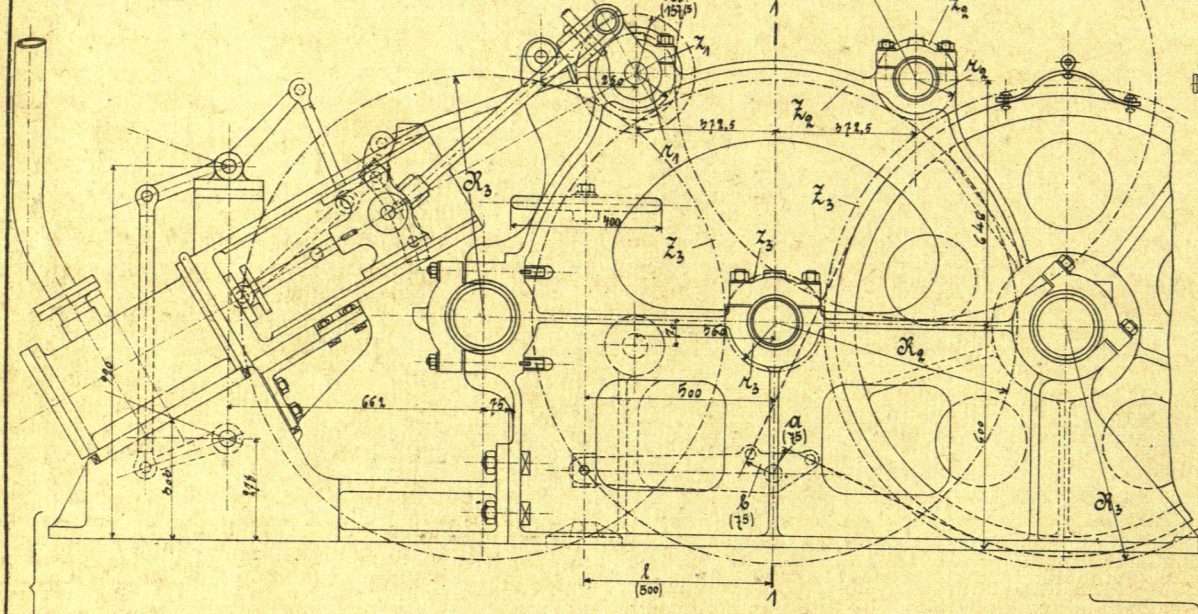


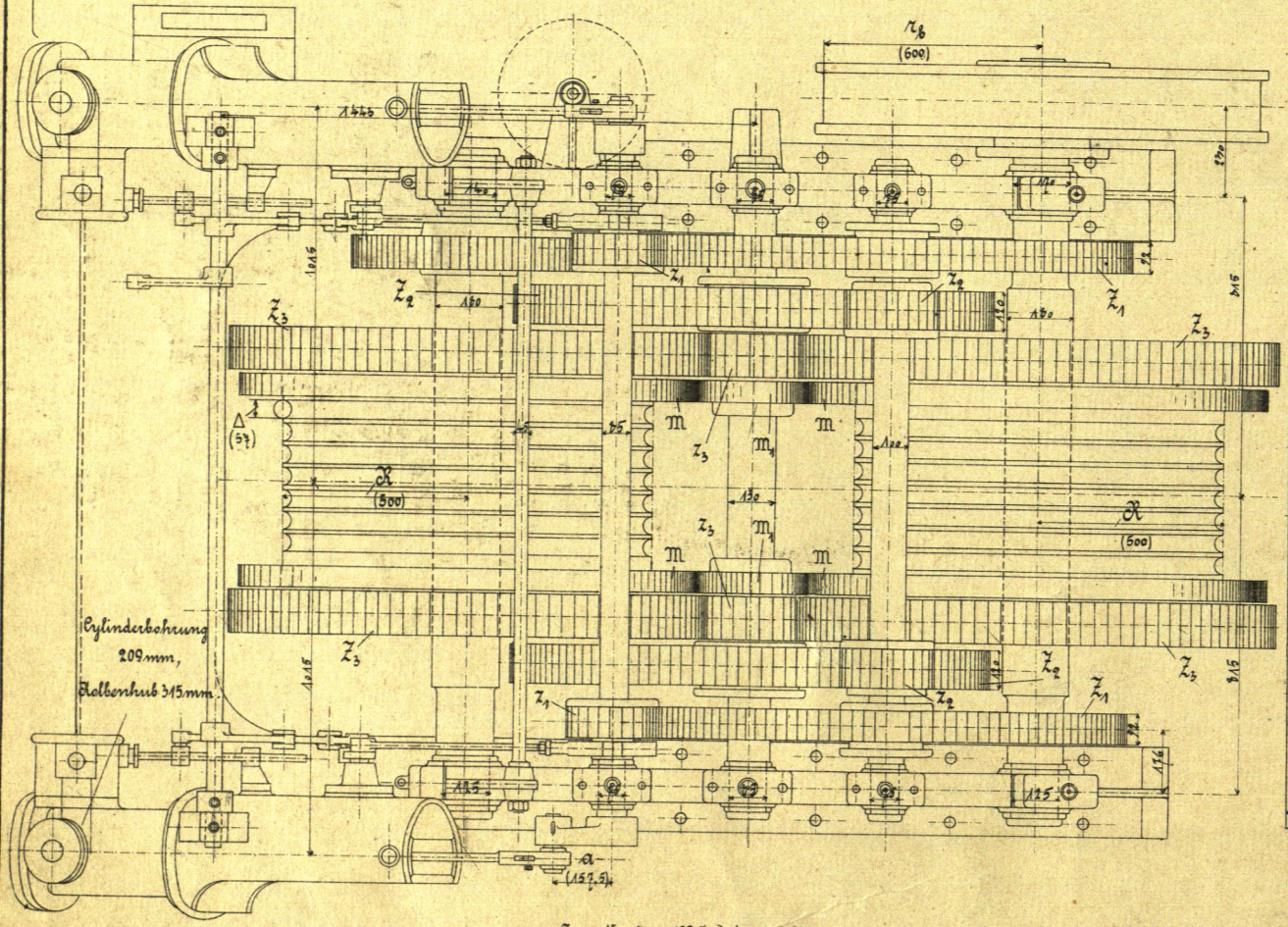
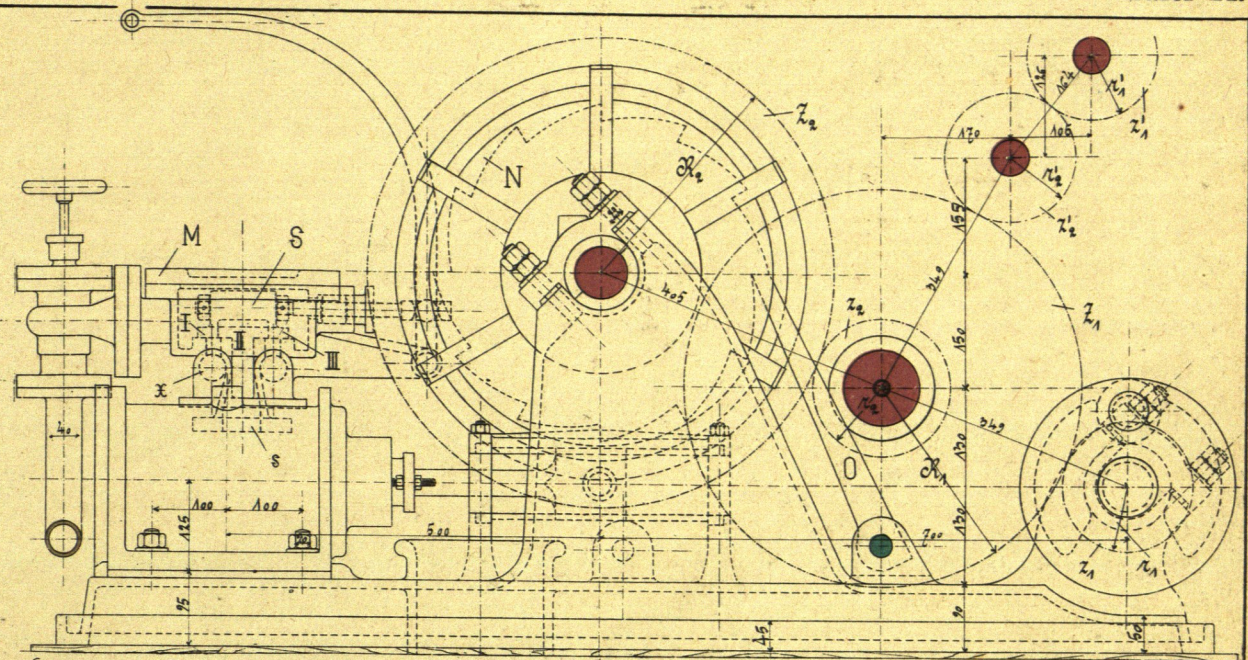
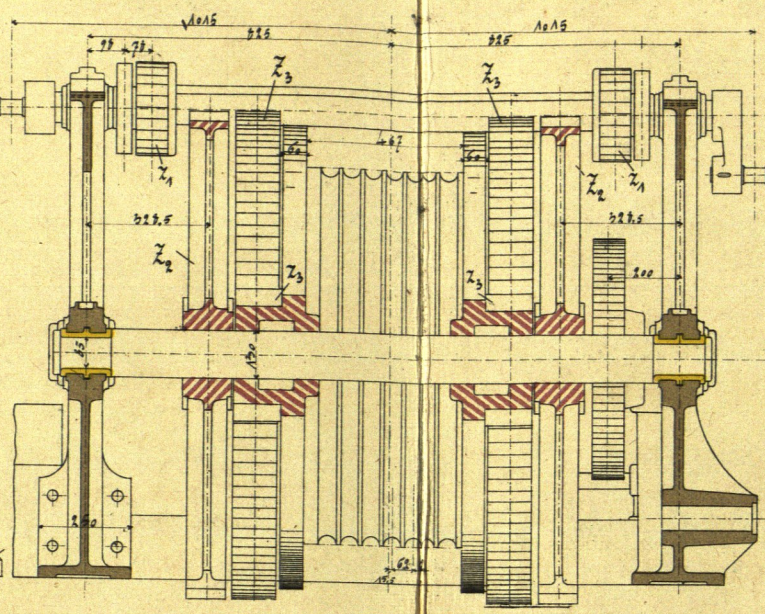
Dampfwinden.

Fig. 1. 1/20.

Wilhelmshütte, Waldenburger Schlo.



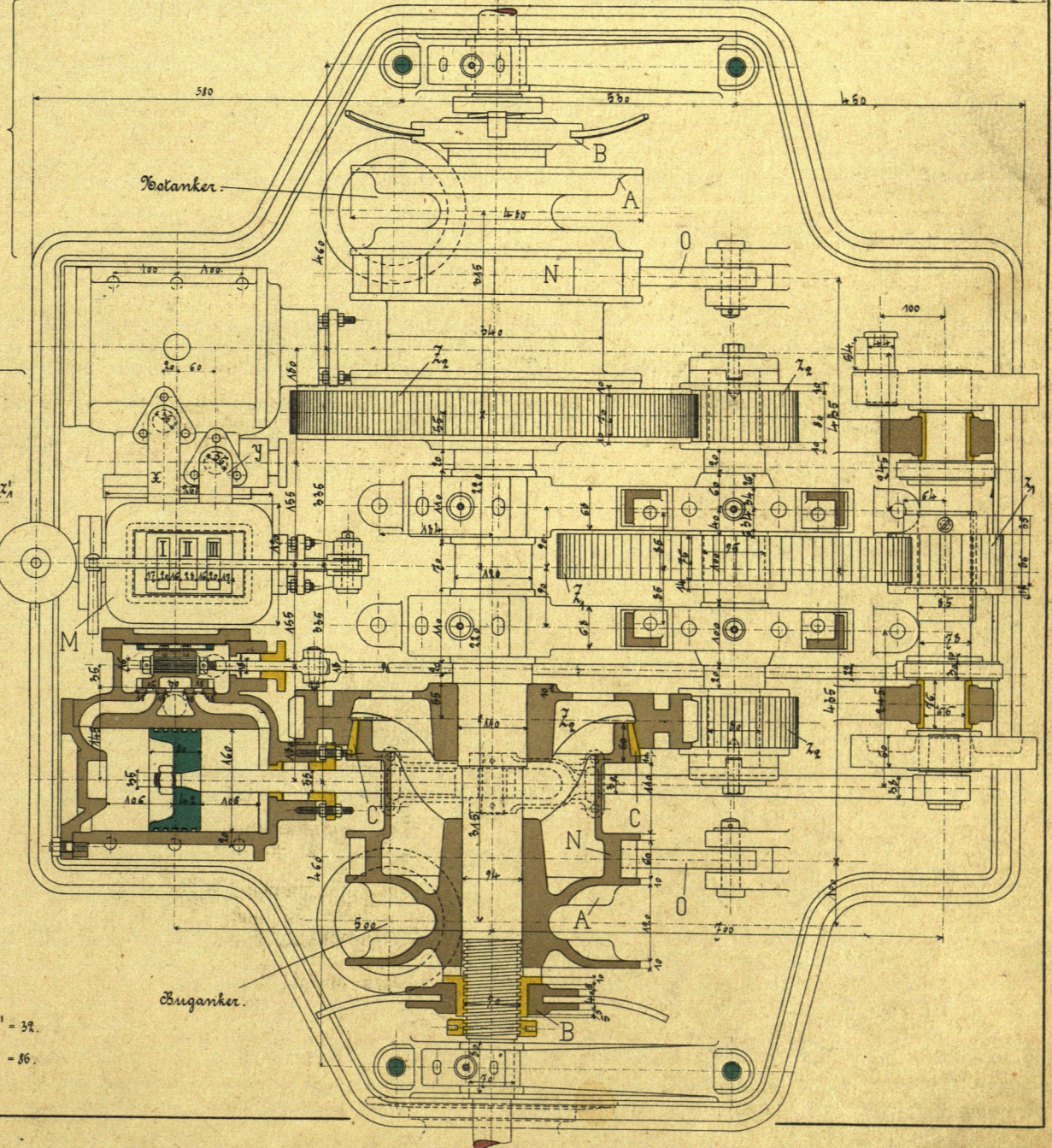
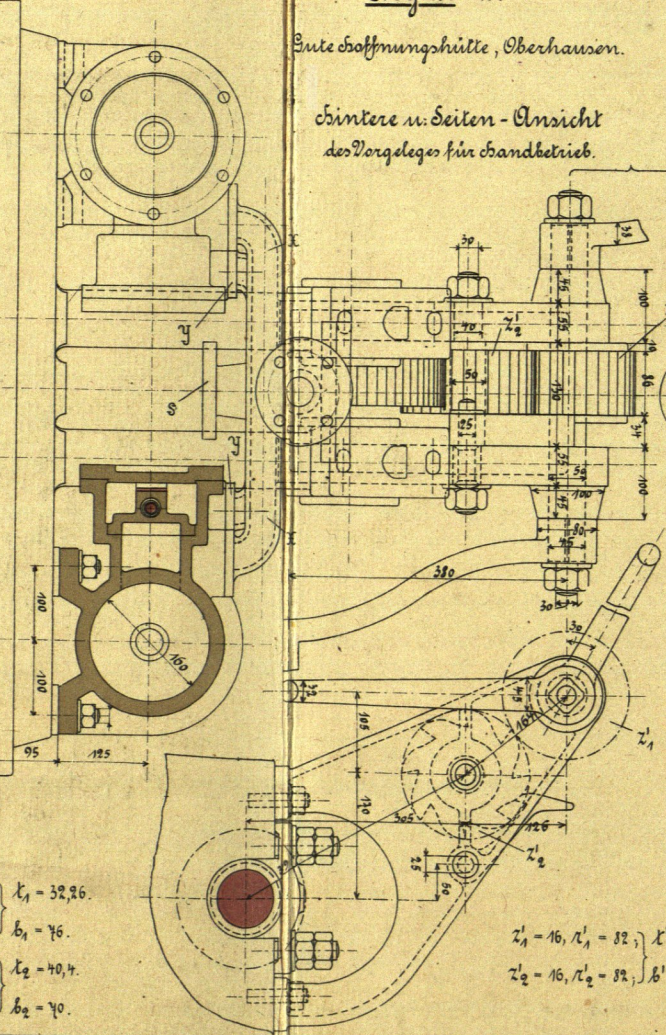
Schnitt 1-1 mit Ansicht nach links.



Zylinderbohrung
209 mm,
Halbhoh 315 mm

Fig. 2. 1/10.

Gute Bohrungshülse, Oberhausen.
Hintere u. Seiten-Ansicht
des Vorgeleges für Handbetrieb.



Rädervorgelege zu Fig. 1:
 $z_1 = 15, \alpha_1 = 109,5; \alpha_1 = 45,89$
 $z_2 = 87, \alpha_2 = 655,5; b_1 = 92$
 $z_3 = 15, \alpha_3 = 156; \alpha_3 = 65,386$
 $z_3 = 60, \alpha_3 = 624; b_3 = 121$
 $z_2 = 15, \alpha_2 = 109,5; \alpha_2 = 45,89$
 $z_2 = 87, \alpha_2 = 655,5; b_2 = 120$

Rädervorgelege zu Fig. 2:
 $z_1 = 16, \alpha_1 = 82; \alpha_1 = 32,26$
 $z_1 = 52, \alpha_1 = 267; b_1 = 76$
 $z_2 = 14, \alpha_2 = 90; \alpha_2 = 40,7$
 $z_2 = 49, \alpha_2 = 315; b_2 = 70$

$z'_1 = 16, \alpha'_1 = 82; \alpha'_1 = 32$
 $z'_2 = 16, \alpha'_2 = 82; b'_1 = 86$

Zuganker.