

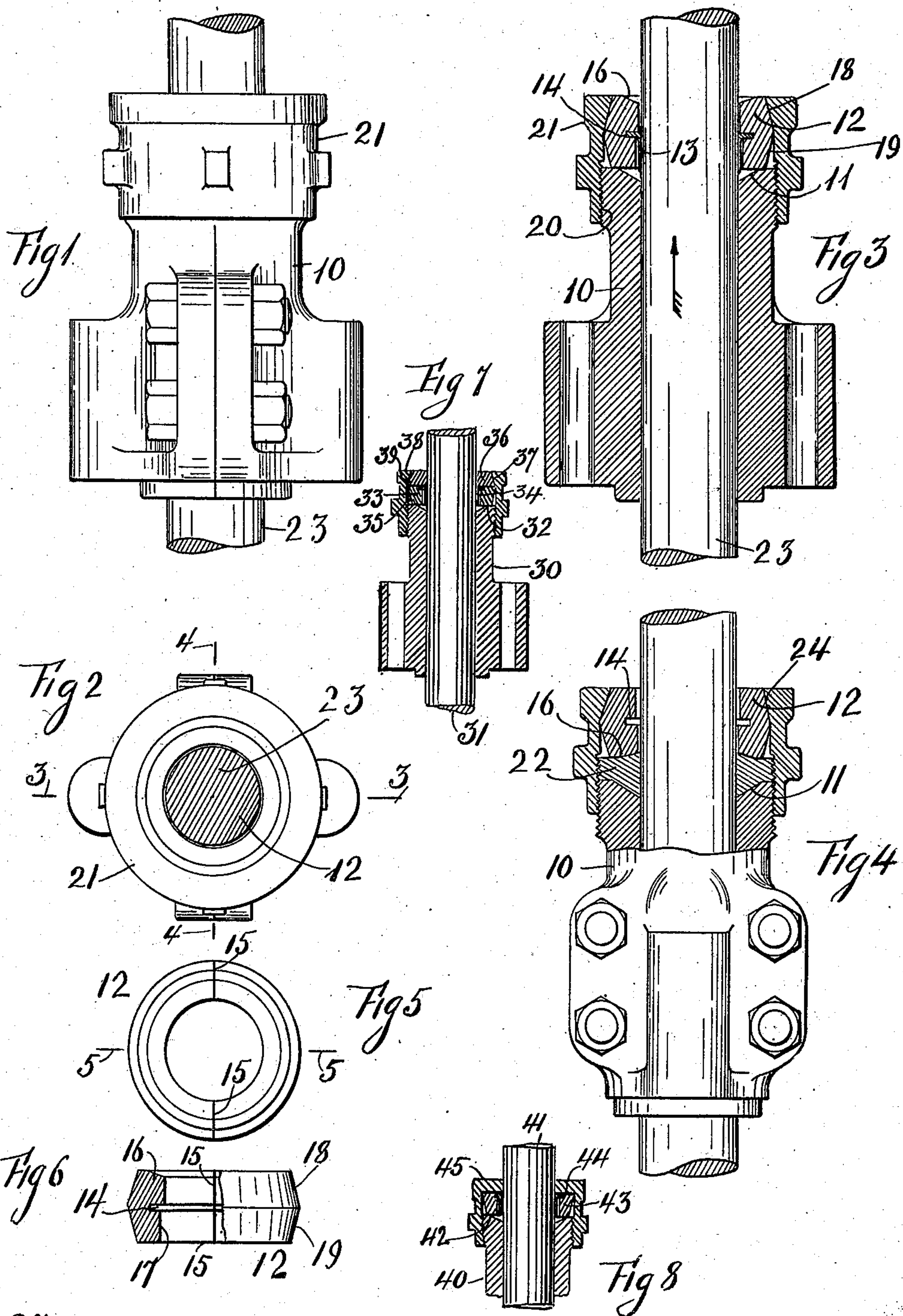
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G. S. POWER.

STUFFING BOX WITH REVERSIBLE GLAND.

APPLICATION FILED NOV. 5, 1906.



Witnesses  
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# UNITED STATES PATENT OFFICE.

GEORGE S. POWER, OF PASSAIC, NEW JERSEY.

## STUFFING-BOX WITH REVERSIBLE GLAND.

No. 881,867.

Specification of Letters Patent.

Patented March 10, 1908.

Application filed November 5, 1906. Serial No. 342,010.

*To all whom it may concern:*

Be it known that I, GEORGE S. POWER, a citizen of the United States, and a resident of Passaic, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Stuffing-Boxes with Reversible Glands, of which the following is a specification.

This invention relates to a stuffing box, with a reversible gland. Its object is the production of a stuffing box with a gland, which latter when placed in one position can be used in the usual way with packing material inserted between one of its edges and the edge of the neck of the box, and when its position is reversed a packing ring on the gland performs the functions of the packing material.

The stuffing box and gland is especially applicable to a piston working with air when a flanged packing ring is used therewith, and for steam when the usual packing material is employed.

In the accompanying drawings which exemplify the invention, Figure 1 represents an elevation of the neck of a rock drill cylinder, containing a stuffing box with the improved gland, Fig. 2 shows a top plan view of Fig. 1, Fig. 3 is a section of Fig. 2, on the line 3, 3, Fig. 4 is a partial elevation and section of Fig. 2 on the line 4, 4, with the gland placed in an inversed position, Fig. 5 is a top plan view of the gland, Fig. 6 is a partial elevation and section of Fig. 5 on the line 5, 5. Figs. 7 and 8 show vertical sections on a reduced scale of modifications of the invention.

A neck 10 of a rock drill is shown with the beveled edge 11, upon which bears the reversible gland 12, having the flanged packing ring 13, the latter being preferably made of leather or the like pliable material. The packing ring is supported in a groove 14 formed in the gland, which latter is preferably split as shown on the line 15, 15, and its edge 16 is generally beveled. The gland is counterbored at 17 below the groove 14, and its outer surface bevels both ways from about its central portion, as represented at 18 and 19.

The neck 10 is threaded at 20 for a cap 21, and the latter has a beveled opening 24 through its upper end, that engages with either one of the beveled surfaces of the gland.

In Fig. 4 the gland is placed in a reversed position, the flanged packing ring being

omitted and packing material 22 is inserted between the edge 11 of the neck 10, and the beveled edge 16 of the said gland.

When the gland is used with an air cylinder it is placed in position as shown in Fig. 3, and as the air from the cylinder tends to travel in the direction of the arrow in said figure, the pressure will tend to force the cylindrical body of the packing ring against the piston rod 23 and prevent leakage.

When the gland is used with a steam cylinder the parts are located as shown in Fig. 4, with a packing material 22 inserted between the lower edge of the gland and the top edge of the neck of the stuffing box.

It will be noted that by reversing the position of the gland it is made applicable for use, either with an air or steam operated piston.

In Fig. 7 there is represented the neck 30 of a stuffing box with its piston rod 31, on the upper face 32 of which is placed a gland 33 with the flanged packing ring 34, which latter extends from a counterbore in the upper face of the gland. The gland tapers on its sides 35 from its upper to its lower face. A collar 36 with sides 37 flaring out from its upper to its lower face is placed on top of the gland. A cap 38 with flaring walls 39 on its upper inner sides is screwed on the neck and engages the sides 37 of the collar 36.

In Fig. 8 is shown a neck 40 of a stuffing box with the piston rod 41. On the upper edge 42 of the neck is placed a gland 43 similar to the gland 33 with the flanged packing ring 44. A cap 45 in engagement with the neck 40 bears on the gland 43.

In Figs. 7 and 8 both glands are shown located for use with an air piston, and it is evident that if in Fig. 7 the locations of the gland 33 and collar 36 are reversed, and a packing material placed on top of the upper face 32 of the neck 31 and the flanged packing removed, that the stuffing box with its gland will be applicable for use with steam.

In Fig. 8 if the position of the gland 43 is reversed under the cap 45, and packing material inserted between the gland and top face 42 of the neck 40 the stuffing box will also be applicable for steam. In the glands represented in Figs. 7 and 8 there is no necessity of splitting them as for the gland 12, although it may be done.

Having described my invention, I claim:

1. The combination with a stuffing box of a neck, a cap in engagement with the upper



end of the neck, a gland having a groove therein located in the cap axially in line with the neck, and a flanged packing ring extending from the groove of the gland.

5 2. The combination with a stuffing box of a neck therefor, a cap in engagement with the upper end of the neck, a split gland having a groove thereon located axially in line with the neck and bearing upon the upper  
10 edge thereof, a piston rod passing through the stuffing box, a flanged packing ring extending from the groove and bearing on the piston rod.

3. The combination with a stuffing box of  
15 a neck therefor, a cap in engagement with the upper end of the neck, a split reversible gland located axially in line with the neck and bearing upon the upper edge thereof, a piston rod passing through the stuffing box,  
20 and packing material inserted between the lower edge of the gland and the upper edge of the neck of the stuffing box.

4. The combination with a stuffing box of  
25 a neck therefor, a cap having a beveled opening in engagement with the upper end of the neck, a split reversible gland located axially in line with the neck and bearing thereon and having a beveled surface in en-

gagement with the beveled opening in the cap, a piston rod passing through the gland 30 and stuffing box, and a flanged packing ring extending from the gland bearing on the said rod.

5. The combination with the neck of a stuffing box, of a reversible gland axially in 35 line with the neck and bearing on the upper edge thereof, a piston rod passing through the stuffing box, a packing ring extending from the gland, a collar on the gland, and a cap engaging with the neck and inclosing the 40 gland and collar.

6. The combination with the neck of a stuffing box, a cap in engagement with the upper end of the neck, a split gland located axially in line with the neck and bearing 45 upon the upper edge thereof, a piston rod passing through the stuffing box, and a packing ring extending from the gland.

Signed at the borough of Manhattan city of New York, in the county of New 50 York and State of New York this 30th day of October A. D. 1906.

GEORGE S. POWER.

Witnesses:

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