

(No Model.)

S. C. BERRY.

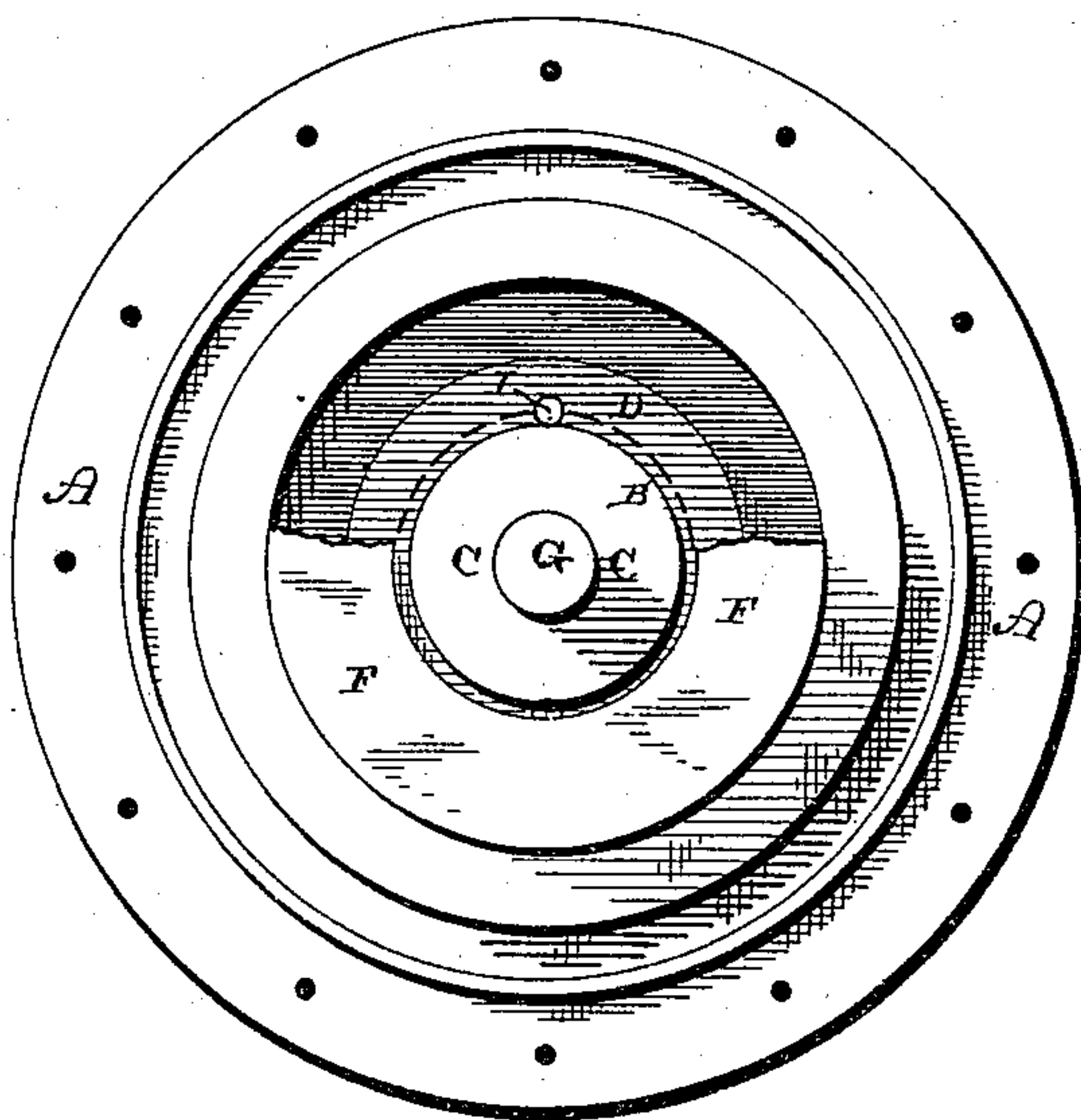
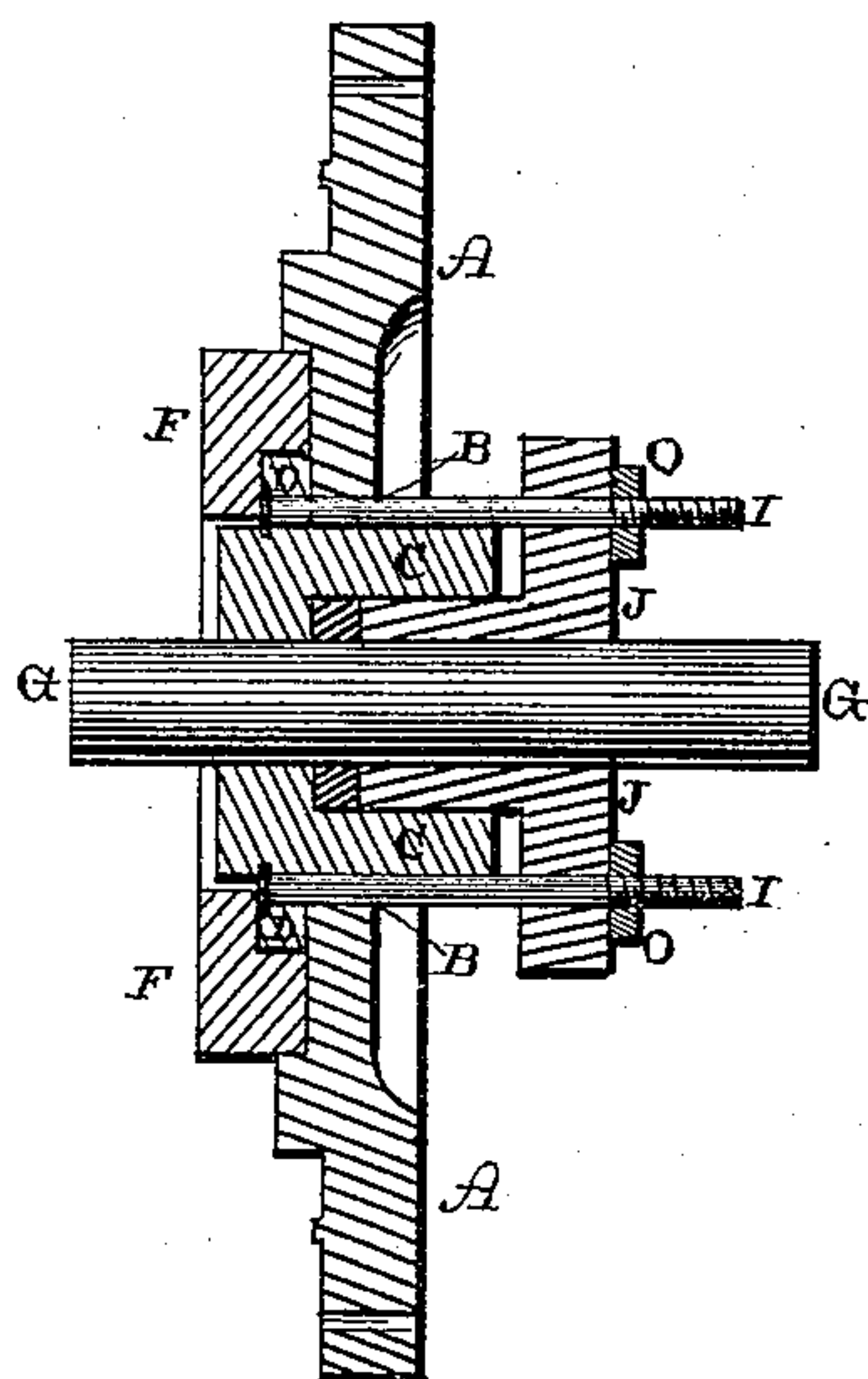
STUFFING BOX FOR STEAM ENGINES.

No. 326,384.

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Fig. 1.

Fig. 2.



-Witnesses.-

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UNITED STATES PATENT OFFICE.

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STUFFING-BOX FOR STEAM-ENGINES.

SPECIFICATION forming part of Letters Patent No. 326,384, dated September 15, 1885.

Application filed June 24, 1885. (No model.)

To all whom it may concern:

Be it known that I, SELBY C. BERRY, of Williamstown, in the county of Wood and State of West Virginia, have invented certain
5 new and useful Improvements in Stuffing-Boxes for Steam-Engines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as
10 it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in stuffing-boxes for steam-engines; and it consists in the combination of the cylinder-head,
15 which has an opening made through its center somewhat larger than the outer end of the stuffing-box which projects through it, with a stuffing-box which has a flange formed upon
20 its inner end, a ring for securing the stuffing-box in position upon the head, the gland and the tightening devices which are used in connection with the gland, as will be more fully described hereinafter.

25 The object of my invention is to make the stuffing-box entirely separate from the cylinder-head, and to allow this stuffing-box a sliding movement in any direction, so that it will accommodate itself to the movements of the
30 piston-rod, and thus not wear the packing as much as it would do if the box were made stationary in the usual manner.

Figure 1 is a vertical section of a stuffing-box embodying my invention. Fig. 2 is a
35 view taken from the inner side of the cylinder-head, the ring being broken partly away.

A represents the cylinder-head, which has an opening, B, through its center, and which opening is made somewhat larger than the
40 outer end of the stuffing-box C, so as to allow the box to move freely in any direction. The stuffing-box C has a flange, D, formed on its inner end, and this flange is pressed tightly against the inner side of the cylinder-head,
45 and forms a steam-tight joint around the edges of the opening B. The stuffing-box is free to move in any direction, so as to accommodate itself to the movement of the piston-rod, and secured to the inner side of the cylinder-head
50 is a perforated ring, F, which is recessed on

its inner side, as shown, so as to catch over the flange D of the stuffing-box, for the purpose of holding the stuffing-box in position. Were it not for this ring, the atmospheric pressure, when a vacuum was formed in the
55 cylinder, would force the stuffing-box inward, and the box would be inclined to move idly back and forth upon the piston-rod. This ring clamps the stuffing-box in position against the cylinder-head. The opening through the
60 center of the ring F is sufficiently large to allow a free pressure of the steam against the inner side of the stuffing-box, so as to keep it pressed tightly against the cylinder-head, and to allow the piston-rod G to play freely back
65 and forth through it.

Passing through the flange D of the stuffing-box, and catching in notches which are formed in opposite sides of the opening B, are the clamping-bolts I, which have their outer
70 ends passed through the gland J to receive the nuts O. By tightening up on the nuts from time to time, the gland can be made to take up any wear in the stuffing-box as rapidly as it occurs. These bolts, catching in notches
75 upon opposite sides of the opening B, serve to act as stops so as to prevent the stuffing-box from turning around. As the piston-rod is forced back and forth through the stuffing-box, the stuffing-box is made to move laterally
80 in every direction, and, being pressed tightly against the cylinder-head by the pressure of steam, it grinds for itself a steam and air tight joint which prevents any leakage at this point. As this box accommodates itself to
85 the lateral movements of the piston-rod, the rod simply plays back and forth through the box without wearing the packing to as great an extent as it will do where the stuffing-box is formed as a part of the cylinder-head or is
90 secured thereto.

Having thus described my invention, I claim—

1. The combination, with the cylinder-head, of a flanged adjustable stuffing-box which has
95 a sliding movement upon the cylinder-head, so as to adapt itself to the movements of the piston-rod, substantially as shown.

2. The combination of a perforated cylinder-head, the flanged stuffing-box, and a ring
100

which secures the stuffing-box in position upon the cylinder-head, substantially as described.

5 3. The combination of the perforated cylinder-head, the movable stuffing-box, the ring which holds the stuffing-box in position, the clamping-screws, and the glands, substantially as specified.

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

SELBY C. BERRY.

Witnesses:

STEPHEN NEWTON,
ROBERT BUNCH.