W. F. J. LUTZ & H. D. BARTLETT.

PACKING.

APPLICATION FILED JULY 6, 1909.

961,872.

Patented June 21, 1910.

Fig. 2.

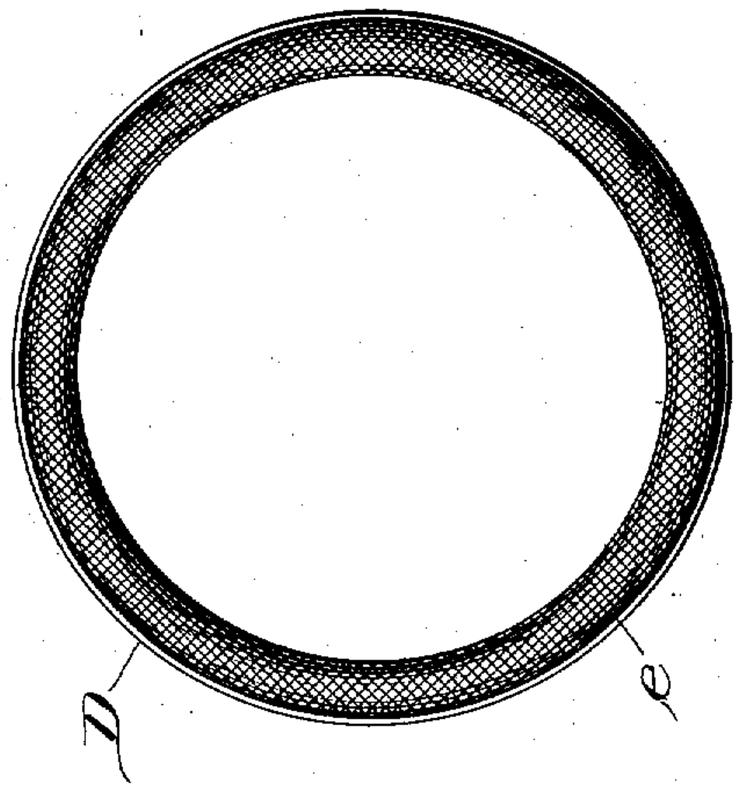


Fig. 4.

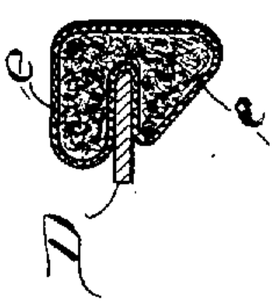


Fig. 3.

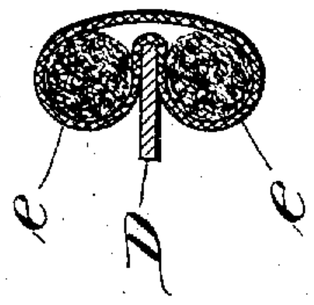
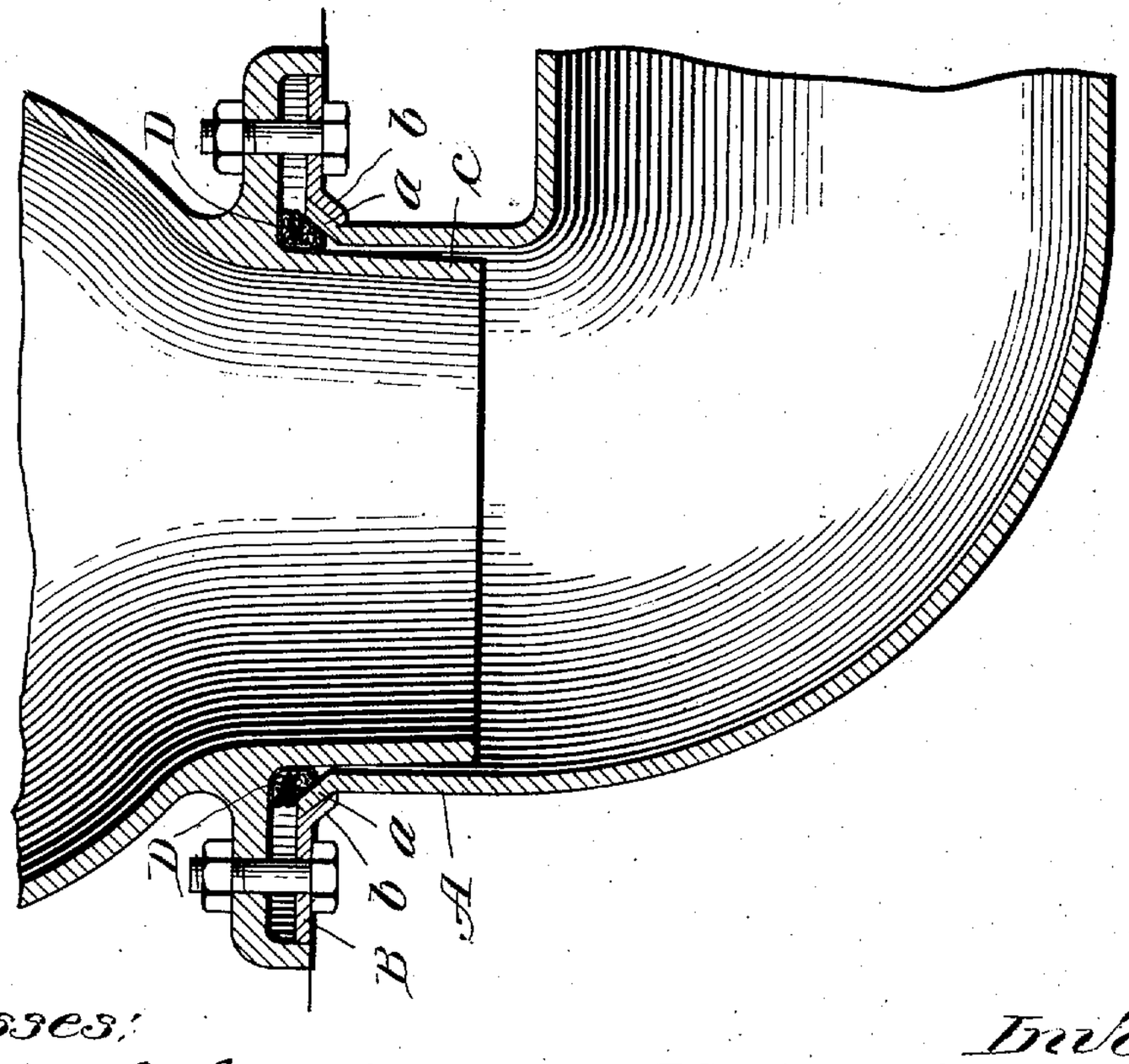


Fig. 1



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UNITED STATES PATENT OFFICE.

WILLIAM FRED JOHN LUTZ AND HARRY D. BARTLETT, OF CHICAGO, ILLINOIS.

PACKING.

961,872. Specification of Letters Patent. Patented June 21, 1910.

Application filed July 6, 1909. Serial No. 506,091.

To all whom it may concern:

Be it known that we, WILLIAM FRED JOHN LUTZ and HARRY D. BARTLETT, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Packing, of which the following is a full, clear, and exact description.

This invention relates to means for tightly calking the connection between closets, drains, and the like and the waste-pipe or sewerage-pipe adapted to be secured thereto. Its object is to provide a suitable packing for this purpose that will be absolutely air-tight and water-tight when in its completed position, and which will fit the parts in such manner that they are not liable to become accidentally separated or dislodged owing to any warping or stretching of the pipes or the settling of the building in which the work is placed. This is accomplished by the means and in the manner hereinafter fully described and as more particularly pointed out in the claims.

In the drawings:—Figure 1 is a central vertical section of the upper end of a waste or drain-pipe connected with the lower extended nose of a closet-bowl, and showing the improved packing in position therein. Fig. 2 is a plan view of said packing removed from the connection and drawn to about the same scale. Figs. 3 and 4 are transverse vertical section showing diagrammatically the parts of the packing in assembled form and drawn to an enlarged scale, in order to better illustrate the normal position of the packing and the shape it usually assumes when under compression in the connection.

Referring to the drawings, it will be noted that A represents the end portion of the usual sewerage drain-pipe that terminates at about the level of the floor and has its end edge *a* preferably flanged outwardly, substantially as shown, to form a slight shoulder or flare to the end of said pipe. This shoulder is adapted to form a stop for a suitable annular washer B that preferably rests on the floor and supports the end of said drain-pipe, and has its inner circumferential edge *b* deflected or flanged at an obtuse angle to the plane of said washer so that it will fit snugly against the shoulder or flare *a* of the pipe above mentioned. The nose *c* of the bowl is preferably slightly tapered inwardly (substantially as shown in Fig. 1) so that when the bowl is being placed in position the nose may be forced down as far as it will go into the flared end of the pipe and will wedge itself therein and make a tight fit. In order to effectively seal the space usually left at the upper end of the pipe and between the same and the flange of the bowl, a suitable packing ring D is placed upon the upper end edge of the pipe where it may be partially seated in the recess or seat formed by the flanged edge *a* of said pipe. Thus, when the bowl is inserted into place and is forced down so tightly into the pipe, the packing ring D will spread in the manner hereinafter pointed out and seal the connection against the escape or passage of air or water in either direction. The washer B has its periphery provided with several holes or recesses in alinement with similar openings in the lateral basal flange of the bowl and in order to tighten the latter in position, suitable headed bolts *b* are passed through said openings and the parts drawn tightly together by suitable nuts on the upper ends of said bolts.

The packing above referred to consists, preferably, of a flat annular metallic ring D of substantially the same diameter as said drain-pipe and may be made of zinc, copper, or the like, or, if desired, it may be of some suitable cast metal. This ring is adapted to hold in shape and be partially surrounded by suitable packing material the outer covering of which is a tubular woven fabric approximately U-shaped in cross-section made "full" in the portions *e*, *e*, thereof, that are disposed on its upper and lower surfaces and which surrounds said ring on its top, bottom, and inner edge. These "full" portions *e* form suitable annular receptacles or spaces wherein is adapted to be inserted and packed a quantity of asbestos, ground cork, hair, or any well-known calking material, having the portion that passes around the inner edge of the ring free from material excepting the woven fabric. This provides a soft padding in the space between the crotch formed between the floor-flange and nose of the bowl and the upper flared end of the drain-pipe both above and below the ring D and may be oiled and sprinkled or coated with graphite or plumbago to preserve the same.

It will be noted, by particular reference to Fig. 4, that when the packing is compressed the filling material both above and below the ring will be displaced and forced into the empty space in the tubular fabric between the inner edge ring and the outer surface of the nose of the bowl. This is caused by the outward movement of the filling being limited and restricted by the non-expansion of the outer portion of the fabric, and the compression on the packing, being exerted on both sides of the ring simultaneously, any lateral movement or expansion of the packing material must take place between the nose or the bowl and the inner circumferential edge of the ring in the manner shown in the drawings.

What is claimed as new is:—

1. A packing comprising a metallic ring and a tubular woven fabric covering for a portion thereof having a space above and below said ring filled with compressible material.

2. A packing comprising a metallic ring and a tubular woven fabric covering for a portion, substantially U-shaped in cross section thereof, having a space above and below said ring filled with compressible material.

3. A packing comprising a metallic ring and a covering therefor consisting of a tubular woven fabric substantially U-shaped in cross section having the ends of its separated portions enlarged and a filler of suitable material inserted therein.

4. A packing comprising a metallic ring and a covering surrounding the same on its upper and lower sides and its inner circumferential edge, and having the portion thereof above and below the ring enlarged as compared to the portion surrounding the edge of said ring.

5. A packing comprising a metallic ring and a covering surrounding the same on its upper and lower sides and its inner circumferential edge and having the portion thereof on the edge of said ring reduced in thickness, and having the portions thereof on the upper and lower sides of said ring provided with suitable packing material.

6. A packing comprising a metallic ring and a tubular woven fabric covering surrounding the same on its upper and lower sides and its inner circumferential edge and having the portion adjacent the inner edge of said ring reduced in thickness.

7. A packing comprising a metallic ring and a tubular woven fabric covering surrounding the same on its upper and lower sides and its inner circumferential edge and having the portions thereof on the upper and lower sides of said ring filled with a suitable packing material.

8. A packing comprising a flexible ring having a fabric containing lubricant and from the center of width of which the lubricating material is, substantially, removed.

9. A packing comprising a flexible ring having a fabric envelop and lubricant filler, the transaxial edges of which are made thicker than the portion between the same.

In witness whereof we have hereunto set our hands this 30th day of June, 1909.

WILLIAM FRED JOHN LUTZ.
HARRY D. BARTLETT.

Witnesses:
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E. K. LUNDY.