

United States Patent Office.

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

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IMPROVED MATERIAL FOR PACKING JOURNALS AND BEARING

The Schedule referred to in these Letters Patent and making part of the same.

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

Nature and Object of the Invention.

My invention consists of a bearing or packing of paper or other pulp, alone or combined or mixed with other material, and so condensed as to form a dense, tough block, sufficiently hard to be cut or turned to any desired shape, and to receive a high polish, the said block, after being reduced to the proper shape, being employed as a substitute for the usual metal and other bearings and packings.

General Description.

Paper, rags, or other material which may be reduced to a pulpy condition, are finely divided, macerated, and passed through a sieve, so as to obtain a pulp in which only the finest particles of the material are contained.

After a pressure between cloths, or after being treated in any other suitable manner to remove the greater part of the water, the pulp is placed in a mold of any suitable form, and is there subjected to a pressure of six or more tons, this pressure being continued until the pulp is perfectly dry.

On removing the molded block it will be found to be dense, tough, and so extremely hard that it can be cut or turned to any suitable form, and highly polished, in which state it is suitable for bearings for journals, spindles, axles, slides, &c., and for use in place of the ordinary metallic and other packings in packing-boxes, pistons, &c.

The material may be used either with or without oil, and plumbago or other similar material may be mixed with the pulp before condensing the same.

In some instances I thoroughly saturate the pulp before or after its introduction into the mold with paraffine, and subject it to a pressure in heated molds, so that the lubricant is preserved in a liquid state until thoroughly absorbed.

In many cases it is best to add a solution or mixture of rubber to the pulp, or to add both rubber and paraffine, the product being thereby rendered more serviceable as a bearing.

I am aware that paper-pulp has been molded into packings, and that a mixture of paper-pulp, plumbago, and other material has been molded, the pulp serving to give body to the material, and to retain the particles together; but I am not aware that paper-pulp, either alone or with other material, has ever been so condensed as to form a block for bearings, &c., capable of receiving a high polish.

Claims.

1. A packing or bearing, consisting of paper or other pulp condensed in dies under such a pressure as to form a dense, solid block capable of being turned and polished, as set forth.

2. A packing, consisting of pulp combined with rubber, and condensed under pressure to form a hard block, as set forth.

3. A packing, consisting of pulp condensed under pressure to form a hard block, and saturated with paraffine.

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

ELIZA D. MURFEY.

Witnesses:

CHARLES E. FOSTER,
EDM. F. BROWN.