June 5, 1923. 1,458,008

R. W. SEXTON

FILLER FORM

Original Filed March 26, 1915

Fig. 1.

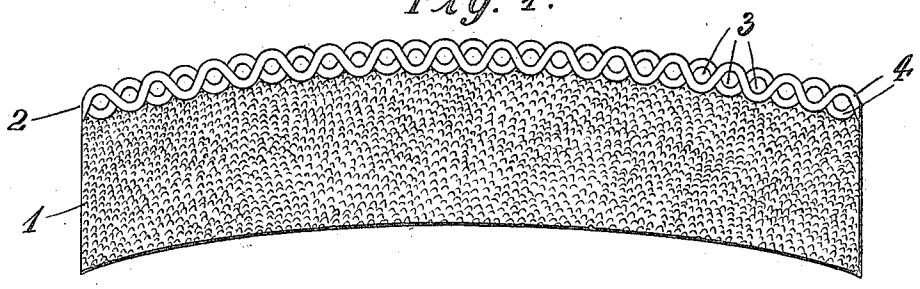
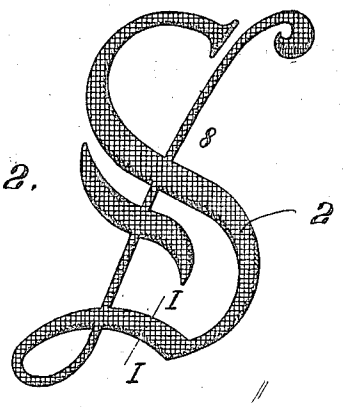


Fig. 2.



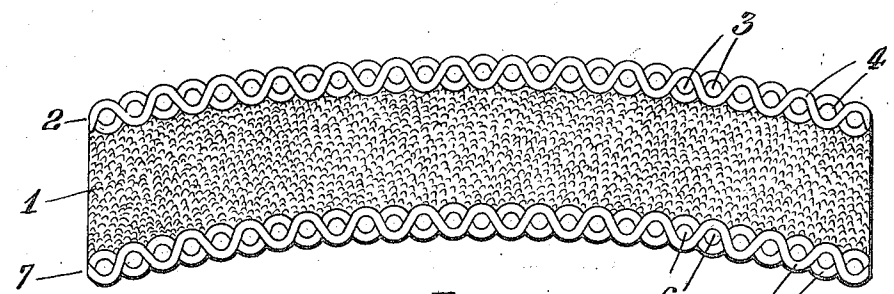


Fig. 3.

Witnesses:
Fred. Roegen.
Matthew Monahan

Inventor
Roy W. Sexton.
By his Attorney
Thomas Roy

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UNITED STATES PATENT OFFICE.

ROY W. SEXTON, OF WYTHEVILLE, VIRGINIA.

FILLER FORM.

Application filed March 26, 1915, Serial No. 17,145. Renewed March 26, 1921. Serial No. 455,982.

To all whom it may concern:

Be it known that I, ROY W. SEXTON, a citizen of the United States, and a resident of Wytheville, county of Wythe, and State of Virginia, have invented certain new and useful Improvements in Filler Forms, set forth in the following specification.

This invention relates to filler forms designed to be applied to the surface of a fabric to be embroidered in a manner so that the embroidery stitches may be filled in over its surface to complete an embroidered design in conformity with the contour of the filler form which at the same time fills the stitches out from the surface of the embroidered fabric.

The difficulty with the use of felt as the material for the filler form is not that it disintegrates and becomes pulverulent, but that it has a tendency to bunch and become very uneven in its disposition beneath the overlying embroidery threads. Nevertheless felt has itself certain inherent qualities most efficiently adapting it to form a filling material under embroidery threads. It is cheap. It makes at least a temporarily good cushion. It never is brittle and it does not impart a non-textile feeling to an embroidered fabric.

The object of my invention is to make possible the utilization of all the advantageous features of felt or a batting of felted fibers in an embroidery form without its disadvantages. To this end I combine the unyielding inelastic quality of tightly twisted spun threads with the cushioning qualities of the batting so that each thread shall locally prevent the tendency to bunch in the batting. Preferably my tightly twisted non-extensible binding threads should extend throughout the entire extent of and parallel with the general contour lines of the design of the filler form and in addition other threads should extend crosswise of each member of the filler form. This, however, is impracticable of achievment on account of expense and I approximate the desired result by employing binding threads in the form of a textile fabric such as lawn. Preferably for practical purposes my filler form comprises an inner body of batting and both a top and bottom binding covering of interlocked crossing threads, each of which is substantially non-extensible and which are all firmly secured to the filling of batting by a binder preferably by one of the binders, such as have been described in my Patent No. 1,224,674 dated May 1, 1917.

The above will be better understood by reference to the accompanying drawings, which show illustrative embodiments of my invention, which form a part of this specification, in which like characters designate corresponding parts, and in which,

Fig. 1 is a cross section on line 1—1 of Fig. 2 drawn to an enlarged scale through a member of a filler form embodying my invention;

Fig. 2 is a plan view of a filler form embodying my invention; and

Fig. 3 is a section similar to Fig. 1, but showing both the top and bottom reenforcing layers.

A sheet of fabric 1 is formed by compressing a batting of interlaced fibers such as cotton batting, but there may preferably be admixed with the vegetable fibers a percentage of animal fibers, say from 5 to 25% so that the exaggerated barbs on the animal fibers will interlock with one another and act as an internal binder for the more ineffectively barbed vegetable fibers. A sheet 2 of textile fabric such as lawn is then firmly fixed to one surface of the felt 1. This may preferably be accomplished by moistening the adjacent surfaces of the two fabrics with a suitable adhesive, preferably a water-insoluble binder such as a non-combustible cellulose derivative. The two sheets are then firmly pressed one to the other so that the binding material causes a firm lock between the fibers of the felt and the inextensible threads 3 and 4 of the textile fabric.

In this manner the body of felted fibers which has no great strength is protected by a bridging layer of tough, tenacious, substantially inextensible material, fixed to said body and serving to prevent bunching and distortion of said body and forming an equalizing bridge directly under the embroidery threads, when they are applied over the form. The embodiment of this tough, tenacious, substantially inextensible material in the form of a fabric of inextensible crossing threads is a satisfactory illustrative embodiment of the kind of material required for the bridging layer and it has qualities of toughness and tenacious-

ness in contra-distinction to the friable characteristic of fibrous, cellulosic material of a paper-like character.

It is contemplated that a dry binder in the form of powder may be employed when heat as well as pressure should be applied to unite the textile fabric with the felt. It is also contemplated that the felt may be united with the protecting layer of textile fabric by a felting process alone without a chemical binder, that is by causing the fibers of the felt to interlock and interlace with the threads of the textile fabric.

This reenforcing textile fabric is shown applied to the surface adapted to be covered by the embroidery threads in the showing of Fig. 1, while in the showing in Fig. 3 a sheet of textile fabric 7 is also applied in a similar manner to the lower surface of the felt 1, so that its inextensible interlocked threads 5 and 6 each serve as a binder against distortion for the bottom of the felt 1. From the finished fabric thus formed suitable embroidery designs are formed by cutters and filler forms in the design desired are cut out, as for example, the finished filler form 8 shown in Fig. 2.

During the cutting out process, it is preferred that an arched cross section be given to the forms. This arched cross section is indicated in the Figs.

What is claimed and what is desired to be secured by United States Letters Patent is:—

1. A washable filler form embodying an embroidery design adapted to be completely covered by embroidery threads, and comprising a flexible form body of felted fibers combined with an outer layer of inextensible crossing threads firmly attached to the felted body to lock the same against distortion and bunching.

2. A washable filler form embodying an embroidery design, adapted to be completely covered by embroidery threads, and comprising a flexible form body of felted fibers combined with an outer surface layer and an inner surface layer of inextensible crossing threads firmly attached to the felted body to lock the same against distortion and bunching.

3. A tough, pliable, composite washable filler form of an embroidery design to be covered by embroidery threads, comprising a protecting top layer of textile fabric such as has interlocked threads, a lower layer of felt-like material, and cementitious material securing the felt to the under surface of the fabric whereby a durable, shape-retaining filler form is provided having a smooth firm upper surface.

4. A tough, pliable, composite washable filler form of an embroidery design to be covered by embroidery threads, comprising a protecting top layer of cloth of the crossed-thread type, a lower layer of relatively loose felt, and cementitious material uniting the layer of felt and cloth, the cloth layer with the cementitious material applied giving the shape-retaining property to the form.

5. A washable filler form embodying an embroidery design adapted to be completely covered by embroidery threads and comprising a flexible body of water absorbent felted fibers having an outer thin bridging layer of tough, tenacious, substantially inextensible material fixed to said body and serving to prevent bunching and distortion of said body and forming an equalizing bridge directly under the embroidery threads.

6. A tough, pliable, composite washable filler form of an embroidery design to be covered by embroidery threads comprising a body of felt-like material and a thin protecting layer of textile fabric such as has crossing threads secured to one of the surfaces of said body to give shape-retaining property to said form.

In witness whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ROY W. SEXTON.

Witnesses:
MATTHEW MONAHAN,
L. ALTMAN.