No. 893,793. PATENTED JULY 21, 1908.

J. H. GATELY.

STUFFING BOX.

APPLICATION FILED MAR. 4, 1908.

Fig. 1.

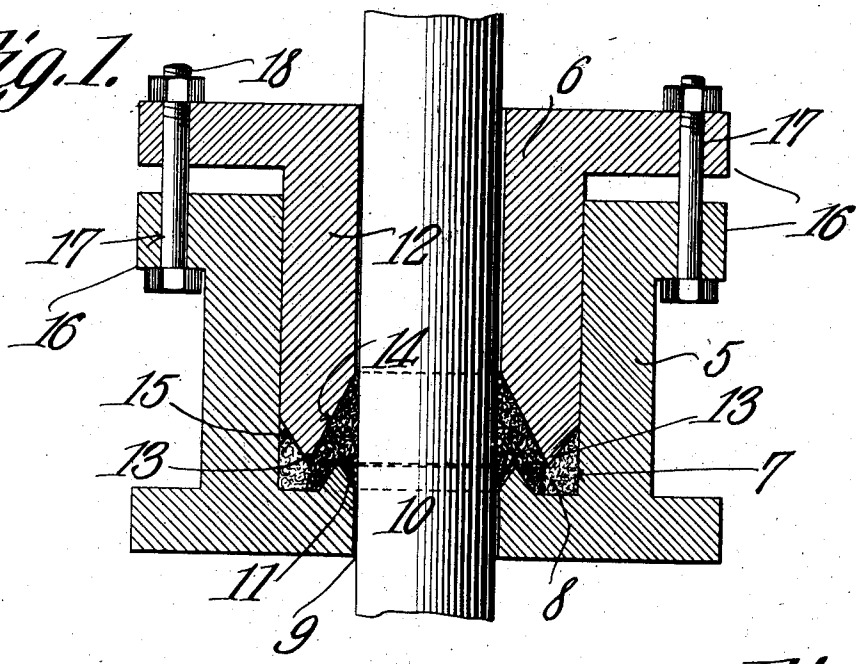
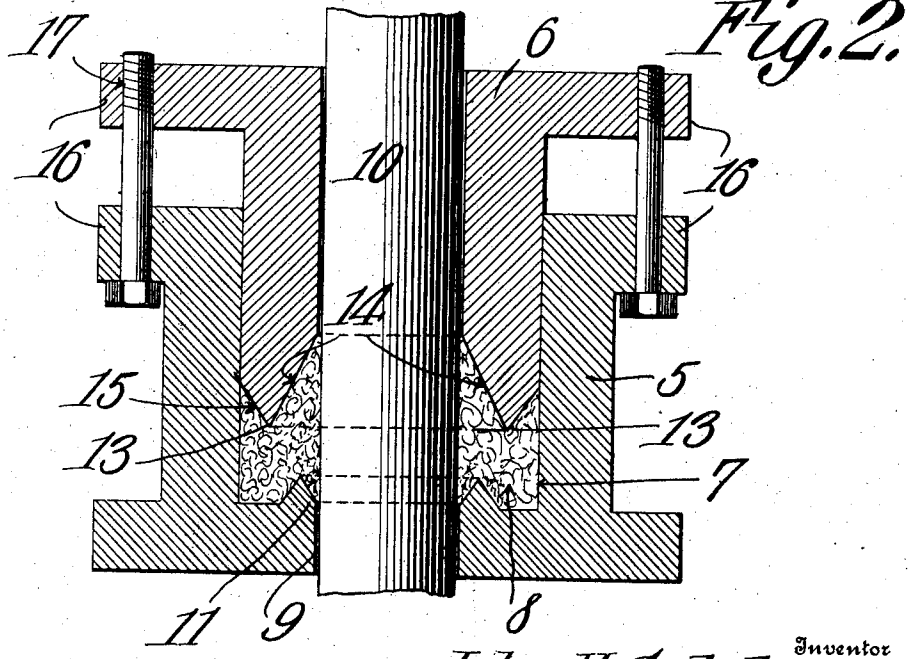


Fig. 2.



Witnesses

E. F. Holman

L. N. Acker.

Inventor

John H. Gately.

By C. A. Snow & Co

Attorneys

UNITED STATES PATENT OFFICE.

JOHN HENRY GATELY, OF BELLOWS FALLS, VERMONT.

STUFFING-BOX.

No. 893,793. Specification of Letters Patent. Patented July 21, 1908.

Application filed March 4, 1908. Serial No. 419,227.

To all whom it may concern:

Be it known that I, JOHN HENRY GATELY, a citizen of the United States, residing at Bellows Falls, in the county of Windham and State of Vermont, have invented a new and useful Stuffing-Box, of which the following is a specification.

This invention relates to stuffing boxes or glands for piston rods, pump rods and the like and has for its object to provide a comparatively simple and thoroughly efficient device of this character in which the packing is positively forced in contact with the adjacent walls of the box and rod, respectively, thereby to form a steam and water tight joint between the parts.

A further object of the invention is to provide a stuffing box including mating sections one of which is provided with a circumferential recess communicating with the rod receiving opening and the other with a depending extension having its terminal portion inclined or beveled in opposite directions so that when the sections are adjusted the packing will be split and forced laterally in engagement with both the box and rod.

A still further object of the invention is generally to improve this class of devices so as to increase their utility, durability and efficiency.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a longitudinal sectional view of a stuffing box constructed in accordance with my invention showing the mating sections adjusted to compress the packing for engagement with the rod. Fig. 2 is a similar view showing the packing before the latter is compressed.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved stuffing box forming the subject matter of the present invention includes mating sections 5 and 6, the lower one of which constitutes the box and the upper one the gland.

The lower section 5 is provided with an interior chamber 7 for the reception of a suitable packing 8, there being an opening 9 formed in the bottom of the section 5 and communicating with the chamber 8 for the reception of the rod 10.

The walls of the opening 9 are inclined or beveled at 11 to form a circumferential recess adapted to receive the packing 8 when the movable section or gland 6 is adjusted longitudinally of the rod, there being an inclined rib or flange 12 extending vertically from the bottom of the section 5 and surrounding the recess 11 for forcing the packing in contact with the rod and interior wall of the section 5 so as to effectually prevent leakage between the box and rod.

The rib 12 is substantially triangular in cross section with one wall thereof inclined in the direction of the recess 11 and forming a continuation of the wall of said recess and with its other wall inclined in the direction of the interior wall of the section 5.

The upper section 6 is provided with a depending extension or collar 12′ which operates within the chamber 7 and has its lower end inclined or beveled in opposite directions to form a cutting edge 13 adapted to split the packing 8 when the mating sections are forced together and thus press said packing laterally in contact with both the box and rod.

The inclined face 14 of the extension has a greater contact surface for engagement with the packing than the inclined face 15 while the cutting edge 13 is disposed substantially in alinement with the base of the annular flange or rib 12, as shown.

By forming the lower end of the extension 12′ in this manner an unequal pressure will be exerted on the packing, that portion of the packing between the inclined face 14 and the rod being effectually compressed and forced in contact with said rod and also within the circumferential recess 11.

The sections 5 and 6 are provided with laterally extending flanges 16 having alined openings 17 formed therein for the reception of bolts or similar fastening devices 18 by means of which the sections may be clamped together thereby to expand the packing.

It will thus be seen that when the bolts 18 are adjusted the movable section 6 will be forced longitudinally within the chamber 7 in contact with the packing thus causing the cutting edge 13 of the extension to split the packing and force the same laterally in opposite directions in engagement with the rod and stuffing box, respectively, in the manner before stated.

The sections comprising the stuffing box may be made in different sizes and shapes and any suitable means may be employed for clamping the sections together.

Having thus described the invention what is claimed is:

1. A stuffing box, consisting of mating sections one of which is provided with a rod receiving opening and a circumferential rib, with inclined sides surrounding said opening, and the other with a depending extension having its terminal portion inclined in opposite directions, a packing interposed between said sections and means for clamping the sections together.

2. A stuffing box, consisting of mating sections one of which is provided with a rod receiving opening, and a rib with inclined sides surrounding said opening, and forming therewith an inclined mouth; and the other with a depending extension having its terminal portion inclined in opposite directions to form a cutting edge; a packing interposed between said sections, and means for forcing the cutting edge into the packing.

3. A stuffing box, consisting of mating sections, one of which is provided with a rod receiving opening, and a triangular rib, surrounding said opening and forming therewith an inclined mouth, and the other with a depending extension having its terminal portion inclined in opposite directions to form a cutting edge, the inclined faces being of different lengths; a packing interposed between said sections, and means for clamping the sections in engagement with each other and forcing the cutting edge into the packing.

4. A stuffing box consisting of a gland and box, each having lateral perforated flanges; the box being provided with a rod receiving opening, and a triangular rib forming the mouth of said opening, the gland being formed with an extension depending in the box, the lower end of said extension being formed with inclined faces of different lengths terminating in a cutting edge depending above the recess between the triangular rib, and the sides of the box, a packing interposed between the gland and the bottom of the box, and bolts and nuts connecting the flanges of the gland and box.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOHN HENRY GATELY.

Witnesses:

MAURICE T. RELIHAN,

PATRICK LAWLOR.