Dec. 18, 1962 E. A. STRAZDAS 3,068,860

BACK PLASTERS

Filed Aug. 12, 1960

Fig. 1.

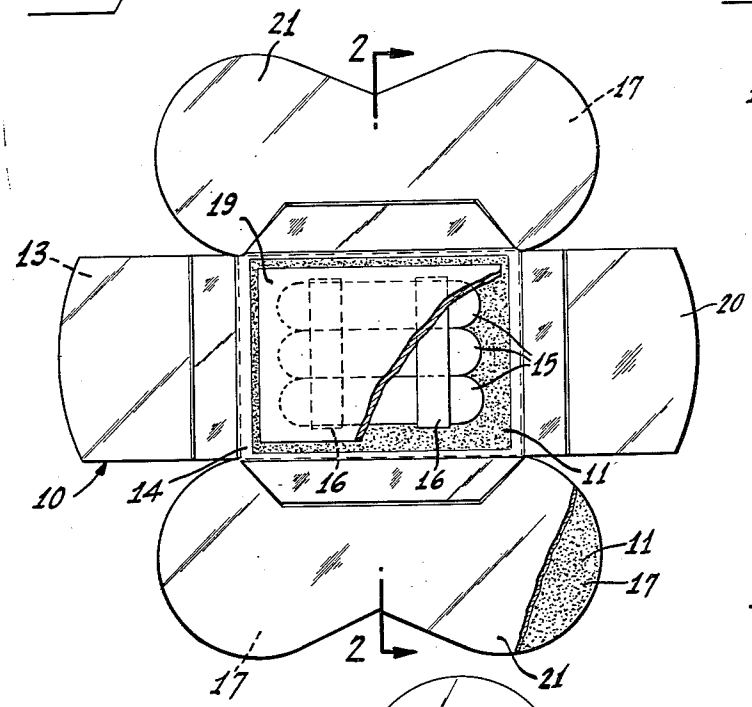


Fig. 2.

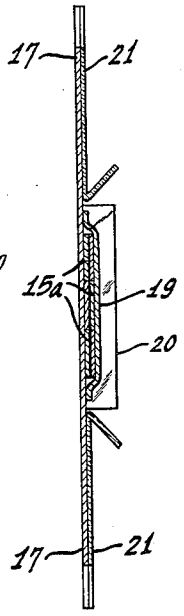
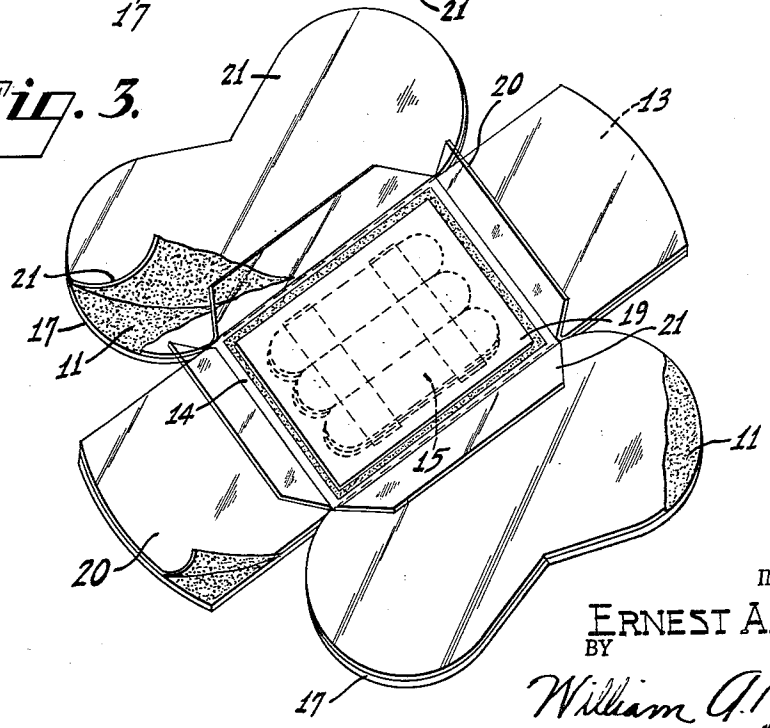


Fig. 3.



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BACK PLASTERS

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6 Claims. (Cl. 128—78)

My invention relates to improved orthopedic devices for use with the spine while the user is in an ambulatory stage, more particularly to such a device where lower back support is necessary to restore normalcy.

This application is a continuation-in-part of my application Serial Number 731,287, filed April 28, 1958, now abandoned.

An object of my invention is to provide an improved appliance capable of exerting pressure upon the spinal column in the lumbar region to provide for symptomatic and corrective relief of backache due to muscular spasm, posterior distortion and intervertebral disc movements where lower back support is necessary to restore normalcy.

A more specific object of my invention is to provide a means to apply corrective forces to the lumbar region of the human spine, more particularly to compress and partially immobilize the lower lumbar segments.

A further object of my invention is to provide an appliance which will not freeze an abnormal condition although permitting side to side flexion while constricting posterior bending of the vertebrae, which is highly desirable in certain types of back conditions.

A still further and more specific object of my invention is to provide a means to help correct kyphosis or posterior bending of the spine.

Briefly, in accordance with my invention, I provide a base panel of flexible material having an adhesive coating on one side. Elongated elements or slats are secured to the central section of an elongated portion of the panel. The elongated elements or slats may comprise one or more superimposed elements of wood, metal or plastic. These members are bound together by flexible strapping means to permit both longitudinal as well as transverse movement with respect to each other. The elongated base panel is provided with two pairs of oppositely disposed flaps coated with adhesive material. A soft covering is positioned over the elongated support. Guards of plastic or other light material protect the adhesive surfaces until the appliance is put into use.

My invention will be described with reference to the accompanying drawing in which:

FIGURE 1 is a front elevation of an orthopedic appliance made according to my invention with parts removed to show details of construction;

FIGURE 2 is a vertical section of FIG. 1 taken along the line 2—2 of FIG. 1; and

FIGURE 3 is a perspective view of the appliance shown in FIGURES 1 and 2.

Referring to the drawings, an appliance made according to my invention includes an elongated base panel **10** of flexible material having an adhesive coating **11** thereon. It consists of an elongated portion **13** having a central section **14** for supporting the elongated flexible supporting element or slat assemblies **15**.

Extending transversely of the elongated base panel **10** and substantially coextensive with the central section **14** is a pair of flaps **17, 17**.

While the base panel is roughly cross-shaped, it can of course assume other shapes. I have found that dimensions of roughly 9 inches by 9 inches is a satisfactory size. The adhesive coating which is applied to the entire base panel including the flaps is preferably of a non-irritating type containing zinc propionate and zinc caprylate and may be embedded in elastic strands having limited stretching.

Supported on the central section **14** of the panel **10** are the supporting elements or slat assemblies **15**. Each consists of two or more slats **15***a* in superimposed relationship. Each assembly is joined to the next by means of adhesive straps **16** which bind the assemblies together. These slats have a tensioning and floating action and conform to the posterior projection of spinous processes and also partially immobilize lower lumbar segments. These slats may be of steel, wood, or plastic and may be rigid or flexible.

Positioned over the slat assemblies **15** is the soft covering **19** preferably of moleskin. This covers and adheres to the slats. The exposed surface of the moleskin is of course not covered with moleskin but may be saturated with an analgesic preparation. This covering gives support without irritation.

To protect the adhesive surfaces during storage and prior to use, I cover the adhesive surfaces with the removable protective shields **20, 20, 21, 21** which may be made of a vinyl plastic or other material such as crinoline. These are removed when the appliance is to be used on a patient.

An appliance made according to my invention has the advantage that while it performs its functions, as described above, the need for use of constricting belts and straps is eliminated.

What is claimed is:

1. An orthopedic appliance for the spine including a base panel having an elongated portion, said elongated portion having a central section, a plurality of elongated flexible elements supported on said central section, flexible elements extending transversely of said elongated flexible elements and attached thereto for retaining said elongated flexible elements in relative relationship while permitting relative movement therebetween, flap members extending from the sides of said elongated portion and registering with said central section, and said base panel including said flap members having an adhesive on one side thereof, and a soft cover member fixed over said elongated elements on the adhesive side of said base panel for contact with the body to which said appliance is to be attached.

2. An orthopedic appliance for the spine including a flexible base panel having an elongated portion, said elongated portion having a central section, a plurality of assemblies comprising a plurality of superimposed elongated slat elements supported on said central section, said slat elements being capable of relative movement, flexible strapping elements extending transversely of said slat elements and attached thereto for retaining said slat elements in relative relationship while permitting relative movement of said slat elements, flap members extending from the sides of and registering with said central section, said panel having an adhesive on one side thereof, and a soft cover member fixed over said elongated slat elements on the adhesive side of said base panel for contact with the body to which said appliance is to be attached.

3. An orthopedic appliance for the spine including a base panel having an elongated portion, said elongated portion having a central section, a plurality of elongated elements supported on said central section, elements extending transversely of said elongated elements and attached thereto for retaining said elongated elements in relative relationship while permitting relative movement therebetween, flap members extending from the sides of said elongated portion and registering with said central section, and said base panel including said flap members having an adhesive on one side thereof, and a soft cover member fixed over said elongated elements on the ad-

hesive side of said base panel for contact with the body to which said appliance is to be attached.

4. An orthopedic appliance for the spine including a flexible base panel having an elongated portion, said elongated portion having a central section, a plurality of slat assemblies in side by side relationship on said central section, each of said assemblies comprising a plurality of elongated flexible slat elements in superimposed relationship permitting relative movement between said slat elements, flexible elements extending transversely of said elongated slat elements and attached thereto for retaining said slat elements in relative relationship while permitting relative movement of said assemblies, flap members extending from the sides of said elongated portion and registering with said elongated slat elements, said flap members and said elongated portion having an adhesive on one side thereof, and a soft cover member fixed over said elongated slat elements on the adhesive side of said base panel for contact with the body to which said appliance is to be attached.

5. An orthopedic appliance for the spine including a flexible base panel having an elongated portion, said elongated portion having a central section, a plurality of slat assemblies in side by side relationship on said central section, each of said assemblies comprising a plurality of flexible elongated slat elements in superimposed relationship permitting relative movement between said slat elements, flexible elements extending transversely of said elongated slat elements and attached thereto for retaining said elements in relative relationship while permitting relative movement of said assemblies, flap members extending from the sides of said elongated portion and registering with said elongated slat elements, said flap members and said elongated portion having an adhesive on one side thereof, and a soft cover member fixed over said elongated slat elements on the adhesive side of said base panel for contact with the body to which said appliance is to be attached, and removable protective shield elements in contact with the exposed adhesive surfaces.

6. An orthopedic appliance for the spine including a base panel having an elongated portion, said elongated portion having a central section, a plurality of elongated slat elements supported on said central section, flexible strap elements extending transversely of said elongated slat elements and attached thereto for retaining said elements in relative relationship while permitting relative movement between said slat elements, flap members extending from the sides of said elongated portion and registering with said elongated slat elements, said flap members and said elongated portion having an adhesive on one side thereof, and a soft cover member fixed over said elongated slat elements on the adhesive side of said base panel for contact with the body to which said appliance is to be applied.

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