

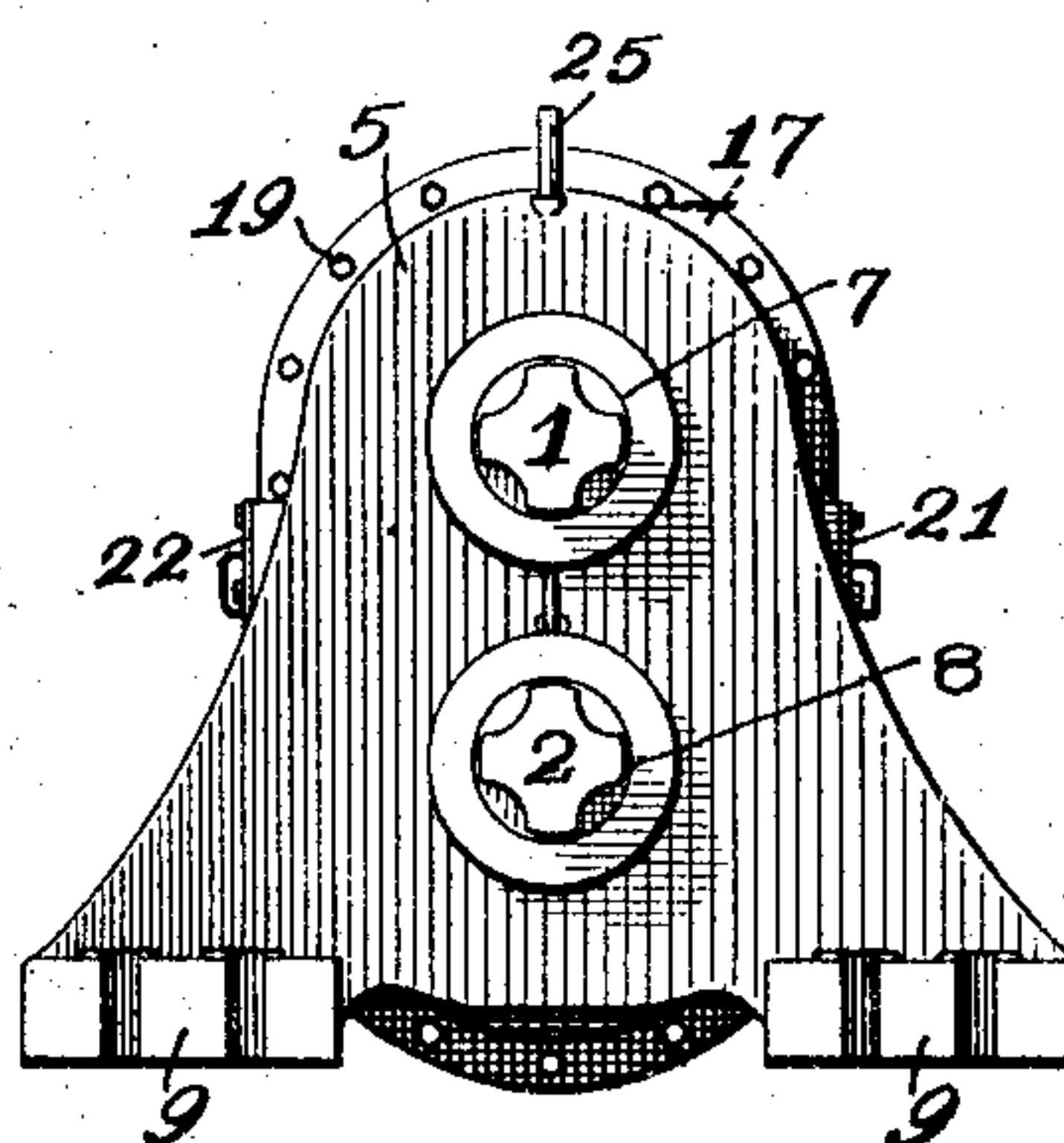
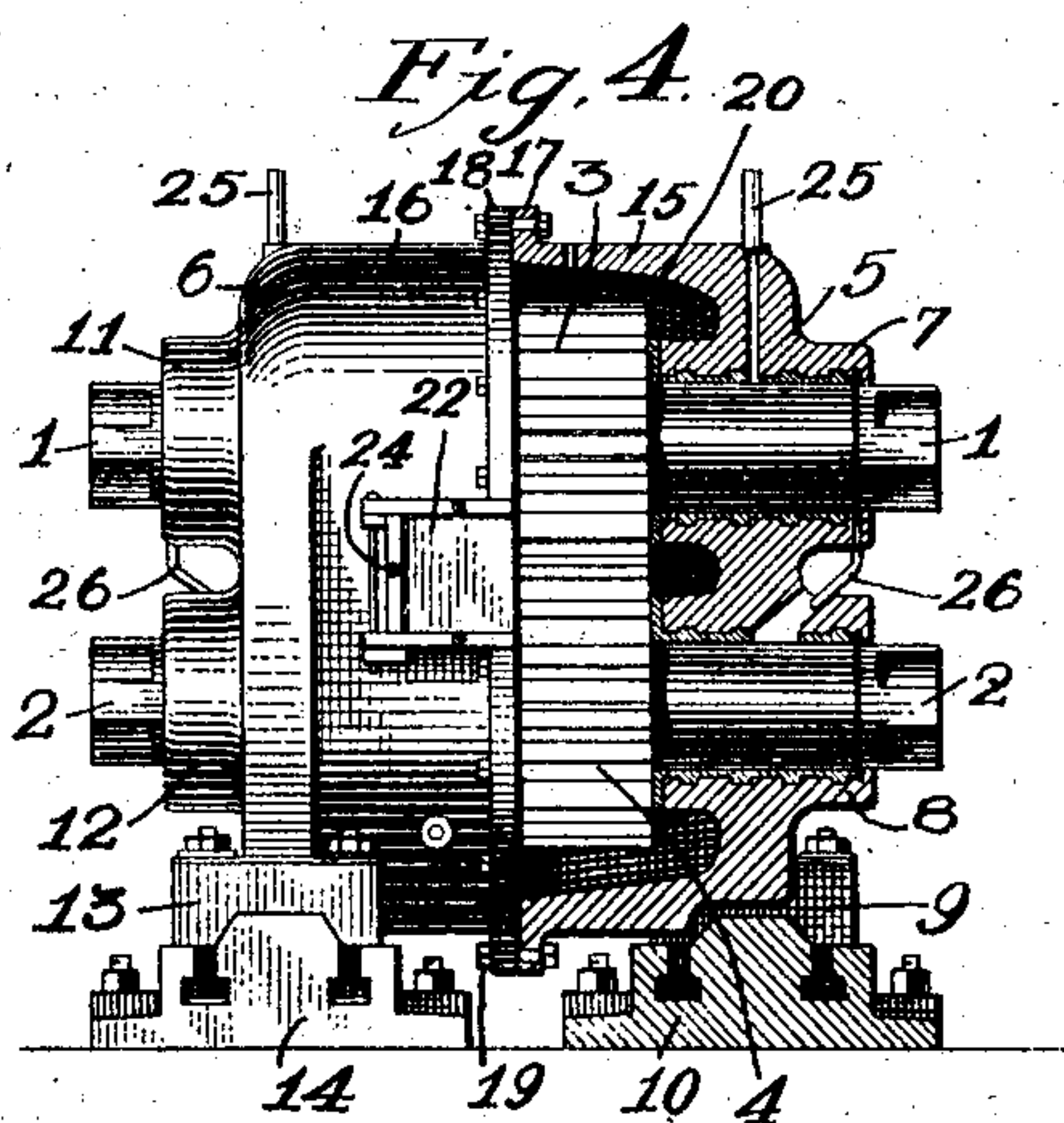
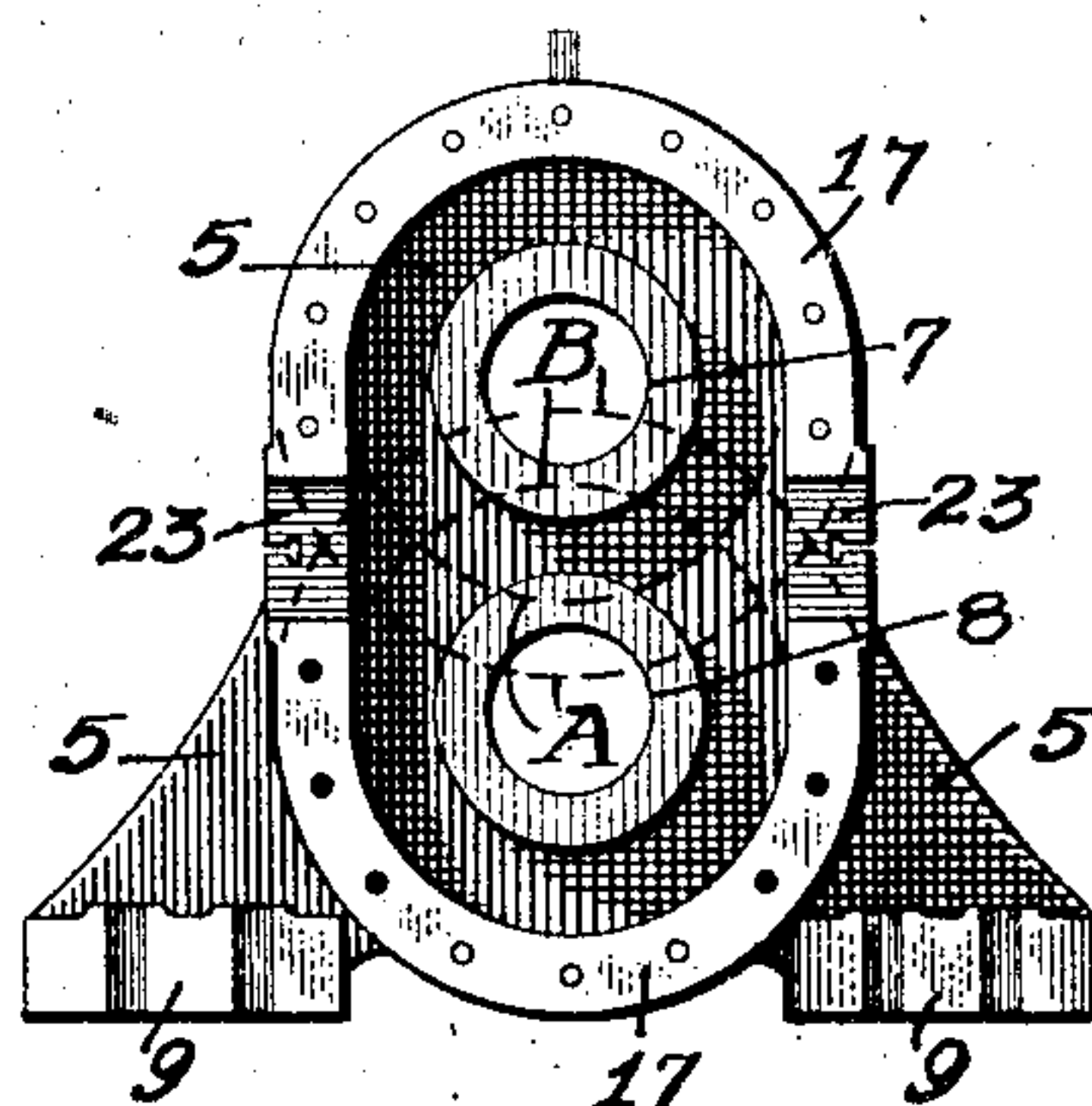
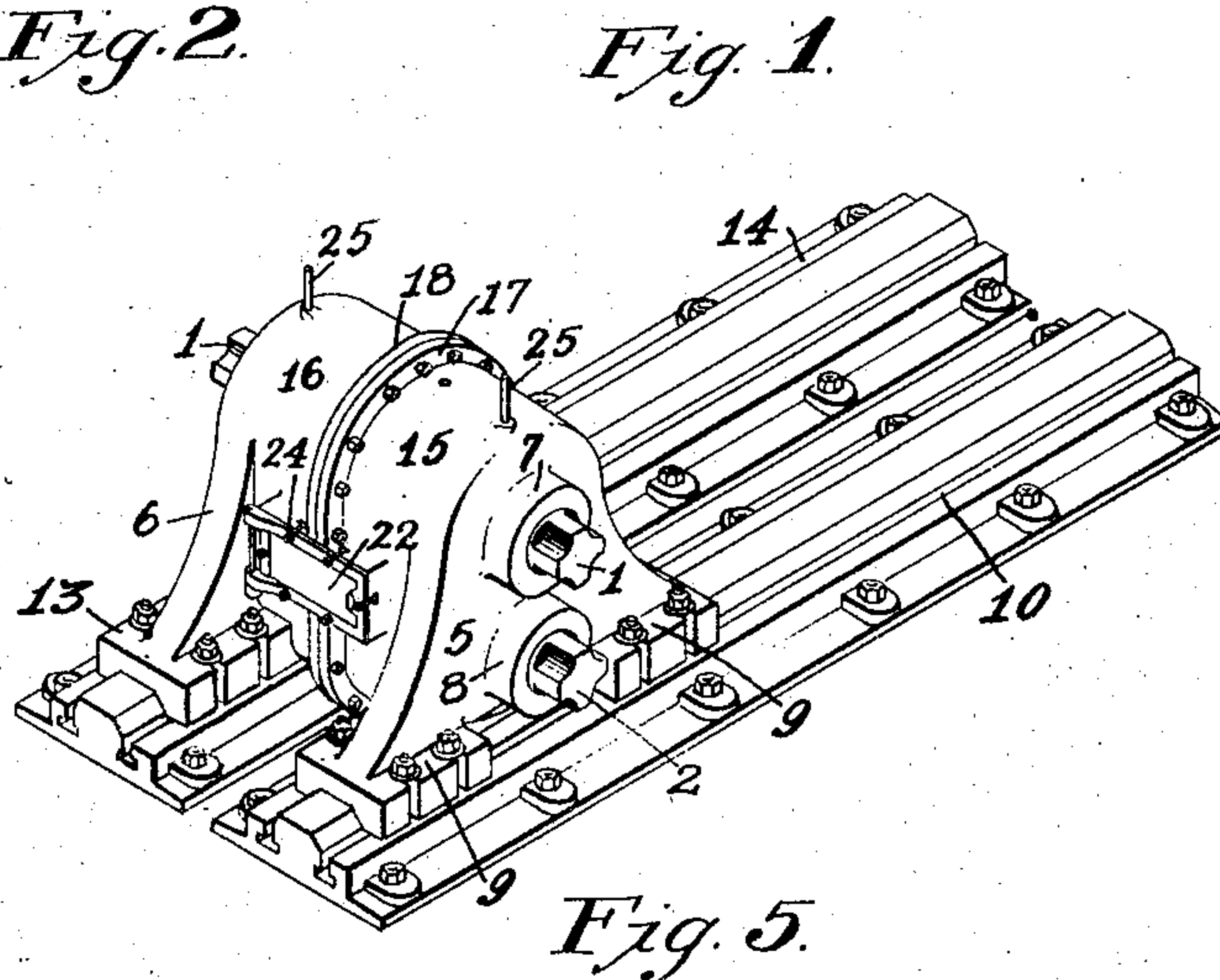
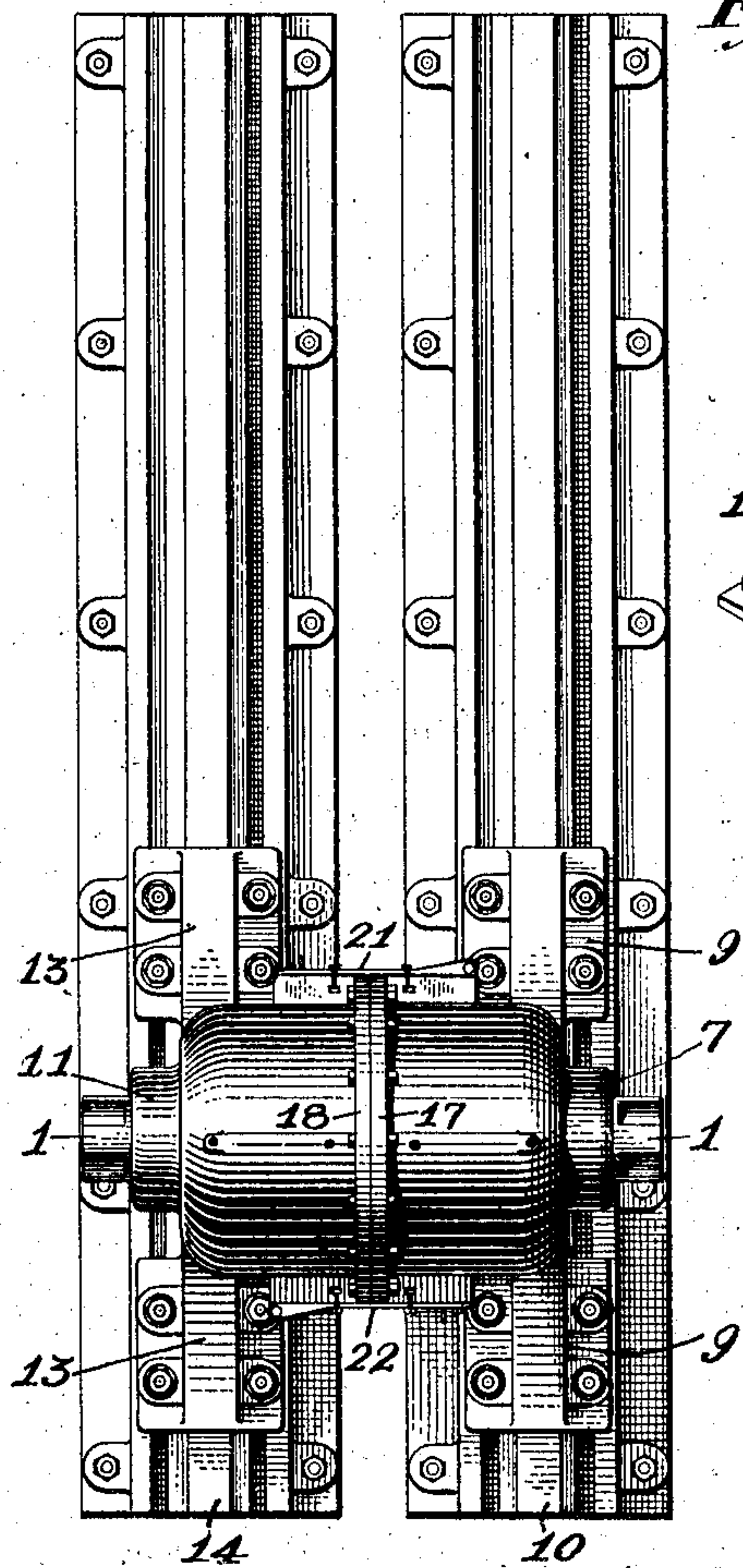
No. 768,041.

PATENTED AUG. 23, 1904.

J. R. GEORGE.
PINION HOUSING.

APPLICATION FILED JUNE 12, 1902.

NO MODEL.



Witnesses

L. H. Horner
Rufus B. Fowler
M. M. Schurmann

Inventor

Jerome R. George
By Rufus B. Fowler
Attorney

UNITED STATES PATENT OFFICE.

JEROME R. GEORGE, OF WORCESTER, MASSACHUSETTS, ASSIGNOR TO
MORGAN CONSTRUCTION COMPANY, OF WORCESTER, MASSACHU-
SETTS, A CORPORATION OF MASSACHUSETTS.

PINION-HOUSING.

SPECIFICATION forming part of Letters Patent No. 768,041, dated August 23, 1904.

Application filed June 12, 1902. Serial No. 111,246. (No model.)

To all whom it may concern:

Be it known that I, JEROME R. GEORGE, a citizen of the United States, residing at Worcester, in the county of Worcester and Commonwealth of Massachusetts, have invented a new and useful Improvement in Pinion-Housings, of which the following is a specification accompanied by drawings forming a part of the same, in which—

10 Figure 1 represents a perspective view of a pinion-housing embodying my invention. Fig. 2 is a plan view of the same. Fig. 3 is an end view. Fig. 4 is a front view with one-half shown in central vertical sectional view, 15 and Fig. 5 represents one-half of the housing with the pinions and pinion-shafts removed and showing the inside or abutting edge of the shell or case.

Similar reference letters and figures refer 20 to similar parts in the different views.

The object of my invention is to provide a pinion-housing for the pinion of rolling-mills, in which the pinions are inclosed in an oil-tight shell or case; and it consists in the construction and arrangement of parts, as hereinafter described, and set forth in the annexed 25 claims.

Referring to the accompanying drawings, 1 and 2 denote the upper and lower pinion-shafts of a rolling-mill carrying pinions 3 and 4 thereon. Each of the pinion-shafts 1 and 2 is journaled in my improved pinion-housing, which consists of two similar stands 5 and 6, the stand 5 being provided with journal-bearings 35 7 and 8 and with feet 9, by which the stand is supported with the feet 9, adapted to rest upon and be attached to a track 10. The stand 6 is provided with similar journal-bearings 11 and 12 and with feet 13, resting upon and attached 40 to the rail 14. The stands 5 and 6 are provided with similar inwardly-projecting oval flanges 15 and 16, forming a shell or case in two halves with the inner edges of said halves provided with radially-projecting flanges 17 45 and 18, which are attached by bolts 19 and are provided with abutting edges which form an oil-tight joint, and the oval flanges 15 and

16 entirely surround the pinions 3 and 4 and inclose an oil-tight chamber 20.

Each of the flanges 15 and 16 is provided 50 on diametrically opposite sides with rectangular openings 23, which when the flanges are bolted together form a single opening in each side of the shell, which is closed by doors 21 22. The curvature of the radial flanges 17 55 and 18 at the top and bottom of the housings are concentric with the journal-bearings of the shafts 1 and 2, the face or abutting surface of the upper part of the flange 17, for example, being included between the broken 60 lines A A, which are concentric with the axis of the bearing 7, and the face of the lower part of the flange 17 being included between the broken lines B, Fig. 5, and as the straight or tangential sides of the case joining the two 65 circles A and B are inclined within openings 23, so that the shell can be rotated about the axis of the bearings 7, that part of the flange 17 included within the broken lines A can be finished by turning the tool running out in 70 the open space 23, and similarly that part of the flanged edge of the shell inclosed within the broken lines B can be turned when the shell is rotated about the axis of the bearing 75 for the shaft 2, the cutting-tool running out in the open space 23. The abutting flanges of the shell or case can therefore be readily finished by turning to form a tight joint when the flanges are bolted together by the bolts 19. The opening 23 in each side of the shell 80 is closed by doors 21 22 of any suitable construction adapted to close the opening and form an oil-tight joint, the doors in the present instance being attached to the shell by bolts 24. 85

Oil may be supplied to the chamber 20 through an oil-hole 25 in sufficient quantity to enable the lower portion of the pinion 4 to dip into the oil as it revolves. Oil is also supplied to the bearings of the upper pinion-shaft 90 through oil-pipes 25, and the surplus or overflow of oil is transferred from the bearings of the upper shaft through pipes 26 to the bearings 8 and 12 of the lower pinion-shaft.

The two halves of my improved pinion-housing are duplicates of each other, and there is but a single joint to be fitted.

The housing is mounted upon tracks 10, placed transversely to the axes of the pinion-shafts, in order to allow the housing to be moved out of alinement with the rolls of the mill and replaced when necessary.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a pinion-housing provided with bearings for pinion-shafts, the combination of a pair of upright stands having supporting-feet by which said bearings are held in axial alinement, a track beneath said feet arranged transversely to the axes of said bearings, there being flanges extending from the inner sides of said stands and inclosing the pinions, and having radial contacting flanges on their inner edges by which an oil-tight joint is formed, substantially as described.

2. In a pinion-housing, the combination of two upright stands, each of said stands having two bearings one above the other for pinion-shafts, there being inner flanges on said stands extending over and inclosing the pinions, the upper part of said flanges being curved concentrically with the upper bearing and the lower part being curved concentrically with the lower bearing, and having straight sides uniting said upper and lower curved portions, said straight sides being cut away to allow of access to the pinions, substantially as described.

3. A pinion-housing consisting of two stands provided with bearings for two pinion-shafts one above the other, duplicate shells or cases on the inner side of said stands extending over and inclosing the pinions, there being radial

flanges on the inner edges of said duplicate shells or cases, the upper of said radial flanges being concentric with the upper pinion-shaft, and the lower of said radial flanges being concentric with the lower pinion-shaft, said concentric portions being united by straight sides, said straight sides being cut away, thereby forming two openings in a horizontal line at right angles to and equally distant from said pinion-shafts, substantially as described.

4. A pinion-housing consisting of two shells or cases provided with bearings for pinion-shafts one above the other, the upper and lower portions of said cases being concentric with said bearings, said concentric portions being united by straight sides and said straight sides being cut away at the point of union of said shells or cases, substantially as described.

5. A pinion-housing consisting of two shells or cases provided with two bearings for pinion-shafts, said shells being joined together between said bearings to form an oil-tight joint and having two openings on opposite sides of said shells or cases at their point of union, said openings being between said bearings, substantially as described.

6. A pinion-housing consisting of two shells or cases provided with bearings for pinion-shafts, the portions of said shells or cases surrounding said shafts being concentric therewith and united by tangential sides, said sides having openings at the point of union and between said bearings, substantially as described.

Dated this 9th day of June, 1902.

JEROME R. GEORGE.

Witnesses:

RUFUS B. FOWLER,
M. M. SCHNERMANN.