

ELIZA D. MURFEY.

Improvement in Packing for Pistons.

No. 124,846.

Patented March 19, 1872.

Fig. 1.

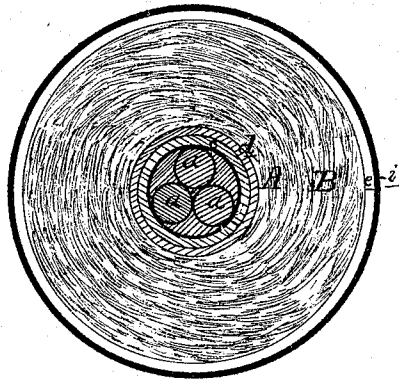


Fig. 2.

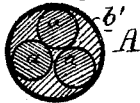
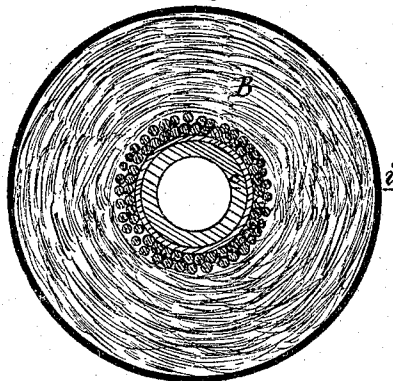


Fig. 3.



Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

ELIZA D. MURFEY, OF NEW YORK, N. Y.

IMPROVEMENT IN PACKINGS FOR PISTONS, &c.

Specification forming part of Letters Patent No. 124,846, dated March 19, 1872.

SPECIFICATION.

I, ELIZA D. MURFEY, of New York, county of New York, State of New York, have invented an Improved Packing, of which the following is a specification:

Packings for Pistons, &c.

Nature and Object of the Invention.

My invention relates to packings for steam-pistons, stuffing-boxes, and similar purposes; and consists of impregnated fibers or strands covered and bound together, as fully described hereafter, so as to form a single solid or hollow rope.

Description of the Accompanying Drawing.

Figure 1 is a sectional view of one form of my improved packing; Figs. 2 and 3, detached sectional views; and Fig. 4, a modification.

General Description.

The packing may be solid throughout, as shown in Fig. 1; or, where more elasticity is required, it may be hollow in the center, as shown in Fig. 4. When a core is used, strands *a*, Fig. 3, of rope, cord, or sliver are impregnated with any suitable material, and each is then inclosed in covering *b*, of fabric or of threads, wrapped, twisted, or plaited round the strands, and likewise impregnated. Two, three, or more of the covered strands are now bound or twisted together, and are enveloped in an impregnated covering, *b'*, similar to the covering *b*, forming the core A. This core is now introduced into an elastic tube, *c*, and round the latter is folded a wrapper, *d*, of felt, which may be impregnated or not, as desired, the office of the felt being to prevent the heating, and consequent softening, of the rubber tube. Round the felt covering is built up the body B of the packing, which may consist of impregnated strands wrapped round the felt-covered rope, or plaited and woven round the same, or laid longitudinally therewith, or the inner strand may be laid longitudinally with or twisted round the core, and the outer strand wrapped helically, as shown in Fig. 4. Round the body may now be placed a wrapper, *e*, of felt, and the whole is inclosed in an impregnated covering, *i*, of canvas or other fabric, or in a tube, woven, plaited, or otherwise formed. The materials employed in impregnating the various

portions of the packing are any of those mentioned in the various patents for packings and packing compositions heretofore granted to me, and consist, generally, of paraffine and plumbago, with or without other ingredients, as may be necessary. The inner portion of the core, instead of consisting of covered strands *a* may be composed of uncovered and unimpregnated strands which give greater elasticity to the packing; or, the core may be entirely dispensed with when a very elastic packing is required, as before described. I have found that lamp-wick is one of the best materials for forming either the body or covering, as it will absorb and retain more of the impregnating material than hemp or similar fiber.

Instead of a single inner rubber tube, *c*, two or more rubber tubes may be arranged between the core and outer covering with intervening bodies of impregnated or unimpregnated strands, felt or fabric.

When a light packing is required the impregnated covered strands *a*, combined and inclosed in the covering *b'*, may be employed.

Claims.

1. A packing, consisting of a body of impregnated fiber, strands, or other material, and one or more tubes of rubber, all arranged as described.
2. The combination, in said packing, of tubes or wrappers of felt or its equivalent, inclosing the rubber, as specified.
3. The combination of the strands *a*, each inclosed in a wrapper, as described, and bound or twisted together and inclosed in an impregnated covering, *b'*, as set forth.
4. A packing, consisting of the core A, rubber *d*, body B, and outer covering *i*, as specified.
5. The combination, with the tube *c*, (or with the core,) of the body B, consisting of inner longitudinal or spiral strands and outer strands wrapped round the inner strands and inclosed by a covering, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

E. D. MURFEY.

Witnesses:

J. ROMAINE BROWN,
FRANCIS JAEGER.