

Sept. 11, 1923.

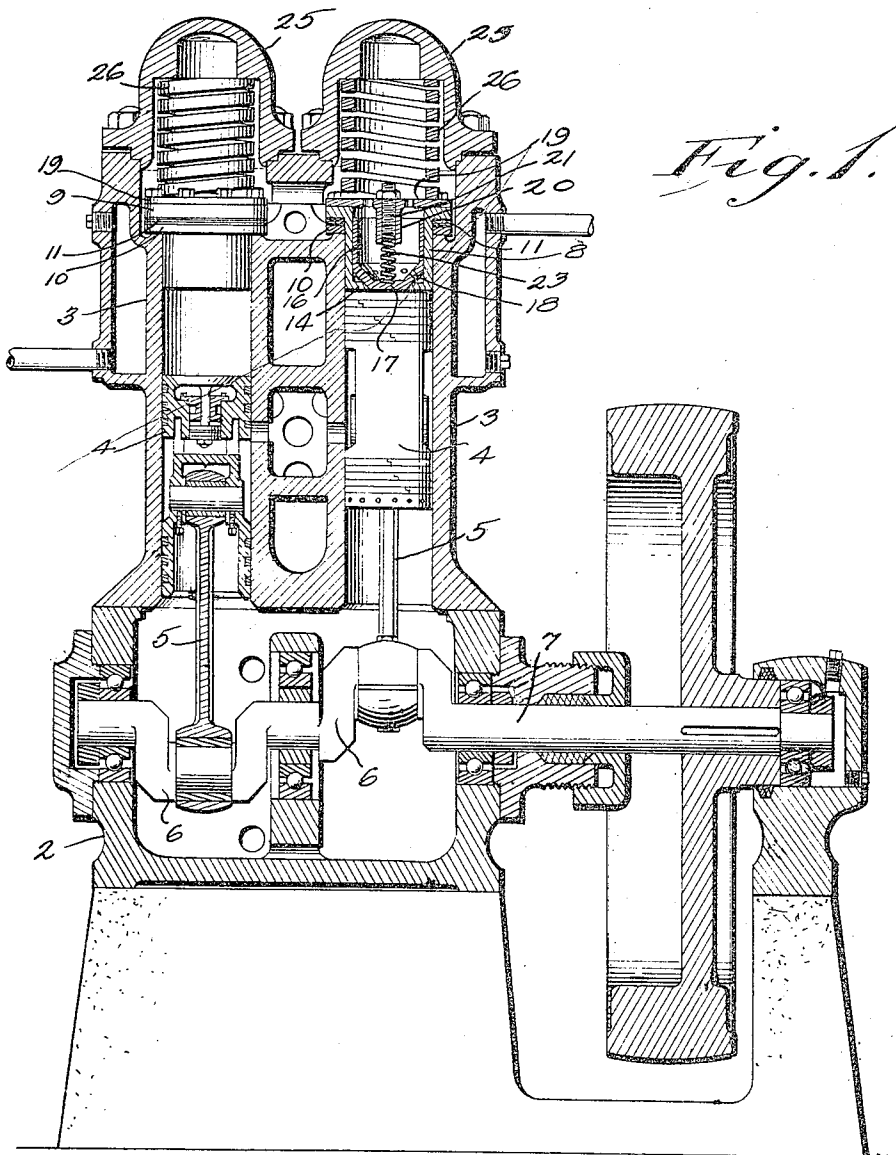
L. W. MEYERS ET AL

1,467,445

FALSE HEAD

Filed March 27, 1922

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 2.

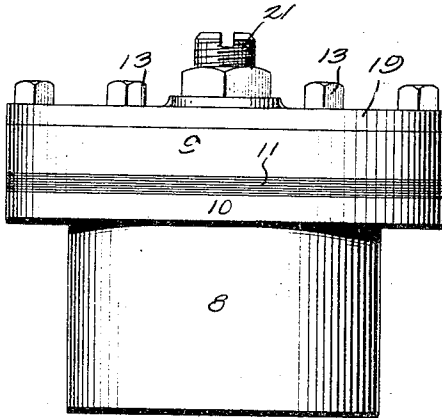


Fig. 3.

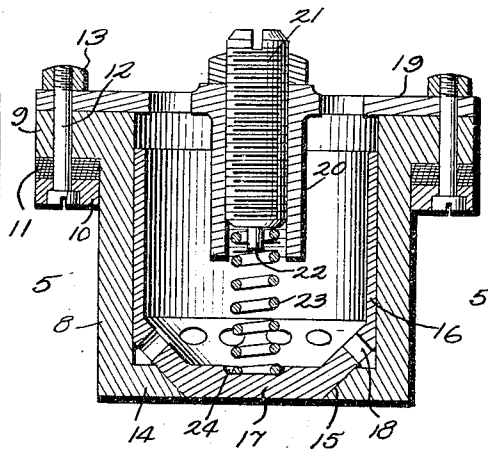
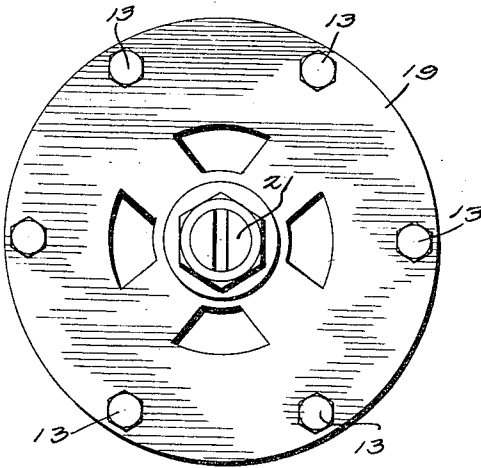


Fig. 4.

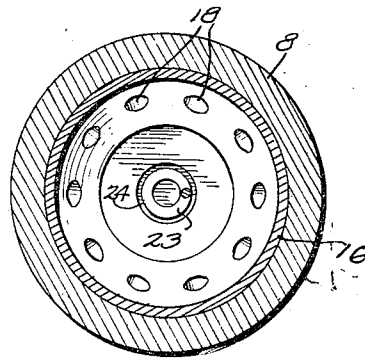


Fig. 5.

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UNITED STATES PATENT OFFICE.

LOUIS W. MEYERS AND HARRY F. DEMKE, OF CHICAGO, ILLINOIS.

FALSE HEAD.

Application filed March 27, 1922. Serial No. 547,189.

To all whom it may concern:

Be it known that we, LOUIS W. MEYERS and HARRY F. DEMKE, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in False Heads, of which the following is a specification.

This invention relates to false heads for compressors, and it comprises a head adapted to fit into the end of a cylinder, means for adjusting the position of the head, a valve carried thereby, and a spring for retaining the valve in closed position when the pressure in the cylinder is below a predetermined limit.

An object of the invention is the provision of a false head which may be adjusted to obtain a given maximum pressure and to compensate for wear in the bearings of the compressor and other parts of the machinery.

A further object is the provision of a ring seat for the false head machined to fit the cylinder and adapted to receive shims to permit adjustment of the position of the head within the cylinder.

A further object is the provision of a spring-pressed valve, and means for varying the tension of the spring.

In the accompanying drawings, we have shown one embodiment of the invention. In this showing:

Figure 1 is a vertical sectional view of a compressor showing the head applied,

Figure 2 is a front elevation of the head removed,

Figure 3 is a vertical sectional view,

Figure 4 is a plan view, and,

Figure 5 is a detail sectional view on line 5-5 of Figure 3.

Referring to the drawings, the reference numeral 1 designates a base or foundation, and 2 the crank case of a compressor. The compressor comprises a plurality of cylinders 3, having pistons 4 arranged therein. The pistons are provided with piston rods 5, which are secured to crank portions 6 of a main shaft 7. Any suitable drive mechanism is employed to revolve the shaft and reciprocate the pistons in the cylinder. The fluid to be compressed is admitted to the cylinder and removed therefrom in any desired manner. As the construction of the compressor per se, forms no part of the

present invention, a further detail description thereof is deemed unnecessary.

The false head forming the present invention consists of a cylindrical body 8 which is adapted to fit in the upper end of the cylinder and is provided with an annular flange 9 at its upper end. A seat ring 10 is arranged on the cylinder, the seat ring being arranged to fit the cylinder and prevent leakage. Shims 11 may be arranged between the seat ring and the flange 9 to position the body portion 8 in the head of the cylinder, as desired. Bolts 12 are passed through the seat ring and the flange and are provided with nuts 13. The lower end of the false head is partially closed by a plate 14 having a central opening. As shown, the walls of the opening are inclined, as at 15. A sleeve 16 is arranged within the false head and this sleeve is provided with a lower end 17, shaped to fit the inclined wall 15. The end of the sleeve is provided with a plurality of openings 18. A supporting plate 19 is arranged on the outer end of the false head and this plate carries a threaded sleeve or hub 20. A screw or bolt 21 is mounted therein, the lower end of the bolt being provided with a pin 22 projecting therefrom. A spring 23 is arranged around the pin and the other end of the spring is received in a depression 24 in the bottom of the sleeve.

Referring to Figure 1 of the drawings, the false head is arranged in position and a cover 25 is placed over the head of the cylinder. A spring 26 is then arranged between the cover and the false head.

In operation, the false head is arranged in the cylinder in the manner described and the bolt 21 is adjusted to place the spring 23 under the desired tension. When the pressure in the cylinder exceeds the desired limit, the sleeve 16 is forced upwardly, permitting the gases to pass through the openings 18 to the interior of the sleeve and thence through openings in the plate 19. The tension of the spring may be adjusted as desired, by means of bolt 21.

When the compressor becomes worn, due to play in the bearings, the clearance between the piston on its up-stroke and the false head becomes too great, one or more of the shims 11 may be removed to adjust the position of the false head. Similarly, if a machine as constructed does not provide

sufficient clearance, shims may be inserted to raise the false head from the piston.

It is to be understood that the form of our invention herewith shown and described is to be taken as a preferred example of the same, and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

Having thus described our invention, we claim:

1. A false head comprising a cylindrical body member having an opening in its lower end, a valve normally closing said opening, the upper end of said false head being provided with an annular flange adapted to rest upon the walls of the cylinder, and

means for adjusting said false head longitudinally of the cylinder.

2. A false head comprising a cylindrical body member adapted to be received within a cylinder, said member being provided with an opening in its lower end, yielding means for closing said opening, the upper end of said member being provided with an annular flange, a ring adapted to be arranged on said cylinder, and shims arranged between said ring and said flange.

In testimony whereof we affix our signatures in presence of two witnesses.

LOUIS W. MEYERS.
HARRY F. DEMKE.

Witnesses:

JOHN AIGNER,
FRANK X. ZETTE.