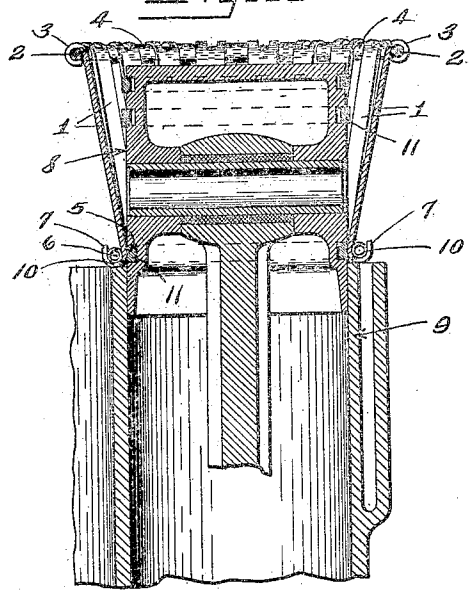
G. B. CADY.

DEVICE FOR PLACING PISTONS HAVING RINGS IN CYLINDERS.

APPLICATION FILED MAR. 22, 1920.

1,425,075. Patented Aug. 8, 1922.

Fig. 1.



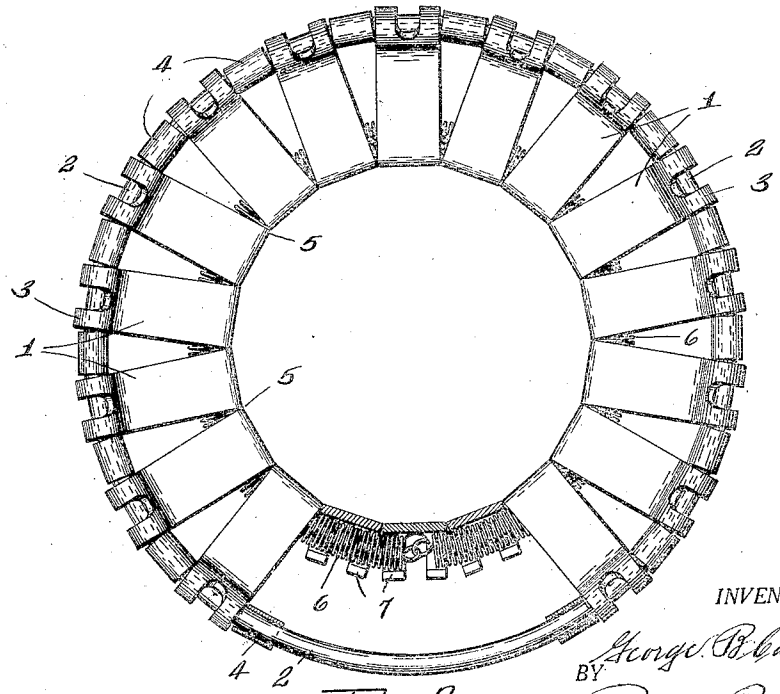


Fig. 2.

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DEVICE FOR PLACING PISTONS HAVING RINGS IN CYLINDERS.

1,425,075. Specification of Letters Patent. Patented Aug. 8, 1922.

Application filed March 22, 1920. Serial No. 367,860.

To all whom it may concern:

Be it known that I, GEORGE B. CADY, a citizen of the United States, and a resident of Canastota, in the county of Madison and State of New York, have invented a certain new and useful Device for Placing Pistons Having Rings in Cylinders, of which the following is a specification.

This invention has for its object a device for placing pistons having rings in cylinders, which is particularly simple in construction, highly efficient, durable and rapid in operation, and which is usable with different boxes. The invention consists in the novel features and in the combinations and constructions hereinafter described and claimed.

In describing this invention, reference is had to the accompanying drawings in which like characters designate corresponding parts in all the views.

Figure 1 is a vertical sectional view of this device showing the operation thereof in connection with a piston and cylinder which are shown in section.

Figure 2 is a plan view, partly in section.

This device comprises an expansible and contractible guide for the piston and means for contracting it on the piston so that, as the piston is forced through the guide, the device will contract the piston rings into a circle of substantially the same radius as the piston in order that the rings may pass into the cylinder. The guide is for convenience called a funnel as it is preferably conical or in the form of a truncated cone.

In the illustrated form of my invention, the wall of the funnel comprises lengthwise sections mounted to move radially in order to conform to pistons of different sizes, and means is provided to contract them onto the piston and to contract the piston rings.

1 designates the lengthwise sections which are metal slats pivoted or hinged at their upper ends to a substantially rigid ring 2 at the large end of the funnel, they being here shown as having eyes or rolls 3 at their upper ends for receiving the ring which is round in cross section. Said slats are spaced apart at their upper ends by spacers 4 on the ring and converge toward the small end of the funnel to form a continuous or substantially continuous bearing face at 5 for engaging the piston rings.

The means for contracting the guide or funnel or the slats or sections 1 thereof is preferably yielding and comprises an annular, coiled spring 6 encircling the small end of the funnel and lying in channels at the lower ends of the slats formed by turning or rolling the lower ends of the slats outwardly and upwardly as at 7.

In operation, the piston 8 is placed in the guide or funnel with one end portion projecting beyond the small end of the funnel, and then the projecting end of the piston inserted in one end of the cylinder 9. The small end of the funnel abutting against the upper or lower end edge of the cylinder wall at 10. The piston is then passed through the funnel, the funnel contracting the piston rings 11 to the circle of the piston or cylinder bore as the rings pass through the small end of the cylinder.

This device can be used to insert pistons at either end of the cylinder and is particularly advantageous in that the same guide or funnel can be used without manual adjustment for different sizes of pistons and cylinder bores and further in that the piston can be inserted instantly.

What I claim is:

1. A device for placing pistons having rings in cylinders comprising a funnel having lengthwisely extending sections pivoted at their upper ends so that their lower ends at the small end of the funnel can swing radially to expand and contract to conform to the periphery of the piston, and means for contracting the sections, substantially as and for the purpose described.

2. A device for placing pistons having rings in cylinders comprising a funnel having lengthwisely extending sections pivoted at their upper ends so that their lower ends at the small end of the funnel can swing radially to expand and contract to conform to the periphery of the piston, and yielding means for contracting the sections, substantially as and for the purpose set forth.

3. A device for placing pistons having rings in cylinders comprising a funnel having lengthwisely extending sections pivoted at their upper ends so that their lower ends at the small end of the funnel can swing radially to expand and contract to conform to the periphery of the piston, and a spring encircling the sections to contract the same and the piston rings as the piston is moved through the funnel, substantially as and for the purpose specified.

4. A device for placing pistons having rings in cylinders comprising a funnel in-

cluding a frame in the form of a ring at the large end of the funnel, a sectional wall including lengthwise slats pivotally mounted at their upper ends in the ring to swing radially whereby the lower portion of said sectional wall can conform, expand and contract to the piston, and means for contracting the sections, substantially as and for the purpose described.

5. A device for placing pistons having rings in cylinders comprising a funnel including a frame in the form of a ring at the large end of the funnel, a sectional wall including lengthwise slats pivotally mounted at their upper ends in the ring to swing radially whereby the lower portion of said sectional wall can conform, expand and contract to the piston, and a spring encircling the lower ends of the sections, substantially as and for the purpose specified.

In testimony whereof, I have hereunto signed my name at Syracuse, in the county of Onondaga, and State of New York, this 11th day of March, 1920.

GEORGE B. CADY.