Sept. 2, 1924. 1,506,855

B. C. McCLURE

PISTON PACKING

Filed June 24, 1922

Fig. 1.

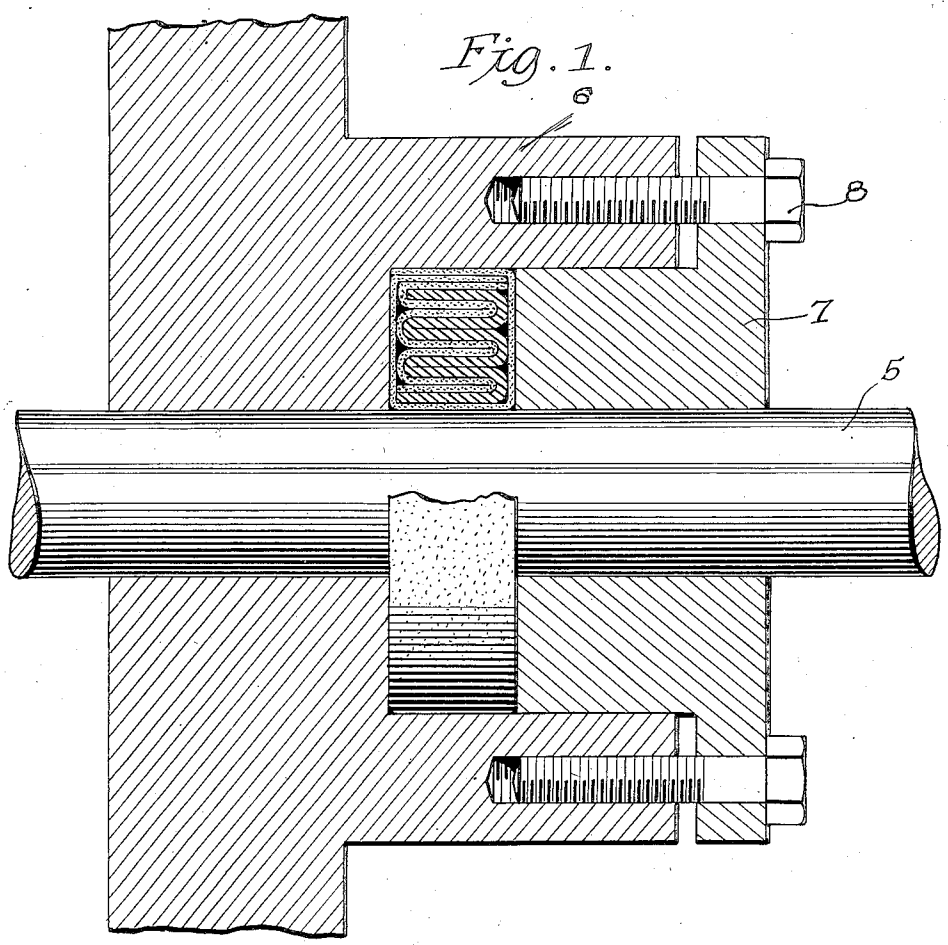
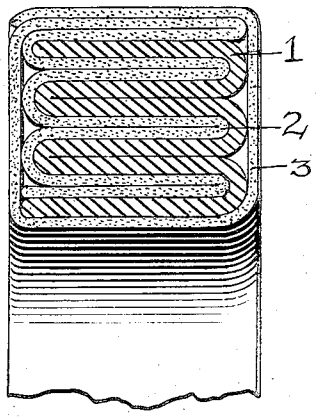


Fig. 2.



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UNITED STATES PATENT OFFICE.

BENJAMIN CARL McCLURE, OF HARTSDALE, NEW YORK, ASSIGNOR TO JOHNS-MANVILLE INCORPORATED, A CORPORATION OF NEW YORK.

PISTON PACKING.

Application filed June 24, 1922. Serial No. 570,534.

To all whom it may concern:

Be it known that I, BENJAMIN C. McCLURE, a citizen of the United States of America, residing at Hartsdale, in the county of Westchester and State of New York, have invented certain new and useful Improvements in Piston Packings, of which the following is a specification.

My invention relates to packing as particularly designed for use for packing stuffing boxes for piston rods in ammonia pumps, although it may be used as a packing for pistons or for piston rods in other apparatus. My invention is an improvement on the type of packing illustrated in my prior Patent No. 1,321,930, dated November 18, 1919.

The best form of my invention at present known to me is illustrated in the accompanying sheet of drawings, in which—

Fig. 1 is an axial cross-section through a stuffing box, with parts broken away, the packing being shown in operative position; and

Fig. 2 is a cross section of a packing ring, parts being broken away and a minor modification being illustrated on an enlarged scale.

Throughout the drawings like reference figures indicate like parts.

1 is a flexible sheet of lead on which has been superposed a sheet of textile fabric, 2, preferably asbestos cloth, and the composite structure so formed folded back and forth upon itself, as clearly indicated in the drawing, to form a core for a packing ring. Said core is enclosed in a wrapping 3, also preferably formed of asbestos cloth, and this wrapping may be an extension of the sheet 2 forming part of the core, as shown in Fig. 2, or said wrapping may consist of a separate sheet of cloth, as indicated in Fig. 1.

The packing so formed has a continuous sheet of lead folded back and forth in its core and extending the entire length thereof, so that when a proper length to fit a given piston rod is cut off and the packing bent into a circle with abutting ends, this continuous sheet of lead extends all the way around the circumference of the ring, being broken only at the butt joint. The convolutions of the lead should also extend continuously around the circle, except at the meeting faces of the joint where they abut.

When a ring formed of my packing is placed in stuffing box 6 around a piston rod 5, preferably with the folds of the lead sheet parallel to the axis of the piston rod, as shown in Fig. 1, and said packing is compressed by screwing down the bolts 8 on the gland 7, a most efficient packing of the piston rod by a practically continuous sheet of lead results.

Such packing is impervious to ammonia gases and vapors, or to other gases and vapors, except of course those which might have a highly corrosive action on lead.

The advantages of my invention comprise its impervious feature above described, and its great durability. The particularly tight fit of the packing on the surface of the piston rod and on the wall of the stuffing box results from the pressure of the stuffing box gland tending to buckle or spread the folds of the convolutions of the lead sheet, and as wear of the inner surface of the packing ring occurs, this can be taken up by screwing the gland down further to further force apart or buckle radially the convolutions of the said lead sheet.

Having described my invention, I claim:

1. A packing for ammonia pumps and the like apparatus, which comprises a sheet of lead and a sheet of textile fabric superposed thereon, the two being folded back and forth to form a core, and a wrapping enclosing said core formed of textile fabric, the folds of the core material extending crosswise of the core, whereby, when a given length of the completed packing is bent into a circle with the ends of the packing body abutting, a continuous sheet of lead with convolutions extending from the butt joint circumferentially around the circle, is formed in the core.

2. A packing for ammonia pumps and the like apparatus, which comprises a sheet of lead and a sheet of asbestos cloth superposed thereon, the two being folded back and forth to form a core, and a wrapping enclosing said core formed of asbestos cloth comprising an extension of the cloth in the core, the folds of the core material extending crosswise of the core, whereby, when a given length of the completed packing is bent into a circle with the ends of the packing body abutting, a continuous sheet of lead with convolutions extending from the butt joint circumferentially around the circle, is formed in the core.

BENJAMIN CARL McCLURE.

Witnesses:
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