Oct. 20, 1953 M. DOLL ET AL 2,656,291

PAD

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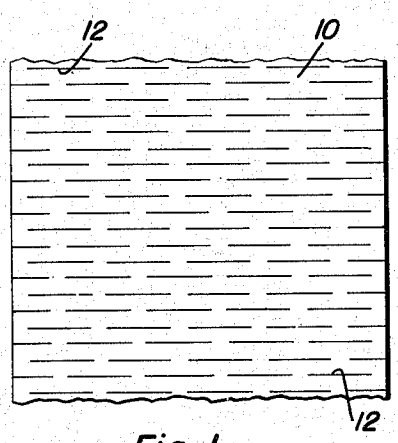

Fig. 1

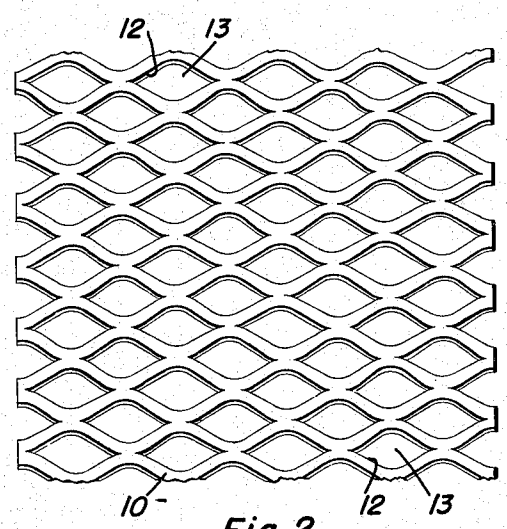

Fig. 2

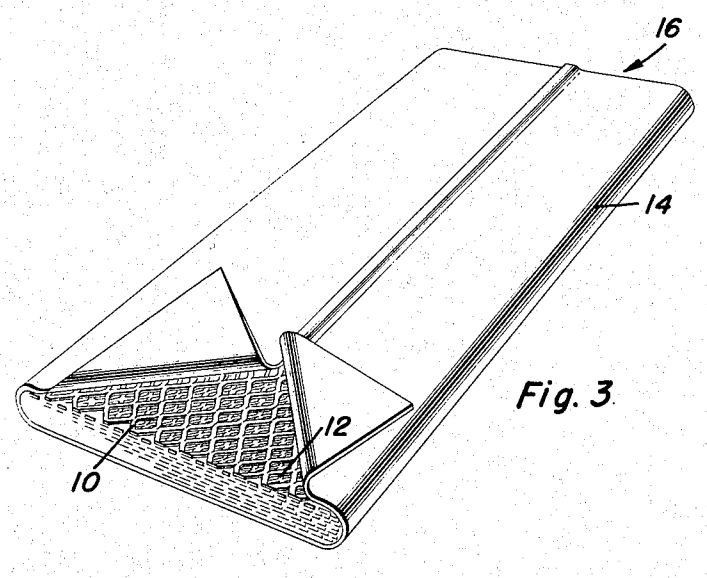

Fig. 3

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PAD

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5 Claims. (Cl. 154—54)

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This invention relates to new and useful improvements in pads and the primary object of the present invention is to provide a combination packaging and upholstering pad whereby furniture and the like may be shipped without marring, scratching or other such harmful damage.

Another important object of the present invention is to provide a packaging and upholstering pad composed of one or more sheets of expanded flexible material that is combined together and preserved in the form of a pad or blanket by a sleeve or securing means.

A further object of the present invention is to provide a soft, pliable, resilient pad composed of superimposed layers or plies of expanded sheet material, such as paper, plastic, metal foil or the like.

A still further aim of the present invention is to provide a pad for protecting furniture and the like during the shipment thereof that is extremely simple and practical in construction, inexpensive to manufacture, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a plan view of a flexible sheet of material having a series of slits therein;

Figure 2 is a view similar to Figure 1 but showing the material expanded in a direction perpendicular to the rows of slits; and

Figure 3 is a perspective view of the present pad and with the covering folded back to illustrate the expanded sheet material filler.

Referring now to the drawings in detail, wherein for the purpose of illustration, there is disclosed a preferred embodiment of the present invention, the numeral 10 represents a flexible sheet material, such as paper, plastic, metal foil, rubber or the like, that is formed with parallel rows of longitudinally spaced slits 12 with the slits of one row being staggered with respect to the slits of an adjacent row. The end of each slit of one row are disposed adjacent the middle portion of the slits of an adjacent row, as shown in Figure 1 of the drawings, so that as the sheet material 10 is stretched in a direction perpendicular to the rows of slits, the material will expand as illustrated in Figure 2 and form diamond-shaped openings 13.

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One or more sheets of the expanded material 10 is combined together and preserved in the form of a pad or blanket by various means or wrapped in an unslit sheet or covering 14 of similar material and sealed by gluing, taping or the like.

When the expanded material is wrapped or enclosed in a sleeve such as the sleeve 14 shown in Figure 3, the finished pad 16 is quite resistant to abrasion and compensates for the rough texture of the padding itself. If neither of the conditions are considered important, the plies may be held together by spot embossing under extreme pressure, the spots ranging from one-quarter of an inch in diameter, and covering the entire pad at intervals of three to six inches or however often is required. In the case of an expanded heat-sealing film or sheet, the same result may be obtained with less pressure by the application of the proper heat at the point of embossing.

The principle of slitting and expanding sheet material has been used in paper toys and for decorating purposes. Its use as a filter material is disclosed in U. S. Patent No. 2,070,073, and a machine for slitting and expanding is contained in U. S. Patent No. 2,294,478. However, the use of expanded sheets for padding and insulation, such as disclosed in Figure 3, provides an extremely resilient and practical pad for the shipment of articles, such as furniture or the like.

Although various means have been discussed for joining adjacent plies together in order to form the completed pad, obviously, other methods could be employed, for example, the plies may be held together by loose stitches spaced far apart, using any economical sewing thread or yarn.

The sheet material 10 may be torn or cut to any desired length or size. Any suitable material may be employed for the covering 14 with the filler or sheet material 10 held within the covering 14 by securing the edges of the covering together by adhesive or the like.

In view of the foregoing description taken in conjunction with the accompanying drawings, it is believed that a clear understanding of the device will be quite apparent to those skilled in this art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention, the same is susceptible to certain changes fully compre-

hended by the spirit of the invention as herein described and the scope of the appended claims.

Having described the invention, what is claimed as new is:

1. A resilient packing pad comprising a plurality of superimposed layers of slitted, expanded paper with adjacent layers in contact with each other, and a covering enclosing the layers.

2. A resilient packing pad comprising a plurality of sheets of expanded paper having slits therein and means joining the layers together and preserving the sheets in the form of a pad with adjacent sheets in contact with each other.

3. A resilient packing pad comprising one or more sheets of expanded flexible material having parallel rows of openings with the openings of one row staggered relative to the openings in an adjacent row, and an imperforate sheet of flexible material wrapped about the expanded flexible material.

4. The combination of claim 2 wherein said means includes sewing thread.

5. A resilient packing pad comprising a plurality of sheets of expanded material having slits

therein and means joining the layers together and preserving the sheets in the form of a pad with adjacent sheets in contact with each other, said material being felted cellulose fibre material, said means joining the layers comprising spot embossing under extreme pressure.

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