(No Model.)

H. S. ROSS.

PACKING FOR STUFFING BOXES.

No. 457,566. Patented Aug. 11, 1891.

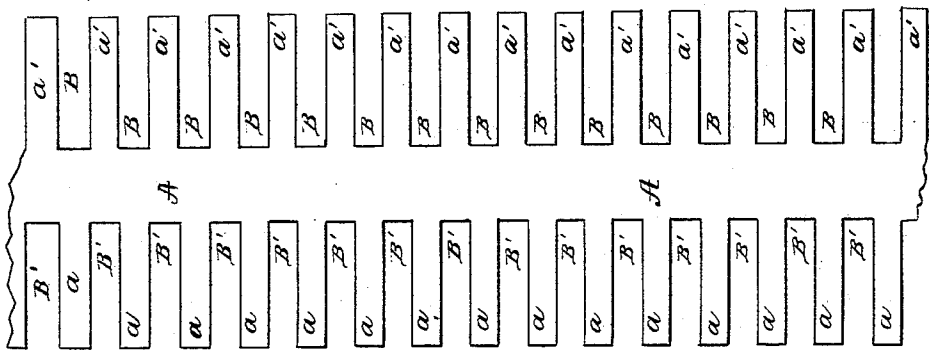


FIG. 1.

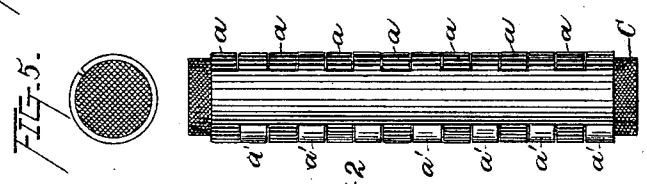


FIG. 5.

FIG. 2.

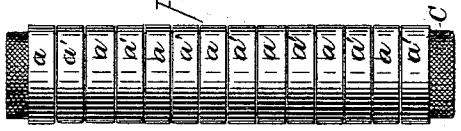


FIG. 3.

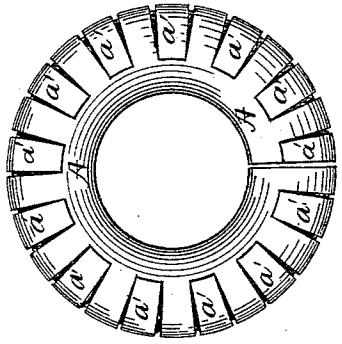


FIG. 4.

WITNESSES:

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UNITED STATES PATENT OFFICE.

HENRY SCHUYLER ROSS, OF NEW YORK, N. Y.

PACKING FOR STUFFING-BOXES.

SPECIFICATION forming part of Letters Patent No. 457,566, dated August 11, 1891.

Application filed November 26, 1889. Renewed January 7, 1891. Serial No. 376,972. (No model.)

To all whom it may concern:

Be it known that I, HENRY SCHUYLER ROSS, of the city, county, and State of New York, have invented certain new and useful Improvements in Packing for Steam or Water, of which the following is a specification.

The object of my invention is to provide a cheap, durable, and convenient packing which shall be ready for use in stuffing-boxes, and which will wear with little friction and be almost completely protected from destruction by heat.

My invention consists in enveloping any elastic or other packing, when in the form of rolls or lengths of round or square packing for use in stuffing-boxes, with a serrated strip of sheet-lead or other pliable metal so cut or shaped with tongues and grooves on both edges that when wrapped around such lengths or rolls of round or square packing the tongues of one side or edge fall into and fit the openings or grooves of the opposite side or edge throughout the length of the same, completely surrounding said elastic packing, the solid part of said metal strip being on the inside next to the rod or stem to receive the wear, and the cuts forming the tongues and grooves being on the outside, which cuts or grooves open sufficiently to give the necessary flexibility and enable the complete packing—that is, the elastic portion and the metal covering—to be bent around a rod or stem.

In the accompanying drawings, forming a part hereof, Figure 1 is a plan of a leaden strip before being wrapped about a roll or length of elastic packing. Fig. 2 is an elevation of the inner side of a straight length of packing when wrapped with the leaden strip. Fig. 3 is an elevation of the outer side. Fig. 4 is an elevation of a ring of packing when wrapped with the leaden strip; and Fig. 5 is an end view of Figs. 2 or 3.

A is the metal strip or sheet, and a a' are the tongues, and B B′ are the grooves that have been cut therein, and C is the elastic portion or center. When the strip A is folded or wrapped around the elastic portion C the tongues a fit into the grooves B, and the tongues a' fit into the grooves B′, as will be readily understood. This strip of lead or other metal should be wide enough to encircle the roll to be covered at least one and one-half times, or so that the tongue ends will reach to the line of neutral axis of the roll on each side. The depth of the grooves and length of the tongues on each side should be sufficient to leave from one-fifth ($\frac{1}{5}$) to one-seventh ($\frac{1}{7}$) of the full width of the strip uncut or solid. These proportions have been found to be very satisfactory in practical use: but they may be varied considerably, if desired, and as occasion requires. The ends of the tongues and bottoms of the grooves I make square or rounded in either case so as to fit each other; but the circular or rounded form tends to prevent buckling or tearing at the bottom of the grooves in round packing while it is being bent to fit the rod to be packed. While there may be a small opening between the tongues when they are bent to form a ring, as shown in Fig. 4, yet when a ring of this packing is compressed by the gland, the lead yields in every direction and forms a tight packing next the rod, and the tongues are pressed into the elastic center portion, forming a tight joint, and the steam or water having little access to the surface of the roll of elastic packing the latter is preserved from burning and corrosion for a long period of time; and, besides, this compound packing of my invention will not leak, since the soft fibrous elastic and yielding portion fills out when compressed into the interstices between the tongues of the metal portion, thereby preventing leakage.

I am aware of Letters Patent to Charles Jenkins, No. 242,133, dated May 31, 1881, but I do not consider that this patent embodies the spirit of my invention, since it does not show or describe a compound packing consisting of a soft yielding and elastic center portion enveloped by a sheet of metal constructed as hereinbefore described.

Having described my invention, I claim—

In a packing, the combination, with an elastic and yielding portion, of a strip or sheet of lead or other pliable metal covering said elastic and yielding portion, said strip or sheet being solid for a part of its surface and cut into transverse strips on opposite

sides or edges to form alternate tongues and grooves on each side or edge thereof, the tongues on one side or edge being adapted to closely fit into and fill the grooves of the opposite side or edge when said metal strip is wrapped around the elastic and yielding portion, substantially as and for the purpose set forth.

This specification signed and witnessed this 22d day of November, 1889.

HENRY SCHUYLER ROSS.

In presence of—
A. W. KIDDLE,
E. GATTEUR.