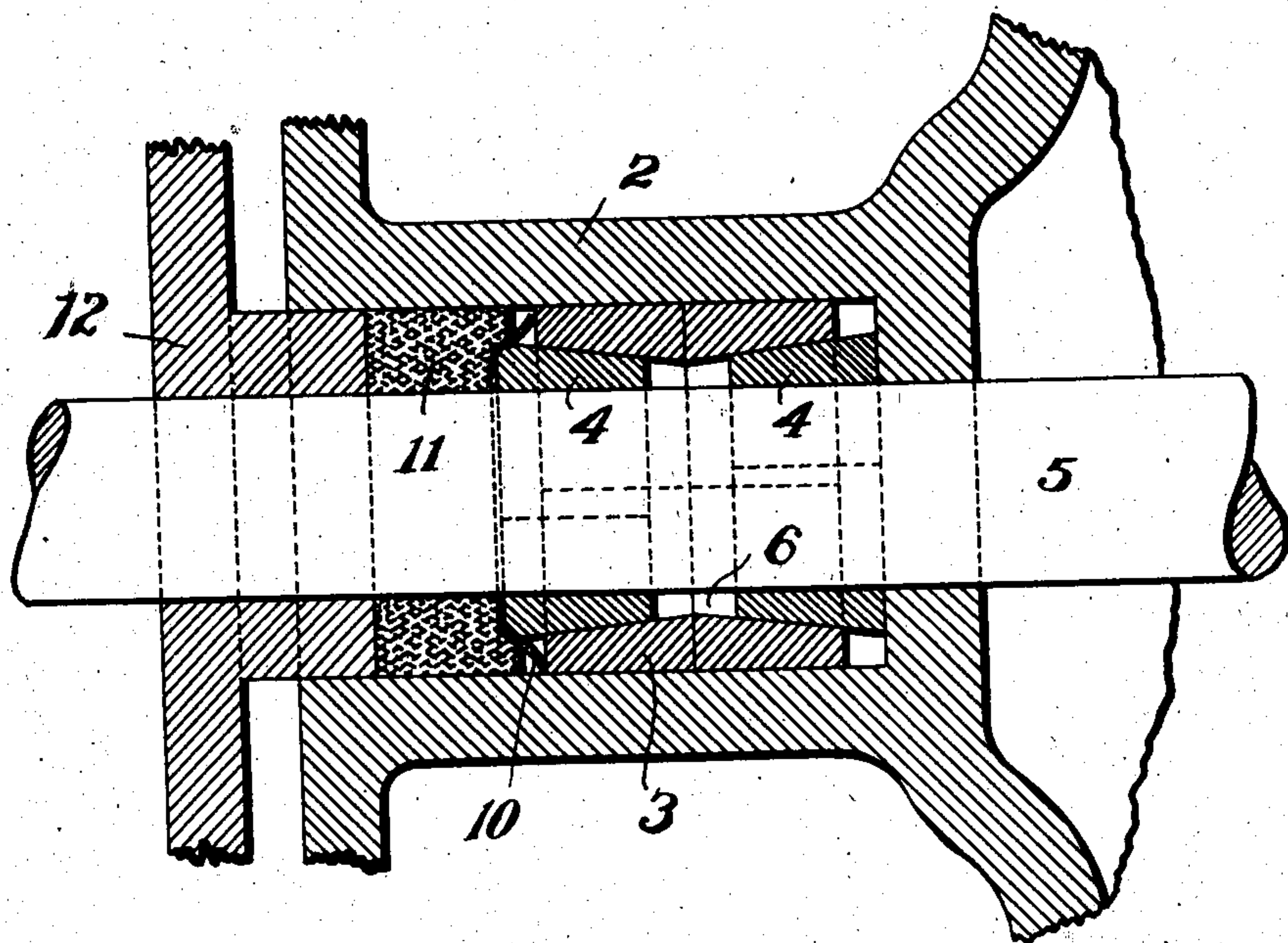


No. 833,962.

PATENTED OCT. 23, 1906.

S. M. GUSS.  
STUFFING BOX PACKING.  
APPLICATION FILED APR. 9, 1906.



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WITNESSES:

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# UNITED STATES PATENT OFFICE.

SAMUEL M. GUSS, OF READING, PENNSYLVANIA.

## STUFFING-BOX PACKING.

NO. 833,962.

Specification of Letters Patent

Patented Oct. 23, 1906.

Application filed April 9, 1906. Serial No. 310,681.

*To all whom it may concern:*

Be it known that I, SAMUEL M. GUSS, a citizen of the United States, and a resident of the city of Reading, county of Berks, and State of Pennsylvania, have invented certain new and useful Improvements in Stuffing-Box Packing, of which the following is a specification.

My invention relates to stuffing-box packing adapted particularly for use in connection with hydraulic machines; and it consists in the improved form and arrangement of conical metallic packing-rings in connection with an inclosing correspondingly - bored clamping-ring therefor and means for setting up the same to maintain a uniformly tight packing without undue friction, as fully described in connection with the accompanying drawing, the novel features being specifically pointed out in the claims.

The drawing is a longitudinal sectional view of a stuffing-box provided with my improved packing applied thereto in preferred form.

Fitted to the stuffing-box 2 is a clamping-ring 3, the bore of which, as shown, is oppositely tapered from a point midway of its length, so as to form an opening flared at each end. This ring incloses a pair of longitudinally-split packing-rings 4, of Babbitt metal or the like, bored to fit the rod 5 and of conical form, exteriorly corresponding with the oppositely-flared opening of the inclosing ring 3. These conical packing-rings are arranged with their smaller diameter ends adjacent and with their larger diameter outer ends projecting oppositely through the inclosing ring 3, so that an endwise closing-together pressure exerted upon said projecting ends will cause the packing-rings to be correspondingly closed upon the rod 5. In order that this wedging action of the conically-bored clamping-ring 3 upon the packing-rings 4 may be modified, so as to secure a proper packing pressure upon the rod under varying conditions without liability of excessive friction and binding of the parts, and at the same time provide for continuous and automatic lubrication by means of the operating medium, I preferably make this inclosing ring 3 of pine-wood or similar porous fibrous material, adapted to provide a properly-yielding and elastic wedging action upon the metal packing-ring and to permit the passage therethrough of the operating medium under pressure to the annular chamber 6,

formed between the adjacent inner ends of the packing-rings, said chamber thus serving as a lubricating-chamber by retaining therein the supply of operating medium finding its way thereto through the said porous material or around the reciprocating rod.

The conical packing-rings 4 are divided into approximately hemispherical parts, as usual, adapted to be progressively closed upon the rod 5 as wear occurs by endwise movement thereof in the inclosing ring 3, and the latter may also be similarly divided into hemispherical parts, as indicated, though this is not required and is merely preferable because it enables them to be more readily placed or withdrawn from position in the stuffing-box. To provide for setting up the conical packing-rings as required and for completing the packing of the rod 5, I employ, as indicated, a thin sheet-metal washer 10, preferably of copper, interposed between the projecting end of the packing-ring 4 and any suitable compressible packing 11, through which latter said washer 10 is pressed against the projecting packing-ring 4 and the clamping-ring 3 by means of an adjustable gland 12, thus providing a metallic covering against the ends of the parted rings as a support for the packing material 11 in closing together the packing-rings 4 by end movement thereof.

The preferred construction of the clamping-ring 3 from pine-wood or like non-metallic material is of decided advantage, because the swelling of such material in hydraulic service insures sufficient tightening of the packing-rings upon the rod, while at the same time allowing such yielding as will prevent any binding or excessive wearing action of the parts and providing for utilizing the operating medium itself as an effective lubricant in the intermediate annular chamber 6.

What I claim is—

1. In a stuffing-box packing, a clamping-ring having an oppositely - flared opening, and a pair of split packing-rings of conical form arranged with their smaller ends contiguous and their larger ends projecting oppositely through said clamping-ring substantially as set forth.

2. A stuffing-box packing comprising a clamping-ring having an oppositely-flared opening, a pair of split packing-rings of conical form arranged with their smaller ends contiguous and their larger ends projecting oppositely through said clamping-ring, a com-



pressible end packing and interposed washer, and an adjustable gland, substantially as set forth.

3. A hydraulic stuffing-box packing comprising a clamping-ring of porous material  
5 having an oppositely-flared opening, a pair of split conical packing-rings within said clamping-ring arranged with their smaller ends adjacent and forming between them an  
10 annular lubricating-chamber and with their larger ends projecting oppositely through

said clamping-ring, and means for pressing together said packing-rings, the porous material of said clamping-ring enabling the operating medium under pressure to occupy said  
15 annular lubricating-chamber.

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

SAML. M. GUSS.

Witnesses:

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D. M. STEWART.