

SHUTTLE CRAFT

FEBRUARY

PORTFOLIO

1959



From Weaver To Weaver

Dear Guild Members,

As a follow-up of last month's experiments and research with man-made fibers, this issue of SHUTTLE CRAFT is a monograph on natural fibers.

The natural fibers are divided into three categories: vegetable, animal and mineral--depending on the source from which we obtain them. We are grateful to AMERICAN FABRICS for permission to reprint their listing of these fibers as shown on page 2.

As with the man-made fibers, some natural fibers are of use to handweavers and some are not (though they may be useful commercially), and some are just plain curiosities.

Nearly all handweavers have used the Big Three natural fibers--cotton, linen and wool--and although we mention these three fibers with specific application to various weaving projects, we have not gone into the properties of them. For more information on linen, see SHUTTLE CRAFT, August-September 1958 and for a report on wools, see SHUTTLE CRAFT for October 1957.

The next most important natural fiber used by handweavers is silk. We have not mentioned silk at all this month, other than to list it, as we intend to devote a complete issue to it later this year.

Perhaps the next most important natural fiber used by handweavers today is ramie. It is not as well known or as readily available as the other fibers mentioned, but it is a very satisfactory fiber with which to work--as we found in our experiments and research. If you've never worked with ramie, don't be hesitant about trying it--it's easy to handle and the resulting fabric is very pleasing.

Other of the natural fibers are also important, but many of them have specialized uses and are, or could be used, only in limited quantities for specialized projects in handweaving. We have mentioned the properties and uses of many of these.

Sincerely,

Jayce Chown

THE NATURAL FIBERS.

1. *Vegetable*

Abaca	Hemp	Kenaf	Urena
Coir	Henequen	Ramie	
Cotton	Jute	Sisal	
Flax (Linen)	Kapok	Sunn	

2. *Animal.*

Alpaca	Chinchilla	Nutria	Worm (Silk)
Angora Goat (Mohair)	Fox	Opposum	
Angora Rabbit	Guanaco	Rabbit	
Beaver	Hare	Raccoon	
Camel hair	Llama	Sheep (Wool)	
Cashmere	Muskrat	Vicuna	

3. *Mineral.*

Aluminum	Asbestos
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The Vegetable Fibers

There are of course other vegetable fibres used in weaving than those listed above. Specifically we are thinking of grasses, leaves, stems, pine needles, rushes and such, gathered or harvested by individual weavers for their own use in specialized projects such as place mats, blinds, screens and room dividers. Somewhat similar to this class are materials as raffia, rattan, reed and split bamboo, which though certainly not common to all parts of the country are more readily available than the home-grown product to weavers who may want to experiment with them.

Then there are many other vegetable fibers which are cultivated and processed in other parts of the world but cannot be economically grown and processed in the United States or Canada because of our higher labor costs. This group includes such fibers as: pineapple fiber—made into the beautiful and fine pineapple or pina cloth and produced in China, Mexico, Central American and notably in the Philippines; and, istle or ixtle—used for brushes, twines and low-grade sacking and produced mainly in Mexico.

Many of the vegetable fibers mentioned in the above table will be familiar to you, and no doubt some of them will be complete strangers to you, as they were to us. So with the exception of cotton, flax, and ramie and coir which are mentioned elsewhere in this issue of SHUTTLE CRAFT, we are including here a short sketch of each.

Abaca: A fiber very similar to hemp, grown in the Philippines, commonly called Manilla hemp.

Coir: See page 23.

Hemp: The outstanding quality of the hemp fiber is that it withstands water better than any other natural fiber. It is a long, coarse fiber which comes from just inside the outer bark of the plant. It is difficult to bleach. Though used mostly for rope, the most refined fibers are also used for woven textiles. The hemp plant, *cannabis sativa*, is also the source of marihuana.

Henequen or *Henequin*, and *Sisal*: are closely related plants, the fibers being obtained from the leaves. The fibers are used for the manufacture of small diameter rope, binder twine and some hard fiber twine. Though it will withstand water, it will not withstand salt water and is not therefore suitable for marine use.

Jute: This fiber is obtained from the stalk of the plant and is rippled, retted, scutched and hackled as flax (see August-September 1958 SHUTTLE CRAFT). Jute fiber is two to five times as long as flax fiber, but it is not a strong fiber and disintegrates if exposed to moisture or water. Like hemp, it is difficult to bleach, but will bleach to a creamy white. It is used for carpet warp, for weaving burlap, and for rough textured effects in contemporary upholstery and drapery fabrics.

Kapok: Nearly everyone is familiar with this fiber as used for stuffing pillows, mattresses and upholstered furniture. The fiber is obtained from the covering of the seeds of the silk-cotton tree of India. It is a soft, irregular, weak, transparent and inconsistent fiber not suitable for spinning. Its greatest virtue—other than the fact that it is used for stuffing—seems to be that it dries quickly.

Kenaf: Another of the hard, best fibers used for cordage and twines.

Sisal: See henequen.

Sunn: A soft bast fiber, produced in India and used only for twine.

Urena: A hard fiber, comparable to jute.

You could say, with the exception of kapok, that all these fibers turn out to be rope, cordage or twine. In any event, they all produce coarse yarns which are not likely to surpass or supplant the outstanding qualities of cotton, linen and ramie.

One word that one comes across continually in literature concerning vegetable fibers, is *bast*, or *bast fiber*. Different authorities give slightly different definitions of this term. For example, we found it defined as “any of certain strong woody fibers obtained from various plants . . . used in making ropes, cordage, etc.” This definition then, would apply to all the vegetable fibers listed on page 2, except cotton and kapok.

Another definition states that bast is “the tough inner fibrous bark of various trees.” If this is so, then bast fibers do not include cotton or kapok, or linen, ramie, coir or any of the vegetable fibers obtained from the leaves of plants.

And yet another source defines bast or bast fibers: “Between the inner and outer core of plants there is a long, strong fiber that has many commercial uses. Examples of important bast fibers include flax, ramie, jute, hemp, pineapple fiber, sisal, istle.” The definition then continues: “Cotton is an example of a seed bast fiber; flax is a stalk bast fiber; while the pineapple fiber is a leaf bast fiber.” This definition would seem to include all the vegetable fibers. Why then use the word *bast* at all? Why not just *vegetable* fibers?

Confusing? Yes. Inconclusive? Definitely. We'll do some more searching and when we come up with a more accurate definition or description, we'll let you know.

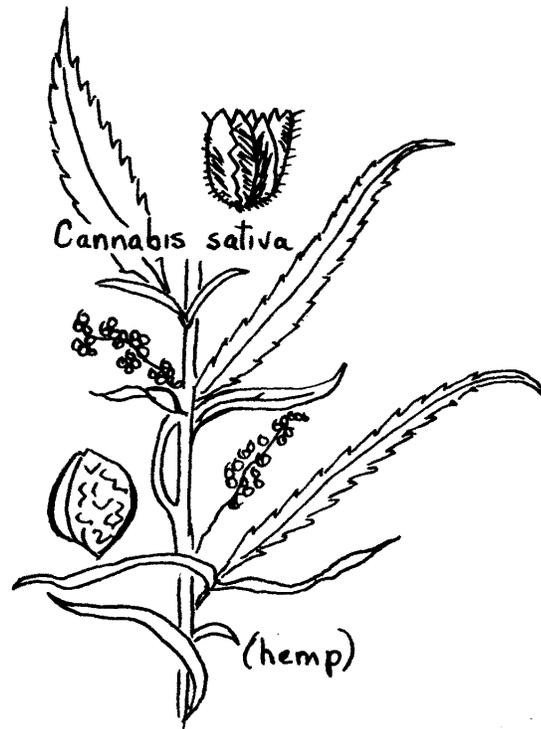
BURNING TESTS
NATURAL FIBERS

FIBER	DESCRIPTION OF FLAME	DESCRIPTION OF SMOKE	METHOD OF BURNING	SMELL
COTTON	Orange yellow. Mantle and bottom edges orange. Mauve tints at base not apparent with very well bleached samples.	Wisps of bluish smoke after flame extinguished.	Ignites readily. Not self-extinguishing. Burns steadily. Leaves delicate black or greyish ash skeleton. Little or no ash from very well bleached samples.	Burnt paper.
FLAX	Orange yellow. Edges orange. Orange and yellow sparkling.	Bluish smoke on removal from flame.	Ignites readily. Self-extinguishing. Burns with crackle and smoulders on removal from flame. Delicate greyish ash skeleton.	Burnt grass.
HEMP & SISAL	Orange yellow. Mantle and bottom edges orange.	Wisps of bluish smoke after flame extinguished.	Ignites readily. Not self-extinguishing. Burns steadily leaving delicate white ash skeleton.	Burnt paper.
JUTE	Orange yellow. Mantle and bottom edges orange with mauve tints.	Wisps of bluish smoke after flame extinguished.	Ignites very readily. Not self-extinguishing. Burns steadily. Delicate blackish skeleton smouldering to blue color.	Burnt paper.
KAPOK	Orange yellow. Mantle and bottom edges orange with mauve tints.	Wisps of bluish smoke after flame extinguished.	Ignites readily. Not self-extinguishing. Burns steadily leaving delicate black or greyish skeleton.	Burnt paper.
RAMIE	Orange yellow. Mantle and bottom edges orange.	Wisps of bluish smoke after flame extinguished.	Ignites very readily. Not self-extinguishing. Burns steadily and fairly quickly. Delicate black ash skeleton.	Burnt paper.
SILK	Orange yellow. Orange mantle. Sparkling.	Bluish grey on removal from flame.	Ignites readily. Self-extinguishing. Burns steadily with very slight sizzle.	Burnt hair.
WOOL	Yellow. Orange mantle. Bottom edges bluish or purplish.	Bluish grey, rising in clouds on removal from flame.	Ignites readily. Self-extinguishing. Swells. Coarsest varieties burn with slight crackle. Leave irregular crisp black inflated mass.	Burnt hair.

Some better-known
Vegetable Fibers

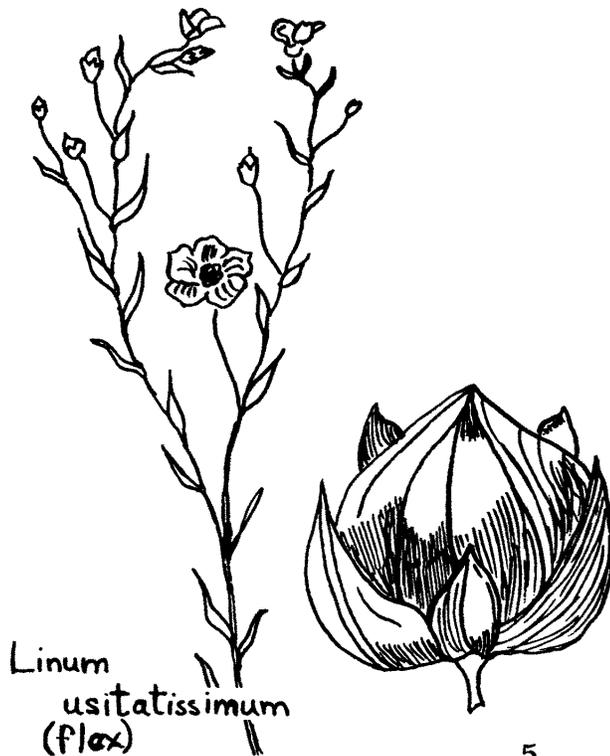


Gossypium
hirsutum
(cotton)



Cannabis sativa

(hemp)



Linum
usitatissimum
(flax)

RAMIE

Ramie is a natural fiber, but one that is not used to nearly the same extent in North America as the old faithful cotton, linen and wool. It is not a new fiber, indeed it was cultivated and processed into cloth in China in Confucius' time (551-478 B.C.) and its use possibly dates in China even as far back as 1700 B.C.

Over the centuries the cultivation of ramie spread to East Asia and in the last hundred years to France, Italy, Central and South America and Florida in the United States.

Ramie—*Boehmeria nivea*—a stingless member of the nettle family, is a perennial, and grows so rapidly that the stalks can be cut at least three times each year. The ramie fiber comes from the stalks or stems of the plant. After cutting, the outer layers are peeled from the stalks; this process is called *decorticating*. The decorticated or raw ramie contains gums which cement the fibers together and which must be removed. The chemical process by which this is done is called *degumming*. The degummed fiber is then sent to spinning mills—and thence to the dyer and weaver.

Ramie has a higher absorbency than linen, and dries rapidly; it is a very strong fiber—stronger still when wet; it has a high lustre, which like linen improves with washing; and it has a high resistance to mildew and rot.

Commercially it is used for light sturdy fabrics including sheets, table linen, towels, apron and shirting materials, tropical suitings, overalls and canvas shoes. Ramie fabrics are used for blinds and sun shades and specialties such as tent cloth, parachute harness belts, rubber-lined fire hose, certain types of filter cloth, and in the past, for the production of gas mantles.

This fiber is also used in the production of string and cordage such as industrial sewing threads, shoe laces, twines, rope and fishing net yarns; and in the paper industry—mainly for bank-notes.

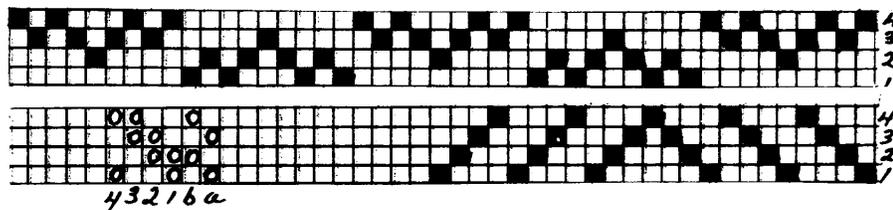
Now, while we don't recommend that you go into the making of bank-notes, it would seem that there are a lot of other uses to which ramie could be put by the handweaver.

As we said at the beginning, ramie is certainly not a new fiber, but it is one that we—here in Bedford—have not worked with before. The experimenting we did with this fiber, we did with dress materials in mind, but before we go on to describe the dress fabric, we'd like to discuss some other applications for handweaving. With the aforementioned properties of ramie in mind, perhaps the most obvious use for it would be for household linens: in the kitchen for aprons, hand or tea-towels, in the bathroom for everyday or guest towels, and in the dining room for place mats, serviettes, table cloths and runners. In the experiments we did, we found that the woven fabric washed and ironed beautifully. It was slightly stiff when

first woven—very much like linen—but washing softened the material and brought out its lustre—again like linen. We should mention too, that we ironed this fabric as we would linen, that is, it was ironed with a very hot dry iron while the fabric was still wet—but not dripping wet.

Thus, while we did not weave or make up any pieces specifically for household linens, we feel that ramie could be used to excellent advantage for this purpose. Handweavers could also adapt some of its commercial uses, viz. shirting materials and tropical suitings, and we have seen it used very effectively by handweavers in glass curtains and upholstery.

For our experiments we used a 40/2 bleached white ramie, set 30 threads per inch in the reed—double in a 15 dent reed—and threaded in a small overshot pattern:



Tabby weft was the same as the warp, 40/2 bleached white, and pattern thread was 16/2 colored ramie, and 40/2 bleached white double on the shuttle.

The material woven (see cover photo) was for mother and daughter dress: for mother a shirt-waist type dress with unpressed pleated skirt; and a smaller edition of the same for daughter with pattern stripes closer together for smaller pleats.

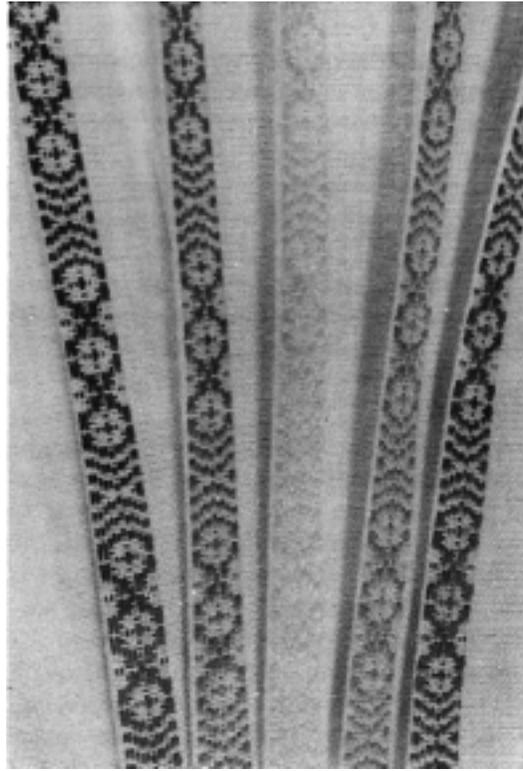
Pattern stripes were woven as follows:

Treadle: 1 twice
 2 once
 3 twice
 4 once
 3 twice with tabby
 2 once
 1 twice

or the opposite of this, which is equally charming:

Treadle: 3 twice
 4 once
 1 twice
 2 once
 1 twice
 4 once with tabby
 3 twice





Or use any other small pattern which you may like particularly well.

For a dress for daughter, we wove the material as follows:

- 1 rust pattern stripe
- $\frac{5}{8}$ " 40/2 white tabby
- 1 white pattern stripe (40/2 double on shuttle)
- $\frac{5}{8}$ " 40/2 white tabby
- 1 pumpkin colored pattern stripe
- tabby, white pattern, tabby, as above
- 1 lemon yellow pattern stripe
- tabby, etc.
- 1 yellow green pattern stripe
- tabby, etc.
- 1 dark green pattern stripe
- tabby, etc.

and repeat from beginning for desired length.

When taken from the loom, washed and pressed, the material was pleated from the waist to the hem so that the stripes ran vertically with a colored pattern stripe on top of each pleat and the white pattern stripe between each pleat. See photograph.

The top of the dress could be woven in the same color sequence, or just one color woven in the colored pattern stripes alternating with the tabby and white pattern stripes as in the skirt.

For the mother, weave the material so the stripes run vertically, but we suggest placing the colored stripes further apart for less bulkiness at the waist, and unpressed rather than pressed pleats.

Suggested order of stripes:

- 1 rust pattern stripe
- 2" white 40/2 tabby
- 1 white pattern stripe (40/2 double on the shuttle)
- 2" white 40/2 tabby
- 1 lemon yellow pattern stripe
tabby, white pattern, tabby, as above
- 1 yellow green pattern stripe
tabby, white pattern, tabby
and repeat for desired length

For a finishing touch, add a bright belt to pick up one of the pattern colors.

Should you decide to use ramie, be sure to wash and iron it, or have a laundry do it—before making up the material. The shrinkage is negligible once the material is off the loom, but what little there is, will disappear after this initial "pre-shrinking". Also, thoroughly test your colored threads for fastness to washing before weaving yards of it. Dyed ramie is advertised as being color fast but one of our colors—a beautiful bright red—definitely was not, although there were no signs of running in any of the other fourteen colors we tested.



Boehmeria nivea
(Ramie)

LINEN FOR A SHEATH

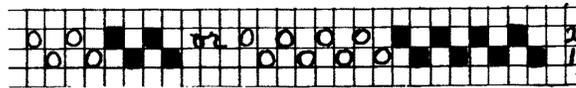


Everyone loves linen, and even the novice, if careful, should be able to manage the 25/2 mercerized linen we have chosen for this sheath dress.

For our sample we wound 8 threads turquoise, 8 threads white, repeated the required number of times for our warp. This combination proved to be quite striking when woven and a change from the usual black and white or brown and white houndstooth check.

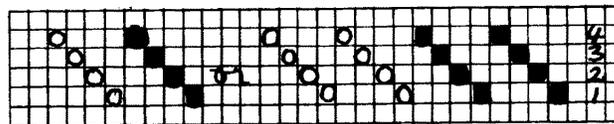
Should you desire a small check use only 4 threads to the square, or if a larger splashy check appeals, thread it 12 threads to the square.

For a two harness loom, wind the warp of the desired colors and desired number of threads to the square, and thread for plain weave—



weave as drawn in beating to obtain a 50/50 web.

Thread the 4 harness loom to a plain twill with 4, 8, or 12 threads in one color followed by the same number in the second color, viz:



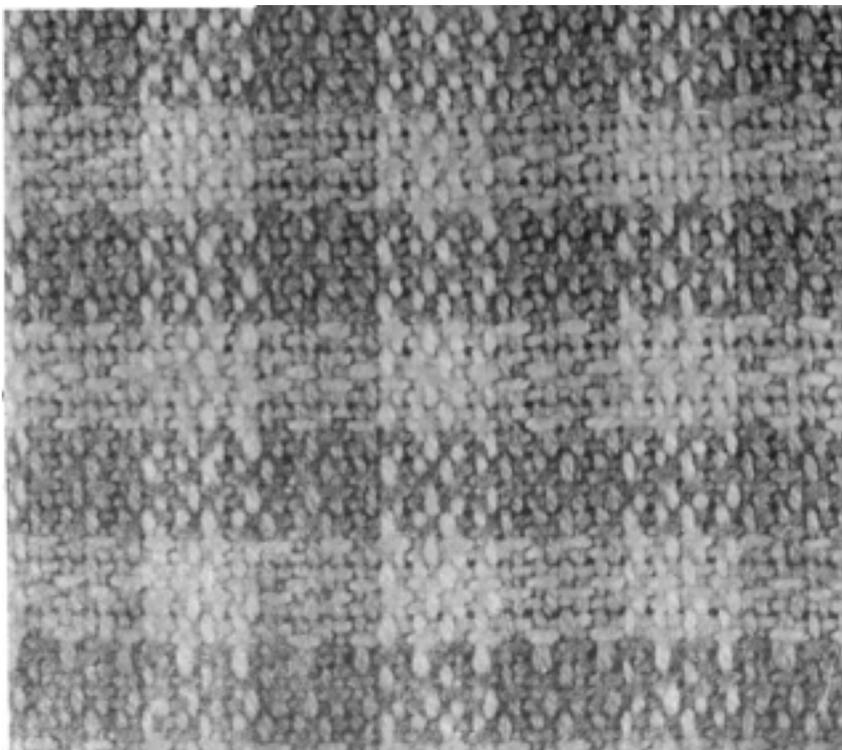
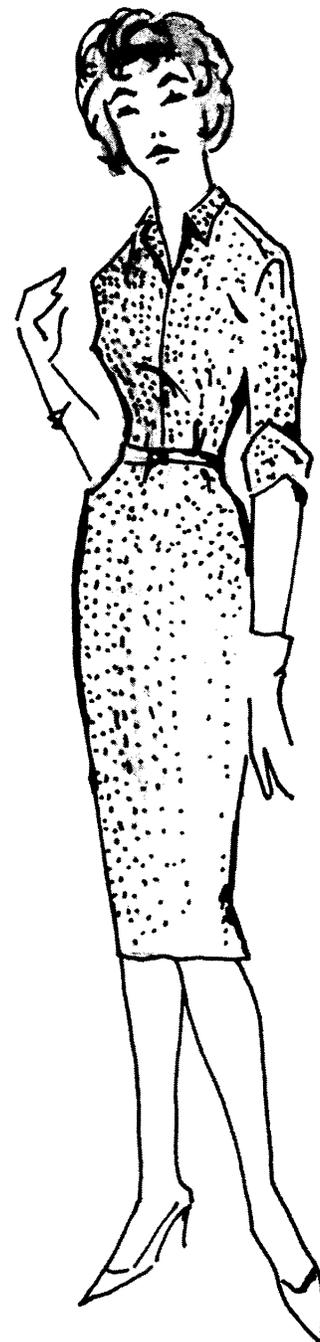
Treadle 12, 23, 34, 41 once for each square. For 8 thread squares repeat twice, and for 12 thread squares treadle 3 times. Beat to square. This produces the popular houndstooth check.

This 25/2 linen sleyed at 24 threads per inch and woven with 24 threads to the inch produces a slightly loose web. To achieve a firmer web we suggest a heavier weft thread, preferably in singles linen. In our experience we find that a singles linen-used for weft produces a better web than a plyed linen.

We experimented and obtained an interesting and firmer web by changing our treadling from the regulation 12, 23, 34, 41 twill treadling. After some trial and error we decided that we liked the following: 12, 13, 24, 14 repeated twice. An attractive little design comes up in each square; the web is textured and we feel that the very nature of the structure may offset to some extent the inevitable creasing and crushing which is a part of dress linen. This treadling of course does not produce the regulation houndstooth check.

Before starting to weave, remove the thread from No. 1 heddle on the right selvage and begin the 1 and 2 treadling on the left, facing the loom. This will obviate loose threads at the selvages.

Remember to allow the usual amount for linen shrinkage. We suggest washing and pressing the finished web at least once, (twice would be better) before making it up so that when washed or cleaned the garment will not shrink.



Sample on next page.



Japanese Sand Man

What you weave it of depends upon your skill, the purpose for which you intend using it and your pocket book.

If you want a really swish robe for T. V. hours weave it of silk. We'll be writing about silks soon so if you aren't quite sure which type you should purchase wait for our report.

Many of the man-made fibers would be good, the nylons, rayons, or the cuprama which we wrote about recently but somehow we like the idea of weaving it of cotton. We suggest you choose your own colors for your stripes. For our experimental sample we threaded two versions. They were:



#1

16 threads 2/16 natural
4 threads cotton boucle, natural
16 threads 2/16 natural
4 threads 4/8 dark blue
4 threads 2/8 medium blue
4 threads 2/8 light blue

#2

16 threads 2/16 natural
4 threads 2/8 light blue
4 threads 2/8 medium blue
4 threads 4/8 dark blue
16 threads 2/16 natural
1 thread 4/8 orange
2 threads 4/8 yellow
1 thread 4/8 orange

All threads were sleyed double in a 16 dent reed. It is suggested that you use a 15 dent reed, if you set your warp 40" or 45" wide in your loom, to offset the variable that exists between beating a narrow web and a wide one.

Treadle plain or twill as you prefer. The twill produces a heavier material but we rather liked the plain weave keeping in mind that it would be a good two harness project.



Luxury Yarns



Kashmir Goat

Cashmere described as the wool that's "nearest to heaven" is the one luxury wool or fiber with which we are most familiar. Our cashmere sweaters are our pride and joy and with most of us the one great extravagance in our wardrobes.

Cashmere is spun from the fleece of the Kashmir goat, an inhabitant of the high rarefied plateaus of Asia, with the finest fibers coming from China, Inner and Outer Mongolia, Manchuria and Tibet, and actually very little coming from Kashmir.

Although its importation has been going on for centuries there is still a scarcity of it and even today it is described with superlatives. It is soft and light, has natural draping qualities and is gently warm. "It is one with royal ermine, one with supple brocade . . . and just as unforgettable as the bouquet of a fine wine or as delightful as a Beethoven Symphony."

The cashmere goat, a small short legged, graceful animal is frugal and quite able to maintain itself on the sparse vegetation of the high mountains where it lives. The higher the altitude the finer the fleece. A cashmere goat produces little more each year than an angora rabbit and it requires the combings of from four to six animals for a sweater and from about twenty for a coat. The fleece is combed or plucked out by hand and eager shepherds scour the countryside collecting the bunches of hair which have stuck to rock and shrub.

The animal has become domesticated and is well guarded by the members of the tribes whose living depend on the sale of the fiber.

There is a long dangerous route to be followed from the time the hair is plucked until it is delivered to the processing centers.

It is carried over dangerous mountain passes on the backs of coolies or small horses, across the Gobi desert on camel back, along the Great Silk Road, to small river craft which eventually deliver the bales to the larger rail and boat centers for shipment to the mills.

No one knows exactly how long cashmere has been in use though there are records testifying that it was known and used in Rome during the reigns of the early Caesars. We do know that it never has lost favor as a luxury fabric and much could be written of it even during the Victorian era.

The Cashmere goat lives in a climate of hot days and cold nights. His fleece insulates him against both. Under his coarse outer hair lies the soft warm fleece.

In preparing the fibers for spinning the first process is to remove these outer hairs by hand. Following this, a highly intricate machine removes any of these long hairs, which were missed by the hand pickers, together with the black hairs which are found in all fleeces no matter what the overall color of the fleece. During this processing there is a loss of from $\frac{1}{2}$ to $\frac{3}{4}$ of the original weight. The natural colors of the cashmere goat are grey, brown and white, with white the rarest.

It is only recently that the United States and Austria have entered the field of processing, spinning and weaving cashmere, a field long held by English and Scottish firms with Hawith, Scotland being an important center.

Cashmere yarns are used for socks, sweaters, scarves, cardigans and vests for men as well as topcoats for sports wear, jackets and robes, mostly in the natural shades. For women's wear it is popular in the lighter shades for knit sport socks, sweaters and scarves and woven into fabrics for coats, suits, skirts and housecoats.

A pure white cashmere coat retails from \$150 to \$200 and even higher if a mink collar is added. A natural or dark one sells for about \$100.

Bernats advertise a 100% cashmere wool in $\frac{1}{2}$ oz. balls of 100 yards for \$1.75 or \$56.00 per lb. Fleishers have a 50% cashmere—50% nylon yarn in 10 gram skeins of 67 yards each @ 89 cents.

These yarns should be set to weave a 50/50 plain weave web. It is not difficult to figure the amount of yarn needed if the yardage per oz. (or 10 grams as above) is used as a basis.

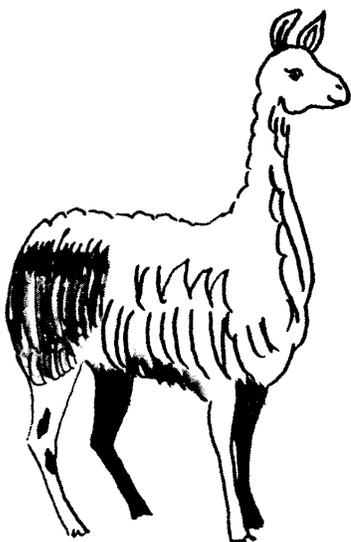
Oddly enough, with one exception, of the cashmere, the yarns we have chosen in the luxury group all originate from animals belonging to one family, namely the camelida or camel family.

This seems strange as their native habitats are so very different; the camel living on the hot desert sands and the alpaca, the llama and the vicuna of the genus auchenia living in the rarefied air of the high mountains of South America. But nature has endowed each with the right kind

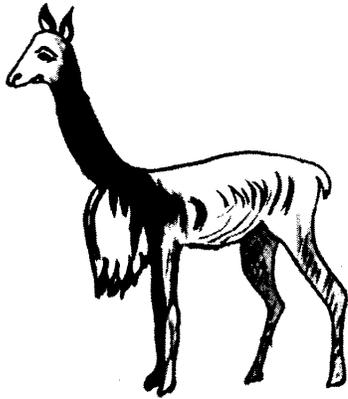
of feet, water humps and breathing apparatus to meet the problems of their environments.

The alpaca, llama and vicuna, all hair bearing animals, have similar characteristics yet each has its own individual traits.

The alpaca is noted for the length and fineness of its hair which is of a lustrous silken texture, almost metallic in appearance. If shorn regularly the hair averages a yearly growth of from 6 to 8 inches. If not shorn yearly it attains a length of from 20 to 30 inches. The hair is often yellowish-brown; grey; black; and a greyish white. The alpaca live on the highest mountain peaks of Peru and Chile and are not easily domesticated though if captured young



*South American
Llama*



Vicuna

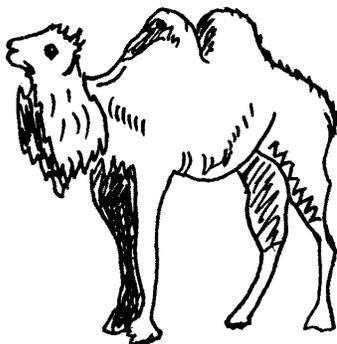
enough and taken into the villages the Indians do have some success in training them. As far back as history relates, the Indians have used the hair to weave blankets and ponchos and some fine examples of these can be seen in museums.

The llama has long been domesticated and was the only beast of burden used by the natives until the horse and ass were introduced by Europeans. The llama is a clever likeable animal. If too heavily laden it lies down and refuses to move. It is patient, docile, is about three feet in height and carries its head proudly. The color of the llama's hair may be brown, with shades of yellow or black, possibly speckled but rarely a clear, clean, black or white. The fleece is inferior to that of the alpaca or vicuna, and the hair of the female is of a better quality than that of the male.

The vicuna, or vicugna to use the native spelling, is the third member of this group whose hair is used commercially. The vicuna is reported to be a much more beautiful animal than either the alpaca or llama. In size it is between the two. Its hair is finer, shorter and curled; is dark brown with patches of white across the shoulders and the innerside of the legs. While the other two species seem to revel in the sheer mountain heights the vicuna is satisfied to dwell on the moist pasture lands lying between the high peaks. A hybrid animal which is a combination of vicuna and alpaca has a black and white fleece of long silky hair. It is probably from this group that much of the commercial vicuna yarn is obtained.

If cashmere coats are expensive, vicuna coats are even more so selling for \$400 to \$700. All these coats of luxury yarns are simple in style and impeccably tailored.

For portfolio subscribers we enclose samples of this luxury yarn. These are 100% alpaca imported by Unger from Peru. Packaged in 1 oz. balls of approximately 116 yards each they sell for \$1.20 per oz. or \$18.00 per lb. The colors are the natural alpaca colors.



Two-humped Camel

Camel's hair perhaps should not be included in the above luxury group as coats, for which it is most generally used, have been sold for many years in a price range quite within the budget of the average college or working girl. Selected yarns of course, demand a higher price but even these are not prohibitive. Camel's hair is long wearing, soft and warm and is frequently woven on a self color wool warp.

The high price of the luxury yarns prevented us doing as much experimenting as we should like to have done. These yarns with their soft feather weight qualities are not difficult for the handweaver to handle but should not be used for warp as they are much too fragile.

We suggest a 2/16 Weavecraft wool from Searle Grain; Lily's weaving wool; ernat's cashmerelain (50% cashmere and 50% lambswool) or others of the mixed yarns for warps.

Sleying will be governed by the choice of warp but it should be such as to produce a firm but supple material and beating must be light and well controlled. These point up the necessity of first weaving a sample. An ideal sample would be a man's scarf approximately 12" x 54".

One question we did ask ourselves, after we figured the amount and price of sufficient alpaca to weave a coat was: "Is this a saving? The coat must be tailored properly and this plus the charge for linings, buttons, etc. added to the cost of the yarn will bring it very close to the price for which I could purchase one ready made." There are times when the weaving of one's own materials may not be an economy and this perhaps is one of those times.

All prices of yarns given in this article are only approximate and are of course, subject to the confirmation of the yarn suppliers.

LOOM LANGUAGE

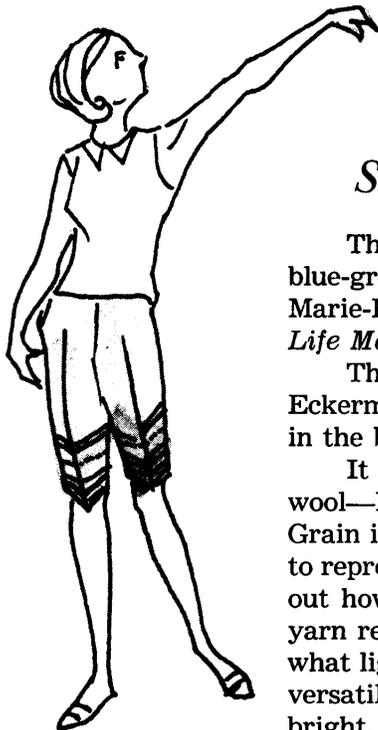
In doing our research on the luxury fabrics we found that the words fur, hair and wool were used interchangeably, whether rightly or wrongly we are not sure. Possibly all are right through usage. For example we talk about a dog or cat's *fur* coat and in the same breath we talk about getting that same dog or cat's *hairs* on our clothing, etc. Our dictionary gives the following definitions which do not quite satisfy us, and when the opportunity presents itself we will go more deeply into the matter.

Fleece—The coat of wool or hair that covers a sheep or similar animal and is shorn off.

Fur—the hairy coat of a mammal especially when fine, soft and thick (such as the sable, ermine or fur seal).

Hair—a slender threadlike outgrowth of an animal, especially one of the filaments which form the characteristic coat of mammals also the coat of some part of it, as of the human head. Such animals as camels, alpacas, vicunas, cashmere goats and rabbits have hair, rather than wool, coverings.

Wool—the soft and curled, or crisped covering or coat of domesticated sheep and some other animals.



Smart

The smartest shorts we've seen recently were the blue-green Bermuda shorts worn by the Swedish model, Marie-Louise Nyam, shown in color in a recent issue of *Life Magazine*.

They were handwoven in the studio of Ebba von Eckermann of Ripsa, Sweden, whose products are found in the better specialty shops across the U.S.A.

It is our guess that the shorts were woven of fine wool—Lily weaving wools or Weavecraft from Searle Grain in the finest size would be admirable. If you want to reproduce them first get your shorts pattern and figure out how much material you will need, then figure your yarn requirements. The warp is a rich dark blue, somewhat lighter than a navy blue, threaded on rosepath, that versatile draft so much used by Swedish weavers. A bright, almost paddy green was used for weft.

Bands in varying widths extend from the bottom to the top of the leg part of the shorts. This would probably be over a 10 or 12 inch area. From a picture it is difficult to judge the exact width of these bands or the treadling, we can only give you an idea. The bottom band, possibly 4 inches wide seems to be treadled on the same shed throughout, for instance harnesses 1 and 2, in green with a blue tabby. The next band treadled rosepath, with the blue with a green tabby is possibly an inch wide. This is followed by a blue band, about half the width of the first green band, also treadled throughout on the same harnesses. A second rosepath band, this time green with a blue tabby and a green band, approximately one-third the width of the bottom band ends the bands. It too is woven of the green on the same shed throughout. The upper part of the shorts is woven in rosepath with blue for the pattern, green for the tabby.

A wide black belt, paddy green slip-on sweater and green wool, knee length stockings, complete the costume.

Shown in the same article is a "striped skirt of alternating bands of orange, green and white on a black background." This skirt seems also to have been set on rosepath. It is very short and very full and again we would think wool had been used. There are four closely placed bands of color at the bottom; a wide black stripe with a border woven of squares; two light closely placed stripes; another row of squares ending with plain black to the waist line. A wide leather belt and cotton shirt, probably in a color matching one of the skirt bands, are worn with it.

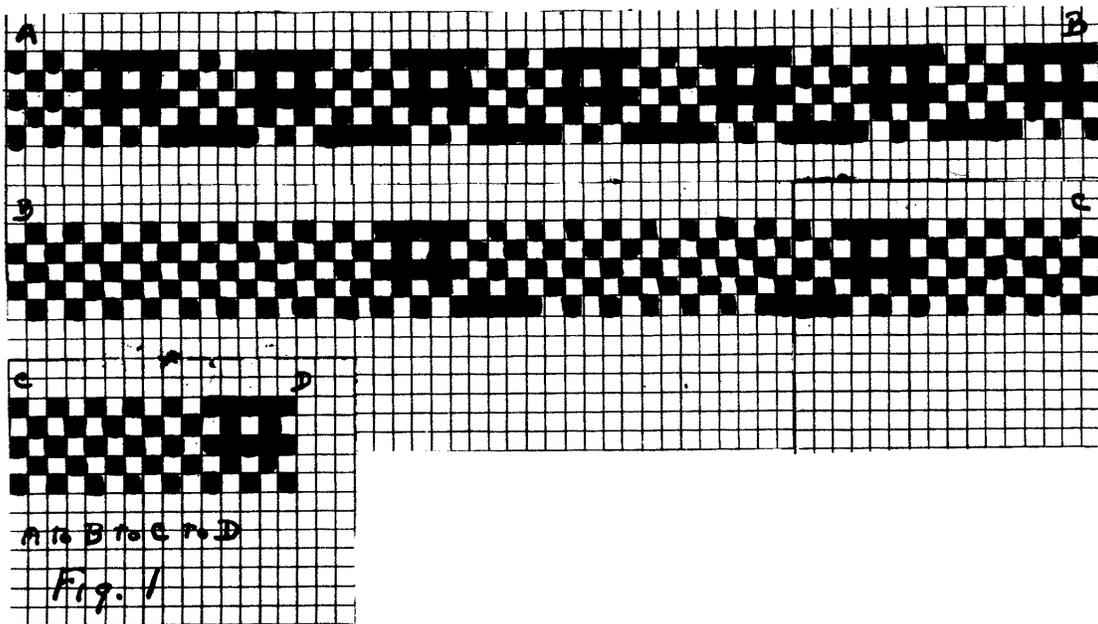
Cloth Analysis

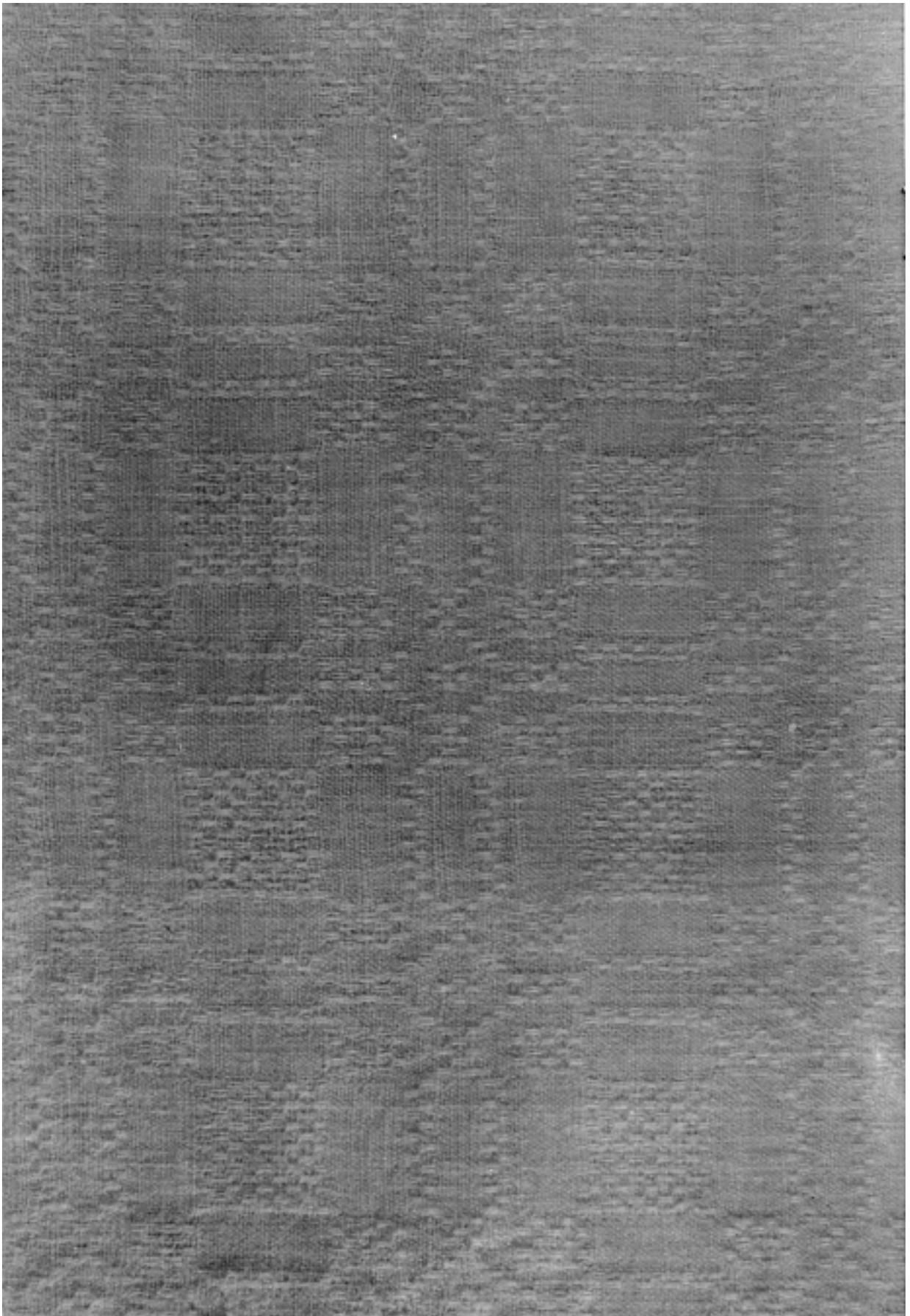
By Evelyn N. Longard

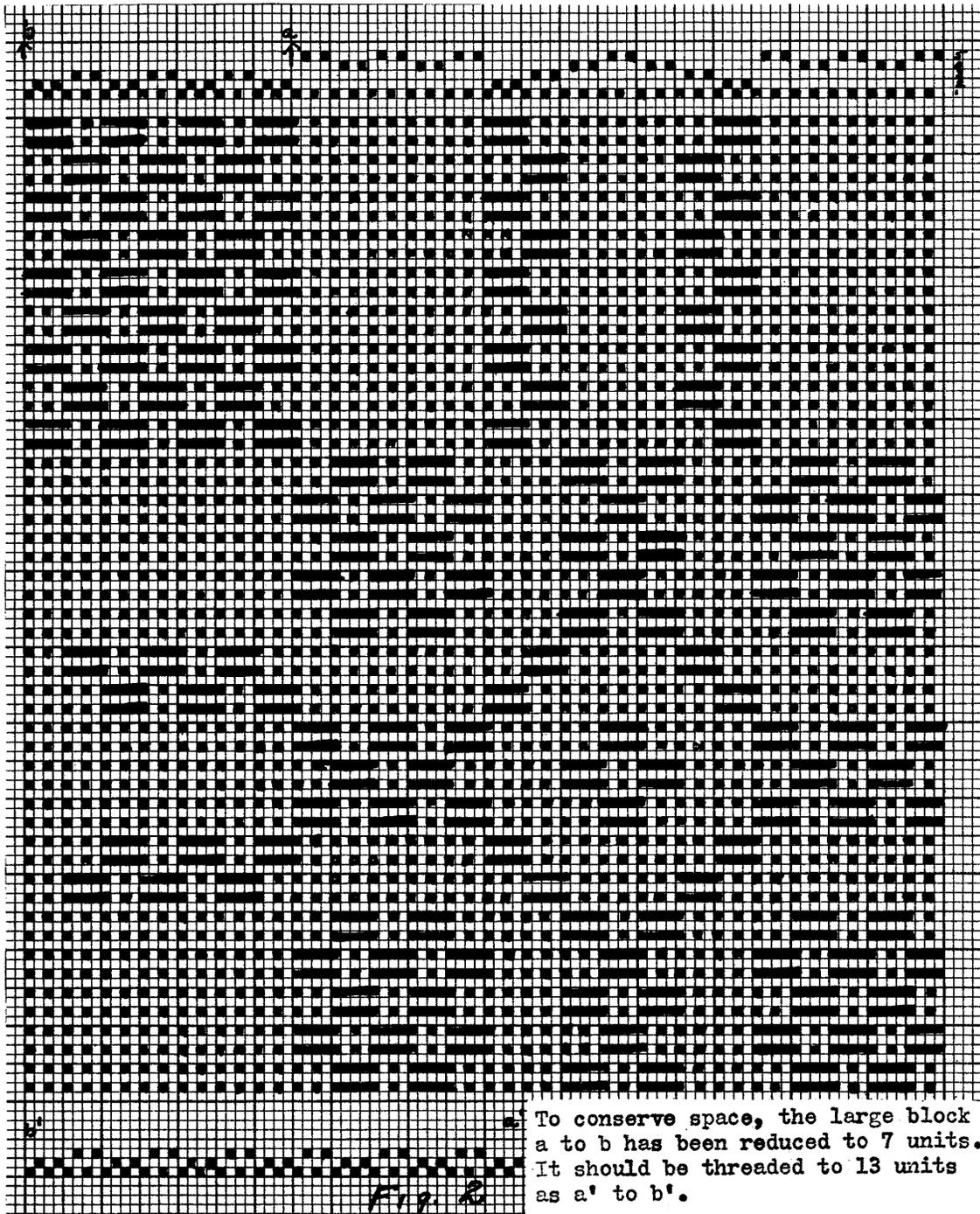
When we saw this old linen table cloth, the first thought was, "What a lovely old piece!" and the second, "How do you think it was woven?" To us, this second thought is always a challenge and naturally we took it up.

The cloth is an old family heirloom brought to this country from Denmark by the family of the husband of the present owner. It has been washed and ironed over the years until now it has acquired that lovely softness and sheen that only age and use can give. The owner gave us a section to analyse and we thought that you might be interested in how we did it. Everyone has his or her special methods for analysing materials but each one learns a bit from the others. We hope that you, too, will find something helpful in our analysis.

First, we looked at the sample carefully to find the beginning and the end of a repeat and then pinned the material to a board being sure to include more than the required repeat. Then the threads were carefully counted and we found that it required 120 threads to make one pattern. In beginning the draw-down, we started a few threads beyond the edge of the pattern and painstakingly noted whether each weft thread was over or under the warp and marked it on squared paper accordingly, inked if over the warp, left blank if under. (Fig. 1).





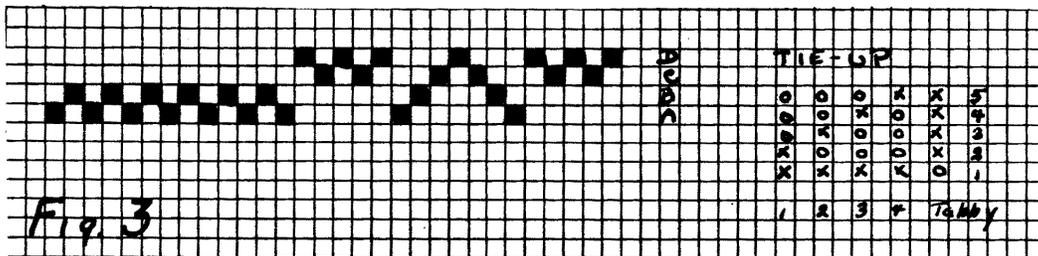


We did the next weft row similarly and found that this second row was a complete alternation of threads. The third row repeated the first, and the fourth was again an alternation. We went on to the fifth row and found that the last thread in the first weft skip in the first and third rows, was the same as the first thread in the first skip in the fifth row. This was interesting as it gave a clue to the block structure. From the appearance of the weave it had seemed to be either a huck or a spot bronson. From the fact that the blocks had a thread in common we deduced that it must be a spot bronson. Also, from the detail of the five rows done, we could see that every second row was a tabby, and the same tabby each time, again fitting in with our theory of spot bronson weave.

We started another draw-down, (Fig. 2) this time omitting the tabby rows, as is customary, and looking for blocks. We found that the first two blocks were repeated nine times and then a new block appeared. It did not join directly, but the following one did, alternating again five times. Then our second block repeated forming a double diagonal line in the centre, which with the drawing in of the first block again, and then blocks 4 and 3 formed half the pattern. It then reversed, giving a diamond shape, then the five repeats of blocks 3 and 4 and finally the table of blocks 1 and 2.

Obviously there were four blocks, all woven separately. One of the major headaches of writing drafts from old textiles is inaccurate threading. So often you are unable to tell at first whether what seems to you to be an illogical thread is meant to be there or is a mistake. It takes considerable care in analysing different repeats to determine this, but in this particular sample, we were extremely lucky—no mistakes! It was also helpful and simplified matters a great deal to see that no blocks were woven in combination.

All that was left now, was to determine how we would thread it. Assuming that Block 1 would be 1, 2, 1, 2 (which gives the necessary five thread skip with its adjoining "1"), then Block 2 would be 1, 3, 1, 3. The next block we would expect to be 1, 4, 1, 4 and the fourth 1, 5, 1, 5. This follows quite logically on the draft if you consider Block 1 as A (1, 2, 1, 2); Block 2 as B (1, 3, 1, 3); Block 3 as C (1, 4, 1, 4); and Block 4 as D (1, 5, 1, 5). The short draft looks as shown in Figure 3.



Now to the actual weaving. We were able to find some rough spun, semi-bleached, singles linen, size 10, which was very similar to the original. This was threaded according to pattern, (Fig. 2) and set the required 36 threads to the inch. It was woven with the same linen as the warp. We noticed that the tables were not square, nine repeats being used instead of thirteen, but we followed the original weaving. Each shot was woven twice, with tabby to complete one block.

Block A Harnesses 1 and 2
 Block B Harnesses 1 and 3
 Block C Harnesses 1 and 4
 Block D Harnesses 1 and 5
 Tabby Harnesses 2, 3, 4 and 5
 Treadling: A, B, A, B, A, B, A, B, A
 C, D, C, D, C
 B, A, D, C, D, A, B
 C, D, C, D, C
 and repeat from the beginning.

This treadling is for a sinking-shed loom or can be used for a rising-shed loom, the warp skips in this case appearing on the top surface of the web. For a rising-shed loom with the weft skips on top as is customary, reverse the treadling thus:

Block A Harnesses 3, 4, 5
 Block B Harnesses 2, 4, 5
 Block C Harnesses 2, 3, 5
 Block D Harnesses 2, 3, 4
 Tabby Harness 1

After the sample was completed, repeated washing and ironing brought it up to a very close copy of the original, although it was impossible to duplicate the "feel" of it in so short a time. We feel that for a modern weaver a few changes might be made. This cloth was woven 27 inches wide with no selvedge. We suggest that a selvedge of 1, 6, 1, 6 added on either side would improve the appearance of the cloth, and also, we would suggest a two-ply linen of the same weight as warp. It is very difficult and often heart-breaking to weave on a singles warp. We think, too, at least to our eyes, the tables, i.e. alternating Blocks A and B, would look better if squared. It may be difficult to beat thirteen repeats to square the block, but a setting of 32 threads to the inch rather than 36 might do it more easily.

It was a very enjoyable task to try to duplicate this cloth and we are just waiting for someone to say again, "Oh, by the way, can you tell me how this was woven?"

Animal Fibers

One of the animal fibers not listed on page 2 is cow hair. Cow hair is used in Canada and the United States for commercially made, inexpensive, hard-wearing rugs; but we don't see it on price lists and sample cards of handweaving yarns. However, cow hair yarn, or Swedish *notharsgarn*, is familiar to all Scandinavian handweavers. It does not have as long a staple as wool, but it is a harder wearing fiber than wool and is less expensive. It is usually combined with wool—for strength—and is used for weft in rolakan and rosepath rugs and for the binder thread in flossa and rya rugs. It is usually sold as a 1-ply or singles yarn ranging in size from a heavy 1-ply tweed yarn to a 3 or 4-ply rug yarn; and it is obtainable in a beautiful range of dyed (and natural) colors.

Another of the animal fibers not listed, but we think worth mentioning, is horsehair. True, it is not used much now but until recently it has been a very important fiber used in upholstery textiles, and stuffing.

A third animal fiber not found in our list, is dog hair. It is not likely that dog hair will ever be important commercially, but many handweavers who are also ardent dog-lovers have found pleasure in working with their dog's hair. The only dog hair fabric we have had anything to do with is samoyed. A few years ago we were given a skein of spun samoyed hair and asked if we could make some samples of it to see if it would be suitable for coat, suit or dress material. The yarn was very similar to angora in that it was very soft and somewhat hairy. We tried samples using this yarn for both warp and weft but found that the warp threads tended to pull apart under tension and beating; and, we also felt that the all-dog hair fabric seemed rather lifeless and heavy. To give the needed strength, resiliency and life to the fabric we used a fine worsted wool warp and used the dog hair yarn for the weft with satisfactory results.

By the way, the findings from our samoyed hair experiments also apply to weaving with angora. An all angora fabric seems heavy and lifeless while a wool-angora blended material is more durable and resilient.



COIR

Coir is the fiber of the outer husk of the coconut. It is a rough, uneven fiber of variable strength. It is not affected by salt water.

This last property of coconut fiber reminded us of an expedition we took last fall to Oak Island, N. S. Oak Island is not large, and is not inhabited, but it is famous because it is thought that Captain Kidd buried—some two hundred years ago—a fabulous treasure on the island. The island is almost like a sponge, it is so full of dug and drilled holes where treasure hunters have searched. No one has found the treasure yet, but one of the luckier expeditions' drills went through platforms of solid oak beams and also layers of coconut fiber—and then salt water. The cores from this drilling showed the fiber to be in excellent condition. What better example of coir's imperviousness to salt water!

By the way, we went to Oak Island as skeptical onlookers, but came away convinced that the treasure is still there and that perhaps we too would go and drill or dig a hole one day.

But we have digressed.

The coconut husks are steeped in water for as long as six months or a year then beaten until the fibers separate. The fibers are then twisted or spun into coir yarns, or as it is frequently called, cocoa-fiber.

Aside from being used for certain types of ropes, brushes and upholstery stuffing, coir yarn is used in the manufacture of cocoa matting or door mats.

These mats can be made on either a large heavy, 2-harness loom or on a sturdy upright frame-loom similar to a high warp tapestry loom. If a floor loom is used it will be necessary to purchase a special reed with widely spaced dents—about 4 or 5 to the inch.

Various techniques can be used but the most satisfactory rugs are those with a pile.

While coir yarn is somewhat rough, and strong hands and wrists are an advantage in weaving the rugs, they are within the capabilities of the average home weaver.

We suggest a frame approximately 20 inches wide by 28 inches high as a convenient size to handle. The finished mat should be about 14" x 24", and will require 3½ lbs. of the cocoa fiber. The cocoa fiber is retailed in compressed, 1 lb. hanks.

To facilitate handling the yarn is used wet.

The loom should be warped in much the same manner as a tapestry frame. (SHUTTLE CRAFT, December 1958) keeping a uniform and tight tension. There should be 4 warp threads between each inch mark. Use singles coir yarn for warp.

For the binder cut three strands of the coir yarn, each 9' long. The three strands are used together as a single thread.

Begin weaving at the lower left side of the loom and pass the ends over the first and under the second warp threads and alternate over and under until the opposite side is reached. Two rows should be sufficient for a hem, or edging. As the warp threads will alternate between the face and the back of the lower bar of the frame it will be necessary to pull the binder thread quite tight in order to bring these threads up to the same level. The binder threads should be beaten down tightly with a weighted wooden comb or small metal bar. Two words of warning: throughout, beating must be very hard or the rug will be sleazy and lose its value; and, secondly, watch the edges and keep them straight. You won't want an hour-glass shaped mat at your front door!

For filler cut strands of the coir yarn $3\frac{1}{2}$ " long. Take a bunch of seven of those strands, even the ends and pass the group around every alternate warp strand, beginning at the lower left warp thread, and bring them up the front. If care is taken to even the ends, after they are passed around the warp very little trimming will be required. After a row of tufting has been entered, weave in a 3-strand binder thread. The second row of tufts are placed around the opposite warp threads than those around which the first tufts were passed. Enter another row of three-strand binder and continue until the mat is the required size. After the last row of tufts, finish off with two rows of binder.

Cut the mat from the frame. Tie the warp ends together by joining first and second ends, second and third ends and so on until all ends are tied by double knots. Make a three plait flat braid of nine strands of the cocoa fiber and sew it around the edges of the mat carefully, concealing the knotted warp ends. A curved sack needle facilitates the sewing. If necessary each row can be trimmed as woven, and it is easier to do this as the weaving proceeds than it is to trim the entire mat when finished. Sharp, heavy type domestic scissors will do an efficient job of trimming. Neaten all ends but in no case cut any threads so close they will pull out.

Mineral Fibers

It is always difficult to categorize anything and we run up against this difficulty with the mineral fibers. Some listings we have seen, list glass and aluminum as natural fibers while other equally reliable sources list them as man-made fibers. However, for our study of fibers—man-made and natural—a precise classification of aluminum and glass is not too important.

Whichever category they belong in, we have discussed them in the January SHUTTLE CRAFT and will not reiterate here what has already been said. This leaves us with one other mineral fiber—asbestos.

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Whichever category they belong in, we have discussed them in the January SHUTTLE CRAFT and will not reiterate here what has already been said. This leaves us with one other mineral fiber—asbestos.

Asbestos is found in different parts of the world the greatest quantity coming from the Province of Quebec at Thetford Mines.

It is a fibrous material which is made into roving and can be spun into yarn. Fibers to be spun into yarn are blended with cotton or rayon or both, and are spun similarly to cotton or wool. The single-ply yarn ranges in thickness from .015" to .100". Asbestos yarn is woven in plain weave, twill or herringbone weaves and in metallic or non-metallic construction, depending on the end use of the textile. Asbestos cloth is made in a wide variety of style, texture, grade, thickness and weight, the latter varying from a few ounces to several pounds per square yard. The yarn is manufactured into cord, tubing, tape and woven and braided fabrics.

The outstanding properties of asbestos are that it is non-combustible; it is able to withstand high temperatures with little physical alteration; and, it is a poor conductor of heat and electricity. These properties make it especially valuable in industrial engineering fabrics where thermal resistance, electrical insulating, fire protection and durability are necessary. Lightweight asbestos fabrics are also used in the making of some ironing board covers where durability and fire resistance are highly desirable. Asbestos fabric may be bleached if necessary.

More romantic than ironing board covers and thermal resistance is Adele Coulin Wiebel's* brief reference to the use of asbestos in textiles. "Many anecdotes are told of great men from Alexander to Charlemagne who shocked their guileless guests by throwing a fine napkin into the blazing fire, whence it emerged clean and unharmed. The same story is found also in the Han annals, where asbestos cloth is mentioned among the goods imported to China from Syria. It was used there for table napkins and for lamp wicks "that would never come to an end'."

Thus, of the three mineral fibers listed—aluminum, glass and asbestos—all are important for industrial or commercial fabrics, but the aluminum fiber (lurex, metlon, lamnette, etc.) is the only used to any extent in hand-weaving. Real gold and silver threads, which could also be classified with aluminum as mineral fibers, have been used in textiles for centuries but their use has now been supplanted by aluminum metallic yarn which is far less expensive, more durable, heat-resistant and non-tarnishing.

*Two Thousand Years of Textiles

THE WEAVER'S BOOK SHELF



By Boris Veren

Strike up the BAND, for I. C. A. new weaving book on my desk! And why not introduce pun-wise and in a musical spirit, a big book on a narrow subject! For as you may now suspect, I am talking about bands, or inkle, or braids, belts, ribbons, tapes—whatever one calls them. The weaving of these long narrow textiles is one of our most absorbing crafts. The latest book in the Swedish I. C. A. series (publisher of VI VAVER TILL HEMMET; HANDDUKAR OCH DUKTYG; TRASMATTOR OCH ANDRA MATTOR; and YLLEVAVER) is entitled: BAND, edited by L. Trotzig and Astrid Axelsson, and covers the most versatile of the narrow-textile techniques, Inkle Weaving comprehensively, and then some fine material on Card Weaving, Braiding and Plaiting.

One might wonder why such a significant series as the I. C. A. books should devote their fifth and most opulent volume to such a “narrow” subject, and Mrs. Atwater gave part of the answer in the introduction to her *BYWAYS IN HANDWEAVING* (1954, \$8.50) the classic work in the English language on narrow weavings: “These crafts are noiseless, take little space, do not create a litter, for the most part go pleasantly and rapidly, and require enough skill to be interesting”. Other reasons are that weaving bands requires a minimum of easily made or obtained equipment and small quantities of yarns with little wastage; and the products are beautiful and for the imaginative person useful in many ways. Look at the host of wonderful objects that can be made from these weavings: decorative edgings for guest towels, straps for handbags, straps to carry books that some of you will purchase in person from me at the next Northern California Handweavers’ Conference in Monterey, California; ties for curtains, hairbands, lamp shade trimmings, key “chains”, straps for sandals, leashes for dogs, hat bands, apron bands and many others.

Now, as with every one of the foreign language handweaving publications, the first question asked is whether it is written in English and whether a translation is needed. My answer to this applies to this book as well as to many of the harness-weaving books: although it is not written in English, no translation is needed because the pictures and the diagrams provide all the information needed by anyone who has a rudimentary knowledge of the processes involved. (And to those who do not have this knowledge, I am going to recommend later in this article some good books in English that will give you this technical information). In discussing this with Harriet Tidball, she thinks that a translation may prove a detriment, as it may lead to rote copying without adequate comprehension of the processes, and inhibit creative application. I mentioned the illustrations, and it is in order now, to take inventory. The back and front covers of this hard bound book are I think the covers of the year. One can almost feel

the texture and one is tempted to lift the weavings right from the pages, so graphically "real" are they. There are 12 more plates illustrating in vibrant color and magnificent photography 66 different woven bands. There are many black and white patterns, about 165 patterns in all. Even if you don't do inkle or card weaving, you will want to weave on your own loom some of these narrow fabrics, which are wonderful examples of warp faced weavings.

A comprehensive knowledge of Inkle Weaving may be secured from the booklet *THE INKLE WEAVE* by Harriet Tidball (1952, \$2.50) and for this booklet, *BAND* provides the perfect designing and pattern extension which the enthusiastic inkler may wish. While in *THE INKLE WEAVE*, only one type of equipment (the continuous-warp loom derived from the early English inkle loom) is suggested, *BAND* illustrates a variety of Inkle looms, none of them using a continuous or circular warp. Some of the illustrations of these looms intrigued me, and so I wrote to the author of *THE INKLE WEAVE*. Mrs. Tidball replied: "The simplest equipment shown is the simplest possible, the slot-and-eye heddle with a warp attached to a stationary object and to the weaver's belt, in the primitive loom manner. Such a heddle may be purchased at low cost from Hammett. The other inkle looms illustrated in *BAND* are more elaborate frames which stand on the floor, have two large spools for warp and cloth beams, and doup-heddle arrangements. The treadle-operated Inkle Loom illustrated on page 27 of *BAND* looks so wonderful that the devoted inkler will be rushing the picture to the nearest carpenter or the husband's basement workshop to have a copy made immediately. The loom shown on pages 25 and 46 is of particular interest as it merges the use of the doup-heddles with a slot-and-eye heddle, making a combination comparable to four harnesses. The implication here will be highly significant to the accomplished inkler weaver, as this method should give an easier means for working the intricate three and four-shed inkles devised by Dr. William Bateman. These techniques are presented in detail on pages 19 to 22 of *THE INKLE WEAVE*. The combination should also facilitate developing the pick-up sheds for the more intricate pattern weaves, and make it possible to obtain the clear tabby backgrounds shown on the color plates opposite page 16."

The 114 inkle designs given on pages 43 to 104 of *BAND* are in the main, specific adaptations of the twelve basic motifs drafted and diagrammed on page 13 of *THE INKLE WEAVE*. The 30 designs presented on pages 105 through 123 are for pick-up patterns, and the directions for working these are Methods II through VII given on pages 15 and 18 of *THE INKLE WEAVE*. Here, as Mrs. Tidball suggests, the warp color arrangement should be taken from the Swedish book, but the more creative approach is to transcribe the values rather than to translate the colors.

There are in *BAND* some short sections devoted to other methods for weaving narrow bands. The card weavers will be interested in patterns 145 through 156. The diagrams illustrating the card threading method are most interesting, and all of the patterns given in *BAND* will comprise an

excellent supplement to Mrs. Atwater's exhaustive treatment of the subject in her *BYWAYS IN HAND WEAVING*. A good elementary book on this is Lois Clifford's *CARD WEAVING* (1947, \$1.25). And another fine book for the band weaver is the handsome color plate portfolio: *SAMISK BAND-VEVNAD FRA FINNMARK* by Anny Haugen (Norway, 1946, \$2.85). This folder has 8 large color plates of wonderfully designed warp patterned belts, with actual size color photographs, plus the pattern drafts. I wonder if any of you have seen this work being done by the Laplanders in a Disney nature movie of these reindeer herders.

The last eight designs are for plaiting and braiding, the methods for which may be found in Chapters IV and V of *BYWAYS IN HANDWEAVING*.

So, if you already are an inkle or band weaver, or want to know more about this unexplored *BYWAY*, you may send to me at Coast Route, Monterey, California for: *BAND* at \$3.75. And of course we stock *THE INKLE WEAVE*, and the other supplementary books mentioned in this review.

Good news this month for new Elmer Hickman fans, for that versatile weaver, teacher and publisher in Pennsylvania writes me that a few more folios of his *NATURAL YARN FABRICS* have been assembled. This folio was one of Mr. Hickman's most successful compilations, and was quickly sold out. I only tell you this, so that you will not be led into thinking that a *new* Hickman folio is out with this title. It is an older title, and only a few copies are available.

Usually, and wisely, I would not have the writer review his own book, but in Mr. Hickman's case, I can think of nothing more pertinent and explanatory than his own words, and so I quote from his prospectus: "*NATURAL YARNS FABRICS in the Contemporary Manner.*"

"This folio is not only unusual in that it presents many attractive woven samples in natural yarn colors, but also that it offers unique methods in developing fascinating contemporary modern weaves—for those who feel they are in a rut and wish a lift to give them a new approach to their weaving. Even though the weaves employ, mainly, natural color yarns—a few dyed yarns were used from necessity, as is explained in the folio—the samples serve as models, through their light and dark tone yarns, when one wishes to interpret them in colored yarns. Should the occasion demand, the finished fabrics may be dyed giving unusual results and a unity of color tones which are always harmonious.

"The fabrics are woven on multiple fine, medium heavy, and heavy warps—as many as ten different textiles on the same warp—multiple warps designed from yarns of different texture, character, and tone which offer a variety in emphasis, contrast, etc. The fabrics shown in this folio are not the only fabrics resulting from my experiments, but are those selected as the most serviceable for the average home weaver.

"These fabrics may be duplicated from the complete instructions given in the folio for those who do not care to create their own textiles; but for those who wish to weave original textiles, those weavers will find out-of-the-ordinary methods in the instructions whereby novel and unique fabrics

may be accomplished. Most of these out-of-the-ordinary techniques used in the woven samples are a radical change from the traditional methods customarily employed by the average weaver, and are acquired by unusual threading of heddles and reed sleyings together with tricky arrangements of weft yarns.

"Simple 4-harness drafts are used, since the fabrics do not depend upon elaborate pattern drafts for their development. The pattern, usually simple, is produced by a development of the preconceived plan of warp and weft construction. The methods are easy, although exactness is compulsory in preparing the heddle threading and reed sleying—but what good weaving does not require just that? The fabrics range from very sheer materials to heavy textiles which may be used for draperies, upholstery, table linens, handbags, decorative fabrics, and many uses as desired by the individual weaver.

"If the woven samples in this folio offer nothing more to your liking than showing what developments may be achieved by weft arrangements on the same multiple warp, then the folio will have served its purpose, but I trust you will like the fabrics for their worth alone. As in all cases you will like some and not others, and some may even show you what you do not want in your weaving.

"The attractive 20 woven samples, complete with instructions and comments, will be assembled in a heavy 2 pocket folder, two woven samples mounted on heavy 8½" x 11" index cardboard, stapled on colored plates. TABBY TALK sheets will give suggestions and list of yarn sources where yarns may be obtained that are used in the samples of the folio. Printing costs are higher, but we will still keep this folio the same price as the previous one, \$6.50."

In January of 1957 I made my debut in the pages of SHUTTLE CRAFT as book reviewer by introducing Sofie Krafft's PICTORIAL WEAVING OF THE VIKING AGE, which described and illustrated cloth fragments found in the Viking burial ship of the 9th century excavated at Oseburg, Norway. The publishers and the author have now compiled a portfolio of these Oseberg patterns, called OSEBERG MONSTRE, and I am sure that all purchasers of the original book will want to add these patterns to their weaving library. There are 16 large folding plates, all drawn by Sofie Krafft on squared drafting paper. Specifications for yarns, and colors are indicated. As Ann Blinks who was my guest reviewer that month wrote: "These are arranged in squares and blocks strongly suggestive of many arrangements used a thousand years later, as in Rosepath and in many of the 'Dralls' and indeed in the American overshot. There are no threadings given but the modern weaver should have no great difficulty in translating these handsome geometric patterns and decorative figures into dramatic contemporary use."

The price of OSEBERG MONSTRE is \$3.60, and may be purchased, as can the Hickman folios from Craft and Hobby Book Service, at Coast Route, Monterey, California.

The LOOM-SIDE MARKET

REPRIEVE

Winter has drawn its icy fingers along our seawall and steps, making it impossible for us to get down onto the beach to have our "Handweavers' Reference" bonfire.

So the remaining copies will be available until the spring sun does its work. Just enclose your coupon with your dollar bill (*please* no \$1.00 checks) in an opaque envelope. If you've lost or destroyed your coupon a note with your name and address will serve to get your copy off to you by return mail.

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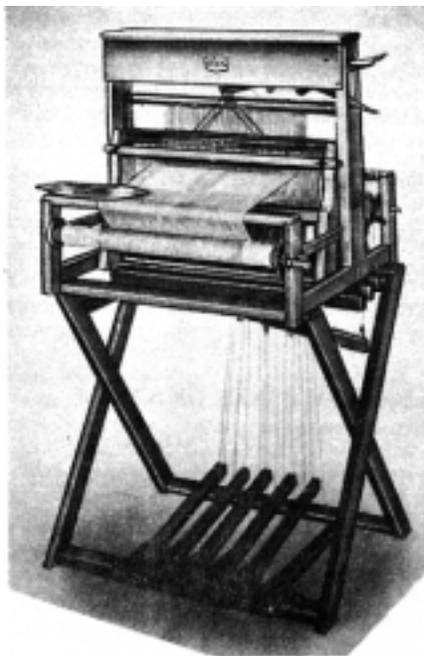
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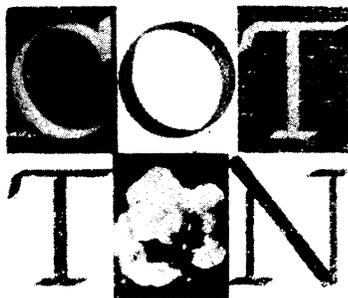


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