

THE MANY FEELS OF FELT

BY SHAROLETT KOENIG

Felt has been a useful material since ancient times, long before history was recorded. It is made of interlocking unspun fibers. Although wool or sheep hair is the most common fiber used to make felt, it is sometimes made by combining other animal hair, such as rabbit, horse, camel, cat, or dog. It can also be made with plant fibers, such as cotton, jute, and viscose rayon, or from synthetic fibers. Some sort of animal hair, however, must be combined with plant or synthetic fibers to cause the fibers to interlock.

Craft felt comes in an endless variety of colors and sizes. One of its great advantages is that, much like paper, felt can be cut to any shape without the edges raveling or fraying. During processing felt fabric can be shaped to any form, thus making its uses seemingly endless. Felt is durable; it does not get weak areas or holes from wear, nor is it affected by temperature or exposure to the elements. Felt can be thick or thin, soft or hard. In fact, hard felt is much like wood, as it can be carved, drilled, and even turned on a lathe or sculpted.

The manufacture and use of felt has spread to nearly all parts of the world. Even today, with the advent of plastic and foam, felt remains unmatched in thermal and moisture insulation, cushioning, filtering of gases and liquids, and sound and moisture absorption.

The specific origins of feltmaking are unknown, although its earliest use seems to have been limited to Europe and Asia. However, several similar legends about its discovery exist.

All these things make use of the unique cushioning, absorbing, and insulating properties of felt:

- ✗ felt tip pens
- ✗ felt hats
- ✗ markers
- ✗ gas masks
- ✗ chalkboard erasers
- ✗ Arctic clothing and shelters
- ✗ snowmobile boots
- ✗ the Gemini EVA suit
- ✗ pianos
- ✗ corn and bunion plasters
- ✗ drumsticks
- ✗ artificial limbs
- ✗ felt boards
- ✗ shoe and floor buffers
- ✗ lens and gem polishers
- ✗ pool tables
- ✗ felts for waders
- ✗ the bottoms of church offering plates

Some interesting legends about the origins of felt:

One legend credits Noah with the discovery. He supposedly padded the floor of the ark with sheep's wool to make it more comfortable. After many days of subjecting this loose wool to the pressure and moisture of the animals, it became a matted fabric - felt.

In another legend, St. Clement, a monk who lived in France during the Middle Ages, made a pilgrimage to a distant shrine. His new sandals soon made his feet sore. As he rested, he plucked wool from the backs of passing sheep and stuffed it in his sandals to make them more comfortable. At the end of his fifteen-day journey he found a strong, soft cloth had been formed by the constant pressure and moisture of his feet. St. Clement is also referred to as St. Feutre (*feutre* is the French word for felt.)

Felt caps as old as 3,500 years have been found in Scandinavia. Several felt items from the Bronze Age have been found in Germany and Siberia. Many believe feltmaking had been carried on for hundreds of years by this time because the felt pieces show evidence of a highly developed technology.

Felt from the Iron Age, perfectly preserved in icy tombs, gives us much information about the making and uses of felt by nomadic tribes during this time. Among some early peoples felt items were used in almost every phase of their lives.

The feltmaking tradition of these nomadic tribes is still carried on by their descendants. The Chinese called the nomadic territory "the land of felt," and Genghis Khan referred to the nomads themselves as "the generations that live in felt tents." The Russian Cossack troops used so many items made of felt material that they earned the nickname "the felt army."

How is felt made today? In Mongolia, Tibet, Turkey, Iran, and Russia, some of the nomadic cultures still make felt by the primitive methods of their ancestors. In Mongolia, the batt is rolled very tightly in a heavy cloth. Then two individuals pull against each other as they roll the batt back and forth between them. In Tibet, a horse or an ox drags the roll of felt along the ground. In Turkish workshops, workers roll batts tightly in reed mats and harden the felt by stamping on them. In most modern countries, big heavy machines in factories make felt using the same basic techniques people have used from ancient times to make it by hand.

You can make felt by hand using

these same ancient techniques. Read through the following instructions before beginning:

(1) First, locate a source of wool and supplies. If there is a sheep owner in your area, he may be willing to give or sell you a fleece. A local manufacturer of wool products might be able to supply you with wool waste or reprocessed wool; medium length fibers are best for felting. The easiest way to make felt is with commercially prepared wool batts, which are already carded; these might be available through a woolen mill. Look in the yellow pages of your telephone book for craft, textile, or fiber stores and shops which might be able to supply the materials you need.

Some other supplies and equipment you will need are carders (unless you use the already carded, commercially prepared batts), lengths of nylon netting for backing, a basin or tub, bar soap, detergent, strong thread, a needle, and an electric iron.

If you cannot locate a local source for materials and supplies, you may contact the mail order sources listed at the end of this article.

(2) Once you have your wool fiber and supplies, you are ready to make felt. (If you have chosen to use commercially prepared batts, skip down to step 4.) Begin by washing and drying the wool. Loosen the fibers and remove foreign debris, such as burrs and sticks. Fill a basin or tub with lukewarm water, and dissolve a mild soap in it. Gently lay the wool fibers in the soapy water, and let them soak for fifteen minutes.

At this point you want to avoid subjecting the wool to conditions that will cause the fibers to felt or interlock; so don't put it under a faucet of running water, don't

wring it out, don't agitate the water, and don't put it in very hot or very cold water.

Gently remove the wool and lay it aside while you dump the dirty soapy water. Refill the basin or tub with more lukewarm water and replace the wool in the water. Continue lifting out and replacing the wool in fresh clean water of the same temperature until all the dirt and soap are removed. To dry, lay the wool fibers on a surface that allows air to circulate around all sides. A sweater dryer works well for this step.

(3) When the wool is dry, it should be gently pulled or picked apart (teased) to loosen the fibers. You should now have a soft, fluffy mass of fiber. Arrange a small amount of this teased fiber in a thin layer on the left hand carder. Make the layer even all the way across, allowing it to catch on the teeth and extend slightly over the edge.

You are now ready to card your wool. Take the right hand carder and draw it across the left hand carder in the direction away from you. The teeth should glide through one another and not get caught. Do this several times, until most of the wool is on the right hand carder.

Now draw the right hand carder slowly toward you across the left hand carder. This transfers the wool back to the left hand carder. Do this until the fibers are completely smooth and parallel and hanging from the bottom edge. To remove the rolled fleece, use the wooden edge or the back of the right hand carder. Push gently, using your fingers when necessary, in the direction of the handle or toward you.

(4) After making enough rolls of carded wool, layer them on the backing material. This is called laying the batt. On a length of

nylon netting, lay several rolls next to each other with the edges slightly overlapped. Place a second layer of rolls, running in a perpendicular direction, on top of the first layer. Make the batt three or four layers thick, with each layer running in a direction perpendicular to that of the one below, and as evenly spread as possible.

Cover the felt batt with another layer of nylon netting. Secure the batt by sewing around the edge with a strong thread in long running stitches. Then stitch several diagonal rows across the batt in both directions, much like a quilt is sewn. Make the stitches loose but firm, to prevent any indentations or pockers when the felt hardens.

(5) You are now ready to begin the actual felting process, or hardening. Saturate the quilted batt with very hot water in a tub or basin. Rub a cake of soap on the batt, and start pressing it with the palms of your hands, from side to side and from top to bottom. Now roll the batt tightly in one direction, kneading and pounding it as you continue to work with it. Unroll and roll it in the other direction. Repeat this several times, until you reach the "soft felt" stage. (This will take from five to twenty minutes.) The batt will begin to hold together and feel like a whole unit.

When the batt has hardened and holds together, you may remove the backing. If there are any holes in the felt, you can carefully fill them in with some carded wool. Saturate the filled-in wool and rub soap on it. Press and work the filled-in hole with your fingers, especially around the edges where it overlaps onto the hardened material, until it has also hardened. Rework the whole batt by rolling and unrolling in both directions a few times and

applying pressure.

(6) Fulling can be accomplished simply by ironing the felt. Use the wool setting and press evenly in all directions and on both sides.

(7) When the desired effect has been achieved, the felt must be finished. Rinse all the soap from the material and then dip it in a vinegar solution. Let the felt dry. It can be left as is or cut to any shape or size.

For anyone who is interested in experimenting with different techniques and different fibers, the book *Feltmaking* by Beverly Gordon is full of ideas and helpful tips.

Felt is an art medium, a craft material, and an industrial tool. It is a component in a wide variety of consumer products, and it is also used in scientific research. Perhaps someday you will discover a use for this ancient material that will revolutionize the modern world. *

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MAIL ORDER SOURCES FOR WOOL AND SUPPLIES

The Fiber Studio, P.O. Box 637, 9 Foster Hill Road, Henniker, NH 03242.

Harrisville Designs, Harrisville, NH 03450.

The Mannings, P.O. Box 687, East Berlin, PA 17316.

Wilde Yarns, 3737 Main Street, P.O. Box 4662, Philadelphia, PA 19127-0662.

Yarn Barn, 918 Massachusetts, P.O. Box 334, Lawrence, Kansas 66044.

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