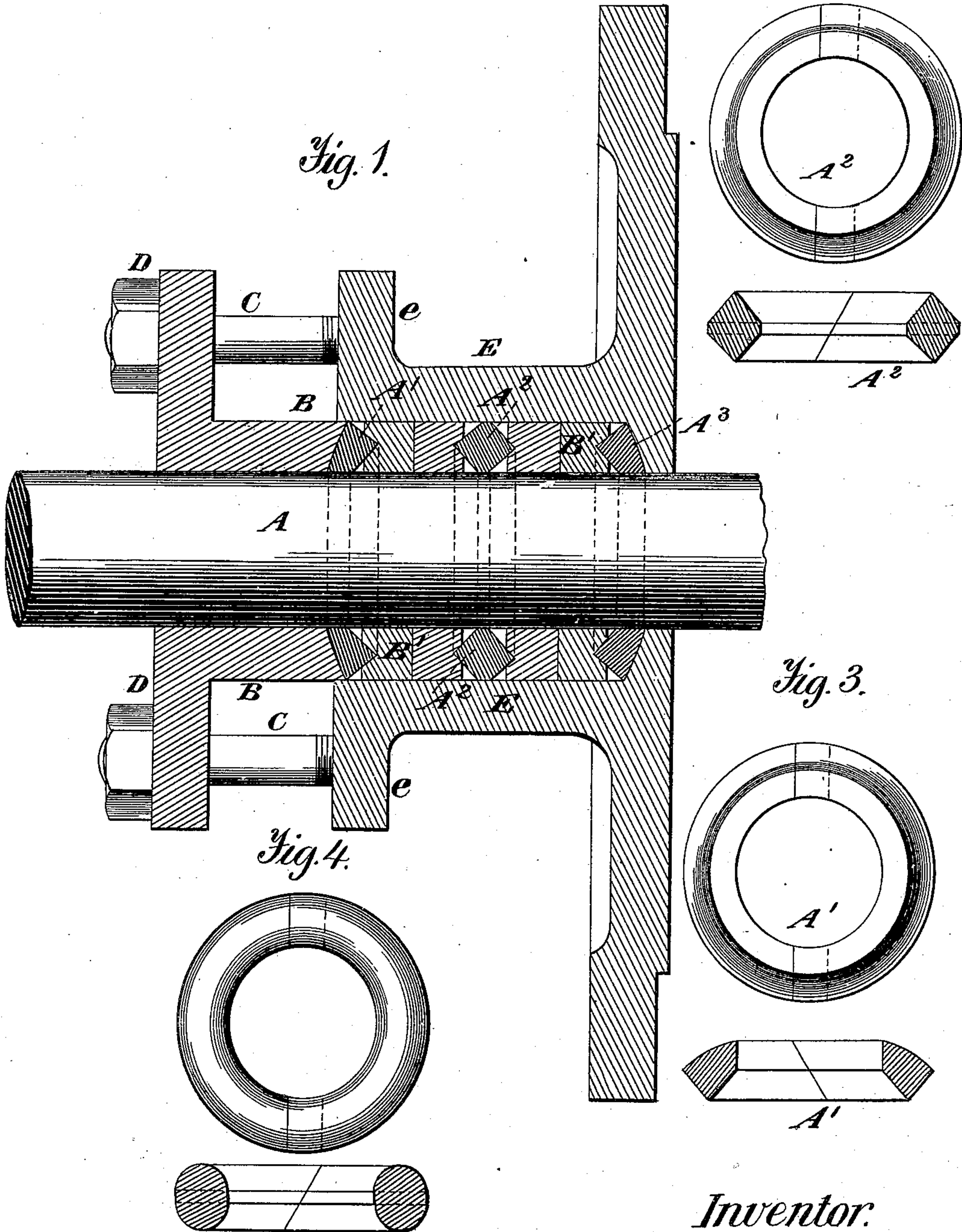


(No Model.)

G. H. & J. DICKSON.
PACKING FOR PISTON RODS.

No. 332,793.

Patented Dec. 22, 1885.



Witnesses.
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UNITED STATES PATENT OFFICE.

GEORGE HILL DICKSON AND JOHN DICKSON, OF BROOKLYN, NEW YORK.

PACKING FOR PISTON-RODS.

SPECIFICATION forming part of Letters Patent No. 332,793, dated December 22, 1885.

Application filed September 8, 1885. Serial No. 176,535. (No model.)

To all whom it may concern:

Be it known that we, GEORGE HILL DICKSON and JOHN DICKSON, of Brooklyn, in the county of Kings and State of New York, have
5 invented an Improved Packing for Piston-Rods, Valve-Stems, Plungers, and Analogous Devices, of which the following is a specification.

The invention relates to packing piston-rods,
10 valve-stems, plungers, and analogous devices, so that they may be rendered water and steam tight.

The special object of the invention is to combine metallic rings with expansible packing,
15 so that the former will press the latter in the middle and cause a wedging action, which will expand the packing toward both the rod and the packing-box.

Figure 1 of the drawings is a vertical section showing the application of my invention.
20 Fig. 3 is an end and side view of a ring which is V-shaped on one side and round on the other. Fig. 2 is a similar view showing a ring which is V-shaped on both sides. Fig. 4
25 is a similar view showing a ring which is rounded on both sides.

In the drawings, A represents a piston-rod; B, the packing-gland; C D, the screw-clamp by which the gland is held and adjusted, and E
30 the packing-box. The box E has an upper flange, e, which receives and supports the screw C.

A' A² A³ are wedge-rings of metal or other solid material, and B' the expansible packing.
35 The vertices of the wedge angles of rings are made to bear upon the middle of the packing, so as to press it in opposite directions. The rings A' A³ being respectively placed at top

and bottom require but one side to be angled or wedge-shaped, while ring A², which is arranged intermediately, is constructed with two
40 opposite angles or wedges for pressing an upper and lower packing. The upper side on the rings A' A³ may be rounded, as shown, or made of any other shape adapted to facilitate
45 an equable pressure. The rings are cut diagonally in halves by preference.

Our invention is used as follows: The ring A³ is first placed in the bottom of the packing-box E, and an expansible packing, B, hammered down upon it. Then a second packing
50 is hammered down upon this. The double ring A² is then put in position, and on this is superposed two more packings, B', when the top ring, A', is placed upon them. The packing-box gland B is now screwed down upon
55 ring A', and the packing expanded to the desired extent.

We are aware that angle-rings of solid metal have been combined with angle-tubes; but the
60 latter consist of wire wrapped about an inner tube, the angles of the solid metal meeting between the angle-packing; hence they cannot give the wedge pressure in the middle of packing, as ours do.

Having thus described our invention, what we claim as new, and desire to protect by Letters Patent, is—

The packing B', combined with the wedge-rings A' A² A³ and a clamping-gland, substantially as and for the purpose specified.
70

GEORGE HILL DICKSON.
JOHN DICKSON.

Witnesses:

JAMES HUNTER DICKSON,
GEORGE W. FISHER.