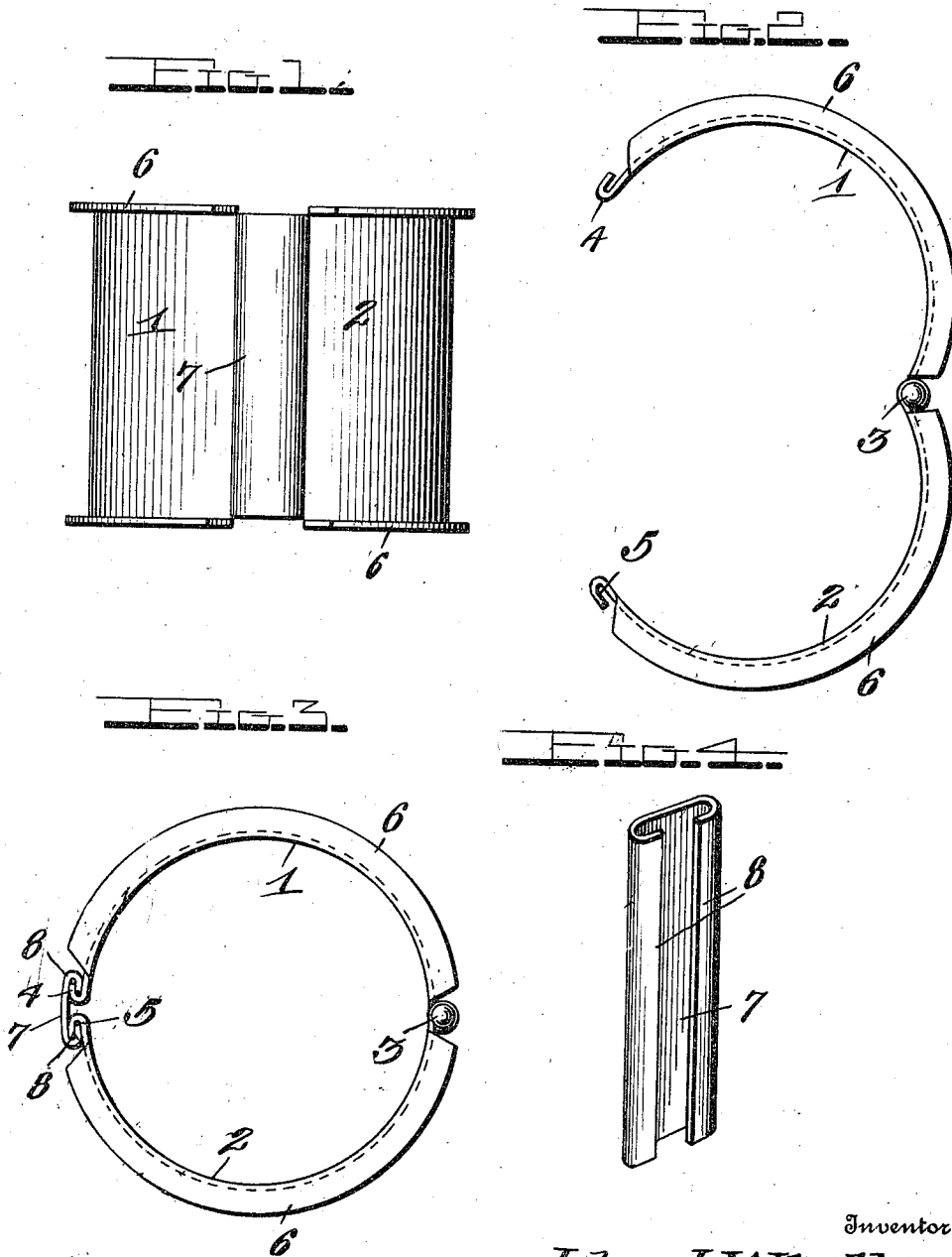


J. J. WHITTY.
COLLAR FOR PISTON RINGS.
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1,013,349.

Patented Jan. 2, 1912.



Witnesses

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JOHN J. WHITTY, OF NEWPORT, RHODE ISLAND.

COLLAR FOR PISTON-RINGS.

1,013,349.

Specification of Letters Patent.

Patented Jan. 2, 1912.

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To all whom it may concern:

Be it known that I, JOHN J. WHITTY, a citizen of the United States, residing at Newport, in the county of Newport and State of Rhode Island, have invented certain new and useful Improvements in Collars for Piston-Rings, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to new and useful improvements in means for retaining piston rings in position to be readily inserted in a cylinder and more particularly to a collar for piston rings, and my object is to provide a device of this character which may be securely clamped about a piston head to retain said rings in position thereon, while the same are being inserted within the cylinder.

A further object of the invention resides in providing a collar formed in sections hinged one to the other, and a still further object resides in providing means to lock the sections of the collar together.

Still another object of the invention resides in providing locking flanges on the free ends of the sections of said collar which are adapted to be engaged by a gripping member to retain the collar in its locked position.

With these and other objects in view, my invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claims.

In the accompanying drawing forming a part of this application, Figure 1 is a front elevation of the device in locked position. Fig. 2 is a top plan view showing the sections of the device outspread or unlocked. Fig. 3 is a top plan view thereof showing the sections in closed position, and, Fig. 4 is a detail perspective of the gripping or locking member.

In describing my invention, I shall refer to the drawing in which similar reference characters designate corresponding parts throughout the several views and in which 1 and 2 indicate, respectively, the sections of the device, which sections are arcuate in cross section and when properly brought together, form a substantially cylindrical member or collar. These sections 1 and 2 are hingedly secured to one another at one of their ends by means of the hinge 3, the

sections of said hinge being formed from the edges of said sections 1 and 2, and the free ends of said sections 1 and 2 are bent backwardly on their outer faces to form the locking flanges 4 and 5, respectively, said locking flanges extending the full height of the sections. The edges of said sections are bent between the hinge 3 and the locking flanges 4 and 5 to form the laterally extending flanges 6, the purpose of which will be hereinafter and more particularly described, and in order to secure the free ends of said sections together, I provide a locking or gripping member 7, which member comprises a strip the height of the sections and has its side edges bent inwardly toward one another to form the locking flanges 8. Thus, when it is desired to secure the sections of the device together, said gripping member 7 is applied thereto so that the locking flanges 8 interlock with the locking flanges 4 and 5 of said sections and a substantially cylindrical collar will be formed.

It is a well known fact that in overhauling an internal combustion engine, it is a difficult matter to replace the piston head with the rings thereon, within the cylinder after the same has been once removed, as each ring must be compressed separately, which requires considerable time and labor. With a device such as I have invented, however, the rings may be properly positioned on the piston head and this collar, the inner diameter of which, when formed, is substantially equal to or a fraction less than the inner diameter of the cylinder, applied about the rings on said piston head and clamped. The cylinder may then be brought into engagement with the collar so that the flanges 6 thereof contact with the edges of said cylinder, whereupon force may be applied to cause the piston with the rings thereon to be introduced within said cylinder. As such force is applied, the piston head with the rings thereon, will slide through the collar and enter the cylinder, whereupon when the last ring has entered said cylinder, the gripping member 7 may be removed from the sections of the collar and the same removed from its encircled position about the piston rod and head. This act may be accomplished with a considerable saving of time and labor.

From the foregoing, it will be seen that I have provided means for clamping piston

rings to the head, whereby said head and piston rings may be readily introduced within a cylinder.

It will still further be seen that this device comprises a pair of arcuate sections hinged one to the other and provided with locking flanges on their free ends, said locking flanges being adapted to be interlocked with similar flanges on a gripping member. It will still further be seen that flanges are provided on the edges of said sections of the device, which latter flanges are adapted to engage the edges of the cylinder, whereby the piston head with the rings, may be forced from the collar to a point within said cylinder.

It will still further be seen that my device is of extremely simple construction, whereby the same may be readily and cheaply manufactured, and one which is durable, effective and useful in operation.

Although I have described the various features of my device, it will be understood that various changes in form, proportion and in the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the principles of the invention.

What I claim is:—

1. In a device of the class described, the combination with a collar formed in sections and hinged one to the other, the free ends of

said sections being provided with locking flanges, and a gripping member provided with similar flanges adapted to engage said other flanges and lock the sections together.

2. A device of the class described, comprising a collar formed in sections and hinged one to the other, said sections being provided on their edges with laterally extending flanges and having their free ends provided with locking flanges, and a gripping member provided with similar flanges adapted to interlock said other flanges and secure said sections together.

3. A device of the class described, comprising a collar formed in sections and hinged one to the other, the free ends of said sections having oppositely bent flanges thereon, a gripping member having flanges thereon adapted to engage the flanges of said collar, and laterally extending flanges formed on the peripheral edges of the sections of said collar, said last referred to flanges terminating at points adjacent the flanges at the free ends of said sections to allow for the longitudinal movement of said gripping member.

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

JOHN J. WHITTY.

Witnesses:

GERTRUDE T. LOUIS,
JOHN E. MCCARTHY.