

(No Model.)

G. MULLER.
CUSHION, PAD, &c.

No. 590,328.

Patented Sept. 21, 1897.

Fig. 1

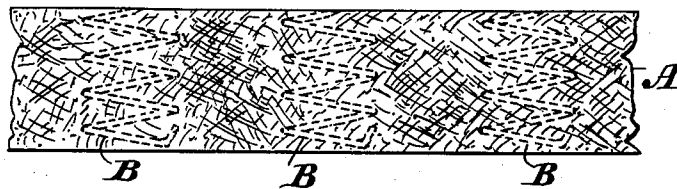
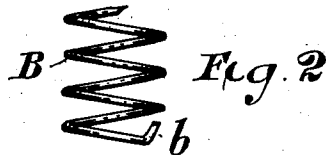
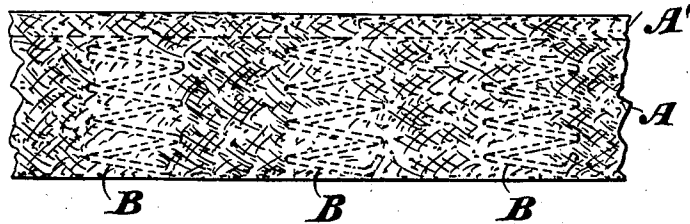


Fig. 3



Witnesses
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UNITED STATES PATENT OFFICE.

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CUSHION, PAD, &c.

SPECIFICATION forming part of Letters Patent No. 590,328, dated September 21, 1897.

Application filed April 21, 1897. Serial No. 633,132. (No model.)

To all whom it may concern:

Be it known that I, GEORGE MULLER, a citizen of the United States, residing in Mount Vernon, county of Westchester, State of New York, have invented certain new and useful Improvements in Cushions, Pads, &c., of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

Cushions or pads for various purposes are commonly composed of masses of material of various kinds, all of which are preferably somewhat resilient, so that they shall not become compacted and hard in use, but shall return approximately to their normal condition after release from the pressure to which they have been subjected. It is, however, the fact that of all the materials which are available for use in cushions or pads—such as hair, wool, cotton fiber, sponge, felt, and even rubber—lose their natural resilience after continued use and exhibit a tendency to become more or less compacted and hard. Under many conditions of use the material employed would not require to be renewed for very long periods of time but for this tendency to become compacted, and in fact it is often possible by removal and renovation or picking apart and lightening up of the material to restore it substantially to its original condition. In some cases, however, it is not practicable to remove the material for the purpose of renovation. I have sought to provide means whereby such a felted or compacted material shall be practically self-renovating while in use and shall maintain itself in its natural and original condition of resilience, thereby prolonging the efficiency of the cushion or pad and obviating the necessity for the removal and renovation of the material of which it is composed. To this end I incorporate with or embed in the felted or compacted cushioning material spiral wire springs, screwing them into the felted mass and varying their number and arrangement and form according to the particular use for which the cushion or pad is intended.

In the accompanying drawings, wherein I have illustrated an embodiment of my inven-

tion, Figure 1 is a view in side elevation of a small portion of a cushion or pad to which my invention is applied. Fig. 2 is a side view of one of the springs removed from the cushion or pad; and Fig. 3 is a view similar to Fig. 1, showing a preferred arrangement of the cushioning material for some purposes, the springs being indicated in dotted lines in both Figs. 1 and 3.

The cushioning material to which my improvements are specially applicable is a practically homogeneous felted or compacted mass of fiber, such as indicated at A in the drawings. I incorporate with or embed in the mass of cushioning material, by screwing them in in number and relative arrangement and character, according to the particular use for which the cushion or pad is intended, one or more spiral springs, such as are indicated at B in the drawings, such springs when sharpened or pointed being easily inserted and thoroughly effective in accomplishing their intended purpose, namely: to restore the cushioning material to its original condition after release from pressure by lightening it up throughout its mass and stretching and separating the fibers or parts of the mass. The spiral wire springs B are easily incorporated with the mass of cushioning material by screwing them into the same. In some cases there may be a tendency on the part of plain wire spirals to work out of the mass of cushioning material, and in order to prevent such action I bend one or both ends of the wire spiral at an angle, as shown at b in Fig. 2, so that the bent-over end shall engage the cushioning material and prevent the screwing outward of the spiral. Furthermore, since the bending of the wire necessarily leaves one end or the other of the spiral at or near the surface of the mass of cushioning material I may apply to the surface of the cushioning material where the wires are exposed a thin layer of felt or any other suitable cover, as indicated at A' in Fig. 3.

It will be readily apparent that the action of the spring in constantly lightening up the mass of felted or compacted fibrous material after it has been subjected to pressure and

released offsets completely the tendency of such material to become matted and hard in long-continued use.

I claim as my invention—

5 1. A practically homogeneous mass of felted or compacted fibrous material having spiral wire springs screwed therein.

2. A practically homogeneous mass of felted or compacted fibrous material having spiral

wire springs screwed therein, the ends of said springs being bent to prevent the withdrawal of the springs.

This specification signed and witnessed this 17th day of April, A. D. 1897.

GEORGE MULLER.

In presence of—

W. B. GREELEY,

F. M. EGGLESTON.