

G. F. MILLER.
PACKING.

APPLICATION FILED MAY 29, 1909.

951,827.

Patented Mar. 15, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

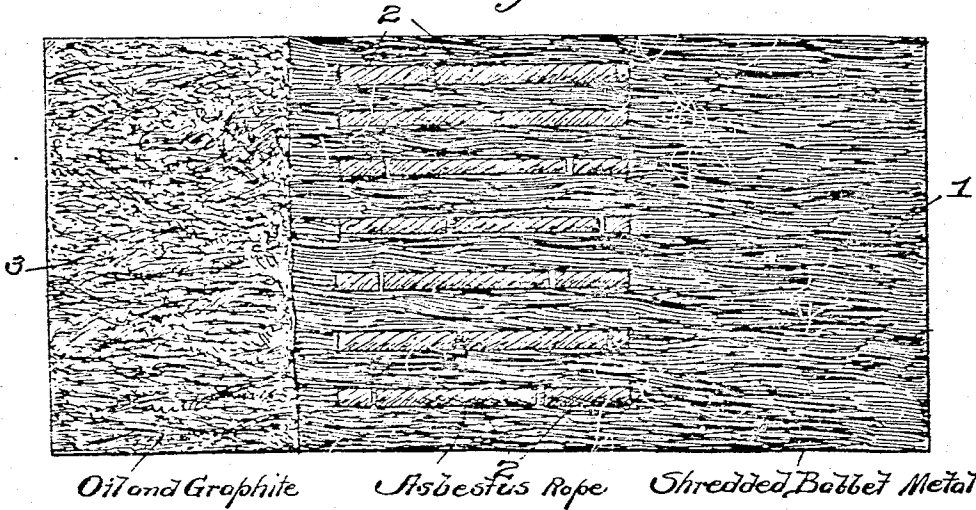
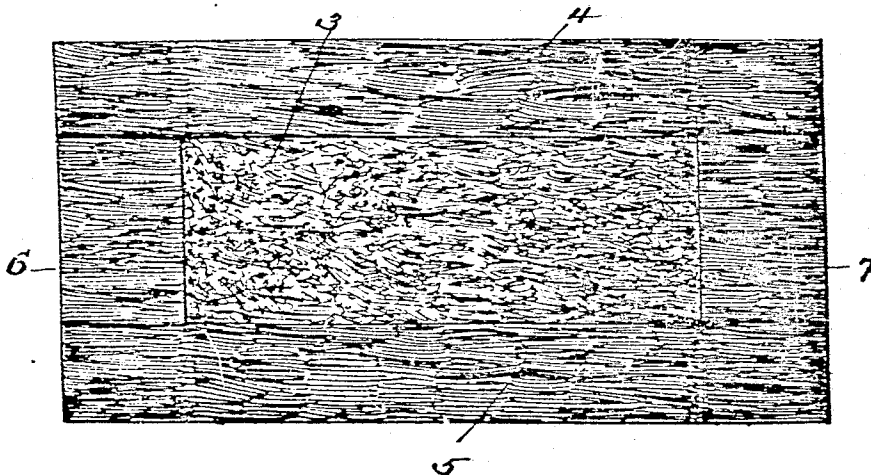


Fig. 2.



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3 SHEETS—SHEET 2.

Fig. 3.

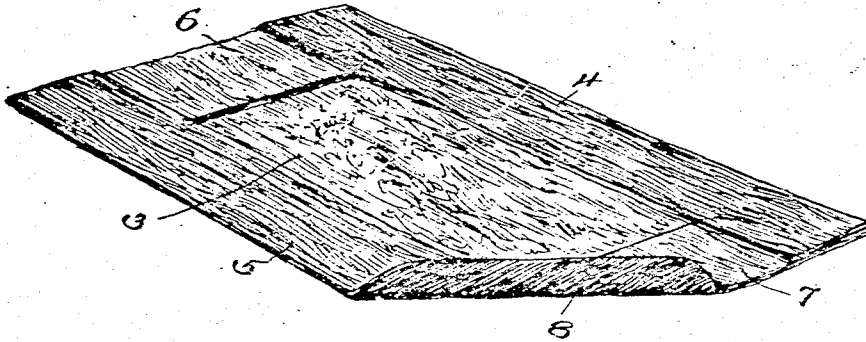


Fig. 4.

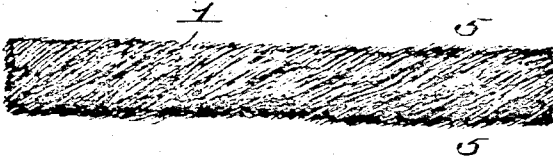
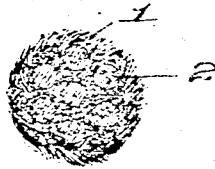


Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE F. MILLER, OF EASTON, PENNSYLVANIA.

PACKING.

951,827.

Specification of Letters Patent. Patented Mar. 15, 1910.

Application filed May 29, 1909. Serial No. 499,133.

To all whom it may concern:

Be it known that J. GEORGE F. MILLER, a citizen of the United States, residing at Easton, in the county of Northampton and State of Pennsylvania, have invented certain new and useful Improvements in Packing, of which the following is a specification.

This invention relates to improvements in packing, and particularly to packing for valves, joints and the like where friction is present.

The object in view is the provision of means arranged for lubricating and packing a joint or valve or the like at the same time.

Another object in view is the arrangement of a soft metal and a liquid lubricant, together with binding means for presenting a combination packing and lubricant that has a comparatively long life.

A still further object of the invention is the arrangement of shredded Babbitt metal, asbestos rope, oil and graphite intermixed and twisted together for forming a combined packing and lubricant.

With these and other objects in view the invention comprises certain novel constructions, combinations and arrangement of parts as will be hereinafter more fully described and claimed.

In the accompanying drawings: Figure 1 is a plan view of the combined packing and lubricant arranged with certain parts removed for disclosing the structure thereof. Fig. 2 is a plan view of the packing with the edges turned in. Fig. 3 is a perspective view of the packing with the edges turned in and one corner slightly rolled. Fig. 4 is a side elevation of the complete packing rolled and twisted. Fig. 5 is a section through Fig. 4, approximately on line 5-5 thereof.

In constructing a packing embodying the invention, Babbitt metal is taken and shredded to any desired extent, but preferably in comparatively small strings or pieces. The Babbitt metal after having been shredded is spread out in a thin layer and then a number of comparatively small strands of wick asbestos are arranged or scattered over the layer of shredded Babbitt metal. The shredded Babbitt metal is arranged in a thin layer of such length and breadth as will be necessary to make the contemplated size packing. The asbestos wick or rope is arranged lengthwise of the layer of Babbitt metal so as to extend

lengthwise of the packing when complete. Upon the top of the asbestos is laid lengthwise another layer of shredded Babbitt metal which is comparatively thin, the same as the first layer. Another layer of wick asbestos is placed upon the second layer of Babbitt metal and arranged in rows a short distance apart. A third layer of shredded Babbitt metal, comparatively thin, is placed upon the second layer of asbestos wick. Any desired layers of Babbitt metal may be provided according to the size of packing desired. After the last layer of Babbitt metal has been placed in position oil and graphite is sprinkled or spread over the upper surface of the finished pile. The oil and graphite may be placed in position separately or may be mixed first and then sprinkled upon the pile of Babbitt metal and asbestos. Any desired quantity of oil and graphite may be placed upon the pile of Babbitt metal and asbestos according to the amount of oily matter desired in the packing, a comparatively small amount being preferable. After the oil and graphite have been placed in position all of the outer edges, both on each side and the ends, are turned in and then the Babbitt metal is rolled up commencing at one corner and ending at the diagonal opposite corner. This rolling will cause the asbestos wick or rope and also the shredded Babbitt metal to be wound something like an ordinary rope structure. After the packing has been thus rolled up the same is twisted in the direction in which it has been rolled which twisting action will squeeze the oil and graphite through the entire body until the same begins to ooze out when the twisting action will cease.

In order that the invention may be more clearly understood, an embodiment of the same is shown in the accompanying drawings in which 1 indicates a layer of shredded Babbitt metal upon which is placed rows of wick or rope asbestos 2 which are spaced apart any desired distance. Upon the top layer 1 of Babbitt metal is positioned the oil and graphite 3. In forming the packing any desired numbers of layers of shredded Babbitt metal 1 may be provided and between each layer is provided the asbestos rope or wick 2. After the desired thickness of Babbitt metal and asbestos has been secured the oil and graphite 3 is placed in po-

sition upon the top layer, either separately or after having been previously mixed. The packing is then folded as shown in Fig. 2 in which the edges 4 and 5 are folded inward, and also the ends 6 and 7. After the packing has been arranged as shown in Fig. 2 the same is rolled starting at one corner as at 8, as shown in Fig. 3. The packing is rolled from one corner to the diagonal opposite corner, whereby the asbestos rope 2 will be twisted something on the order of an ordinary rope. After the packing has been rolled the same is twisted until the oil and graphite begin to ooze out the outer surface. This distributes the oil and graphite entirely through the mass, and also forms a more compact body. When in use as a packing for piston rods the oil and graphite will form ample lubricant for the piston rod until the Babbitt metal has been worn sufficiently smooth to act as a combined packing and lubricant. The oil and graphite remaining in the packing will however continually act though to a less degree after having been used for a considerable time.

What I claim is:

1. In a packing, a plurality of layers of strands of lubricating metal, a binding agent between said layers of metal, and oil lubricant distributed through said binding agent and said lubricating metal.

2. In a packing, a plurality of layers of strands of Babbitt metal, a binding agent positioned between said layers of Babbitt metal, and a lubricant distributed through

said layers of Babbitt metal and said binding agent.

3. A packing comprising a plurality of layers of shredded Babbitt metal, a plurality of spaced rows of rope between said layers of Babbitt metal for acting as a binding agent, and an oil lubricant distributed through said Babbitt metal and said rope.

4. A packing comprising a plurality of layers of shredded Babbitt metal, and a plurality of rows of wick asbestos positioned between each of said layers of Babbitt metal.

5. A packing comprising a plurality of layers of shredded Babbitt metal, a plurality of rows of asbestos wick spaced apart positioned between each of said layers of Babbitt metal, and oil and graphite positioned in the interstices of the Babbitt metal and the asbestos.

6. A packing comprising a plurality of layers of shredded Babbitt metal, a plurality of rows of wick asbestos arranged between each of said layers of Babbitt metal, said Babbitt metal and said asbestos being rolled and twisted into a cylindrical form, and a mixture of oil and graphite positioned in the interstices of the asbestos and Babbitt metal.

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

GEORGE F. MILLER.

Witnesses:

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