

No. 810,671.

PATENTED JAN. 23, 1906.

W. PRELLWITZ.
SEPARABLE HEAD COUPLING.
APPLICATION FILED MAR. 8, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

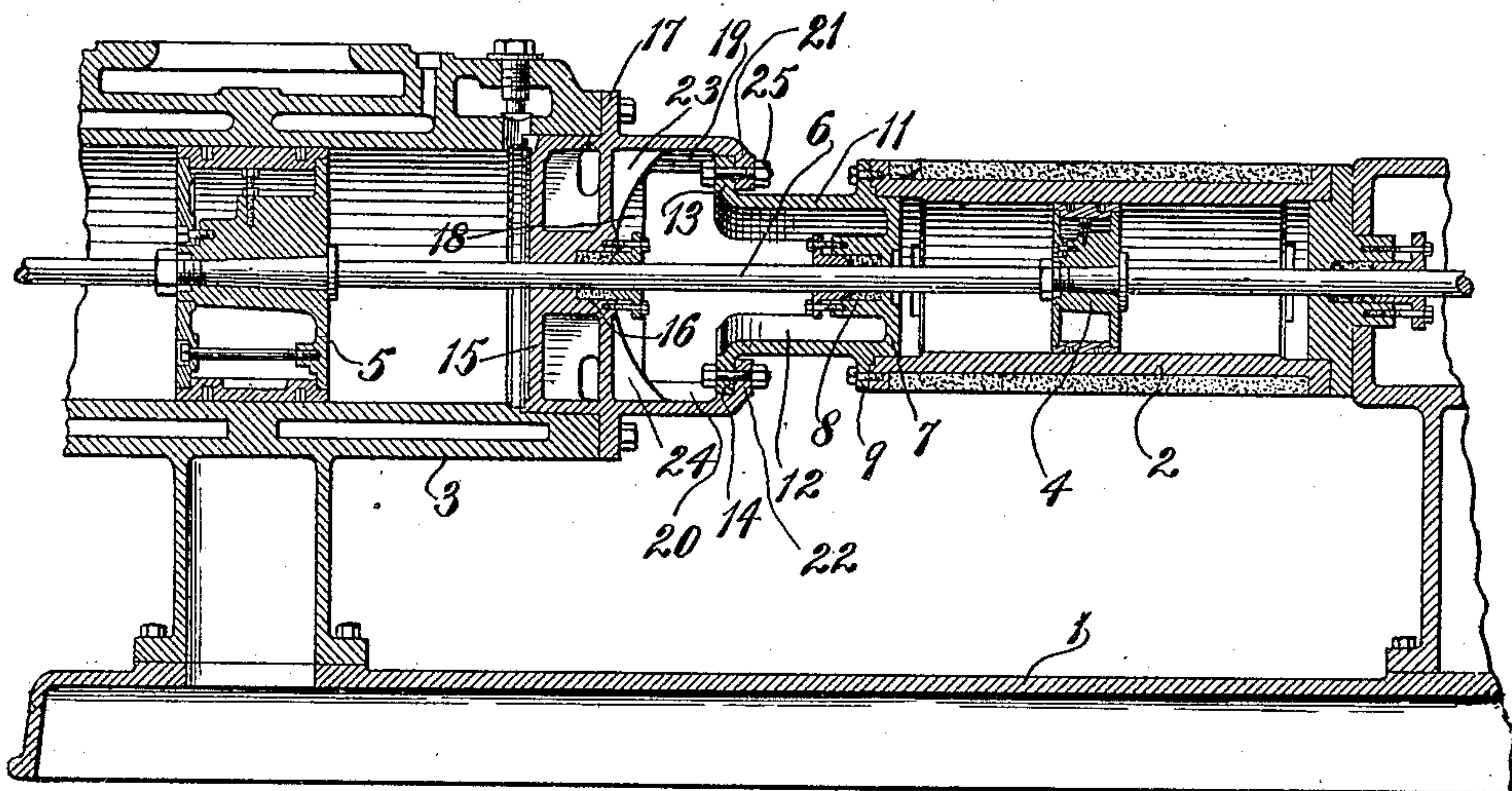
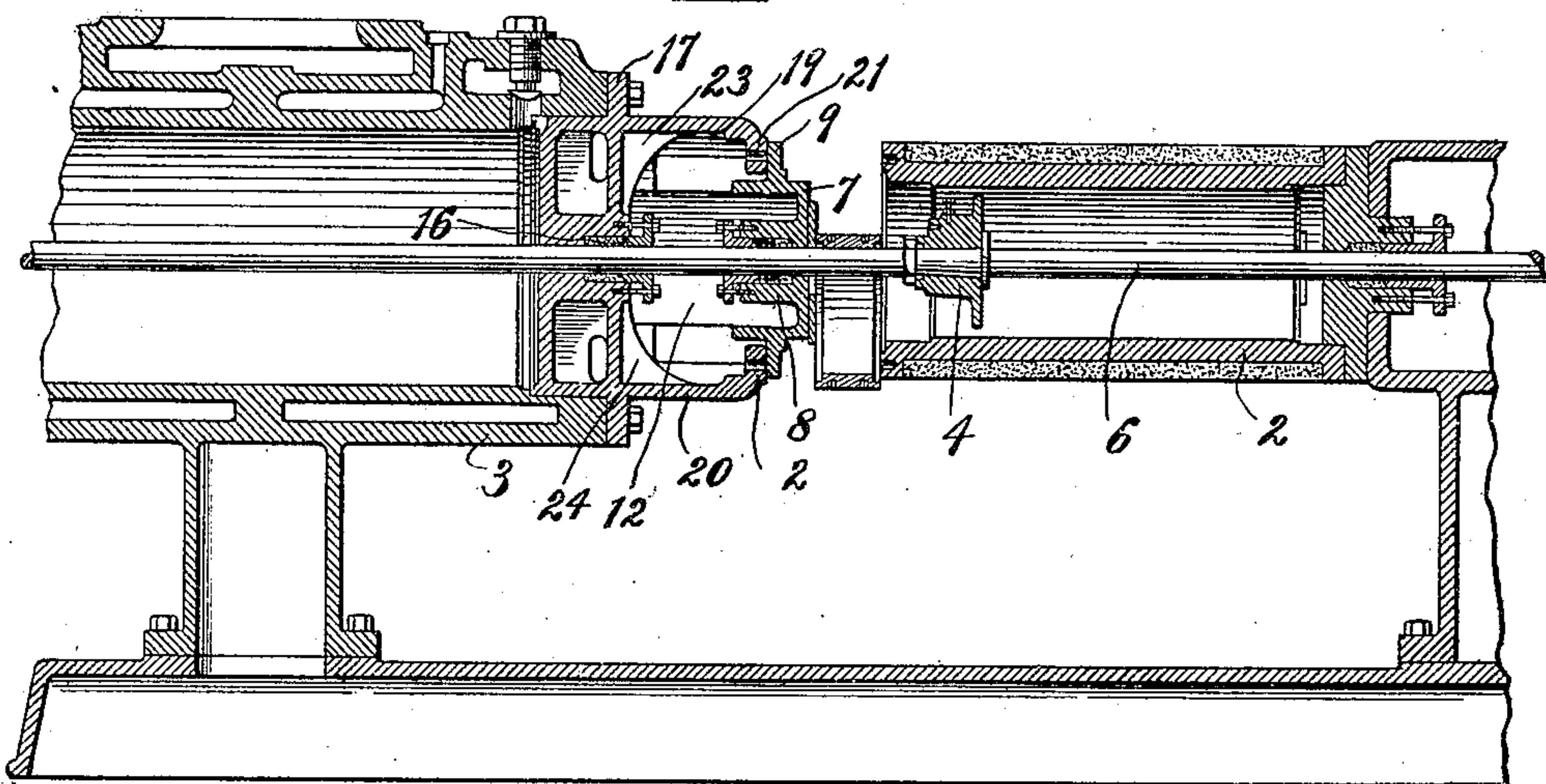


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 3.

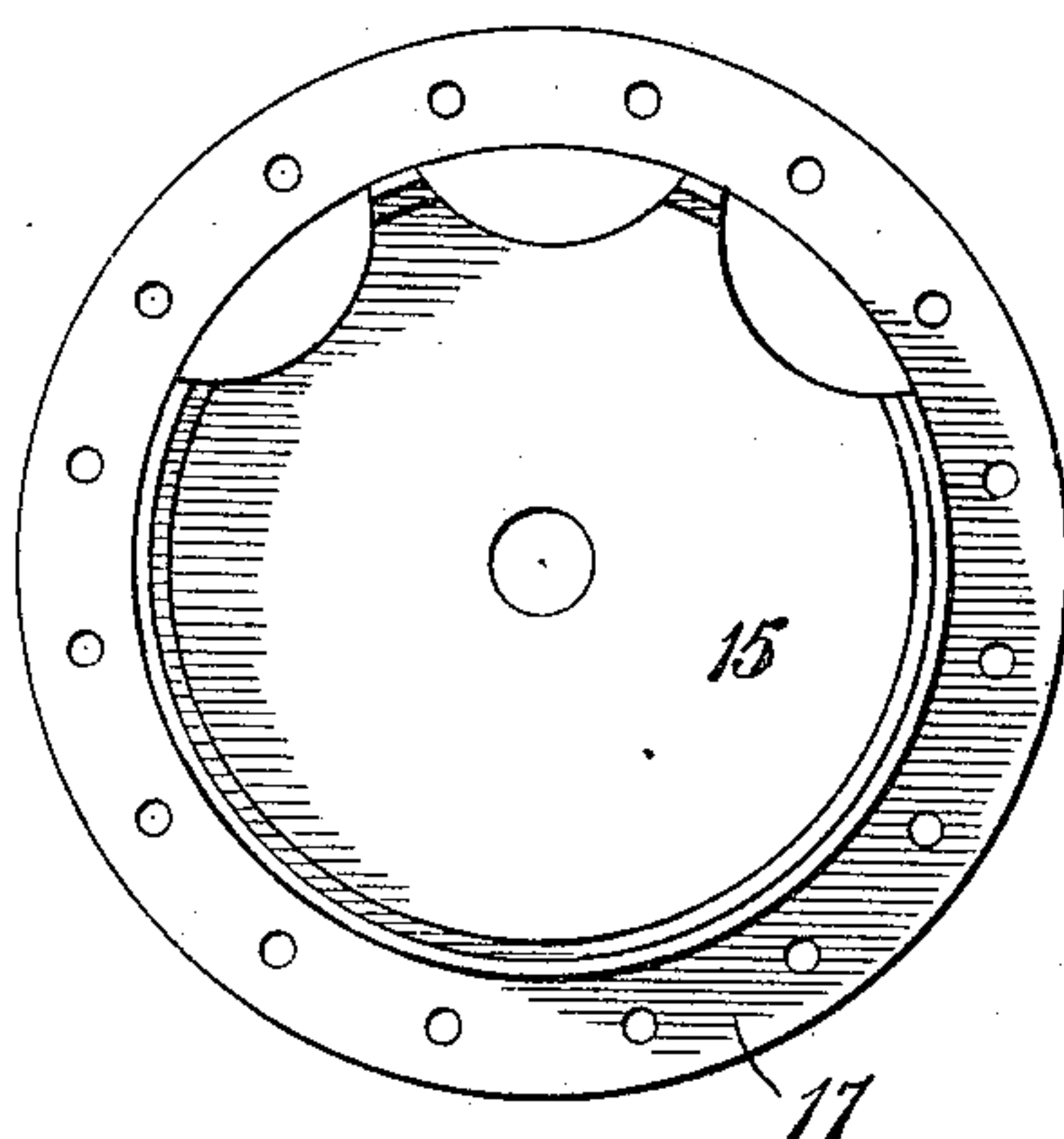


Fig. 4.

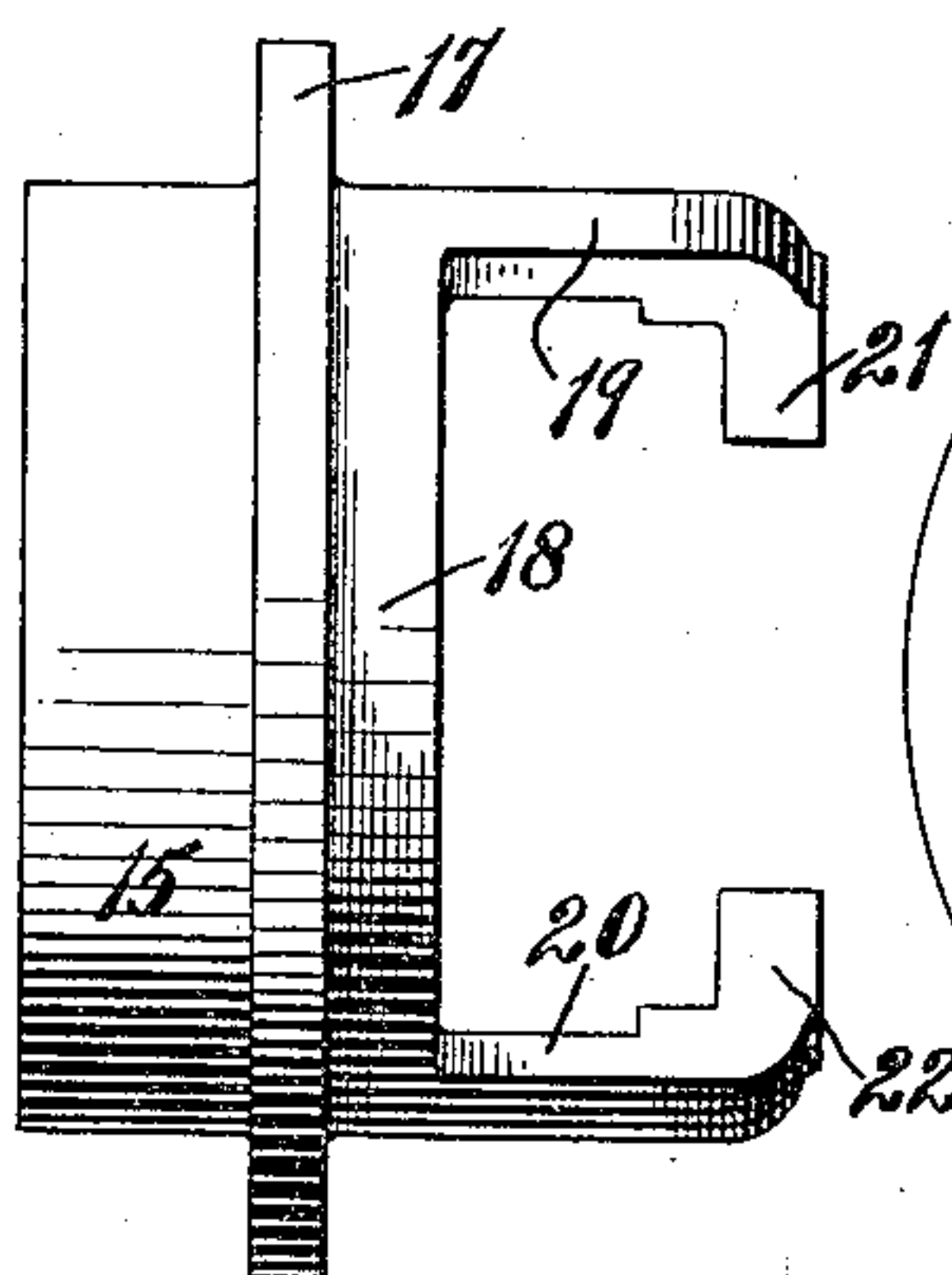


Fig. 5.

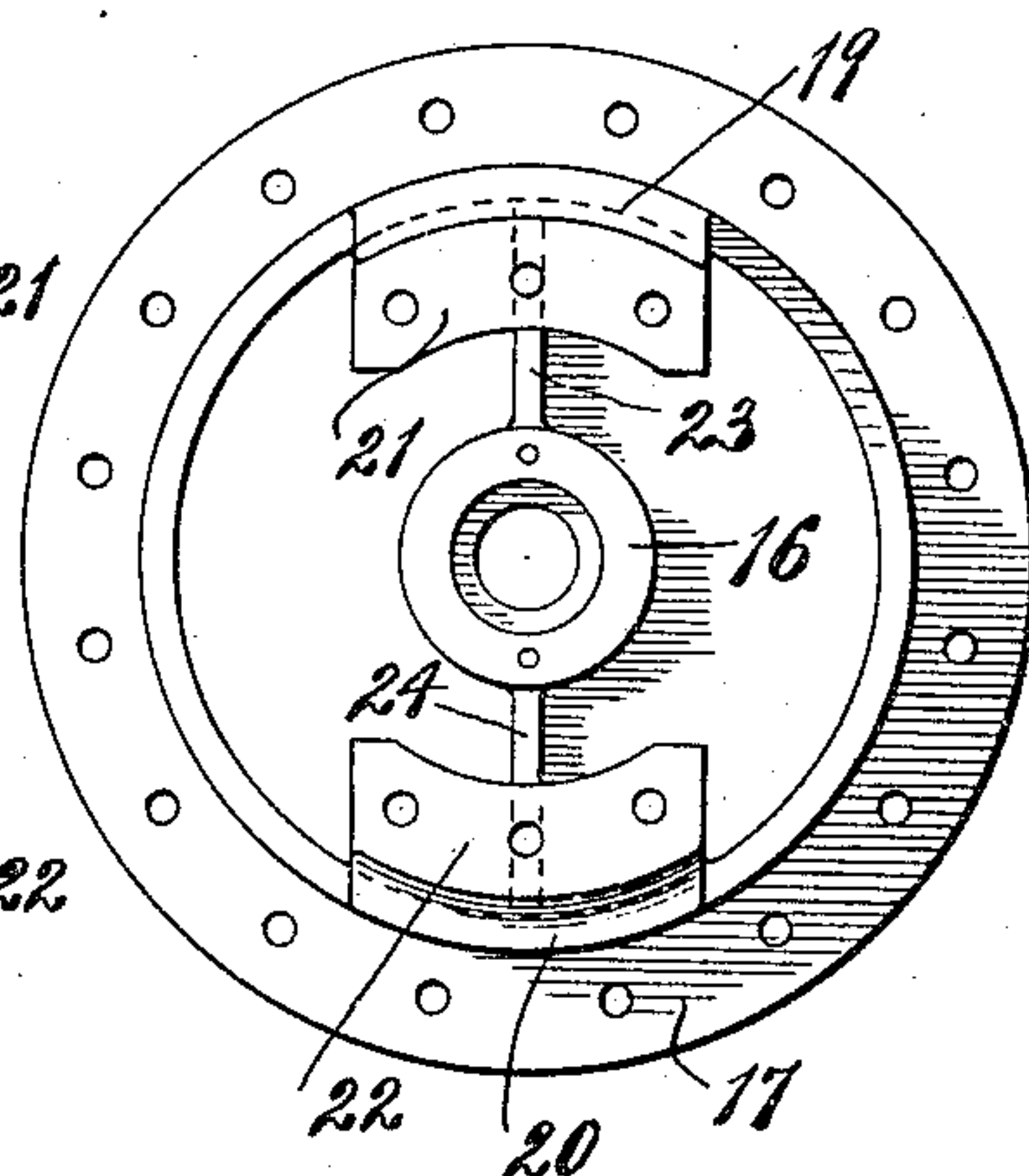


Fig. 6.

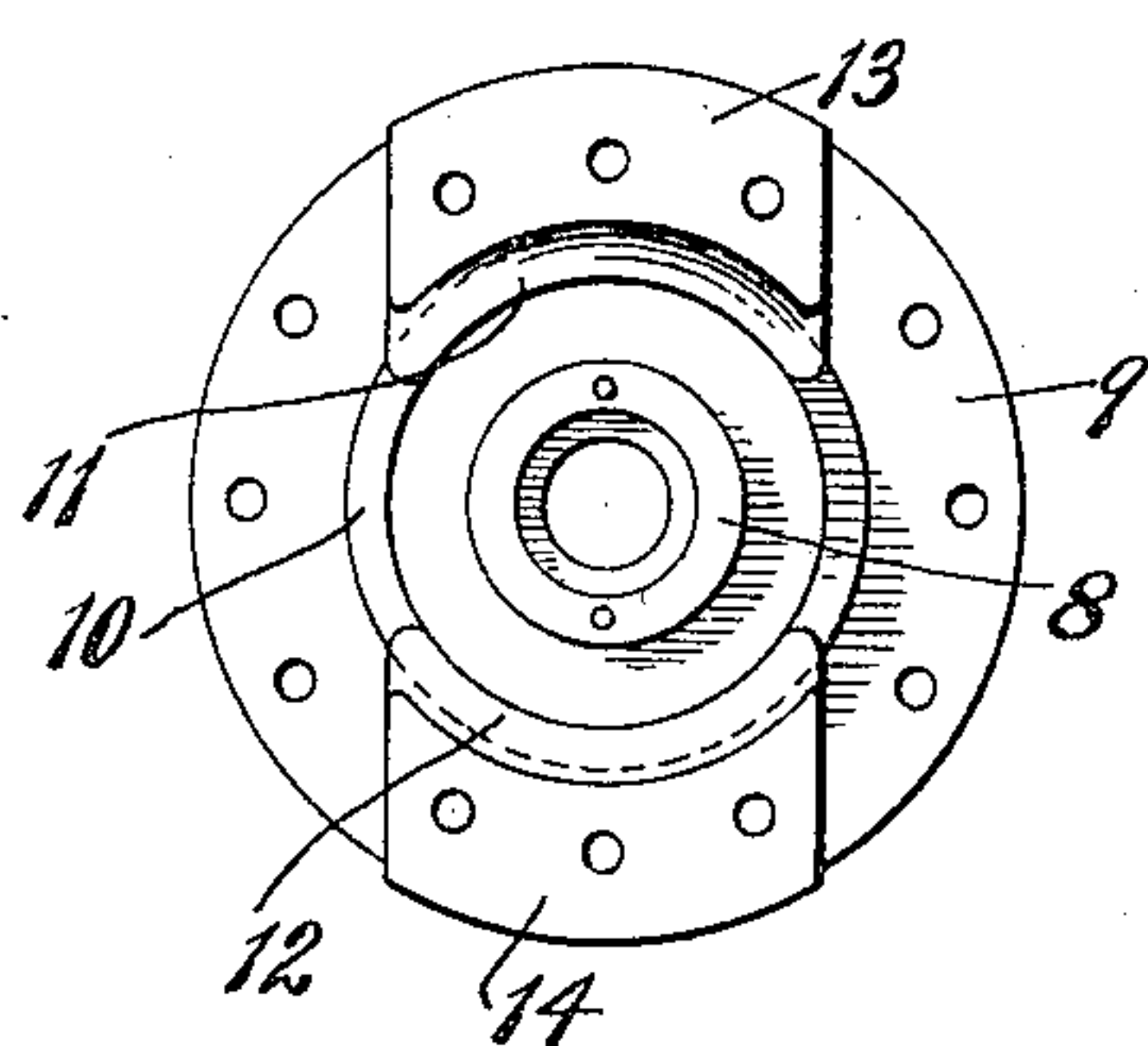


Fig. 7.

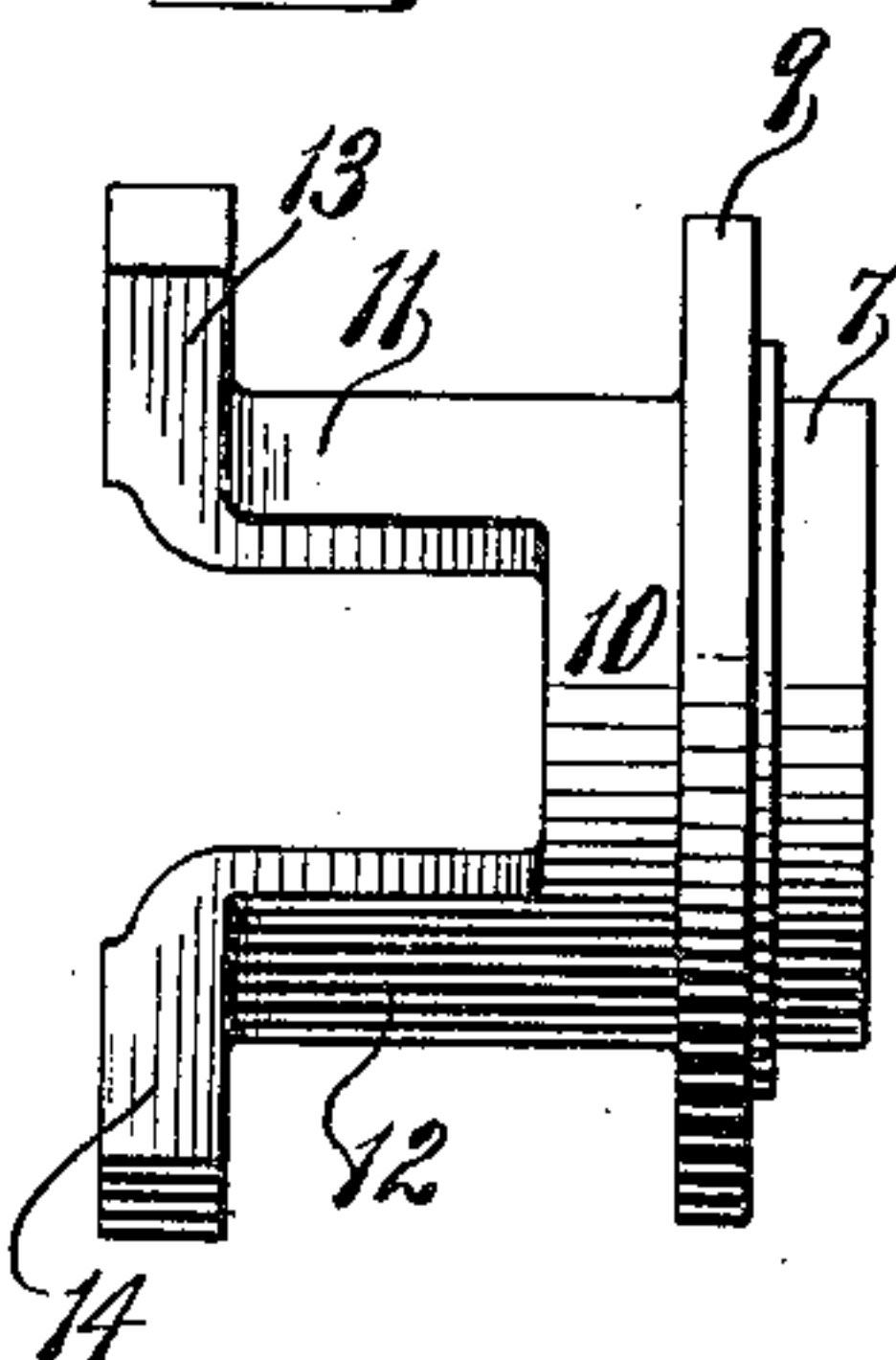
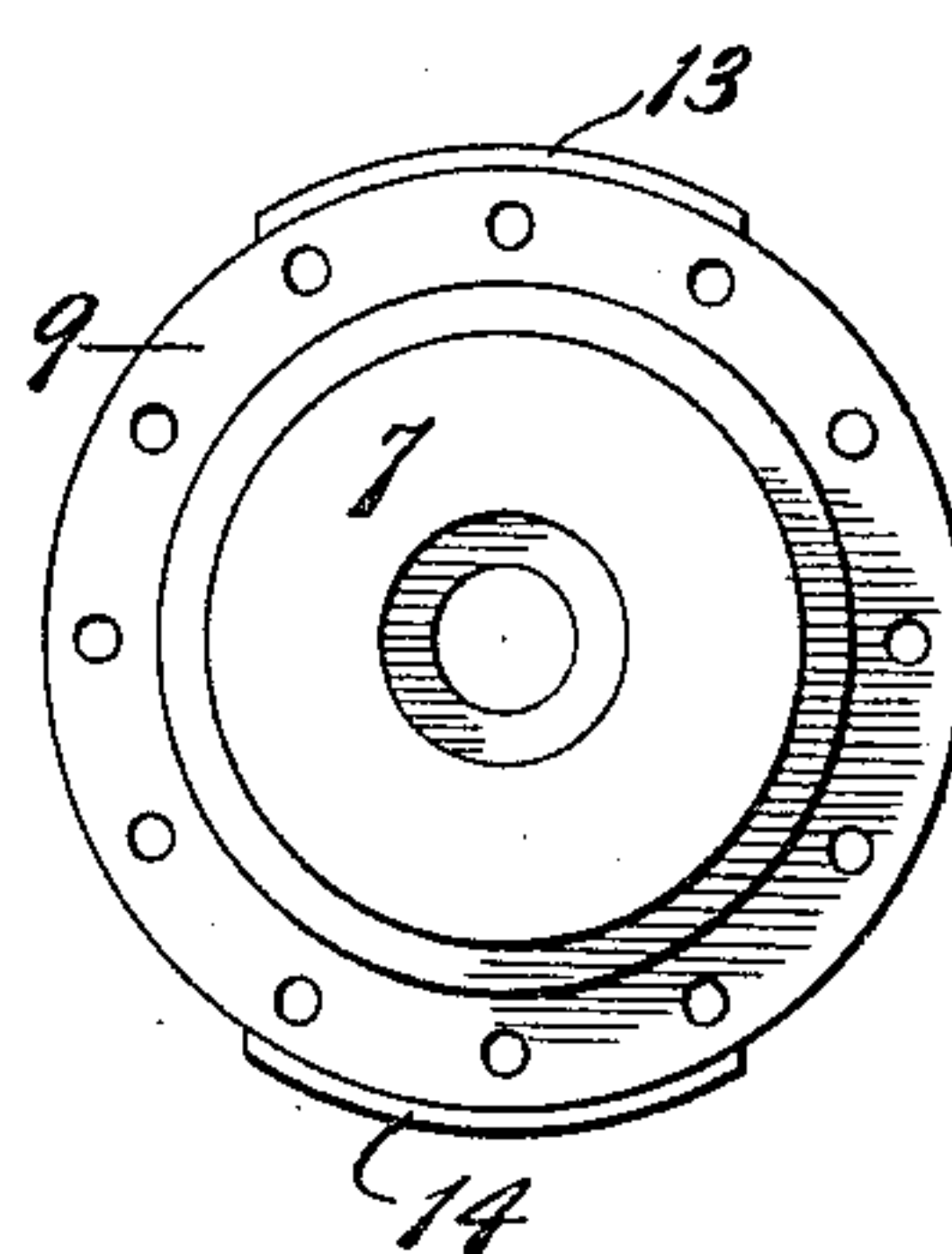


Fig. 8.



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UNITED STATES PATENT OFFICE.

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SEPARABLE HEAD-COUPLING.

No. 810,671.

Specification of Letters Patent.

Patented Jan. 23, 1906.

Application filed March 8, 1905. Serial No. 249,135.

To all whom it may concern:

Be it known that I, WILLIAM PRELLWITZ, a citizen of the United States, and a resident of Easton, in the county of Northampton and State of Pennsylvania, have invented a new and useful Improvement in Separable Head-Couplings for Alined Cylinders, of which the following is a specification.

The object of this invention is to provide a separable head-coupling for alined cylinders, whereby two cylinders may be rigidly secured to each other in alinement at the required distance apart, the coupling being so arranged that the head of one cylinder may be telescoped within the head of the other cylinder for moving the head away from its cylinder to permit the piston to be moved into a position exterior to its cylinder for the purpose of renewing its rings or otherwise repairing the same without disturbing or removing the piston-rod which connects with the pistons in the alined cylinders.

This invention is herein represented as applied to a steam-driven air-compressor and is used for spacing apart and rigidly securing together the steam-cylinder and the air or compression cylinder.

In the accompanying drawings, Figure 1 represents in longitudinal central section a steam-cylinder and a portion of a compression-cylinder with my improved head-coupling applied thereto, the two heads of the coupling being shown secured to their respective cylinders and to each other. Fig. 2 is a similar view showing the steam-cylinder head telescoped within the compression-cylinder head and a portion of the steam-piston head moved into the space between the end of the steam-cylinder and its cylinder-head. Figs. 3, 4, and 5 are inner end, side, and outer end views, respectively, of the compression-cylinder head; and Figs. 6, 7, and 8 are outer end, side, and inner end views, respectively, of the steam-cylinder head.

1 denotes a suitable base upon which are supported the alined steam and compression cylinders 2 and 3.

The steam-piston head is denoted by 4 and the compression-piston head by 5.

The common piston-rod for the two piston-heads 4 and 5 is denoted by 6.

The adjacent ends of the two cylinders 2

and 3 are rigidly secured together and spaced the desired distance apart by my improved separable head-coupling, as follows: The steam-cylinder head is denoted by 7, through which head the rod 6 passes, a suitable packed bearing 8 being provided therefor. This steam-cylinder head 7 is provided with the usual flange 9, by means of which it may be bolted or otherwise secured to the end of the cylinder 2. A shank 10 projects longitudinally from the head 7 and is preferably bifurcated to form two branches 11 and 12, from the free ends of which segmental flanges 13 14 project outwardly in a lateral direction. The compression-cylinder head is denoted by 15, through which head the piston-rod 6 passes, a suitable packed bearing 16 being provided therefor. This head 15 is provided with a suitable flange 17, by means of which the head may be bolted or otherwise secured to the end of the compression-cylinder. This cylinder-head 15 is provided with a shank 18, which projects longitudinally therefrom. This shank is provided with two diametrically opposite branches 19 20, the free ends of which are provided with segmental inwardly-extended laterally-arranged flanges 21 22. The bore of the shank 18 is sufficiently large in diameter to permit the free longitudinal sliding movement therein of the outwardly-projected flanges 13 14 of the steam-cylinder head 7. The branches 19 20 of the shank 18 of the compression-cylinder head are preferably reinforced by interior webs 23 24. The segmental flanges of the two heads are so arranged with respect to each other that they may be brought into overlapping engagement with each other. Bolts or other suitable fastening devices 25 may be employed for removably securing these flanges together. Because of the segmental form of the flanges the two heads may be assembled by inserting the smaller shank into the larger shank with the flanges of the two heads at substantially right angles to each other. One of the heads may then be turned in a rotary direction sufficient to bring the two flanges into engagement with each other. When it is desired to gain access to the steam-piston head, for example, the steam-cylinder head 7 is released from its engagement with the end of the cylinder 2 and from its engagement with the

compression-cylinder head 15. The steam-cylinder head may then be telescoped within the compression-cylinder head. The steam-head may be rotated a slight distance to permit its outwardly-projected flanges to escape contact with the strengthening-webs 23 and 24, and thus be brought into snug engagement with the outer wall of the compression-cylinder head. This will move the steam-cylinder head a sufficient distance away from the steam-cylinder to permit one end plate and the wall of the steam-piston head to be moved out into the space. New piston-packing rings may then be readily placed onto the circumferential wall of the piston-head or the piston-head may be otherwise repaired, as found necessary. It will be seen that all this may be accomplished without disturbing in any particular the relative arrangement of the two cylinders or the piston-rods. This arrangement materially simplifies the structure of air-compressors of this design, the two cylinders being rigidly secured together by the coupling-head when the parts are in operative position.

What I claim is—

1. A separable head-coupling for alined cylinders comprising two cylinder-heads having shanks removably secured together, one of the heads when released being arranged to

permit its shank to telescope within the shank of the other head.

2. A separable head-coupling for alined cylinders comprising two cylinder-heads each having a shank provided with segmental lateral flanges, the flanges of both shanks being removably secured together and arranged to permit the assembling of the heads and the telescoping of one shank within the other when the flanges are released.

3. A separable head-coupling for alined cylinders comprising two cylinder-heads, one head having a shank provided with inwardly-projected segmental lateral flanges and the other head having a shank provided with outwardly-projected segmental lateral flanges, the flanges of both shanks being removably secured together and arranged to permit the assembling of the heads and the telescoping of one shank within the other when the flanges are released.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 6th day of March, 1905.

WILLIAM PRELLWITZ.

Witnesses:

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