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THESIS

on

BASKET-MAKING

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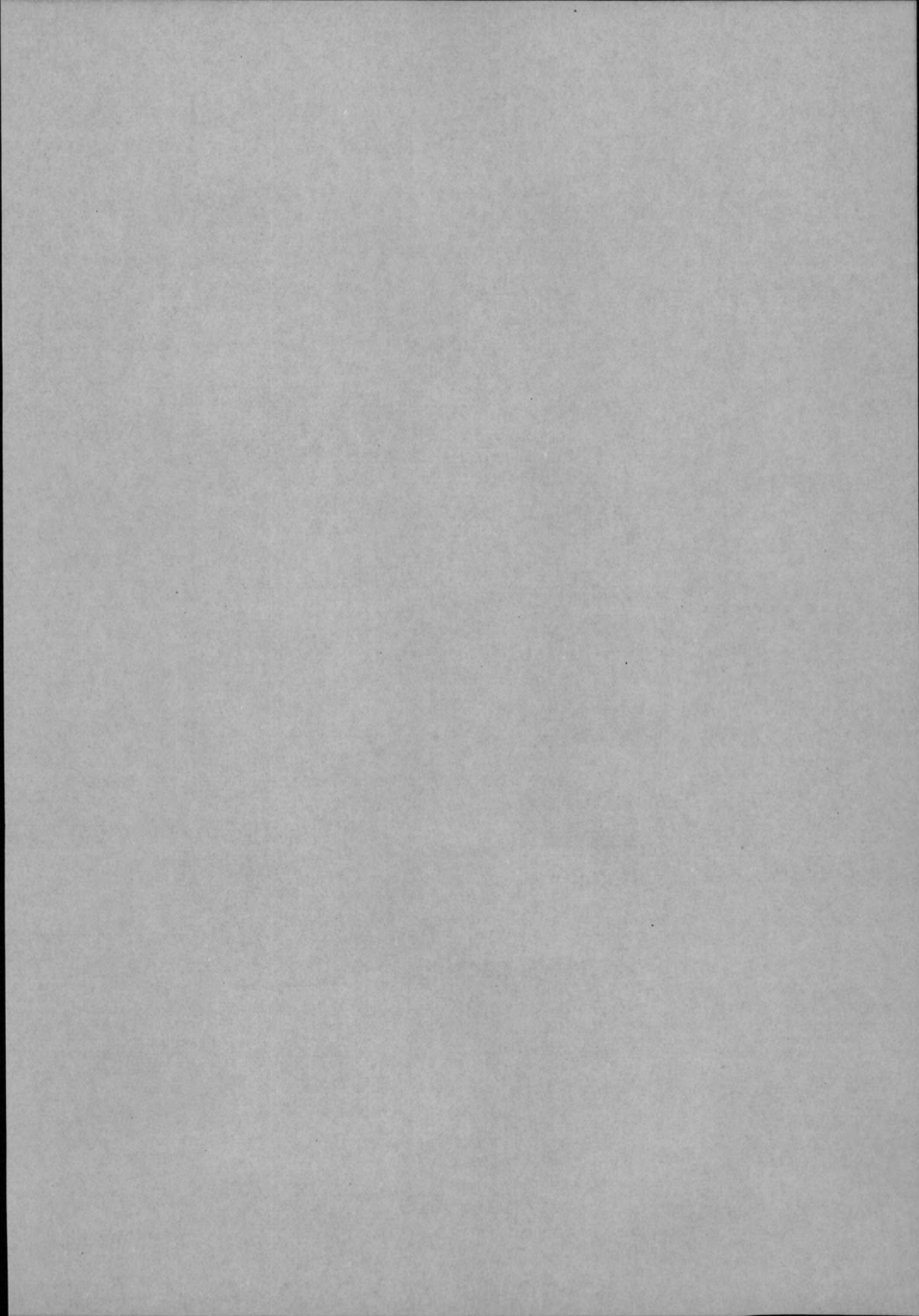
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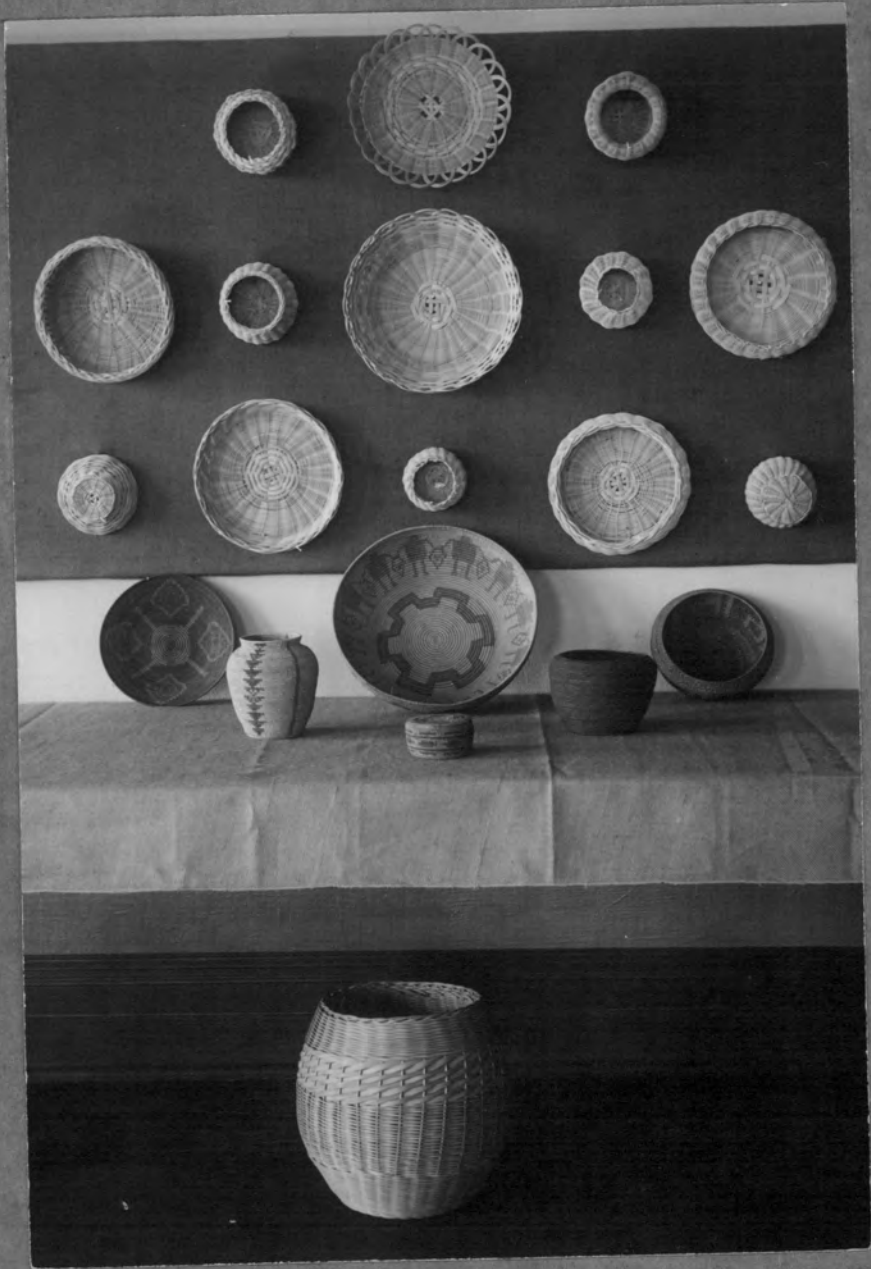
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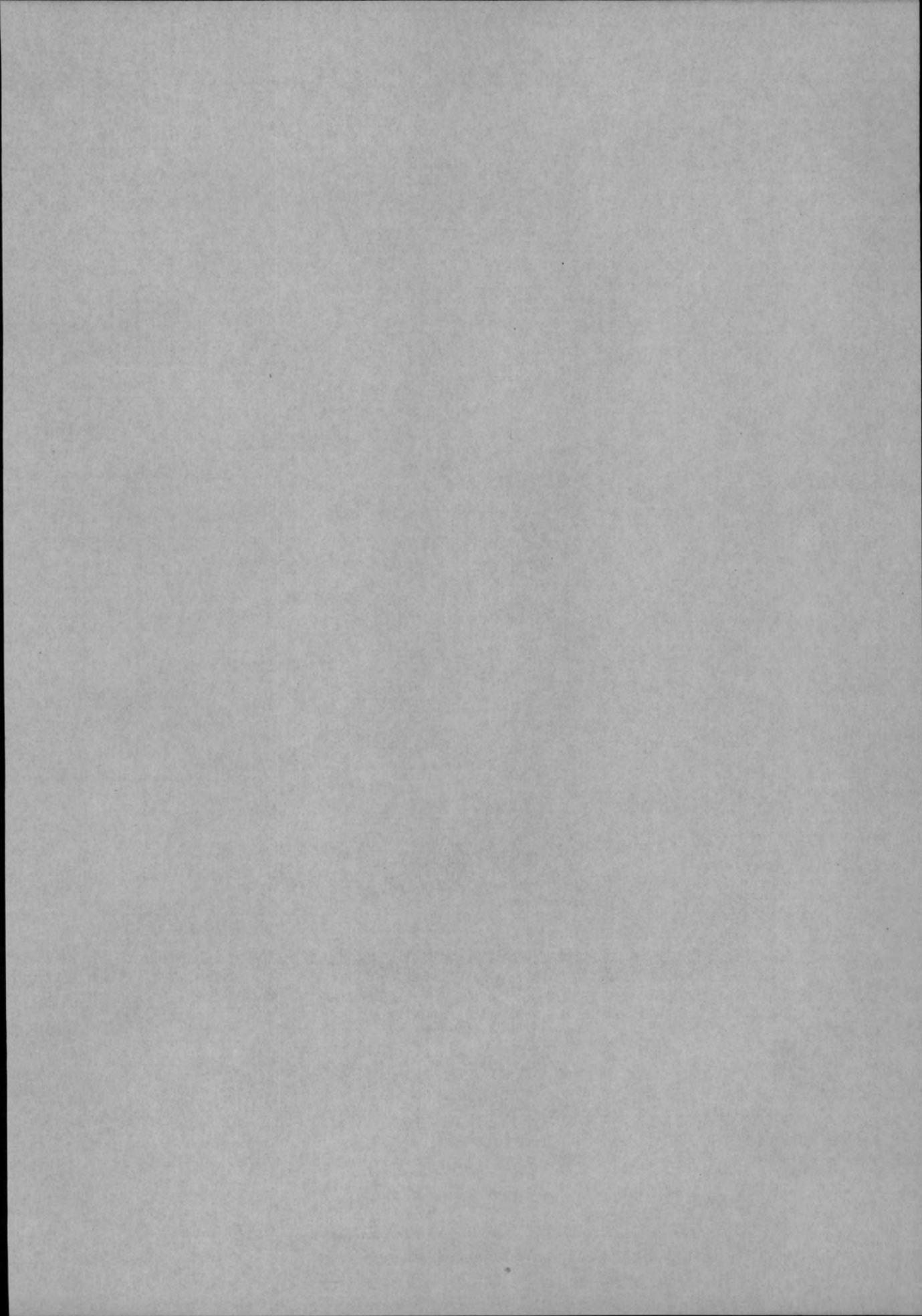
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## BASKET-MAKING

Though we travel the world over to  
find the beautiful,  
We must have it with us or we find  
it not. -- Emerson.

Beauty is something which is undefinable, although it is universal. It is possible for us to become well versed in the history of art, also in the biographical data pertaining to the lives of artists, and yet find ourselves far removed from any true appreciation of art. In every field of art we find a predominance of individual art over tradition, while religion and custom determine the material, conception, and treatment of art, in the time in which it exists. Today, what we need most is workers who can approach each new problem unhampered by tradition, though open-minded to any structural suggestions which the past may offer, seeking to express in a straightforward, clear way, something of our lives, our times, and our environment. As we

look at the best works of art produced in this country, we find they were made to satisfy the strong instincts of the soul and the love of the beautiful and sublime, and no longer to simply meet the needs of the church, which was the former aim in art.

The question of the origination of art at once confronts us. The origin is not easy to establish, as everywhere we find the evidence of art, although it is often blotted out by the production of later civilizations. The period is as uncertain as the place. While one nation dates the origin of its art several thousand years B. C., another nation is still looking for it to come. It is probable, however, that different types of art originated in a similar manner and in different localities.

The particular type of art described in this volume is the art of basketry. The simple weaving of baskets is comparatively an easy problem, so far as technique is concerned. Notwithstanding this fact, basket-making is a difficult art,

since there is involved in it so much aside from the technique.

In thinking of basketry, we immediately associate it with the Indians, as it is the art in which they excel. Each nation or tribe has a different type of art peculiar to it, and it is because of the adaptation of the Indians' art to basketry that their success in this field has been so distinctly marked. It is the inclination of those who have not studied the art of Indians to pronounce it a simple art. This is not a just accusation, as nearly all their designs are made to symbolize religious thoughts, superstitions, or ideas foremost in the minds of some particular tribe. In considering their art we must remember that the Indians were slaves to superstition. Taking into consideration the circumstances under which they worked, their art is worthy of much admiration.

The purpose of this volume is to give practical assistance to those who may be interested in basket-making. The problems discussed in this



book have been carefully planned and executed, applying fundamental principles of color, form, and design. Many of the difficulties in basket-making, which we have experienced, cannot be foreseen by reading concerning them. We have endeavored to give the reader some suggestions concerning the designing of baskets, cost of materials, use of materials and finished articles, also the time and labor involved in the work. We can present only a few finished pieces of the many problems possible in basketry, but we hope they may be sufficient to suggest many ideas which can be executed, and that it may encourage any one interested in basket-making to attempt the problems suggested.

Among the first difficulties we encounter is that of designing. Designing is an art in itself. Ruskin has said, "Drawing may be taught by tutors, but design only by heaven." We may make designs working from the simple to the complex; from the known and obvious to the unknown



and difficult, but the real value of the design is in the thought it frames, the stimulus it furnishes, and the principle it defines. The study of design stimulates within us, imagination, aids us in developing original thought, strengthens our judgment, and embodies within us the power to express ourselves through the materials used.

The question may be asked -- where shall we go to find ideas for designs? "Go to nature." Here you will only find suggestions, but they will be sufficient to inspire you so that with study, imagination, and originality, designs may be produced. There are, however, many other things which are necessary and which aid in designing, but through it all we must remember that it is not elaborateness, but simplicity which lends attractiveness.

It is the definite individual character of an object which makes beauty. -- W. H. Hunt.

Reed is a species of the grass family found in the United States, Southern Europe, and Eastern Asia. The reed used in commerce comes principally from Eastern Asia. This oriental reed, which is used for commercial purposes, has a woody stalk very different from ordinary grasses. Our commercial reed is also obtained from the rattan, a palm vine several hundred feet long, which is brought from the Orient and the Philippine Islands. The long canes are taken to the factories, where the outer surface is removed in ribbons, which are used for caning seats. After this process is completed, the canes are passed through other machines which peel off more of the outer surface. At the center lies the reed which is placed on the market. The sizes of this reed vary according to the sizes of the vine. The larger sizes of reeds are sometimes cut into thin slices called "flats".



Every person interested in reed work should know the different sizes of reed and be able to distinguish good and poor qualities. Upon these two factors depend the quality, beauty, and usefulness of the baskets. A good quality of reed is white and smooth. Poor reed has a dark color, and is very stringy on the surface; it breaks readily, and the stringy surface, as one may observe, does not make an attractive basket. Equally as important is the knowledge of the sizes of reed. A beautifully shaped, small basket could be made very unattractive by using large, course reed. Consider the other extreme; a large basket should be made with large reed, which makes it much more durable and gives it attractive proportions.

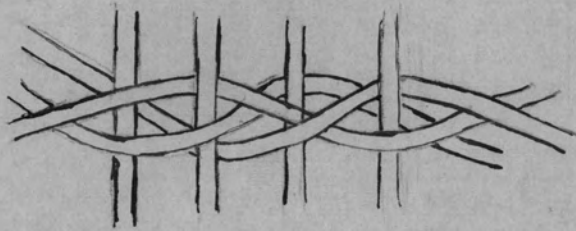
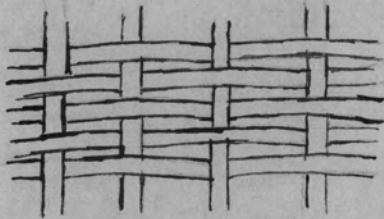
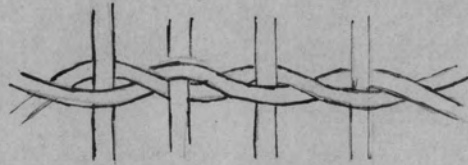
The following information will give assistance in the selection of reed:

Size	Price
1 (largest)	\$.90 per pound
2	.70 " "
3	.55 " "
4	.50 " "
5	.40 " "
6 (smallest)	.35 " "

The first thing to consider in the making of a reed basket is the size and shape of the basket, and second, the design. The latter includes the arrangement of spokes in the center, and the different weaves to be used in the construction and border designs. By the combination of weaves, much originality may be obtained in design. A description of the simpler, more fundamental weaves and designs both in centers and borders will be considered before leaving this subject.

The length of spokes is determined by taking the diameter of the bottom of the basket plus twice the height and an extra length on each spoke for the border, this depending on the kind of border desired. The weavers used should be one or two sizes smaller than the spokes, or the same size if the spokes are used double.

Reed should be soaked in warm water for a few minutes to make it pliable. A caution should be observed here; avoid soaking the reed for too long a time or it will become stringy and will



swell and in drying, will shrink and leave open spaces in the basket. Always work with dry reed when possible. A satisfactory method for soaking reed is that of tying the spokes in a bundle with a cord or a piece of undyed raffia; tying each weaver in a separate coil and soaking these in warm water for five minutes, or in cold water for fifteen minutes. Small reed does not require as long a time for soaking as large reed.

Weavers come only in certain lengths, and so in the process of making, new weavers must be inserted. This may be done by laying the end of the new weaver along with the end of the weaver which is being used, and weave on as before. The end of the new weaver should be long enough to prevent its coming out during the construction of the basket. When the work is completed, the ends may be cut off with a sharp pair of scissors or knife.

The weaving of a reed basket may be done in many different ways. There are several distinct





weaves, and many designs may be produced by a combination of these.

The "Simple" or "Over and Under" weave is made by carrying the weaver over one spoke or group of spokes and under the next.

The "Double" weave is formed by carrying the weaver over and under the same spokes for several times around the basket.

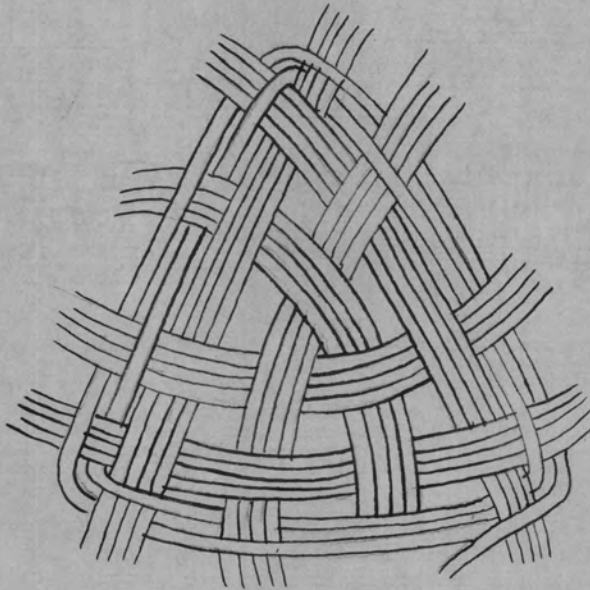
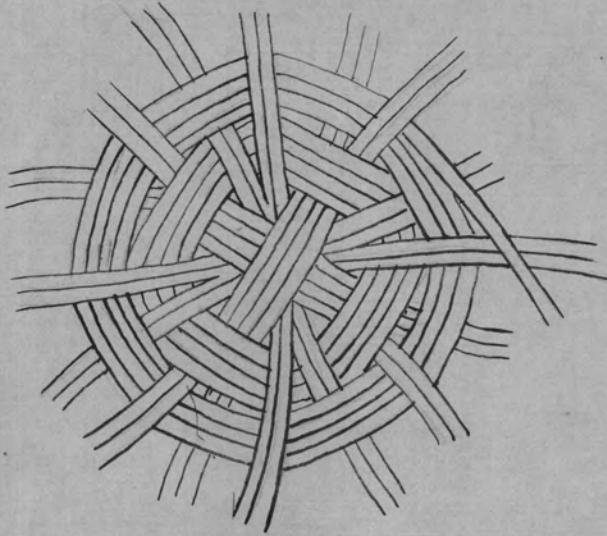
"Pairing" -- Two weavers are started behind two succeeding spokes and crossed between spokes so that what was the under weaver, becomes the upper each time.

"Indian Weave" -- Two weavers are used. Work with one weaver at a time, carrying the first ahead and following with the second, keeping the same one on top each time. This weave gives same appearance as single weave, the advantage in it being that <sup>no</sup> place does the weaver go over two or under two.

The "Triple" weave is constructed by the use of three weavers carrying each weaver over two spokes and under one, and starting one spoke ahead each time so that the weaver passes over

and under a different group of spokes. This weave is used to the best advantage in turning the basket. It is the only weave that has a distinct right and wrong side, the wrong side having no character, but the right side having the appearance of a twisted rope.

The center of a reed basket is made by the arrangement of the spokes, and there are many designs to use here as in weaving, the strength of the basket depending, to a great extent, upon the arrangement of the center. In large baskets many spokes are required, and as it is impossible to form all of these spokes into a center, about one-half or two-thirds of the required number of spokes are used in the beginning, the remainder are inserted during the process of making. This is done by inserting, during the weaving process, a new spoke beside an old one, and then spreading it from the old and weaving around it as with the others. False foundations may be used in large baskets where large reed is used. These are made of wood, and





the spokes are attached.

The "Star Crossing", one arrangement for a center of a basket, is composed of four groups of spokes, placing groups one and two at right angles, and under these diagonally, groups three and four. As the work progresses, the reeds may be divided into smaller groups and finally into single reeds.

Another good arrangement is made by the interlacing of spokes to form a square open center. These are finally reduced to individual reeds. Small reeds are the best for this group.

The "Triangular" center is made by the placing of three groups to form a triangle. These groups are also reduced in the weaving process.

In working with large reed, a group of spokes may be split in the center and another group passed through the opening. This center makes a flat bottom, and is used very success-



fully in oblong or square-shaped baskets.

If a cover is desired for a basket, it is well to use the same design in the center as is used in the center of the bottom of the basket. It should be enough larger in diameter to enable it to fit easily over the top of the basket.

A handle sometimes lends beauty and adds to the utility of a basket. It may be constructed by braiding and weaving together several spokes at opposite sides of the basket. For a heavy handle, extra reeds may be inserted.

Borders are formed by the use of the spokes, or in some cases, the weavers. The spokes should be even in length, and before using should be soaked until they will bend easily without breaking. There should be enough extra length on each spoke to make a good, firm finish. If in working a spoke is broken, it should be cut off close to the work and a new spoke the desired length inserted into the weaving far enough to hold it firmly in place. In most cases the

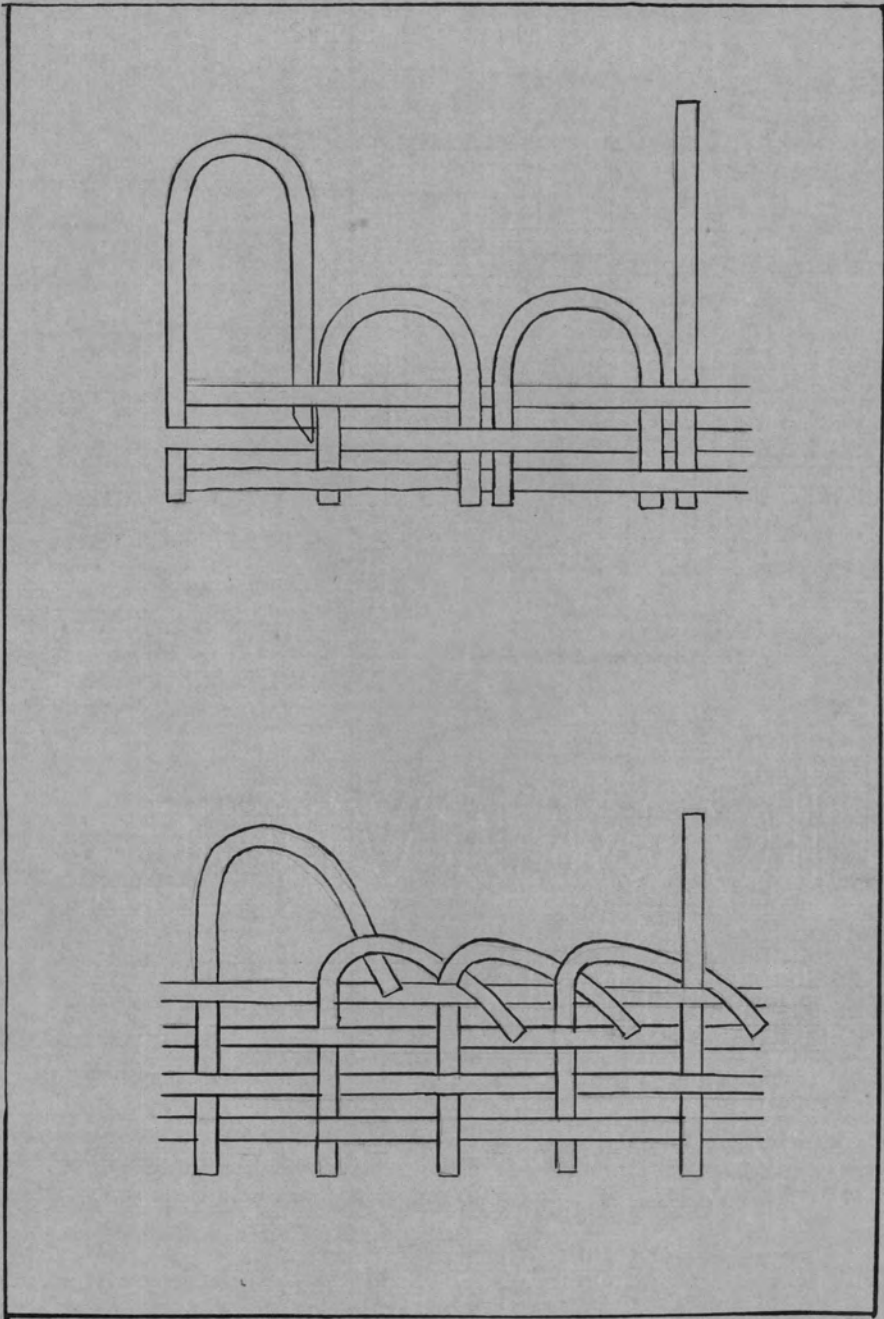
spoke is inserted one and one-half or two inches.

Simple Loop Border -- Insert each spoke next to the succeeding spoke one inch or more into the weaving; insert the last spoke next to the first. Avoid too large loops. A variety of effects may be gained by carrying each spoke over the one and back of the other. The position of the spokes and curve of each spoke should be uniform.

Rolled or Rope Border -- Each spoke around the basket is carried behind the next spoke on the right. The last spoke is passed through the loop formed by the first; continue around the basket several times in this manner, fasten firmly and cut off the ends of the spokes evenly. This border may be worked out in many different ways forming different designs; for instance, a group of spokes may be used instead of one spoke. The border may be constructed so it will add decoration to the outside or inside of the basket. Each spoke may be carried behind two or more spokes uniformly for one row.



SIMPLE LOOP BORDERS.



Groups of spokes are more effective in a border than one, and reeds may be inserted for this use.

With different combinations of spokes many unique and varied effects may be obtained, and it is hoped that with these general directions, the basket weaver will have little difficulty in producing something interesting.

Reed is a practical as well as an artistic material with which to work. Age gives the reed a soft tan shade, which is more attractive than the raw bleached appearance it has at first. It will stand scrubbing with soap and water, and will wear well and stand severe usage for years. One may get almost any color effect by staining the reed with wood stains, this making it fit in artistically with any color scheme in decoration.

Making has done more for the human race than the exercise of any, if not all, the other modes of expression. It is absolutely indispensable to the normal, physical development; it has had a mighty influence upon brain building; it has cultivated ethics as a basis of all moral growth. -- Francis W. Parker.

Raffia, which we will consider in this chapter, is a fiber obtained from the cuticle of the leaves of the raffia palm, which is grown extensively in Africa. The leaves are very long, the average being twenty-five feet. The fiber occurs in the form of flat straw-colored strips three to four feet in length and one-half inch in width. This fiber is imported into this country for many purposes, the two most important being Basketry and Horticulture. Most of the raffia used for basket-making is dyed either with vegetable or aniline dyes.

The art of dyeing was known to the ancients, and we find it stated in the Bible that Jacob gave his favorite son Joseph, a coat of many

colors, and Moses tells how the skins of the ram and badger used for the tabernacle were dyed red. The purple of the Tyrians was known at an early date; the king adopted it as one of his principal ornaments, and it has since continued a badge of royalty. Pliny is the authority for the statement that methods of dying black, yellow, and green were discovered by the Indians, and were brought back from India on the return of Alexander the Great. The early voyagers to America brought back with them new and valuable dye-stuffs, such as Cochineal, Logwood, and Quercitron. Subsequently dying developed according to the discoveries of new dye stuff, and the application of improved processes until the middle of the nineteenth century. Since then, natural dye-stuffs have been gradually giving away to artificial colors derived mostly from coal-tar.

Some of the artificial colors are Aniline blue, green, and yellow. Mineral and vegeta-



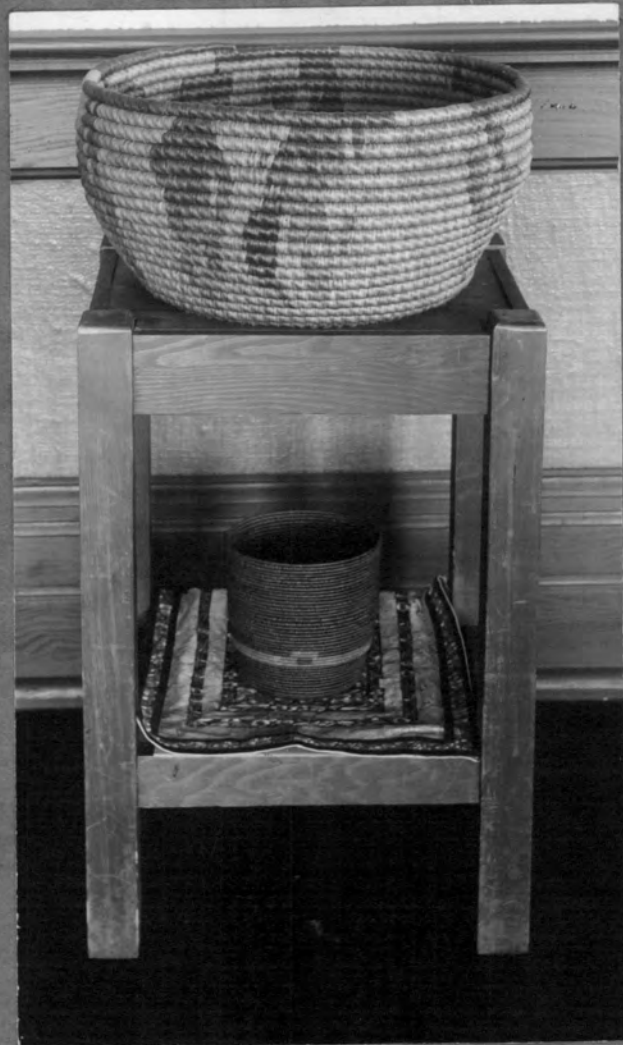
ble dyes were formerly considered more lasting than the artificial ones; but this view has, in all cases, positively no foundation. It is to the vegetable or Indian colors, however, that we wish to draw your attention. A visit to any museum where there is a collection of Indian baskets will enable one to recognize the soft, quiet, natural colors obtained from vegetable dyes. True Indian colors used in basket-making are few in number; red, green, black, cream, yellow, brown, and occasionally blue, but there are many soft gradations of self-coloring, as soft yellows, browns, and greens, that are more harmonious than bright colors.

It is true that the "Indian dyes may be duller, that they do not run through such a lengthy, diverse and brilliant chromatic gamut as the white man's dyes, but the Indian or vegetable dyes are permanent, and they are so softened by the mellowing touch of time as to

gain with age an exquisite combination of color values, altogether inimitable." Vegetable dyeing is an interesting part in the process of preparing basket materials, and interest leads one to make many new combinations and shades of colors. It is surprising how many beautiful shades of color may be found in fruits and blossoms of many plants; for example, the faded flowers of the purple Iris are full of purple liquid.

The stitches generally used in making raffia baskets are: Figure Eight, Lazy Squaw, Samoan or lace stitch, and Indian weave.

Figure Eight Stitch -- Trim the reed back one and one-half inch from the end, sloping the reed to a flat surface; soak in warm water for ten or fifteen minutes. Use a tapestry needle, the size varying according to the size of reed. Coil the shaped end of reed into a small coil and wind the raffia back from



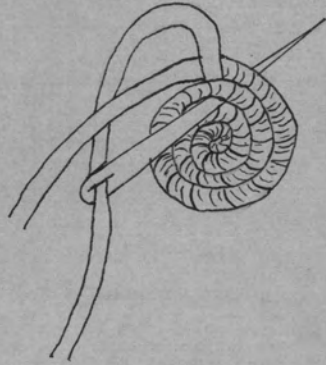
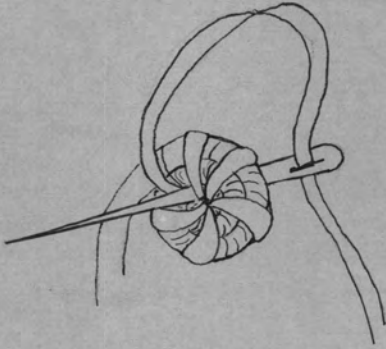
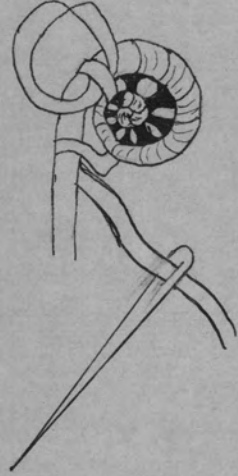
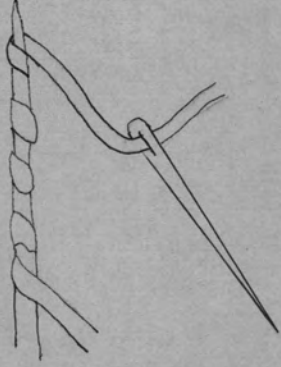
the flattened end of the reed about one and one-half inch. Force the end of the reed into the smallest coil possible and sew firmly through the reed binding entirely around the first coil. After the first coil, wrap the raffia around the upper reed once and bring the needle between the two reeds and down under the lower, then continue under upper reed over upper reed, between the two, and through the lower, making a simple sewing stitch. When the bottom is the required size, form the sides by placing the following reed slightly above the preceding one. When the basket is ready to finish, shave off the reed about two inches from the end to a flat surface the same as when the basket was commenced, but do not increase the number of stitches. Fasten the raffia by running it under a number of stitches and cut close.

Lazy Squaw Stitch -- Commence the basket just as for the Figure Eight stitch. Hold the



coil in the left hand and wrap the raffia from you and around the reed once; then over the reed and down through the center of the coil. This gives a long stitch, while wrapping the reed gives a short one. Continue weaving with first a long stitch, then a short one. Shape the sides by placing the following reed slightly outside or inside the preceding one, according to the shape. Finish the top the same as for the Figure Eight stitch.

Samoaan or Lace Weave -- Begin the same as the two preceding weaves, but after the first coil the reed is held its own width from the coil. The raffia is brought from the center over both reeds around the upper and between the two at the left of the wrapping, then passed back between the two reeds and at the right of the wrapping. Look at the wrong side to see that the needle has passed to the right of the long stitch. Bring



the needle through again between the two reeds at the left of the wrapping; this completes the knot. Wind the raffia twice and make another knot. Continue in this manner, shaping and finishing the basket as previously described.

To apply new raffia or introduce new colors, lay the new stem of raffia along the reed and work over it with the old strand for about an inch, then take up the new strand and work over the old for the same distance, then cut off the remaining old stem and continue with new.

Indian Weave -- Place two groups of spokes over which raffia has been woven, at right angles, inserting spokes which have been sharpened at the ends, as they are needed. Use two strands of raffia for weaving, twisting once between the radiating spokes. Pack the raffia down firmly. There are many possibilities in finishing the top, the most common

method being to shave the spokes down to  
a flat end, turn back and sew through.





Some recipes for dying raffia are: --

Mordant, or the ingredient which fixes dyes:

Three ounces of alum dissolved in one quart of water. Soak the raffia in the mordant over night, and drain before putting it into the dye proper. All material should be thoroughly cleaned before dying.

Black:

A good black may be obtained by boiling logwood chips in sufficient water to cover them, for fifteen or twenty minutes. Add sufficient water to cover materials to be dyed. After being boiled fifteen minutes, drop in a few lumps of copperas. When the desired black is obtained, remove the material and allow to dry.

Red:

Wash the raffia and soak in an alum mordant over night. Make a solution with hypermic chips. Boil for ten or fifteen minutes on the following morning, and strain.

Place the raffia in strained solution,  
leaving it until the desired shade is ob-  
tained.

True education in man, whether as applied to art or morals, is that which fits him to become the highest and best of his nature's capability. -- William Walker.

Splints are the shavings from the wood of the ash or elm tree. They may be used for basket-making in the natural color or dyed various colors. Splints are made in widths varying from one-eighth to three-fourths inch. In making baskets, always select splints that are uniform in width. Dampen the splints and work on a damp cloth to keep the splints moistened and thus pliable. Do not allow the splints to become too wet, because when dried they will shrink and leave large open spaces which are undesirable and unattractive.

Measure and cut spokes the length of the diameter of the bottom plus twice the height of the basket plus one inch, which is allowed for finishing. Lay the splints parallel and perpendicular to you, having them about the width of one splint apart. Begin at the cen-



ter and weave in the horizontal pieces, using the Over and Under weave until the bottom of the basket is the required size. Bend up the spokes to form the sides of the basket, and use for each weaver a piece of splint cut the length of the circumference of the basket plus one inch, which is allowed for lapping. The weaver should lap underneath one of the foundation spokes.

When the sides are the required height, bend the outer spoke in and over the top weaver, and cut the inner spoke off even with the top of the upper weaver. Holding two pieces of splint, one on the outside and one on the inside, parallel with the top weaver, bind firmly with a narrow splint or with raffia.

Covers for splint baskets may be made in the same manner, allowing enough on the diameter of the basket so that the upper half will easily cover the lower half.

Artists may produce excellent designs, but they will avail little unless the taste of the public is sufficiently cultivated to appreciate them. -- George C. Mason.

Sweet grass is a name given to a particular species of grass which has a pleasing odor. There are, however, several varieties. The sweet vernal grass is the special variety that is used in basketry, and to this variety we shall direct our attention.

Sweet grass grows most successfully in Europe, but it is found in certain localities in the United States, such as the region around the St. Lawrence River. Sweet grass is used for basket-making by some tribes of Indians, and also in making baskets for commercial purposes.

The following general rules may give some aid to the beginner in this kind of basketry: Soak the sweet grass in warm water from thirty to sixty minutes or until the grass is pliable and does not break readily. While the sweet grass is soaking, prepare the spokes, which are

usually of splint. Select the desired width of splint and cut each spoke as long as the diameter of the bottom plus twice the height, and allow two and one-half inches at the top for finishing. The number of spokes depends upon the width of each spoke and the diameter of the basket. The spokes are easier to work with if they are dampened.

In the center of the bottom of the basket the spokes may be shaved off, as shown in the illustration, making them narrower and thus improving the looks of the basket as well as making it easier with which to work. Use the splints as radiating spokes, the same as in the construction of a reed basket. Using sweet grass for the weaver, weave the basket with the Indian weave or the "Over and Under" weave which has previously been described. When the sweet grass weaving is completed, weave a splint around the top and cut it off after allowing one and one-half inches for lapping.

Turn the radiating spokes that are on the outside in and over the splint weaver. Cut off the spokes which are outside the splint weaver, even with the top edge of this weaver. Holding a piece of splint on the inside of the basket and parallel with the splint weaver, bind firmly with a narrow piece of splint or raffia. Many deviations from these general rules may be made, such as braiding sweet grass; using other materials for the spokes and making different borders.

Square or oblong baskets may be made from sweet grass, the bottom being constructed in the same manner as the square splint baskets, and the top finished as the round. In weaving with sweet grass, it has been found that it is quite difficult to keep a perfect shape to the basket. This may be somewhat overcome by placing the basket, as it is being constructed, over a frame which is the desired size and shape of the basket.



It is a law of nature that, in things of use, ornament is an addition and secondary to utility. -- William Walker.

Having become acquainted with the subject matter in this volume, it may be seen how this work can be used in the homes and taught to the child. Many schools and colleges have already discovered the advantages to be gained from the teaching of applied art, and have made it a part of the school curriculum.

A pleasant form of handicraft such as basketry may serve as a valuable and fascinating occupation for the child in the home, helping the child to an understanding of art and giving full play to the power of imagination which we find so pronounced in the life of the child. And although we have photographed baskets, many of which are elaborate in color scheme and design, we wish to emphasize that elaborateness does not constitute an essential in beauty, and that simplicity is the fundamental note in true art.

We trust we have given the reader an insight into the beauty and usefulness of basket-making, and that in this brief way, with but suggestions and illustrations, greater possibilities of accomplishment may be seen, and that many may be encouraged to attempt problems in basketry.

The following price list and table of addresses may be of value to any one interested in this work:

Price of Reed:

Size 1	per pound	\$ .90
" 2	" "	.70
" 3	" "	.55
" 4	" "	.50
" 5	" "	.40
" 6	" "	.35

Price of Raffia:

Natural color	per pound	\$ .20
Vegetable dyes	" "	.60
	2 ounces	.10
Aniline dyes	per pound	.50
	2 ounces	.08

Price of Splint	per pound	1.00
Price of Sweet Grass	" "	1.25

Firms from which materials may be obtained:

Raffia, palm, splints, manual training materials, etc.:

L. H. Hammett Company,  
250 Davonshire Street,  
Boston, Mass.

Milton Bradley,  
11 East 16th St., New York.

Colored raffia, jute, reed, and twine:

Charles E. Mather,  
Braggville, Mass.

Reed, raffia, sweet grass, pine needles, and ash splint:

Vaughan's Seed Store,  
14 Barclay St., New York.

American Reed & Rattan Mfg. Co.,  
Norman and Kingsland Avenues,  
Brooklyn, New York.

U. S. Rattan Co.,  
Madison St., Hoboken, N. J.