

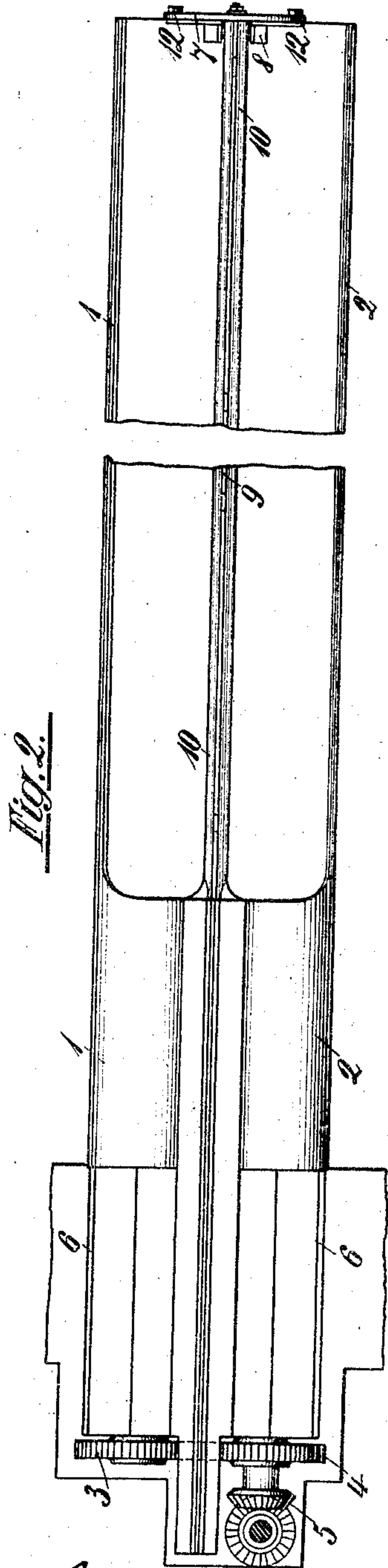
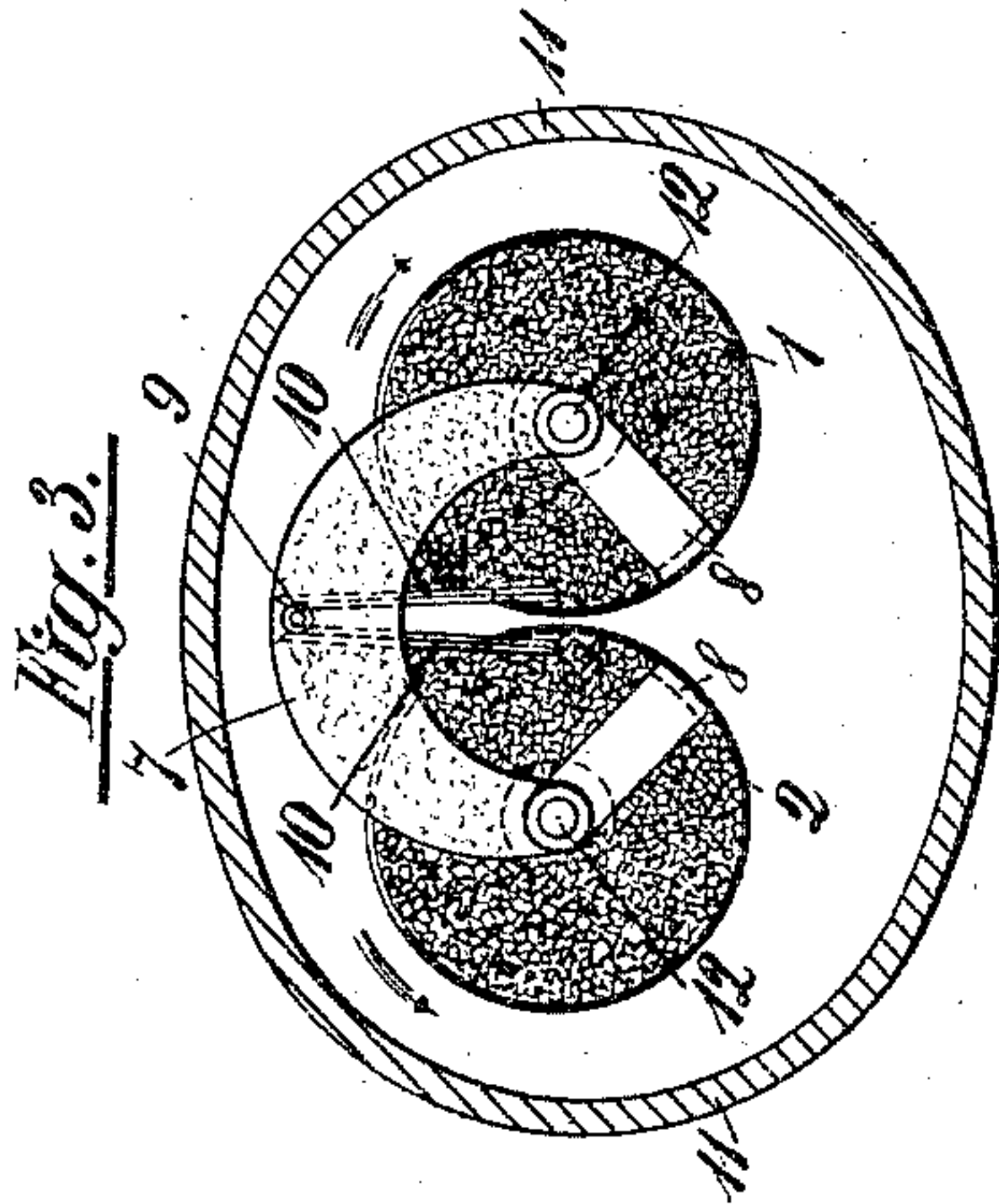
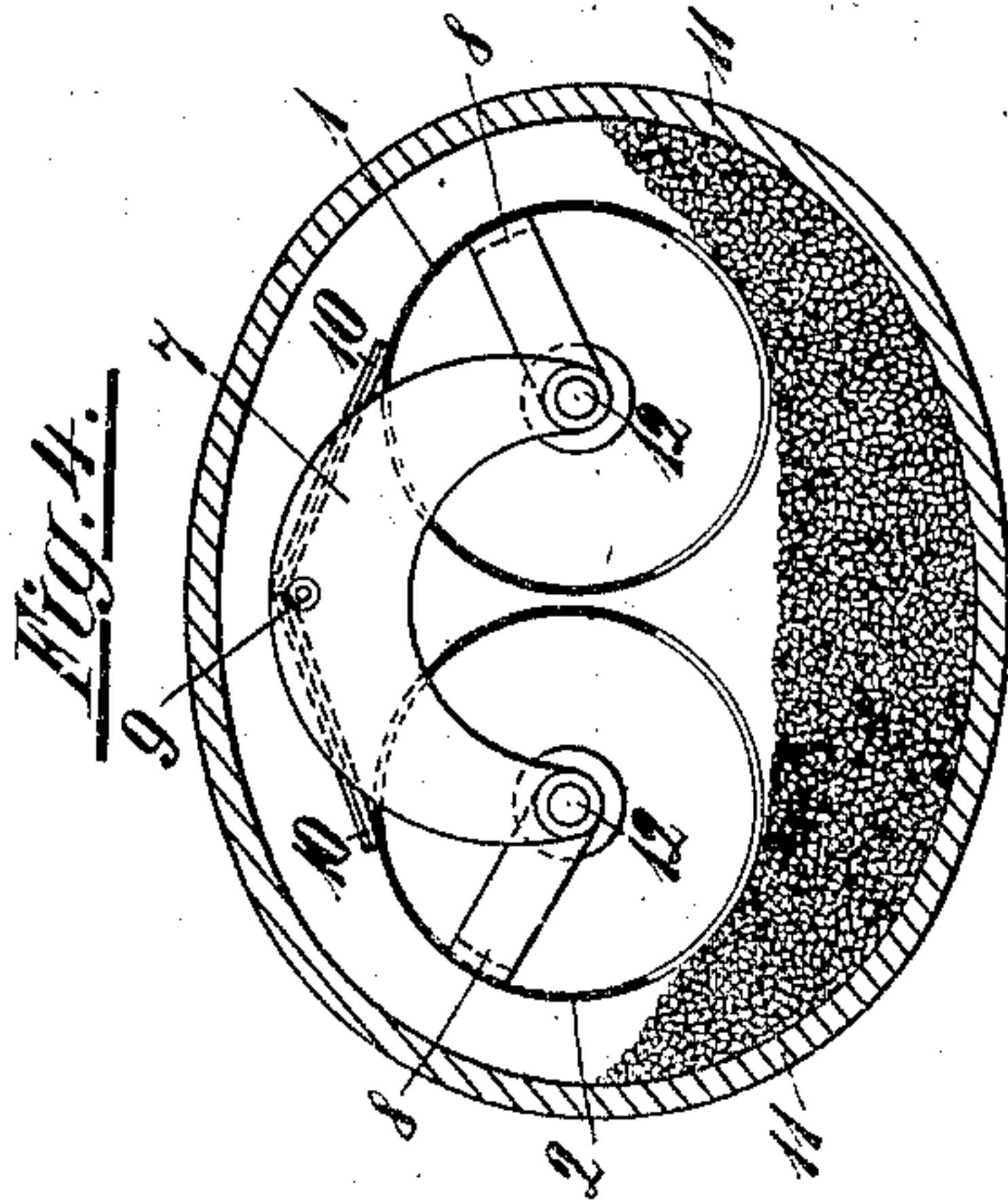
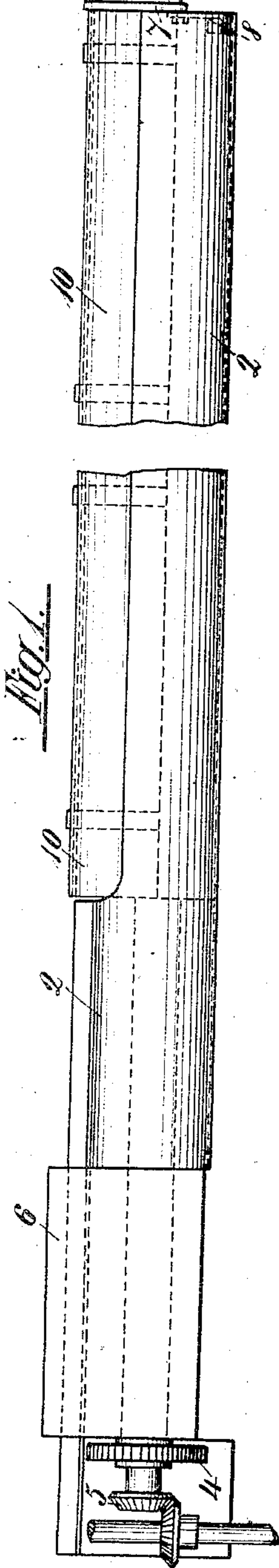
No. 756,696.

PATENTED APR. 5, 1904.

A. PFEIFFER.  
APPARATUS FOR FEEDING GAS RETORTS.

APPLICATION FILED FEB. 24, 1903.

NO MODEL.



Witnesses  
Albert Coppins  
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# UNITED STATES PATENT OFFICE.

ADOLF PFEIFFER, OF HEDELFINGEN, GERMANY.

## APPARATUS FOR FEEDING GAS-RETORTS.

SPECIFICATION forming part of Letters Patent No. 756,696, dated April 5, 1904.

Application filed February 24, 1903. Serial No. 144,815. (No model.)

*To all whom it may concern:*

Be it known that I, ADOLF PFEIFFER, a citizen of the German Empire, residing at Hedelfingen, in the Kingdom of Württemberg, Empire of Germany, have invented certain new and useful Improvements in Devices for Feeding Gas Retorts and Furnaces, of which the following is a description, reference being had to the accompanying drawings and to the figures of reference marked thereon.

The devices employed for feeding gas retorts and furnaces are still all very defective, more particularly as the coal shot into the opened retorts forms an elongated prismatic heap which after the withdrawal of the feeding apparatus can only be uniformly distributed with a rake or the like. This is a very exhausting work for the workmen attending to the retorts on account of the heat and smoke which comes out when the retort is opened, and, further, a very considerable quantity of heat is thereby lost.

This invention has for its object an apparatus for feeding the retorts not only uniformly, but also very rapidly. This is effected by means of two revoluble tubes which lie close together and are provided in the ordinary manner with recesses or openings, between which tubes there are arranged two vertically-upright revoluble flaps or valves, allowing of an increased charge of the tubes, and which tubes when the retorts are fed discharge outwardly, so that the coal falls laterally into the retorts and sliding down the sloping sides or domed lower part of the same automatically distributes itself uniformly. Even if the retorts have a section different from the usual oval section the distribution is perfectly uniform, as the complete discharge does not take place immediately on the commencement of the rotation of the feeding-pipe, but only after the same has turned through about one hundred and sixty degrees, whereby the coal discharged from both sides of the pipe into the retort is piled only to a suitable height along the longitudinal center of the retort.

The object of the invention is shown in the accompanying drawings, in which—

Figure 1 is an elevation, and Fig. 2 a plan view, and Figs. 3 and 4 two cross-sections of a retort and end elevation of the feed-pipe in a filled and discharged condition.

The feed-pipes 1 and 2, which lie close together, are revolubly held in front in a frame 6, which is mounted on the machine for drawing out, inserting, lifting, lowering and turning the tubes. At the rear open end the tubes or pipes are provided with an elbow-piece 8, pivotally mounted, by means of bolts 12, on a bent arm 7. The part lying inside the retorts after the pipe has been inserted in the same is recessed in the ordinary manner. In front cog-wheels 3 and 4 are firmly mounted on the pipes, which cog-wheels gear with one another and may be turned by means of bevel-gear 5 or other suitable arrangement. Between the two pipes, but above them, a rod 9 is carried along their entire length, fixed in front on the frame 6 and in the rear on the bent arm 7. On this rod there are revolubly suspended two flaps or valves 10, close to one another, which rest beneath against the interior of the tubes 1 and 2. In consequence of this arrangement of valves or flaps the charging section or capacity of the tubes 1 and 2 is considerably enlarged. After inserting the filled charging-tubes 1 and 2 into the retorts 11 and turning the same the discharge takes place in the manner shown in Fig. 4, valves 10 then resting externally on the tubes 1 and 2 and assuming their previous vertical position only after the tubes have been turned back again. The uniform discharge of the same is effected in so short a time that the withdrawal of the discharged feed-tubes and closing of the retort only require from about ten to twelve seconds.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

The combination with two parallel revolubly-mounted feed-tubes provided with discharge-openings, and means for rotating the tubes in opposite direction to bring their openings into filling and discharging position, of

two revolubly-mounted valves, suspended between the upper sides of the tubes in register with their openings, whereby the valves will lie close together when the tubes are filled  
5 but will separate and overlies the closed sides of the tubes when they are discharging their contents, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ADOLF PFEIFFER.

Witnesses:

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