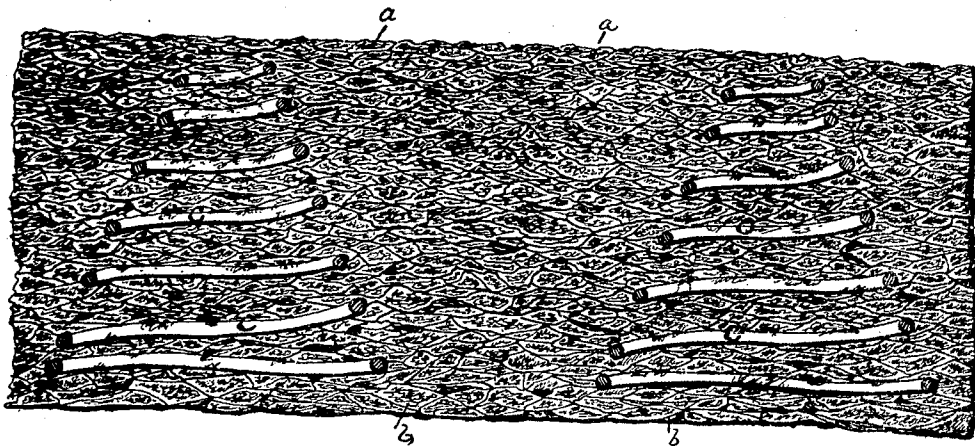


J. L. KENDALL.

Improvement in the Manufacture of Mattresses, Seats,
and Backs of Sofas, &c., from Paper-Pulp, Sponge, &c.

No. 130,223.

Patented Aug. 6, 1872.



WITNESSES.

John C. McElroy.
Robert Morris Jr.

INVENTOR.

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UNITED STATES PATENT OFFICE.

JOHN L. KENDALL, OF FOXBOROUGH, MASSACHUSETTS.

IMPROVEMENT IN THE MANUFACTURE OF MATTRESSES, SEATS, BACKS OF SOFAS, &c., FROM PAPER-PULP, SPONGE, &c.

Specification forming part of Letters Patent No. **130,223**, dated August 6, 1872.

To all whom it may concern:

Be it known that I, JOHN L. KENDALL, of Foxborough, in the county of Norfolk and State of Massachusetts, have invented a new and Improved Manufacture from Paper-Pulp and Sponge, &c.; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying plate of drawing.

This invention relates to a new article of manufacture from paper-pulp and sponge, &c., more especially intended for mattresses, seats and backs of sofas, chairs, &c. It is an improvement on the new manufacture for which I have already made application, dated May 13, 1872, for Letters Patent of the United States.

This new manufacture is composed of pieces of sponge, India rubber, cork, or other elastic and buoyant material or materials, molded with cotton, flax, hemp, or other fibers capable of pulping, and devices mechanically constructed to be springy or elastic—as, for instance, spiral springs, (cylindrical, conical, &c.,) with said springs within or across the thickness of the molded pulpy fibers and sponge, &c.

In the accompanying plate of drawing my new manufacture is illustrated, the figure being a transverse vertical section.

In the drawing, *a* represents pieces of sponge; *b*, cells or cavities made by the pulpy fibers, in which cells are the sponge pieces *a*; *c*, conical spiral springs within and surrounded by the sponge pieces *a* and cells *b*. These springs *c* are perpendicular to the thickness of sponge *a* and cells *b*.

In the production of the new manufacture embraced by this invention, as the means of molding the fibrous pulp and sponge, &c., about the springs, an apparatus is employed that is constructed substantially similar to the apparatus described in the schedule annexed to the Letters Patent dated April 16, 1872, and numbered 125,740, issued to John L. Kendall and Richard H. Trested for improvements in molding articles from paper-pulp; and in its use as regards the molding of the paper-pulp and sponge substantially the mode of operation is employed as described in said Letters Patent and in the aforesaid

application for Letters Patent, except that in the production of my new manufacture the springs which are to be surrounded by the molding of the paper-pulp and sponge, &c., are located within that apparatus before the mixture of pulp and sponge, &c., is poured into the molding-reservoir.

In the location of these springs, one mode is to suspend them by lines from the top of the reservoir, and they are of course to be placed within such a horizontal plane of the depth of the reservoir that they will be within the thickness about them of the pulp and sponge, &c., after molding; the pulpy fibers, sponge, &c., by the operation of the apparatus forming the one about the other, as shown in the accompanying drawing and more particularly described in my aforesaid application, at the same time settling within and filling in and around the coils of the springs, entirely covering and inclosing them. Another mode is to locate them within a frame by lines stretched across the frame, and then this frame set upon the top of the molding screen in reservoir, the springs being secured to the said lines.

The manufacture embraced herein, as before stated, is more especially intended for mattresses, seats and backs of chairs, &c.; and to apply it for such purposes, obviously, no special instructions are herein needed; but it may be well to here observe that care should be taken that the springs are in the proper position for action. By the combination of springs with the paper-pulp and sponge, &c., increased elasticity is obtained, and while are retained all the advantages of springs for mattresses, backs and seats for chairs, &c., by the surrounding fibers and sponge, &c., are obtained additional and very important advantages, among them the following: that the springs are held more perfectly to their plane of action; are braced; cannot “wabble”—that is, cannot “cant” over sidewise.

Although I have named the apparatus embraced by the Letters Patent aforesaid as one suitable to be used for the purposes of this invention, any other apparatus having a reservoir with a perforated mold block or screen at or near its bottom may be employed; and, therefore, in the carrying out of this in-

vention, I do not intend to limit myself to the use of any particular apparatus, intending to employ any apparatus which may be found the best and the most suitable therefor. Furthermore, the suspension of the springs within the molding-reservoir may be variously accomplished other than the two modes herein described; also, the proportion of fibrous pulp to sponge may be four ounces of fibers to one pound of sponge, as described in my aforesaid application, or a greater or less proportion of fiber to sponge, or vice versa, according as may be found necessary or most desirable. The size of the piece of sponge, &c., depends somewhat upon the coarseness and size of the springs, and it may be well to here say that pieces can be used substantially larger than would be best to use were the springs omitted.

I do not claim combining divided or disintegrated sponge with cotton, wool, or other such fibrous material, spread in layers upon or between sheets of paper, for such is not new; but

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The new manufacture herein described and shown.

The above specification of my new and improved manufacture from paper-pulp and sponge, &c., signed by me this 16th day of May, 1872.

JOHN L. KENDALL.

Witnesses:

ALBERT W. BROWN,
EDWIN W. BROWN.