(No Model.)

C. T. BRIDE.

PIPE JOINT PACKING.

No. 274,434. Patented Mar. 20, 1883.

Fig. 1.

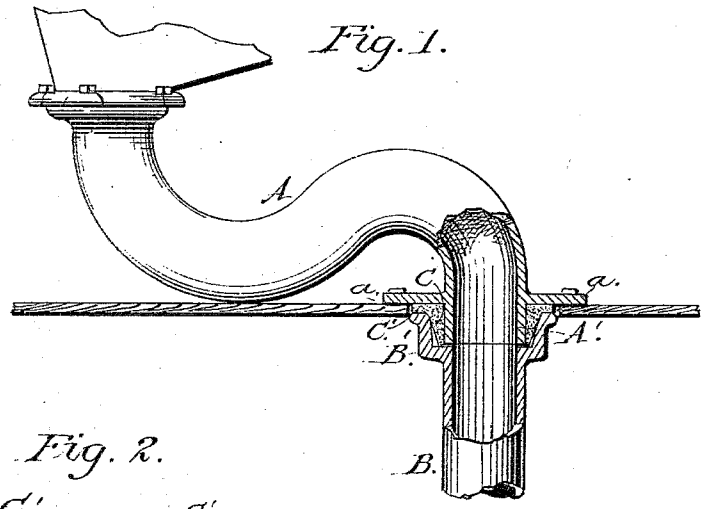


Fig. 2.

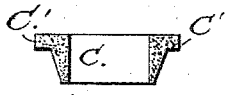


Fig. 4.

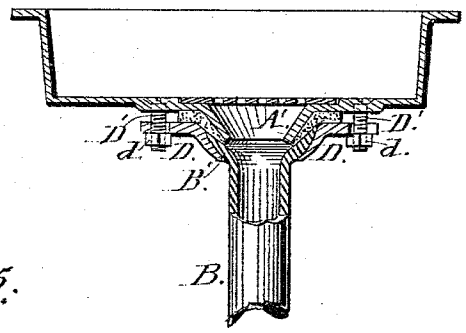


Fig. 3.

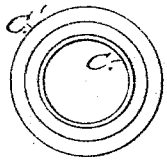
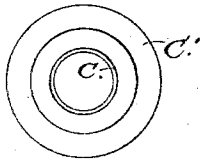


Fig. 5.



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UNITED STATES PATENT OFFICE.

COTTER T. BRIDE, OF WASHINGTON, DISTRICT OF COLUMBIA.

PIPE-JOINT PACKING.

SPECIFICATION forming part of Letters Patent No. 274,434, dated March 20, 1883.

Application filed November 27, 1882. (No model.)

To all whom it may concern:

Be it known that I, COTTER T. BRIDE, a citizen of the United States, residing at Washington, District of Columbia, have invented certain new and useful Improvements in Pipe-Joint Packings; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention has reference to a means for making the joint between sections of sewer-pipe in houses, and particularly to the joint at the closet, urinal, sink, or trap. Putty has heretofore been commonly used for packing this joint; but when putty or other analogous plastic is used there is danger of cracking, when it becomes hard or set, by the shrinkage of timber or the settling of the building. I employ a rubber packing of wedge-shaped sides and flanged top, in combination with a flanged upper portion and a bell-topped lower portion of the parts to be united.

The accompanying drawings illustrate what I consider the best means of carrying out the invention.

Figure 1 is a side elevation, partly in section, showing the packing as applied to the joint of a water-closet of the Jennings pattern. Fig. 2 is a section of the packing-ring. Fig. 3 is a bottom plan view of the same. Fig. 4 shows the packing as applied to a sink-joint. Fig. 5 is an under plan view of the packing as thus applied.

Similar letters of reference indicate corresponding parts in all the figures.

A is an ordinary S-trap applied to a closet formed after the Jennings plan. A′ is the extension thereof, which enters the bell B′ of the pipe B. The joint between these parts is that which is so frequently the occasion of so much annoyance and loss when packed in the ordinary way—*i. e.*, with putty or other plastic. A flange, *a*, extends around the trap A, above the extension A′, and through the medium of this flange the trap is secured to the building by screws or nails. The pipe B is held up against the trap A in the usual manner. Between these parts I introduce my improved packing.

C is my packing-ring. C′ is the flange thereon. To better pack the joint the ring is preferably made wedge shape in section, as shown in Figs. 1 and 4. This wedge-shaped portion lies between the extension A′ and the bell B′, while the flange C′ covers the top of the bell-rim and lies between it and the flange *a* on the trap A, which, secured in place, will tightly compress the ring between the parts united. The elasticity of the material of the ring enables the joint to be made very compactly and the parts to be closely and tightly united. The character of the material also defends against the opening of the joint and the escape of either gas or water in event of the parts separating, as they are so liable to do. The form of the ring adds to its efficacy in this particular, as it allows a tighter juncture than any other form. The advantages of the wedge shape are well understood. The flange C′ at the top continues the tight joint over the rim of the bell. Thus a tight joint is made against the upright walls, and also against the flanged top. The amount of settling, shrinkage, or movement of the parts in the most extreme cases will not separate the pipes sufficiently to cause or allow the escape of either water or gas. When the closet is intentionally removed it can be replaced and the joint secured by the same packing. In putty joints this is not the case, as the packing has to be entirely renewed every time the closet is removed or the packing injured. As applied to sinks, the ring is preferably made more flaring, as shown in Fig. 4.

In Fig. 4, A′ represents the countersunk opening in the sink, B′ the bell of the lead pipe, and D the clamping-ring securing the parts to the sink by means of bolts and nuts D′ *d*. My packing C is applied between the part A′, the bell B, and clamping-ring D. As shown, it is similar in general form to the form applied to the closet.

Having thus described my invention, what I desire to claim and secure by Letters Patent is—

In a joint made to connect water-closet or

other similar pipes to soil-pipes, the combination, with the pipe A, having a flange, *a*, and the pipe B, having the bell-top B′, of the interposed elastic packing having upright flaring walls, and a horizontal flange at the top, whereby a tight joint is made both against the upright walls and against the horizontal top, substantially as set forth.

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

COTTER T. BRIDE.

Witnesses:
EDW. W. DONN,
WM. HELMICK.