Shuttle Craft Guild HANDWEAVER'S BULLETIN

prifolio ssition

1956 Vol. XXXIII • No. 3 MARCH The Shuttle Craft Guild Handweaver's BULLETIN Volume XXXIII, Number 3 March 1956



DAMASK FOR EVERYONE	-	_	-	2
DRAFTS and TIE-UPS for DAMASK	_	_	-	11
Five-Shaft Satin				
Five-Shaft Damask				
Four-Shaft Broken Twill				
Four-Shaft False-Damask	-	-		15
Three-Block Damask and False-Damask -	_	-	-	16
LINEN SIZES and WARP SETTINGS for DAMASK		-	-	16
WEAVING DAMASK and FALSE-DAMASK	-		-	18
TABLE MATS and NAPKINS in DAMASK	_	-	-	20

Remembering what Samuel Johnson said, "Knowledge is of two kinds; we know a subject ourselves or we know where we can find information upon it," we bring you this BULLETIN on Damask. This is for the handweaver who has an immediate interest in Dam sk weaving and wishes to know about it for now; but more important, it is for every handweaver who dreams of weaving Damask someday. and this means almost every handweaver. Sometimes we enjoy bringing "sugar coated" weaving -- projects wrapped up in simple directions from beginning to end. In this BULLETIN there are all of the directions, but no sugar coating. We believe that dynamic interest grows only as understanding of what one is doing develops, and consequently, two or three times a year, the Shuttle Craft Guild has a serious BULLETIN with a thorough analysis of a technique. We know you will enjoy Damask. In fact, our advice on planning your first Damask warp is: calculate the maximum yardage of Damask you wish to weave, then double this figure for preparing your warp. Otherwise, you will be frustrated. This is an idea which grows with experience favorst iniball

DAMASK FOR EVERYONE

Damask -- The Cloth of Kings +- is the ultimate achievement in linen weaving. This statement applies not only to the beautiful textile which results from good damask weaving, but also to the pleasure which the handweaver derives from damask weaving. There is probably no handloom technique which weaves as smoothly, as rapidly, and as easily as damask, and which can give the weaver the full pleasure of loom weaving to as great an extent. And damask weaving is so simple that, with adequate equipment, it is appropriate for a beginner's first project. It is actually easier to produce a good damask textile than it is when weaving one of the more common linen techniques such as huck, Atwater-Bronson, Spot Bronson, or Swedish lace.

The handweaver's attention was focused on damask recently through the Summer 1955 issue of HANDWEAVER AND CRAFTSMAN, which was largely devoted to this weave. But as well as stirring the interest, the magazine served somewhat to discourage the average handweaver away from the field, because it presented only one aspect of damask weaving, and an aspect which requires very elaborate and expensive specialized equipment. This was the draw-loom weaving which produces in damask the elaborate patterns associated with grandmother's tablecloth, or the parlor hangings. None of the damask articles in HANDWEAVER AND CRAFTSMAN touched on the simple type of damask design which the average handweaver can weave on his own loom, and which is much more modern in spirit than damask woven with florid patterns.

If one realizes that damask is a technique for producing a specific type of textile, and not a type of pattern or ornament, then the field for using it broadens. Almost any technique may be interpreted in a simple manner, as is usual on the handloom, or

it may be elaborated into fancy patterns, as it is on the Jacquard and other types of power looms, or it may take a medium position between these two if a handweaver has an elaborate draw-loom or dobby loom like those used at Penland or by Miss Arnold or Mr and Mrs Ahrens. But most handweavers are interested in the simple interpretations which are within the scope of their own looms.

There is another reason why the simple, hand-loom damask interpretations are of greater interest to the handweaver. The trend of modern design leans toward simplicity, toward effects gained through textures and colors, used boldly, rather than toward intricacy of pattern. Much though we may admire the elaborate pattern of grandmother's tablecloth which came from Ireland or Belgium, slight is the impulse to reproduce such a pattern for one's own home use. Fortunately, our own looms in most cases give us the potential for achieving the damask textures, but in simple, modern patterns.

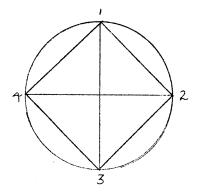
Damask is a satin weave in which patterns are produced by opposing weft-face satin to warp-face satin. The two textures are identical except for the direction of emphasis, and the pattern is evident through a difference in light reflection rather than through any difference in color or texture. The surface texture is smooth, glossy, and desired for its high quality and elegance.

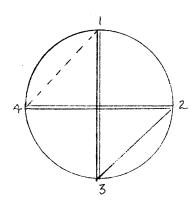
The full expression of handwoven damask requires a loom with ten harnesses, and in the past five years the interest in the ten and twelve harness loom has grown so rapidly that now an amazing number of home weavers are equipped to weave damask. There are several 12-harness looms on the market now, and they are being purchased in increasing numbers. Of the standard make looms, the Macomber is the only one which is especially built for damask weaving. All Macomber looms (except the narrow 16", 20", and 24" models) are built to accommodate ten harnesses, and

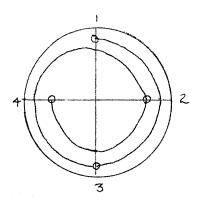
even if the weaver purchased a Macomber loom with 4, 6, or 8 harnesses, he can always secure additional ones to bring the loom quota up to ten. For the weaver with an 8-harness loom, true pattern damask cannot be woven, but this weaver has an approach to the technique in the false-damask, which is a similar and beautiful textile, though lacking in the full luster of the true damask. But even multiple harnesses are not necessary. The weaver who has five harnesses at his disposal may weave true damask in modern interpretation, by making pattern block changes in the weft only. And the 4-harness weaver with a jack loom may make the same kind of interpretation with the false-damask.

Damask is the only common handloom technique which utilizes the satin weave. Satin is woven on a twill threading, with a single harness raised for each shed so that the weft floats over a group of warp ends, and is caught under one. This one thread (or raised harness) cannot progress in a straight line from shed to shed, as it does in normal twill, but must skip harnesses on successive sheds, in a regular sequence, so that no pattern of warp threads on the surface is formed. When two adjacent harnesses are woven consecultively, a thread pattern begins to form, and this destroys the smooth, highly light-reflecting surface characteristic of the satin. To understand the satin structure, one must study the circle diagram on which the twill theory is based.

The 4-spoke circle forms the 4-harness twill, with one spoke representing each harness. (See: The Theory of the Circle Diagram, Shuttle Craft Guild Handweaver's BULLETIN, September 1954, or Part II, Home Study Course in Handweaving.) In figuring a sequence for the use of the four harnesses, one may start at any point on the circle and progress forward or backward around the circle, but this type of harness-use pattern produces a 45 degree twill

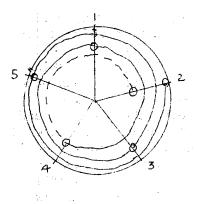


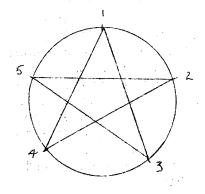


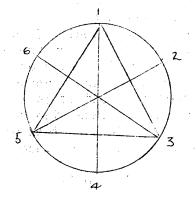


line, when woven, a visible pattern which satin cannot have. The next possibility is to skip one harness between each shed; but this would merely take one back and forth between harnesses I and 3, or 2 and 4, leaving half of the threads unwoven -- an obvious absurdity. Since the 4-harness twill has no further possibilities for regular harnessuse intervals, it is plain that to avoid the diagonal pattern, irregular intervals must be employed. The arrangement pattern shown at left is a progression of harness 2 to 4 to 1 to 3, then back to 2 for a repeat. The arrangement is shown more clearly on the snail-trail diagram in which one first skips one spoke, then none, then one, then 3, and repeat. This figure is the common broken twill, and it is used as the basis for the 4-harness false-satin, But it is not true satin because the warp forms a pattern instead of the smooth satin surface.

The picture is altogether different when one advances to the circle diagram with 5 spokes, for the 5-harness twill. In

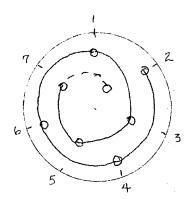






setting up an interval of a 2-harness skip, and tracing the snail-trail arrangement on the circle diagram, one can start with harness 2, skip two to harness 5, skip two to harness 3, skip two to harness 1, skip two to harness 4, skip two, and one is back ready to start on harness 2 for a repeat. Thus, the harness order: 2, 5, 3, 1, 4, has no irregularities, and involves five harnesses in the space of five sheds -- a perfect satin. The same interval is illustrated by the five-pointed star which every school child learns to draw.

The interested weaver may carry the experiment farther -- to the circle diagram for the 6-harness twill. In this case if two harnesses are skipped between sheds, one weaves simply an alternation between two sheds, and if a single harness is skipped, the weaving falls in a triangle, which omits 3 harnesses. Thus, a true satin cannot be produced on six harnesses, though again as with four harnesses, one may make a false-satin by using an irregularity.



The 7-spoke or harness twill diagram again shows a regular interval with seven sheds required for completing the succession, whether one skips 1, 2, or 3 harnesses between sheds. So satin may be woven on a 7-harness twill. It will be found that all further twills will produce a satin interval.

In the case of the 5harness twill (when used for producing satin, this is commonly called 5-shaft, rather than 5-harness) the float interval is over-4-under-1, or under-4-over-1. For the 7-shaft satin the distribution is over-6-under-1. Since the long floats of the 7, 8, 9 and higher shaft satins require, from the practical point of view, very fine threads which are very closely set, these intervals are hardly used by the handweaver. The only advantage of the high shaft intervals is that they produce a smoother surface of greater luster, giving greater contrast between the warpemphasis and the weft-emphasis surfaces. This, of course, is important when weaving satin in very fine silks and linens. Although silk satin is sometimes made on as high as 15-shaft threading, the longest interval generally used for very fine linen is 9shaft. For this, the float is over-8-under-1. Since the float falls over twice as many threads as with the common 5-shaft damask, this is known in the trade as Double Damask. There is another type of Double Damask, on a 5-shaft threading, in which ten weft shots are made to balance 5 warp ends, which is sometimes used by the handweaver. True Double Damask requires threads too fine, and too many of them per inch, for the patience of the modern handweaver.

The satin sequences, derived from the circle diagrams, are not used as threading or treadling

orders, but as the basis for figuring the treadle tie-ups.

It will be noticed that in figuring the satin intervals on the circle diagram, the succession was started each time with harness 2. The reason for this is a mechanical one which becomes evident in the weaving. If the harness used at the beginning or end of the block is used for the first shed, the edge thread of the block slips out of place in the textile and hangs loosely at the edge of the block, disfiguring the fabric. Therefore, harnesses I and 5 may not be used for the first shed, but harness 2, 3, or 4 will be correct, and harness 2 is usually selected.

The classic reference book for weaving damask is, THEORY AND PRACTICE OF DAMASK WEAVING, by Kinzer and Walter, translated from the German by Morris and Robson and published in English in 1903 by Scott, Greenwood & Company of London. This book is long out of print, which is of little moment to the handweaver because most of the book deals with weaving on the elaborate damask machine. Because this book is so important in the damask field, we quote from the introductory chapter on "Hand Loom Made" Damask."

"The manufacture of damask is without doubt a very old branch of weaving. Our forefathers knew long ago how, with very little extra complication of the loom, to raise the warp by the healds (harnesses) in different parts in such a way as to get large patterns.

The damask of long ago was a figured fabric of a simple kind made in Eastern Asia, especially in China. Thence the manufacture extended to the West, and was carried on at Damascus, whence the fabric gets its name.

The pattern was produced by alternating simple weaves with bare stretches of warp, changing after inserting a certain number of weft threads. Until 1604 the oriental loom was still used in Europe. It contained a number of ordinary healds (harnesses) as well as the front set of healds (harnesses with long-eyed heddles) which is still indispensable. (This is the draw-loom similar to the one shown on page 24 of HANDWEAVER AND CRAFTSMAN, Summer 1955.) With this loom many check patterns were produced, and although it was comparatively simple, it was the means of making these wonderfully beautiful fabrics which are still among the best specimens in our museums.

The chessboard-like patterns must be regarded as the forerunners of the damask weaving of to-day. They are fabrics in which the warp and weft sides of a twill or atlas (satin) interchange in square figures. The pattern is produced by interchanging the warp and weft sides of a twill or atlas cross weaving in square forms. The number of threads depends on the size and closeness, and is always a multiple of the crossweaving ratio employed. (This cross-weaving ratio is five, for 5-shaft damask) Check patterns are classified as two-part and many-part. In the former case there are only two transpositions, giving a draughtboard appearance. (It is this type which the handweaver makes on 10 harnesses.) The pattern is three- or four-part and so on, according to the number of transpositions. (Three-part patterns require 15 harnesses, and four-part 20 harnesses.) In representing these patterns pictorially it is not necessary to show the separate warp threads. (The Profile draft is used for threading, and the pattern diagrams are made in short form from the Profile draft.) As is well known, five shafts and five

treads are used for this weave. The bealds

(harnesses) are arranged in two lots, and it will depend on the width of the pattern fields (pattern blocks) how many lots of warp are used, one upon another, for a division of the pattern (how many twill unit repeats in any specific pattern block). The length of the pattern field (warpwise, or in the weaving) will depend upon how often the weaver, in filling (weaving) moves one or the other division of treads in succession. I Hence the number of weft threads in a right-angled pattern always corresponds to a multiple of the cross-weaving ratio (5, for 5-shaft damask).

Once the work has been arranged for a particular pattern, the weaver cannot alter the warp during the weaving. In other words, all the right angles of the pattern will receive the destined number of warp threads. The length (number of wefts) of the right angles, however, can be regulated at his pleasure, for he can work any one set of treads as often as he wants. This gives him the power of making new patterns by means of the weft, for there is no limit to the number of wefts."

Illustrations of damask are given in the Summer 1955 issue of HANDWEAVER AND CRAFTSMAN. The illustrations on page 5 and 6, looking at only the ground and border and disregarding the patterns, show the two opposing satin surfaces admirably. The surfaces in fact are so plain that it is probable that unwashed fabrics, just as they came from the loom, were photographed. The excellent photograph on page 25 shows clearly the beautiful luster to which handwoven damask finishes the photograph on page 24 illustrates the type of two-block pattern which may be woven on the 10-harness loom — though without the charming motifs in the squares.

To obviate any mistaken conceptions, and to do justice to a fine handweaver, it is necessary to call attention to the photographs on page 54. None of these beautiful textiles is damask. They are all tabby, twill and basket variations woven on a 16harness Point Twill. Their only resemblance to damask lies in the fact that they are very fine, very beautiful, and are all pure white. As soon as the magazine appeared Mr Fred Pennington, who has been a Shuttle Craft Guild member for many years, wrote asking that the error in the title be corrected so that Shuttle Craft Guild members would not be confused about their damask. Mr Pennington said that on request, he sent a group of his linens. labeled with full information, and the personal information, but that he did not write the article nor suggest the title. Mr Pennington has woven a considerable amount of damask -- three blocks on 15 harnesses -- but none of these was selected for illustration here.

DRAFTS and TIE-UPS for DAMASK

Since both damask and false-damask are in the Unit-Weave Class of the Classification of Handloom Weaves, and may be threaded from Profile Drafts. the significant points to know are the threading units and the tie-ups. The first important draft and tie-up is that for the 5-harness or 5-shaft satin. This is the weave which can be threaded without any pattern variation, on any loom with five or more harnesses. Patterns of weft stripes, however, may be woven in true damask manner, by making the proper adjustments in the treadling. The next step is the enlargement of the 5-shaft satin to weave in two opposing pattern blocks, on ten harnesses; and to weave in three blocks on fifteen harnesses. False-damask, which may be woven on a 4-harness threading in two opposing

textures as weft stripes, is second in importance when one considers the damask weave, though in practical use it may well be of first importance because so many more weavers are equipped to produce it. The extension of this weave to two blocks on eight harnesses is likewise important, even though the purist who owns an 8-harness loom would normally prefer to thread the single-block satin on five harnesses, to two-block false damask. The further extension to three blocks on twelve harnesses is very important, however, as this is the foundation for a great deal of significant weaving on the 12-harness loom which more and more home weavers are buying.

Five-Shaft Satin

Draft:5			Tie	-Up	:	Α					В		
5		5	5		5				5	-5	5		5
4	1	4	4					4		4	4	4	4
1 -	3	3	3			3			3	3		3	3
	2	2	2	2					2	2	2	2	
									1		1		
					2	3	4	5	6	7	8	9	10

An analysis of the tie-up is worth while for the weaver who wishes to understand this weave. The first group of five treadles is tied to the harnesses which have already been determined from the circle diagram: 2, 5, 3, 1, 4. This will give weftface satin since the weft will pass over 4 and under I warp ends on each of the five sheds. On the under side of the fabric, warp-face satin will appear. The problem of the second block is to make warp-face satin, exactly like that on the under side, appear on the surface. To find the tie-up which will do this, make the usual kind of tie-up grid on squared paper, indicating harnesses through 5 and treadles through 10. Place the "o" designation on treadles through 5 for the 2, 5, 3, 1, 4, sheds, as shown above. Then, working in the direction 10, 9, 8, 7,

6, place the "x" designation in this same order. This indicates that the threads which were up in the A block, are down in the B block, but in reverse order. Next, fill all four remaining squares on each of the five treadles with the "o" designation. Finally, erase the "x's", and the correct tie-up emerges.

The weaver with a 6-harness loom with only eight treadles may look at the 10-treadle tie-up in despair. But this is no deterrent, as the second broup of treadles may be formed by operating groups of treadles from the single tie-up, with both feet. For instance, for tie-up 6 depress treadles I and 2 with the left foot, 3 and 4 with the right foot; for 7, depress I-2-3 with the left foot and 5 with the right.

Five-Shaft	Damask	,	r ·	
	5	5		
Draft:	10		10	•
	9		. 9	
	8		8	В
	7		7	
	6		6	
		5	5	•
		4	4	
		3.	4 3	Α
		2	2	
	B B	Α		

Block A is made by repeats of the 1,2,3,4,5 twill, and Block B by repeats of the 6,7,8,9,10 twill. These two units may be repeated as desired, to form any kind of checkerboard pattern. The only caution is against threading only a part unit. This cannot be done. The warp must be planned in a multiple of five to make the threading units come out even.

The tie-up is made by using the two blocks of the five-shaft satin in combination.

Tie-Up;	.			Α					В		
	10	10	10	10		10		10			
	9		9	9	9	9					9
В	8	8	8		8	8			8		İ
	7	7	7	7	. 7		7				
_	6	6		6	6	6				6	
-	5		5				5	5	5		5
	4	1				4		4	4	4	4
Α	3			3			3	3		3	3
	2	2					2	2	2	2	
	1				1					1	
-		T	2	3	4	5	6	7	8	9	10

The tie-up is very easy to understand, once one has arrived at the two surfaces for the 5-shaft Satin weave. The A block is made by placing the single-tie sequence for the weft-face fabric, on the first five harnesses of the first five treadles. Then the remaining harnesses on these treadles are tied to duplicate the warp-face surface, which is B on the satin weave. Block B is simply these two reversed. It is possible to make two further arrangements: the one which will weave weft-face satin across the entire warp, and the one which will weave warp-face satin across the entire warp;

		A	A					BB			
10		10				10	10	10		10	
9					9		9	9	9	9	
B 8			8			8	8		8	8	
7	7					7	7	7	7		
6				6		6		6	6	6	
5		5				.5	5	. 5		5	
4					4		4	4	4	4	
A 3	ŀ		3			3	3		3	3	
2	2					2	2	2	2		
1				11.				- 1	1	1.	
	1	2	3	4	5	6	7	8	9	10	

Seldom are the full four arrangements used in the same pattern because they would require 20 treadles.

Treadling Order: To weave block A, whether the threading is for 5-harness satin or 10-harness damask, on merely treadles 1, 2, 3, 4, 5, repeated as many times as desired. Block B is treadled 6, 7, 8, 9, 10, repeated as desired. To weave any pattern as-drawn-in, follow the draft, repeating each treadling unit as many times as the unit is repeated in the threaded block.

Four Shaft Broken Twill

Draft:	4		Tie- <u>up:</u>	-							
	4	4	4		4			4	4		4
	3	3	3				3		3	3	3
	2 .	2	2	2				2	2	2	
		lī.				-				_1_	
	i	<u> </u>		1	2	3	4	5	6	7	8

Four Shaft False-Damask

Dr	aft:			Tie	-Up:								
	4	4					Α				. 8	}	
	8 .		8	8	8		8		8	F	8	1	-
	7		7 B	· _B 7			7	7	7				7
	6	1.14	6	B 6	6		б	6		6			
	5		5	5	5			5	-5			5	l
:		4	4	4		•	4			4	4		4
	-	3	3	3					3		3	3	3
		2	2 🖺	A 2	. 2					2	.2	2	1
	<u> </u>	1	1.					. 1		1		1	. 1
	В	Α		•	1		2	3	4	5	6	7	8

The system for deriving the tie-up is the same as for the 5-shaft satin. The weaving rotation is likewise similar: 1, 2, 3, 4, repeated as desired for block A; 5, 6, 7, 8, repeated as desired for block B. The AA and BB tie-ups are also made in the same manner.

Three-Block Damask and False-Damask

The system for making 3-block patterns in either damask or false-damask is simple. Merely add another full group of harnesses (threaded 11, 12, 13, 14, 15, for damask; 9, 10, 11, 12, for false-damask), and another set of treadles. To the third block treadles and harnesses, tie either the weft-face surface, or the warp-face surface, as desired. The tie-up will give two blocks weaving in one surface and the remaining block in the other.

LINEN SIZES and WARP SETTINGS for DAMASK

Traditional damask is woven of fine linen, closely set, and sizes 40/2, 50/2, and 60/2 are all excellent. However, the modern weaver often wishes to be unconventional, and weave damask of very coarse, or even rough linens. A design for a damask table cloth was given in the BULLETIN for April 1948, for which 12/1 natural boiled linen at 30 ends per inch was used for both warp and weft. This made an inexpensive and rapidly woven damask of a crafty character, and one which is increasing in beauty with every use and washing. After seven years of use, the model tablecloth is much more beautiful than at the beginning. Damask mats in 10/2 linen at 24 per inch, with one color for the weft and a second color for warp, have also stood the test of time, though they are quite different in spirit from classical damask. For the heavy and crafty damaska, the 4-shaft, false-damask is a most satisfactory threading.

Damask requires a warp setting which is considerably closer than one would use for weaving either tabby or twill. The 5-shaft damask may be woven either light weight, or very firm, according to the warp setting for the weight of linen used.

The light weight damask is good for napkins, and satisfactory for tablecloths, but for table mats only the heavier weight is satisfactory. A good system when making sets of mats and napkins is to beam and sley the warp for the lighter weight and weave the napkins. Then resley the warp to the closer setting for the mats. This trick has the added advantage of making it possible to weave the napkins woder than the mats.

The appropriate warp settings for the light weight damask are easy to remember, as they follow the thread sizes: 40/2 at 40 per inch, 50/2 at 50 per inch, 60/2 at 60 per inch.

<u>Size</u>	<u>Light Weight</u>	Heavy
20/2	26 per inch	28 per inch
30/2	32 per inch	36 per inch
40/2	40 per inch	45 per inch
50/2	50 per inch	56 per inch
60/2	60 per inch	68 per inch

For the 4-shaft false-damask, use the light weight setting only. This will give a firmer fabric than it does with the 5-shaft, but the heavy setting is too close to permit this weave to beat for a perfect warp-weft balance.

Damask or false-damask of 40/2 linen or finer is such an elegant fabric that only the best in yarns should be used. Warp and weft should be identical, and in the classical interpretation they are of the same color. However, delightful effects are made by weaving one color weft over another color warp. For very delicate effects, use a bleached-white warp with a pastel color weft. For stronger effects use two harmonizing colors.

The most desirable linen there is for damask is the Knox Mercerized Linen, imported from Scotland, and sold by the Weavers' Workshop, Dodgeville, Wisc. The mercerizing of linen, as of cotton, increases the strength, luster and smoothness of the thread and makes it absorb dyes more readily. Therefore the mercerized linens are the strongest, they weave without short fiber ends breaking off or gathering in fuzz-balls, and they give the most lustrous fabric imaginable. The colors too are extraordinary. Miss Mainwaring of the Weavers' Workshop stocks these linens in five sizes, 40/2 and 50/2 being of most interest to the handweaver. The price is higher than for most linens, but the beauty, quality and color choice make the price difference worth while. The Weavers' Workshop pays postage on all orders, and orders are shipped without delay.

A pleasant effect is secured by weaving the mercerized linen as weft, on a warp of the same size unmercerized linen. This was done when weaving the experimental warp for this BULLETIN. The warp of 40/2 bleached white, which at twenty yards long, wove without a single warp breakage, was woven for one project with 40/2 Knox Mercerized, peach color for weft. A delightful effect, as illustrated by the PORTFOLIO sample. A fine quality 40/2 linen is available from Frederick J Fawcett, Inc, 129 South Street, Boston II, Massachusetts, in bleached, natural, and eighteen pleasant colors, at very reasonable prices. For the weaver who might wish to weave exceptionally fine damask, Frederick Fawcett has 70/2 linen in bleached and natural, which would probably require a damask setting of 75 ends per inch.

WEAVING DAMASK and FALSE DAMASK DIFFERENT WAYS

The classical way to weave damask is with weft identical to the warp, and with a beat which will give exactly as many weft threads per inch as there are warp ends. For most cases, especially with the fine linen, 5-shaft damask, this makes such a beautiful fabric that one might not wish to vary it. How-

ever, modern, designed interpretations may be made which have great beauty, and may harmonize better with contemporary table settings. For the contemporary type damask, avoid complex woven-as-drawn-in designs. Weave only weft stripes, or only warp stripes, or plan the threading pattern so it is very simple. Here are a group of variations which proved successful on a warp of bleached white 40/2 linen. The variations were simply the use of different weft yarns, on simple stripe treadings.

- I. Different color weft. With pale colors, using weft the same weight as the warp, the effect is excellent at either the 40 per inch or 45 per inch setting. For strong colors such as bright red, or dark colors, the closer warp setting is better.
- 2. Weft heavier than warp, and of a different color. A "normal" beat was used with the heavy wefts, and no attempt made to balance the fabric. Pleasing effects came from weaving with colored 10/2 and 20/2 and 7/1. The 7/1 gave a particularly nice fabric. These fabrics are excellent for table mats of for the popular long side runners, but are a little heavy for napkins.
- 3. Metallics as weft. A pleasant all-over glint is given by using the linen wound with gold or silver metallic for weft. A stunning set of place mats was woven using 1/64 supported silver as weft throughout, with bleached white napkins. This is particularly beautiful for a formal table setting. The 1/32 silver (either supported or unsupported) puts a stronger emphasis on the metallic (see PORTFOLIO sample). The colored metallics are lovely, if harmonized to china. The most gorgeous of all the metallic damask we tried was that woven of the Laminette, from Hughes Fawcett. This, however, is a very costly fabric, as it requires 24 shots per inch.
- It is probable that a very interesting texture would be formed by using the Bouclin, from F Fawcott

TABLE MATS and NAPKINS in DAMASK

Warp: 40/2 linen, 645 warp ends beamed at 40 ends per inch. (We warped sectionally in I" sections, II sections with 40 spools, 5 with 41, 16 in all.) Set: 40 ends per inch for napkins, 2 per dent in 20-dent reed, but could be 2, 3, alternated in 16-dent. Then resleyed for table mats to 45 ends per inch, 3 per dent in 15-dent reed.

Draft: Any 2-block profile may be used for threading damask or false damask. Many 2-block Profiles are given on page 215 of the revised SHUTTLE CRAFT BOOK by Mary Atwater, and on page 38 of the HANDWEAVER'S INSTRUCTION MANUAL. These must be adapted to 129 threading units for damask (645 warp ends, 16 1/8 inches wide) or 141 units for false-damask (564 warp ends, 14 1/8 inches wide), or to any other desired width. Most of these patterns are best if used as corner motifs, with a large, plain block in the center. Simpler patterns may be preferred. A favorite has one texture used as a wide, plain border, the other as a plain center. This arrangement for the damask warp is:

A - 25 times, B - 76 times, A - 25 times. For false damask the arrangement is:

A - 28 times, B - 85 times, A - 28 times. The best tie-up for this is the one which gives A and AA, so a solid, picture-frame border forms. Plain damask stripes may be arranged:

A - 2, then B - 9 and A - 1, 14 times, plus A - For false damask make it:

A - 1, B - 10, 14 times, then A - 1.

For checkerboard corners and plain center, damask:

A - 6, B - 6, A - 6, B - 6, A - 6, B - 69,

A - 6, B - 6, A - 6, B - 6, A - 6.

The arrangement used for the models was:

A - I, B - I2, A - I, B - 3, A - 7,

B-1, A-7: II times,

B - 3, A - 1, B - 12, A - 1. Napkins, woven as-drawn-in, mats with border on BB, body plain. For threadings from Profile drafts, see BULLETIN for June 1955.

Two samples of two-block true Damask are given here. Both are woven on a warp of 40/2 bleached linen. The upper sample has a warp setting of 45 ends per inch and shows two different interpretations: weft of 1/32 supported silver metallic with fewer shots per inch than warp ends, and weft identical to the warp and woven with exact balance. (Metallic Damask is more attractive with I/64 supported metallic, beaten to balance, or at least more dignified. But both ways are good.) The lower sample has a warp set of 40 ends per inch. Weft is the Knox mercerized linen, woven with 40 shots per inch. Compare the two weights to see that heavy damask is more suitable for runners and table mats, while the lighter weight is good for napkins and table cloths.

In presenting two samples, both of which require ten harnesses to weave, we are not overlooking the interests of the weaver with only four or eight harnesses. Damask is such an important, and also such a controversial technique, that any handweaver, regardless of whether or not he can ever weave it, should be able to recognize and understand it. And besides --- one can dream. A sample of the four and eight-harness false-damask will be given in April.

