

UNITED STATES PATENT OFFICE.

GEORGE R. BEAMER, OF DETROIT, MICHIGAN.

PACKING.

SPECIFICATION forming part of Letters Patent No. 747,846, dated December 22, 1903.

Application filed April 25, 1903. Serial No. 154,320½. (No specimens.)

To all whom it may concern:

Be it known that I, GEORGE R. BEAMER, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Packing, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to packings for valves, pistons, &c., and has particular reference to an improved construction of plastic metallic packing, as will be presently described.

My improved packing is composed, primarily, of a mixture of asbestos, putty graphite, a metallic alloy in shredded form, and wax. These ingredients combined in the manner hereinafter set forth produce a plastic packing having great strength and durability and one that is practically free from soft and heavy grease, which for well-known reasons is a source of annoyance to engineers and other persons using the packing. In forming the mixture a suitable quantity of an antifriction metallic alloy is employed, which, if preferred, may be Babbitt metal. To this is added a relatively small quantity (usually less than five per cent.) of wax, preferably beeswax, which is first melted and then poured over the alloy. A suitable quantity of putty graphite is then mixed separately with a small amount (about two per cent.) of shredded asbestos, and the two mixtures are thoroughly mingled, forming a mass of packing.

The use of asbestos and an antifriction metallic alloy in shredded form produce a pack-

ing sufficiently cohesive to be used without a retaining-webbing or other binding means. The putty graphite and beeswax also assist in holding the ingredients together in a compact mass and aid, further, in making the packing durable and pliable, so that it may be easily pressed into bars or other convenient forms for shipment.

In practice I find it advantageous to use as the antifriction compound an alloy composed of zinc, tin, antimony, aluminium, and copper. The aluminium and zinc may be used in equal parts and give to the mass strength and ductile quality. I also may and preferably do use a small per cent. of a light oil with the beeswax, which increases the adhesive quality of the latter and also thins it to an extent that allows the mixture when poured over the ingredients to thoroughly coat the same, thus giving to the packing a maximum degree of pliability.

The proportions of the ingredients, as will be obvious from the character of the packing, will necessarily vary according to the use of the latter and the temperature to which it is to be subjected. I do not desire, therefore, to be limited to the proportions described.

What I claim as my invention is—

A plastic packing comprising Babbitt metal in shredded form, wax, putty graphite, shredded asbestos and oil.

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

GEORGE R. BEAMER.

Witnesses:

JAS. P. BARRY,
H. C. SMITH.