

UNITED STATES PATENT OFFICE.

THOMAS H. DUNHAM, OF BOSTON, MASSACHUSETTS.

IMPROVED CARPET-WADDING.

Specification forming part of Letters Patent No. 54,312, dated May 1, 1866.

To all whom it may concern:

Be it known that I, THOMAS H. DUNHAM, of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Carpet-Wadding, the same being a new article of manufacture; and I do hereby declare that the following is a full and exact description thereof.

The articles now in general use for covering floors and preventing the wear of carpets are wadding, cotton-batting, and paper of various kinds; also, batting and thin sheets, made of fibrous substances, inclosed between two sheets of paper.

The article that I have invented is composed of a sheet of batting attached to one or more layers of paper stuff or pulp, the parts being so united and consolidated as to combine the advantages due to a paper that is impervious to dust, and to batting or soft fiber that is slightly elastic or yielding to the tread, while the adhesion of the fibrous material or batting to the paper-pulp that forms its coating or exterior prevents the displacement of the fibrous substance and insures a uniform thickness of the wadding when laid down upon a floor under a carpet.

The bat or layer that gives elasticity to the wadding is composed of various kinds of fibrous substances, such as wool, hair, cotton, jute, linen, manila, wood in fine shreds, or any mixtures or combinations of these materials, the same being usually of a coarse or inferior quality, or it may consist of the waste of the above-named or other fibrous materials.

This article, called "carpet-wadding" may be manufactured in various ways. One mode of making the same is as follows: Paper pulp or stuff is prepared in the same manner as for the manufacture of paper. It is then carried forward on an endless apron, and as soon as it is of the right consistence—that is to say, partially hardened, but not dry—the batting or layer of fibrous material is pressed upon it by a roller or other suitable mechanism, which causes the fibers on the outside of the sheet of batting to enter into the paper-pulp and be min-

gled or incorporated with it. It is then passed between drying-rollers, which drive off the moisture, and the pulp as it hardens closes upon the fibers of the batting. It is then passed between calender-rollers, which give an even and smooth surface to the paper, while it condenses the batting or sheet of fiber.

In some cases I make use of the fabric manufactured as above stated—that is to say, consisting of a sheet or layer of batting having upon one of its sides a coat or layer of paper, which adheres to the batting without the use of gum, mucilage, starch, or other similar substances usually employed for the manufacture of wadding; but I prefer to coat both sides of the batting or sheet of fibrous materials with the paper-pulp.

I thus form (without the use of any adhesive gums or similar substances) a fabric having an exterior of paper and a central layer of fibrous materials, or one layer of paper and one of fiber, which, when used under a carpet, prevents it from wearing and insures suitable elasticity and an even surface.

The pulp may be made of various substances. For instance, when great strength is required I use manila pulp or stuff for the exterior coating. I also make use of a pulp made from leather scraps and from the fibrous bark of the cedar, this latter material being also of value for the prevention of injury to carpets by moths.

What I claim, and desire to secure by Letters Patent, is—

A wadding composed of a bat or layer of fibrous materials, and having either upon one or both of its sides a layer or sheet of paper, in which the exterior of the fibrous bat is embedded while the paper is in the condition of partially-hardened pulp, which adheres to the fiber and holds it in place without the use of starch, paste, or adhesive gums.

THOMAS H. DUNHAM. [L. S.]

In presence of—

JOHN M. BATCHELDER,
JOSEPH WALWORTH.