

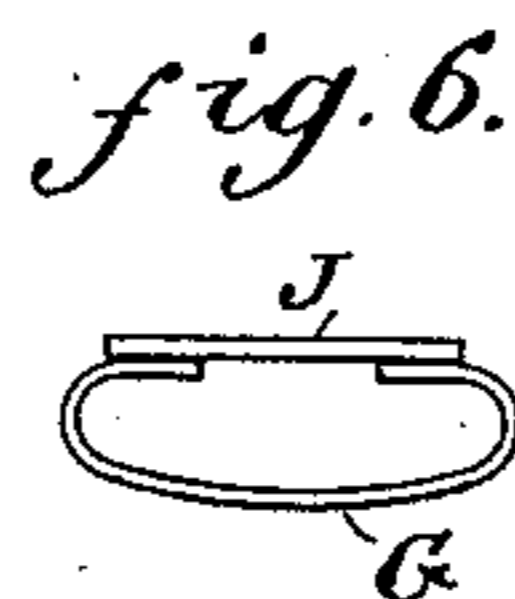
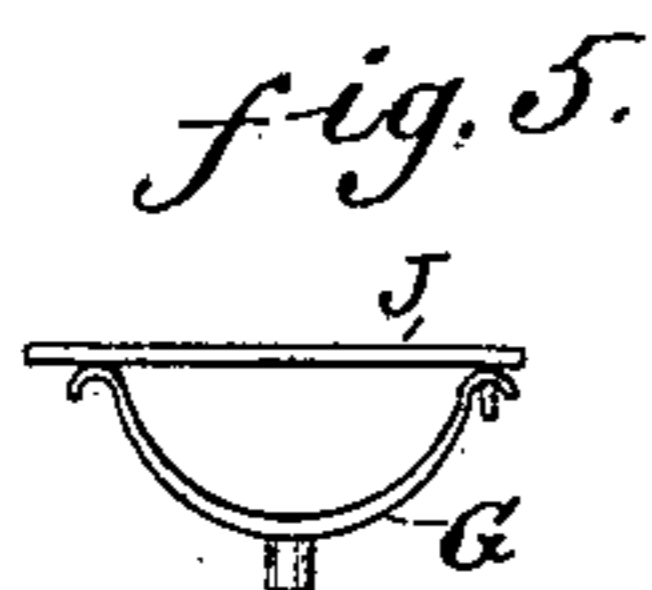
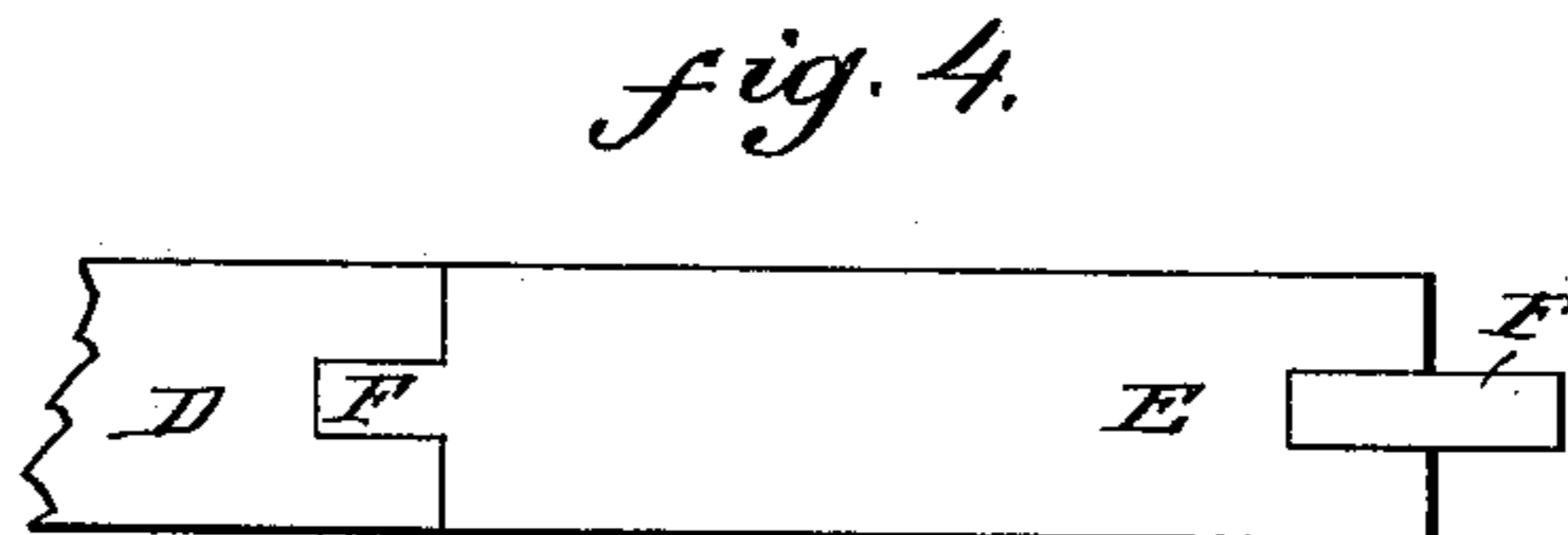
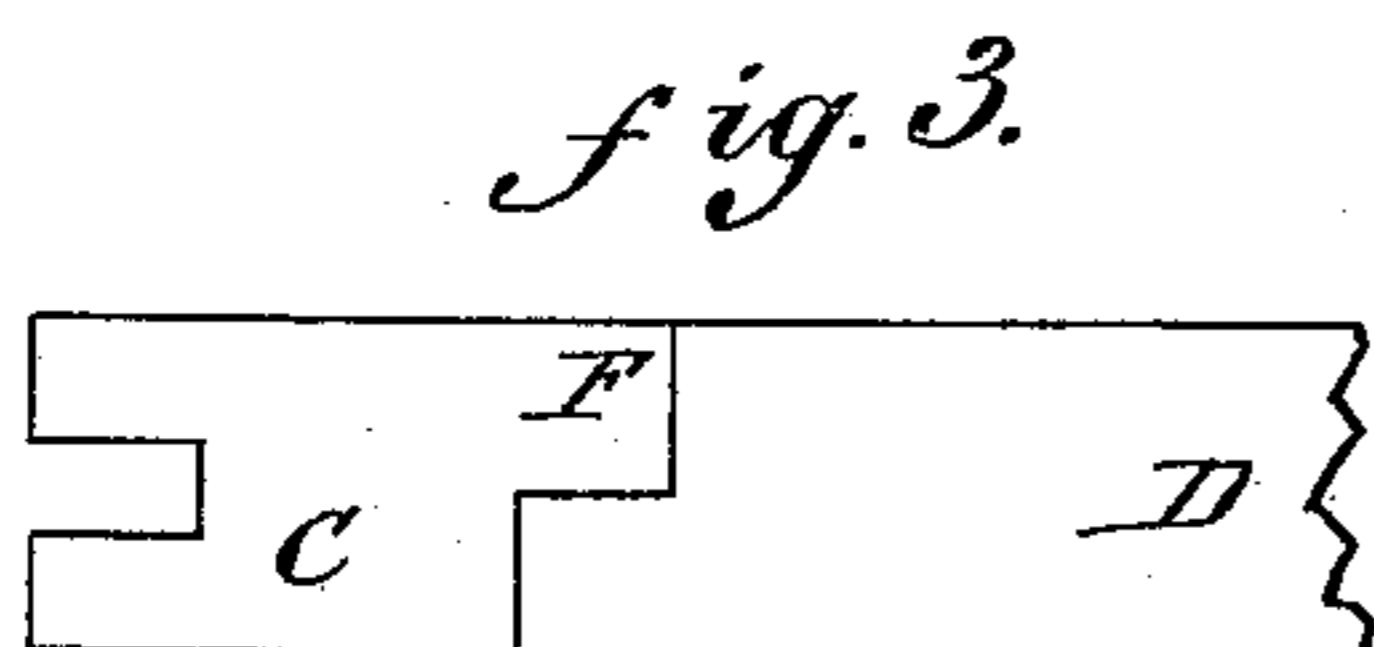
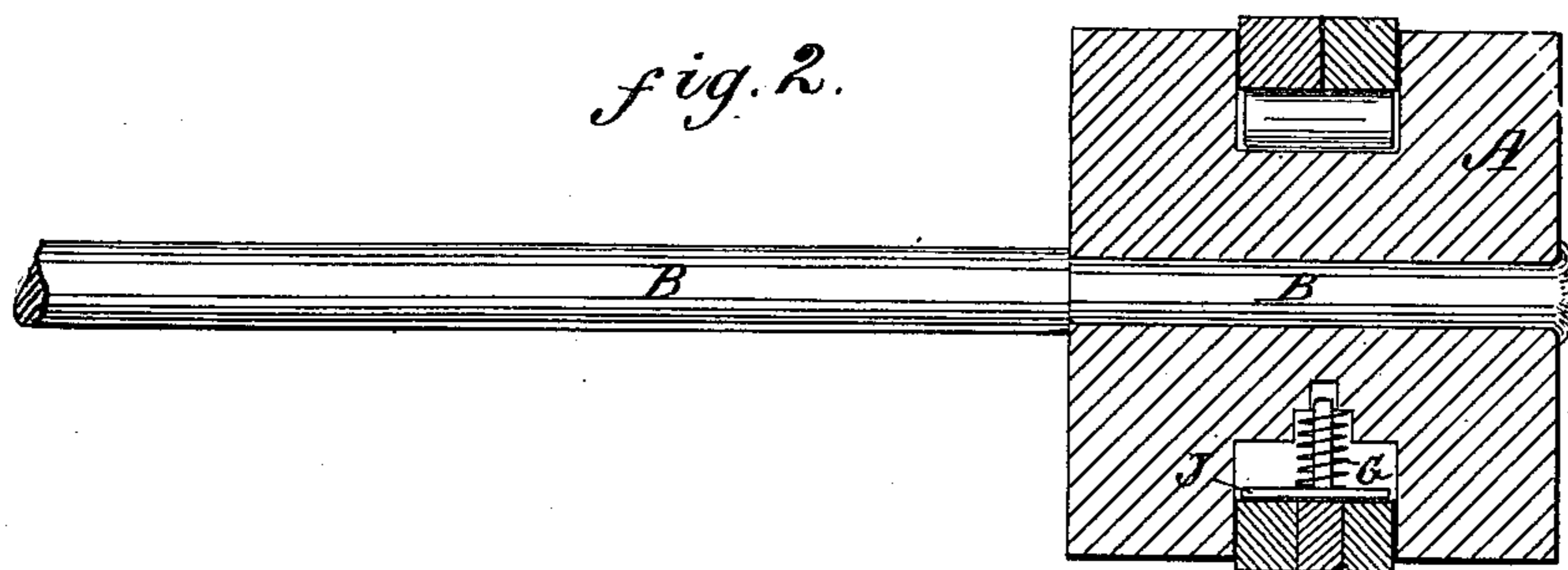
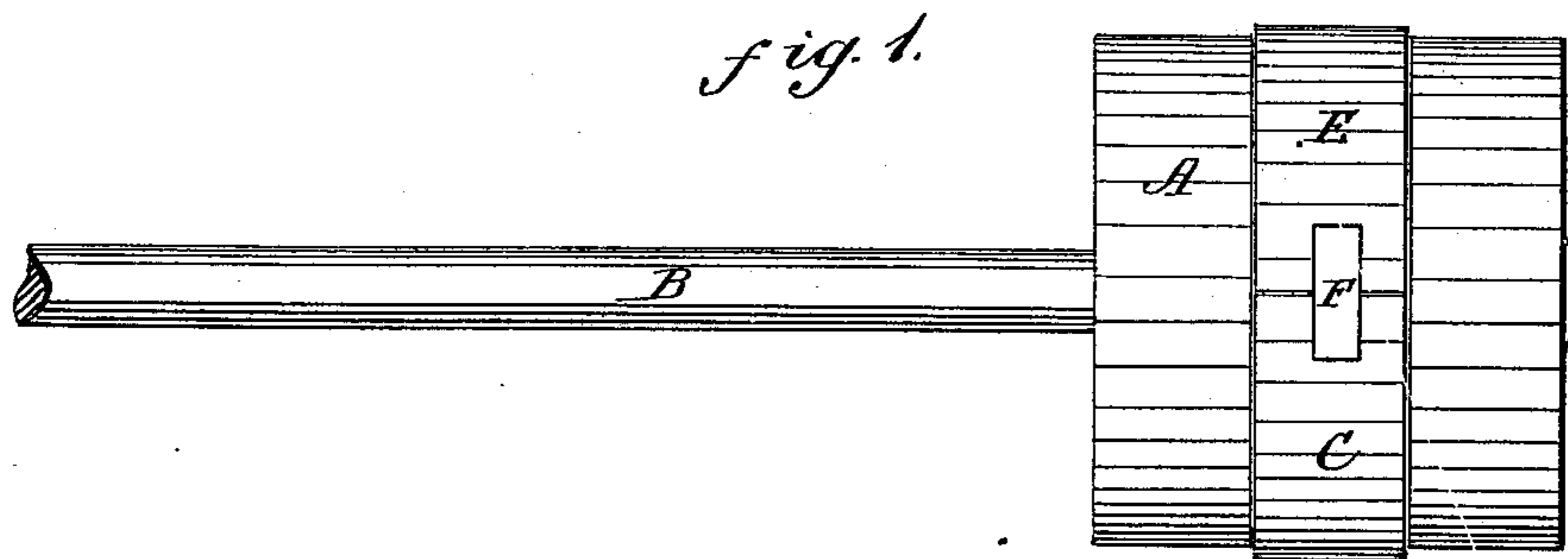
(No Model.)

W. C. McTYEIRE.

PISTON PACKING.

No. 329,665.

Patented Nov. 3, 1885.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM CAPERS McTYEIRE, OF HATCHECHUBBEE, ALABAMA.

PISTON-PACKING.

SPECIFICATION forming part of Letters Patent No. 329,665, dated November 3, 1885.

Application filed January 22, 1885. Serial No. 153,616. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. McTYEIRE, a citizen of the United States, residing at Hatchechubbee, in the county of Russell and State of Alabama, have invented certain new and useful Improvements in Piston-Packings, of which the following is a description.

This invention relates to that class of devices which are placed around pistons to prevent the passage of steam between piston and cylinder; and it has for its object to provide means whereby a piston-packing shall adapt itself to the wear of the cylinder, so as to always form a steam-tight joint, and means for stopping the passage of steam between the joints of the packing.

To this end my invention consists in the construction and combination of parts forming a piston-packing, hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my invention. Fig. 2 is a longitudinal vertical section of the same. Figs. 3 and 4 are detail views of modifications of the joint, and Figs. 5 and 6 show modifications of the spring.

A represents the head of the piston, consisting of a solid piece of metal grooved around its center to receive the packing, and bored through its center longitudinally to receive the piston-rod. The piston-rod B is provided with a shoulder at one end of the piston-head, and it is headed over the piston-head at the other end by riveting with a hammer, so that the head and rod become one and inseparable. I make the packing in segments C D E, first, because that a whole ring could not be put into the groove in the piston-head; and, secondly, in order that the packing may expand and contract from the effects of heat and cold to maintain a tight joint at all times. The joints between the different segments are stopped, to prevent the passage of steam through them, by a cross-bar, F, which may be made in different ways. That which I prefer is shown in Fig. 1, in which a perfect ring is first made, and then sawed into the desired number of segments by plane radial cuts. These segments are then slotted in their ends in a plane at right angles to the axis of the cylinder, and the bars F fitted to these slots to cut off any passage for steam between the ends of the segments.

In the modifications shown in Figs. 3 and 4 a splice or lap joint is made by extending a portion of each segment across the joint to form the bar F, fitting them neatly to each other, and afterward turning the made-up ring to the internal diameter of the cylinder and to fit the groove in the piston. Beneath the segments I place springs G, to press them radially toward the cylinder, to keep them in contact therewith and preserve a steam-tight joint at all times. These springs may be of any suitable form, as shown in the different modifications.

Fig. 2 represents a spiral spring, Fig. 5 a semi-elliptic spring, and Fig. 6 a nearly elliptic spring joined at the ends by a presser-plate, J. The object of this presser-plate is to enable the spring of whichever pattern may be used to bear equally beneath the ends of two adjacent segments, so as to keep both forced alike against the cylinder, and at the same time to lie as a steam-check directly beneath the joint, to prevent the steam from passing around beneath the edge of the splice.

Heretofore pistons have been made having bodies cast in a single piece with an annular groove in their edges. Sectional rings have been placed in the said grooves and supported by springs. Ring-sections for pistons have also been connected by interengaging tongue-joints, and I therefore do not claim such constructions singly; but

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

The improvement in pistons, substantially as herein described, consisting of the body formed in a single piece provided with an annular peripheral groove, the ring seated in the annular groove and made in sections, the ends of which are formed parallel with the line of motion of the piston, and are connected by interlapping tongue-joints, and springs held within the groove of the body and engaging the ring-sections directly below the joints of the said sections, all arranged substantially as and for the purposes specified.

WILLIAM CAPERS McTYEIRE.

Witnesses:

D. V. GLENN,
W. E. STORK.