

UNITED STATES PATENT OFFICE.

BYRON W. GOODSSELL, OF CHICAGO, ILLINOIS.

PLASTIC METALLIC PACKING.

1,355,830.

Specification of Letters Patent.

Patented Oct. 19, 1920.

No Drawing.

Application filed February 24, 1920. Serial No. 360,827.

To all whom it may concern:

Be it known that I, BYRON W. GOODSSELL, a citizen of the United States, and a resident of the city of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Plastic Metallic Packings, of which the following is a full, clear, and exact specification.

10 This invention is concerned with plastic metallic packings which, owing to their plastic nature, are capable of being placed by hand in a stuffing box of any shape or size and perfectly fitted therein, and which will not heat, scratch or otherwise injure a rod or other member working therein, and which does not harden after years of service and may be molded and replaced and thereafter operate as a practical and frictionless packing.

20 A further object of my invention is a metallic packing compound, the materials of which will not absorb and retain heat, are frictionless, as nearly as may be, and which will not scratch or otherwise injure the member working therein, however great its speed.

30 The compound in which my invention finds its embodiment essentially consists of granulated Babbitt metal, brown mica flour, beeswax and cylinder oil and a binder of metallic wool, the Babbitt metal and metallic wool forming about 92 per cent. of the compound.

35 For carrying out my invention, a layer of granulated Babbitt metal is spread with substantial uniformity over the surface of a heated table, followed by spreading thereon first a layer of metallic wool, which may be of Babbitt metal or other alloy, having a melting point of about 600 degrees F., but preferably consists of lead wool, the melting point of which is about 400 degrees F., followed by a layer of mica flour, and then saturating the whole with beeswax dissolved in cylinder oil, and then subjecting it to the action of a heated roller with sufficient pressure for consolidating these several materials.

50 In order to secure the necessary and sub-

stantial mixture of the several ingredients, the sheet thus formed and in a heated condition is then folded over upon itself, but is preferably rolled in coiled form, in which form it is again subjected to the compressive force of a heated roller until it is reformed into a sheet, after which the compound is ready for shipping and use, and for this purpose is commonly packed in retaining cans.

60 The amount of metallic wool used should be sufficient to form a binder preventing the breaking up or crumbling of the mass when molding it by hand in a stuffing box around a bearing and to necessitate quite a little force to pull it apart, but not sufficient to prevent its being readily molded by hand and for perfectly shaping and fitting it to a stuffing box and around the bearing therefor.

70 The invention of my compound, however, is not limited or confined to the exact materials above specified, as, for example, it would be no departure therefrom to use lard oil mixed with the cylinder oil for thinning the compound for use in cold weather or climates, or to use paraffin in connection with beeswax for thickening and stiffening the compound for use in hot weather, or to adapt the compound for use in connection with stuffing boxes wherein the compound is subjected to quite a high degree of heat.

80 For meeting various conditions, lard oil may also be used to the exclusion of cylinder oil, or both may be employed in about equal proportions, the paraffin being used in connection with the beeswax only when the latter may render the compound too sticky for some of the uses to which it may be or is required to be applied. And so also the proportions of ingredients may be varied at will in order to adapt the compound to varying conditions of use.

95 Having described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A composition composed of Babbitt metal, mica flour, beeswax, and a lubricating oil commingled one with the other.

2. A composition composed of granulated

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Babbitt metal, brown mica flour, beeswax, cylinder oil, and a wirelike binder for the whole.

- 9 3. A compound for a plastic metallic packing consisting of a mixture of granulated Babbitt metal, brown mica flour, beeswax, lubricating oil, and a metallic wool binder for the whole.

In witness whereof, I have hereunto set my hand and affixed my seal, this 21st day 10 of February A. D. 1920.

BYRON W. GOODSELL. [L. s.]

Witnesses:

JNO. G. ELLIOTT,
W. C. SMITH.