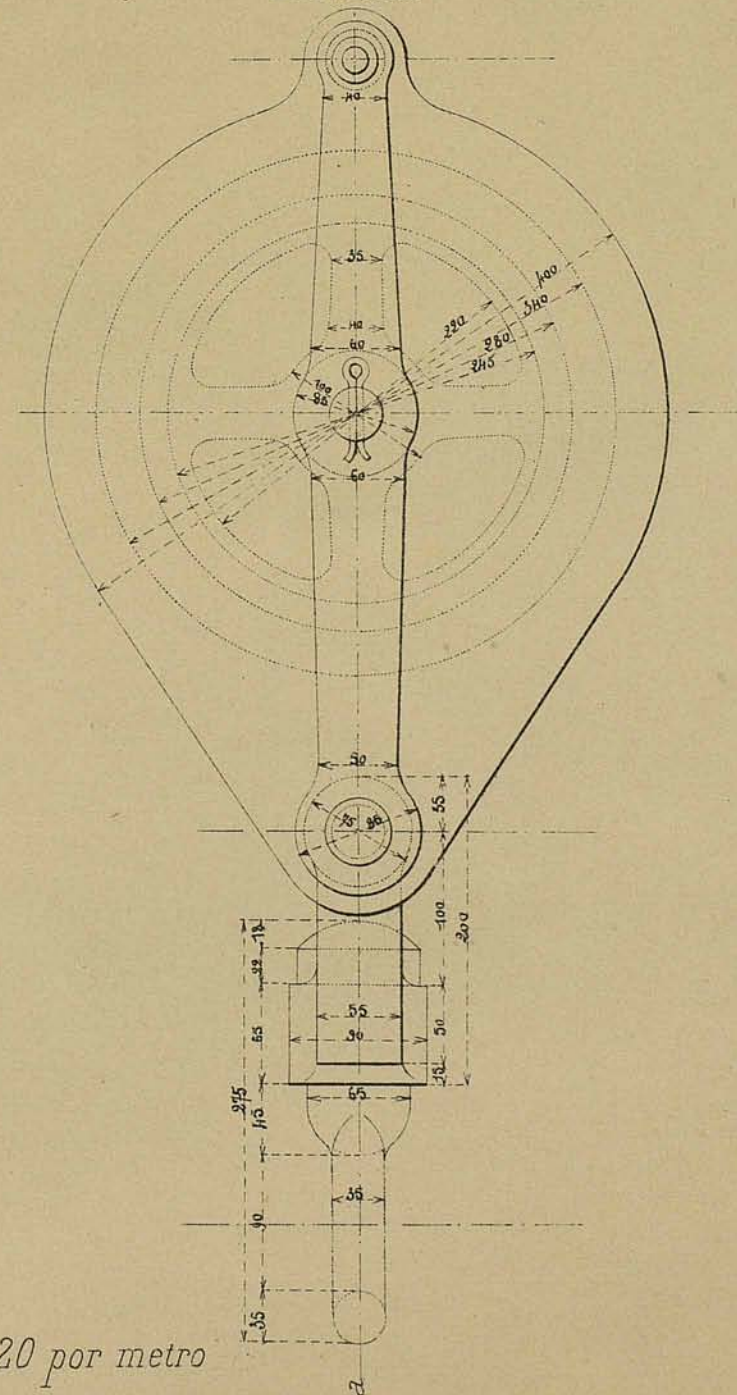
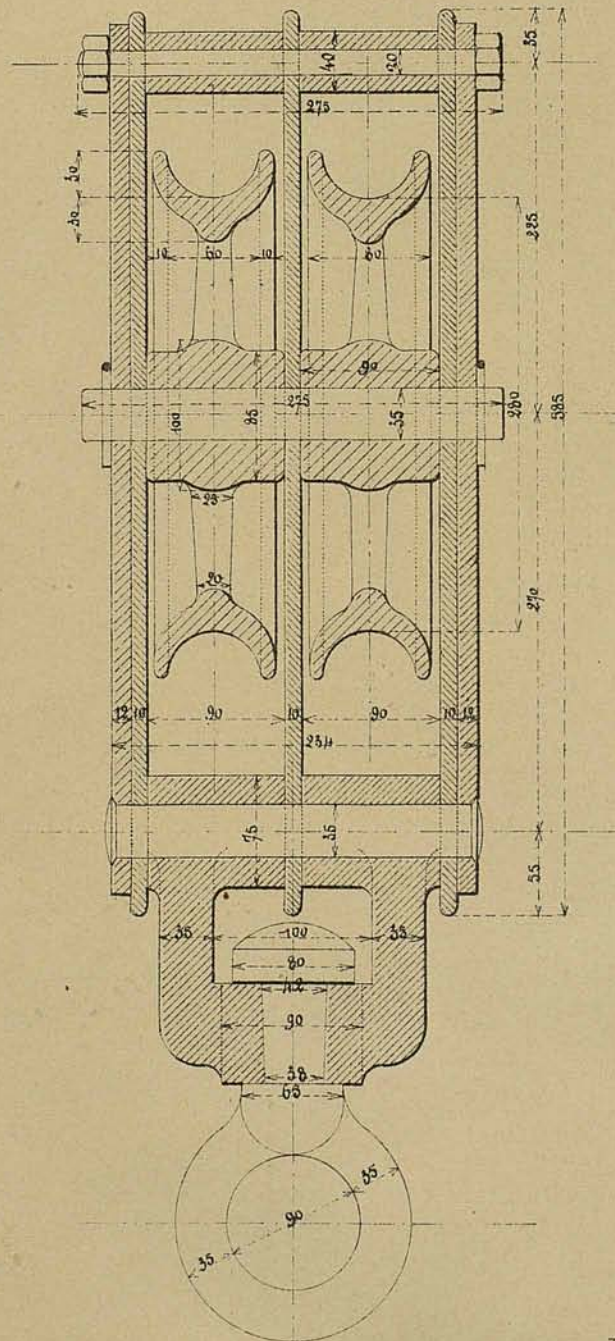


Escala 0^m10 por metro

Aparejo de dos poleas

Sección a b

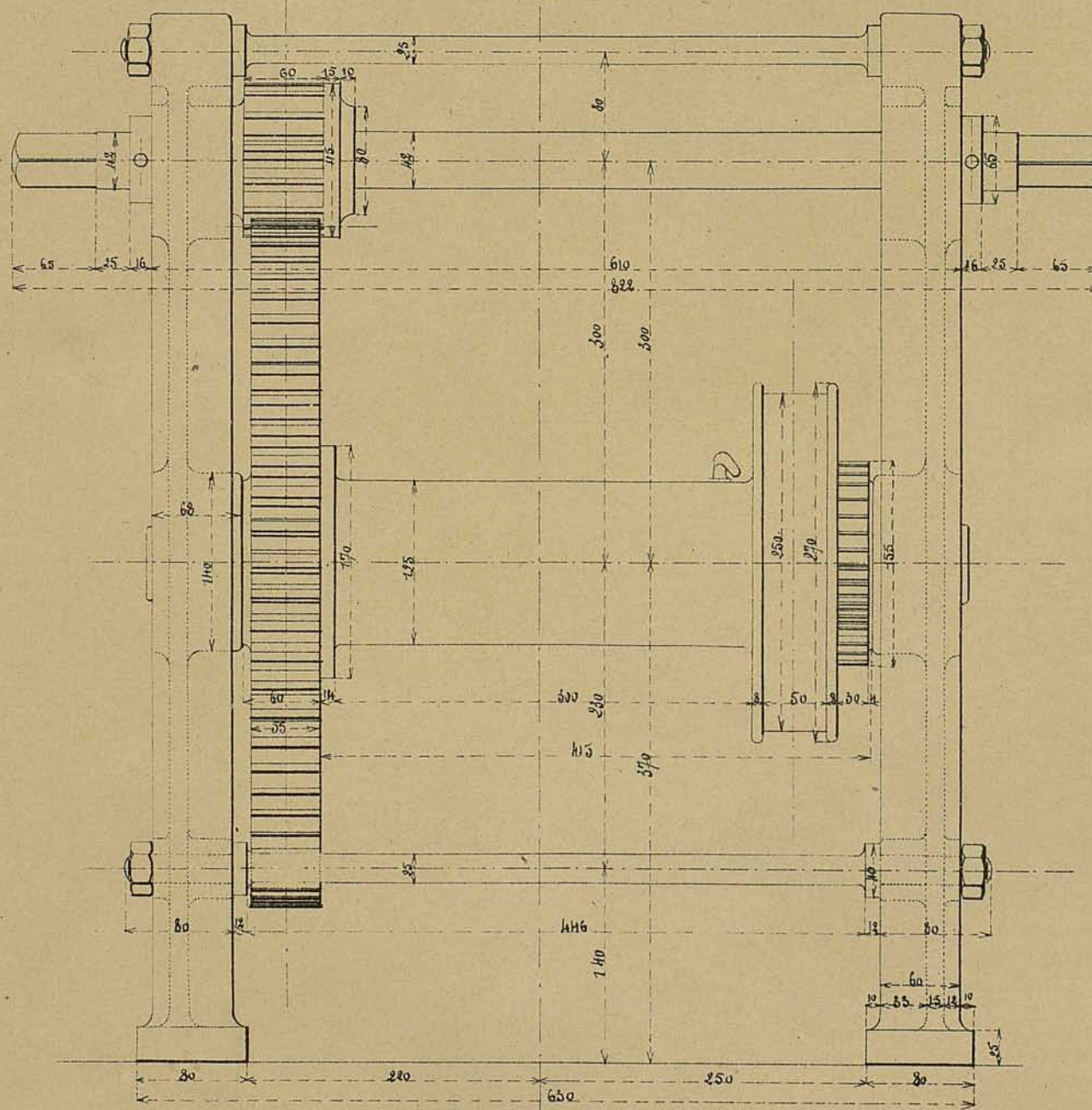
Elevación



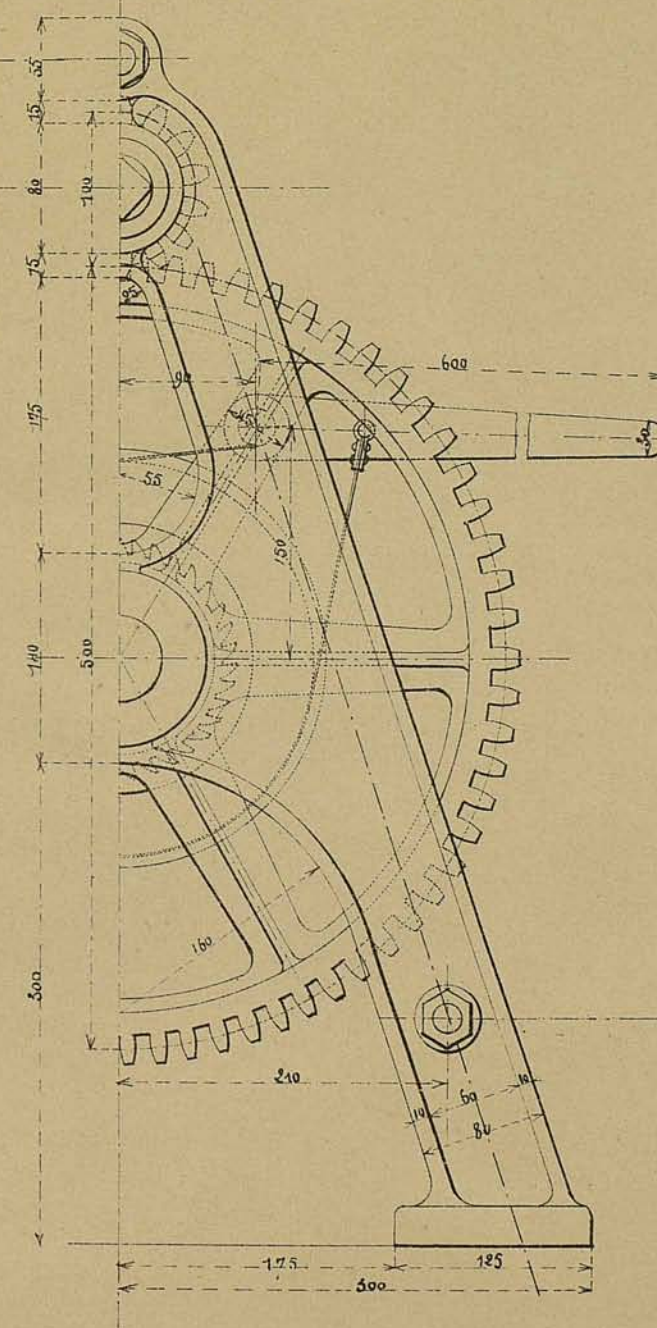
Escala 0^m20 por metro

Torno de engranaje sencillo

Elevación



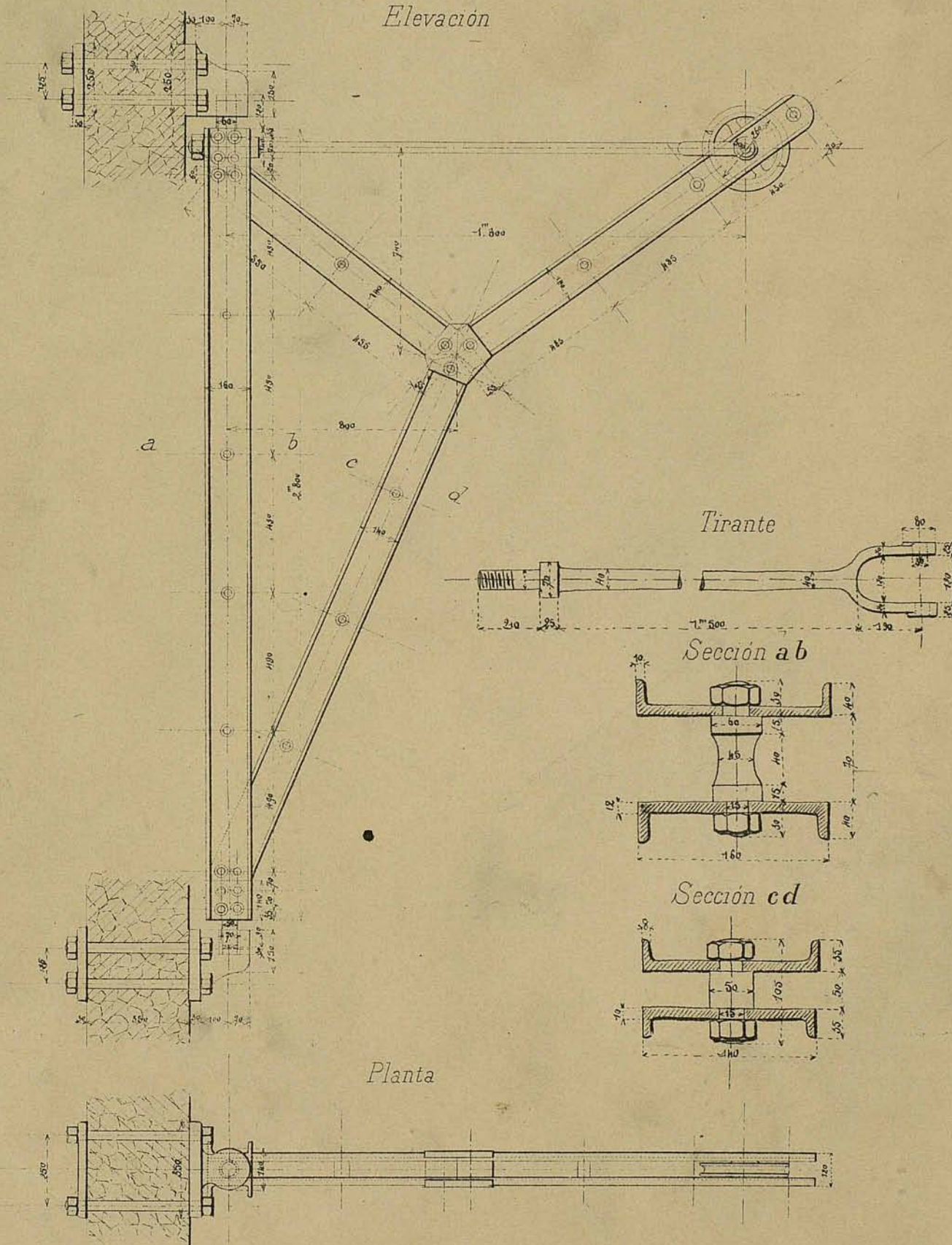
1/2 Perfil



Escala 0^m20 por metro

Grúa mural

Elevación



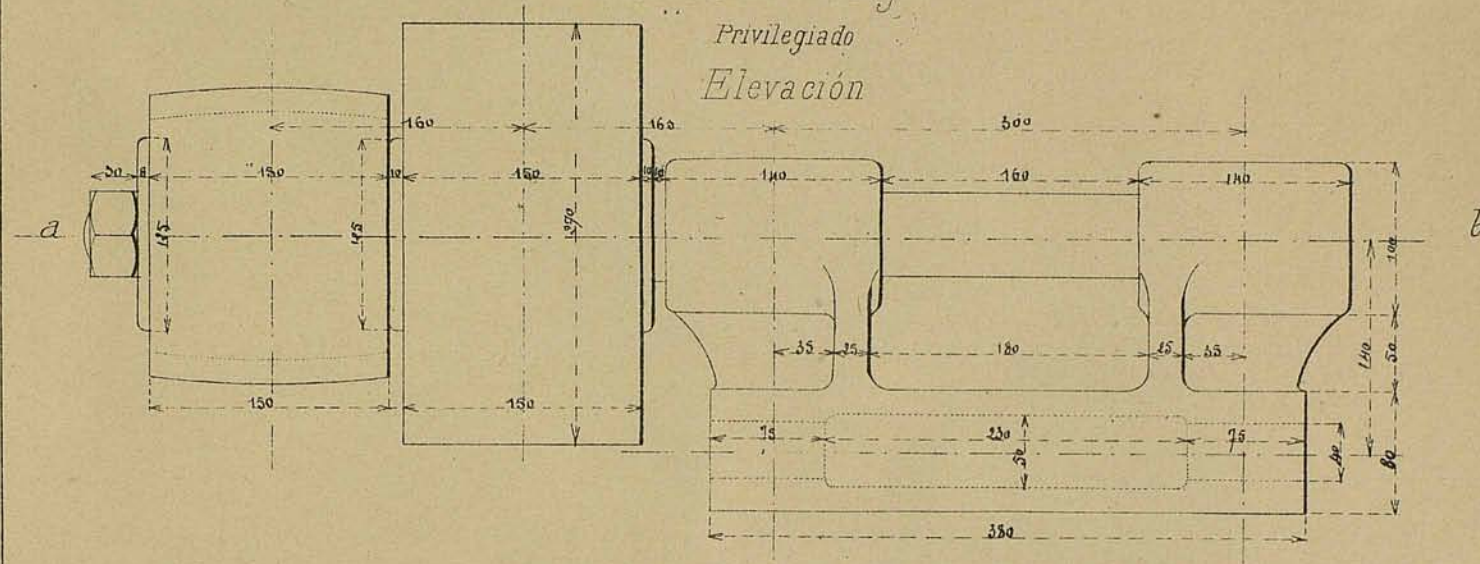
Escala 0^m05 por metro

Embrague por fricción

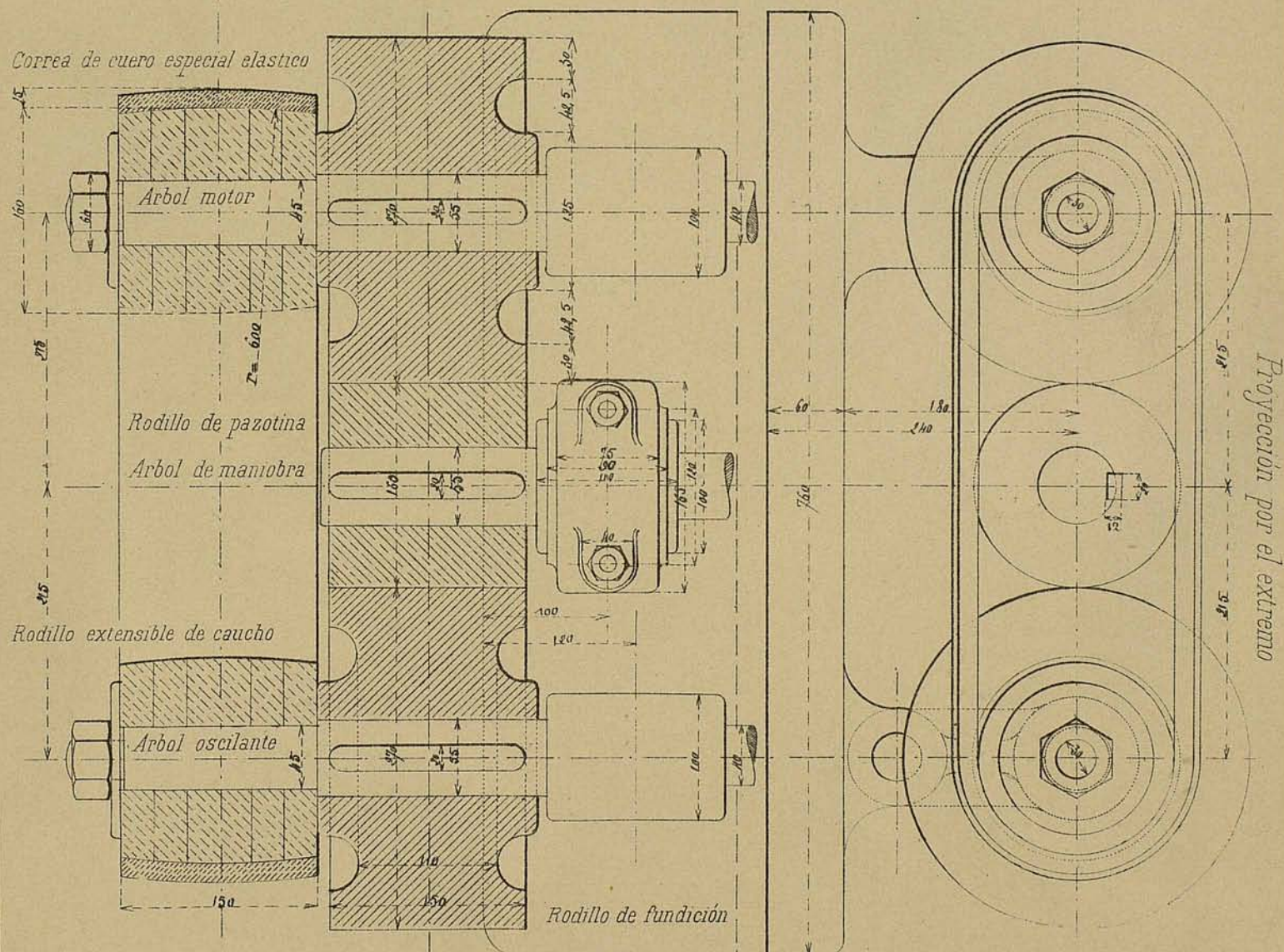
Sistema de F. Singre

Privilegiado

Elevación

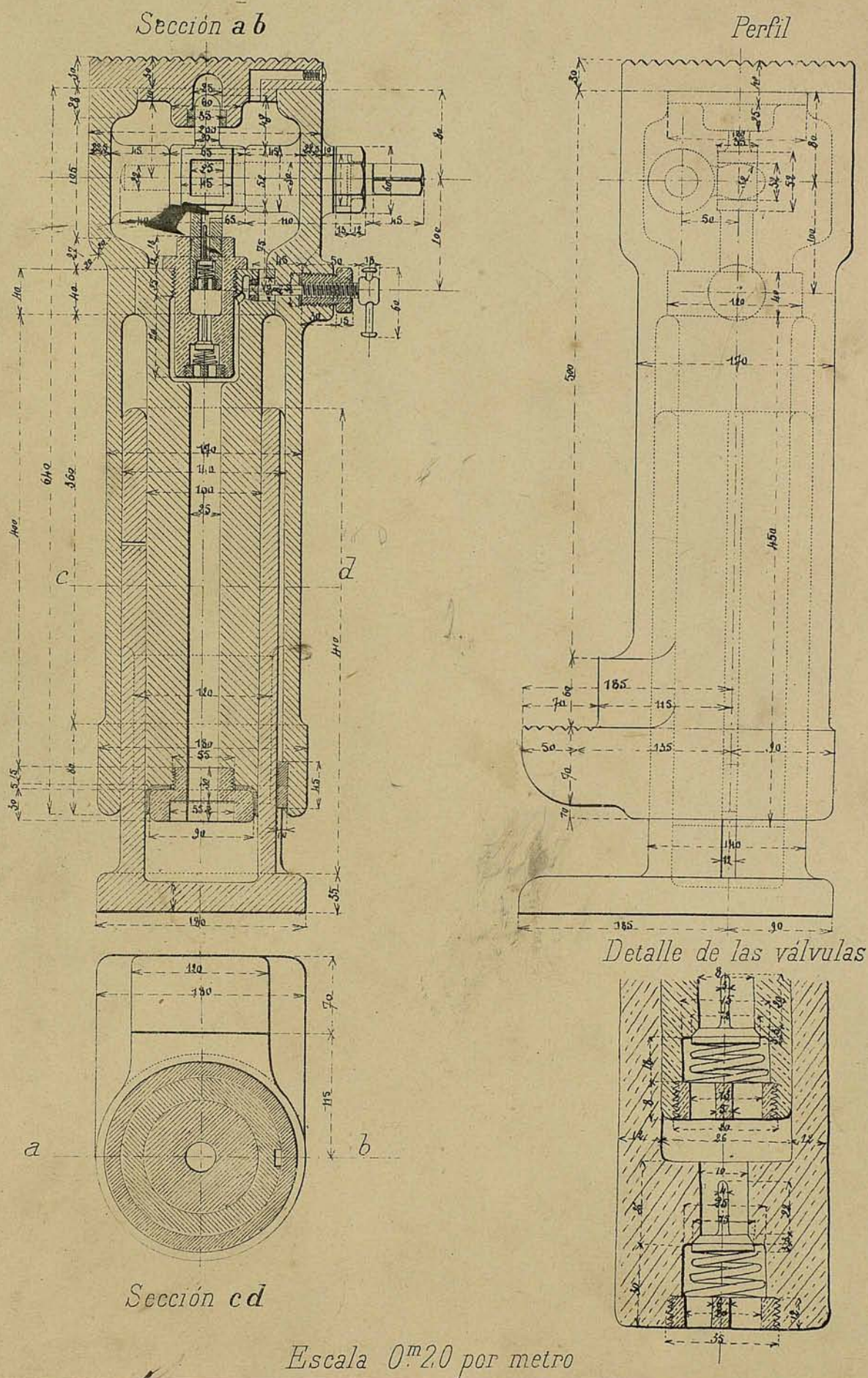


Sección a b



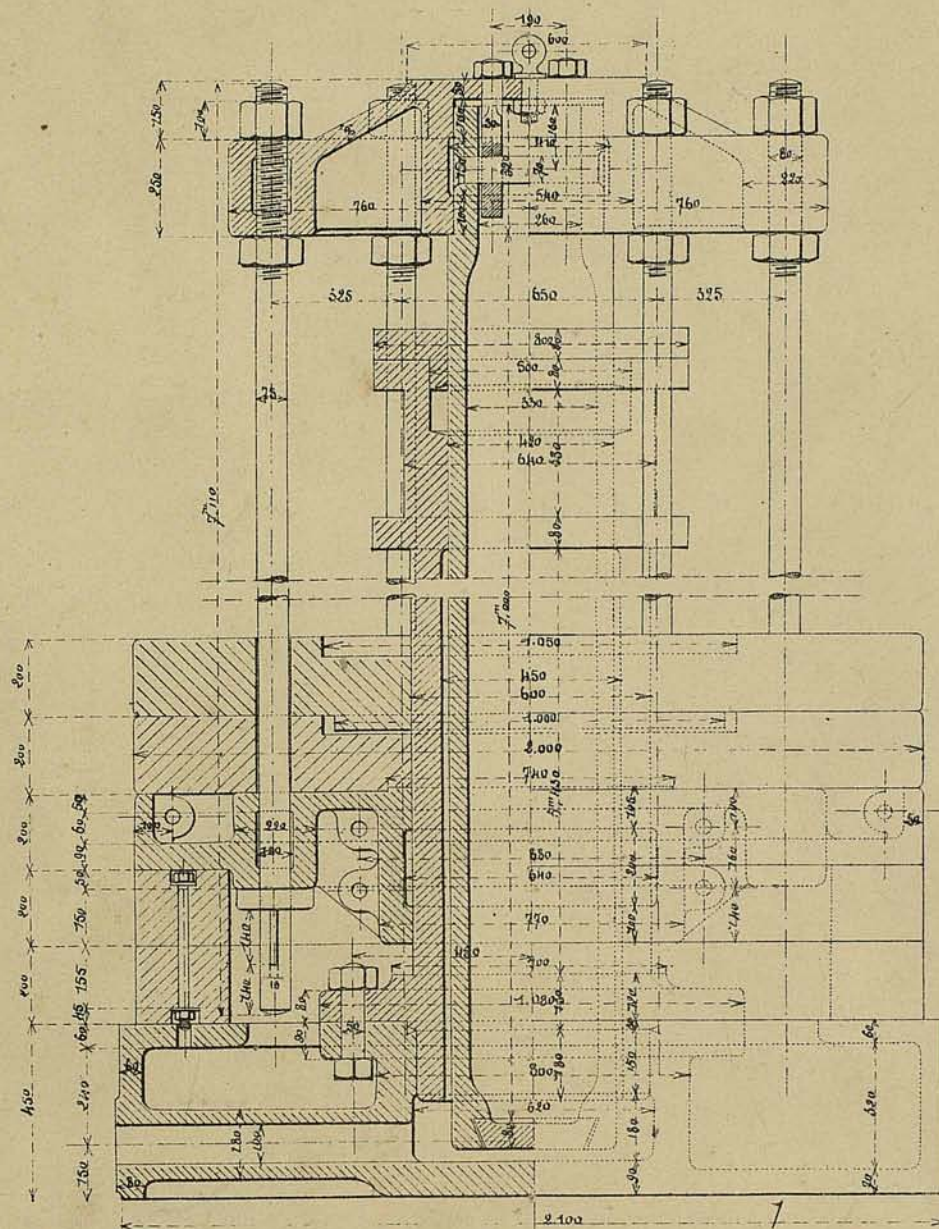
Escala 0^m20 por metro

Gato hidráulico

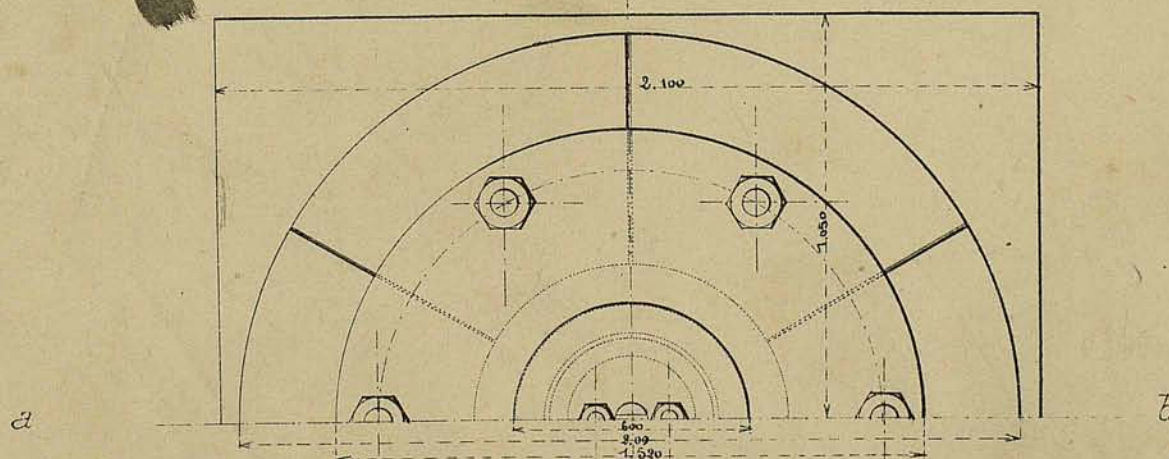


Acumulador hidráulico

$\frac{1}{2}$ Elevación y $\frac{1}{2}$ Sección por *ab*



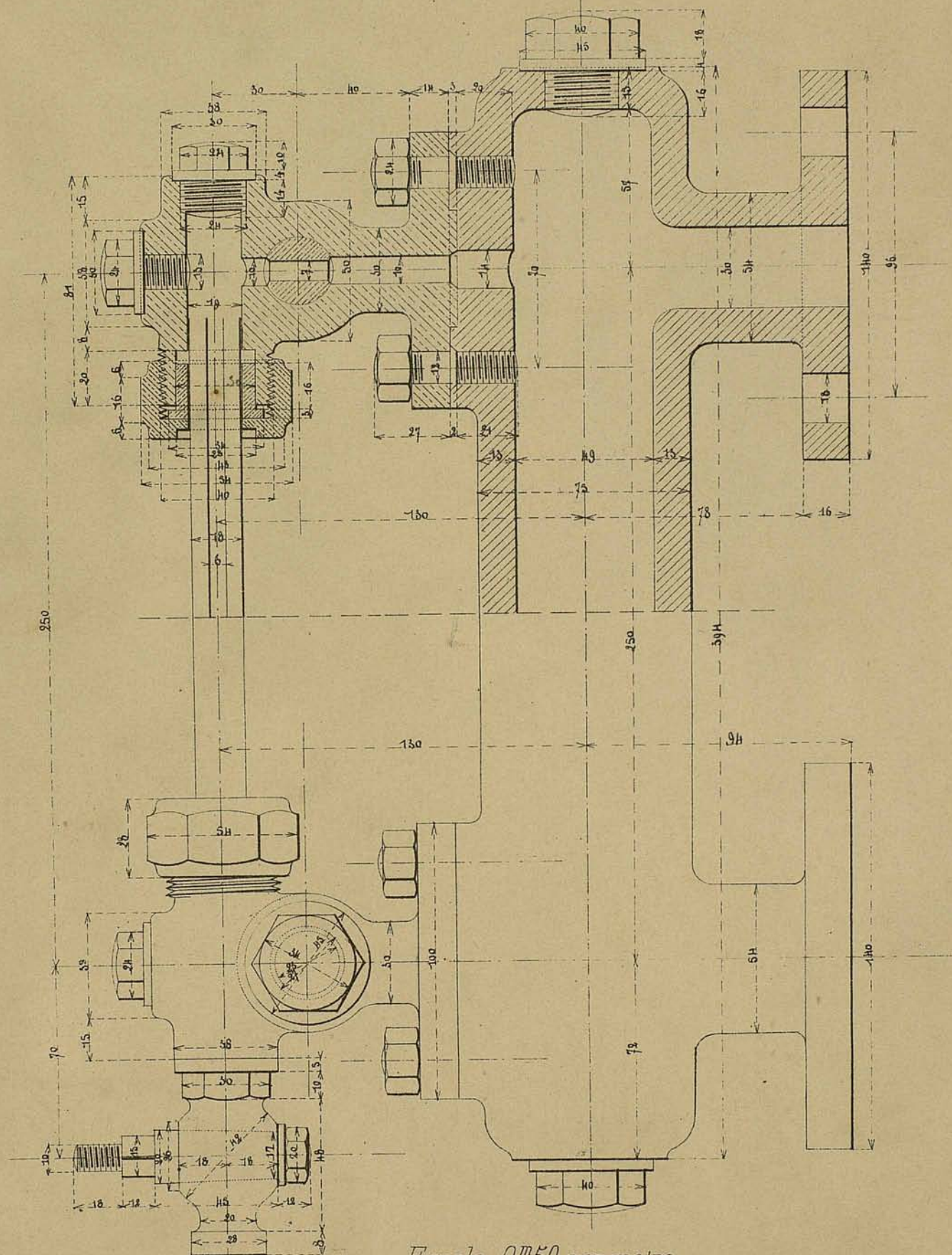
18 Roldanas



Escala 0^m05 por metro

Nivel de agua de botella

para fuertes presiones



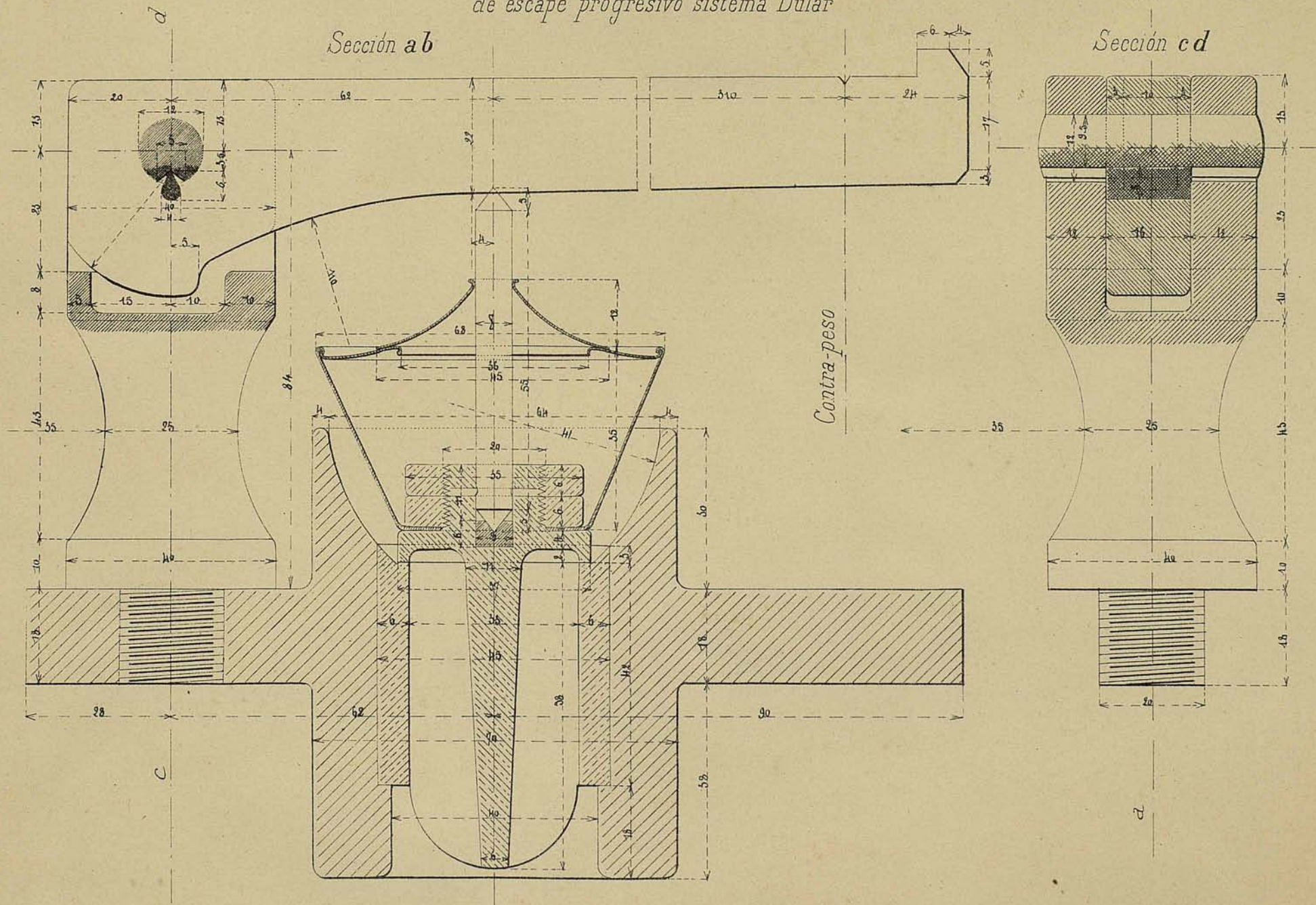
Escala 0^m50 por metro

Válvula

de escape progresivo sistema Dular

Sección *ab*

Sección *cd*



Escala Tamaño natural

Portaescoba para dinamo

con escoba gráfica cobreada

Sección a b

Perfil

