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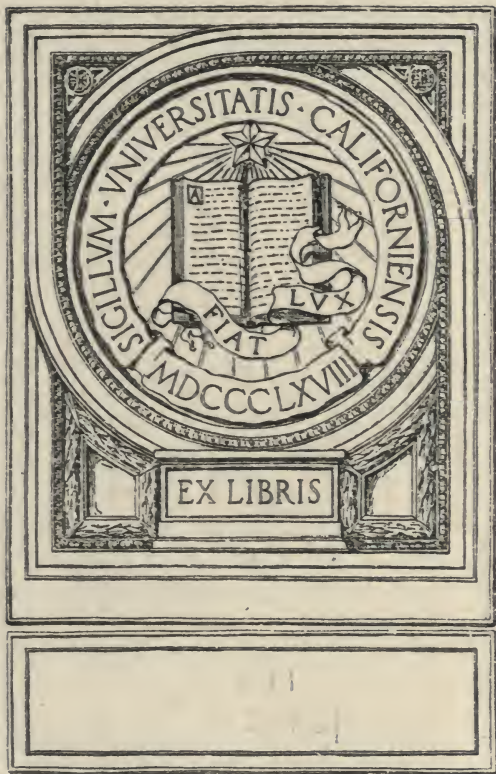
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Primary Hand Work

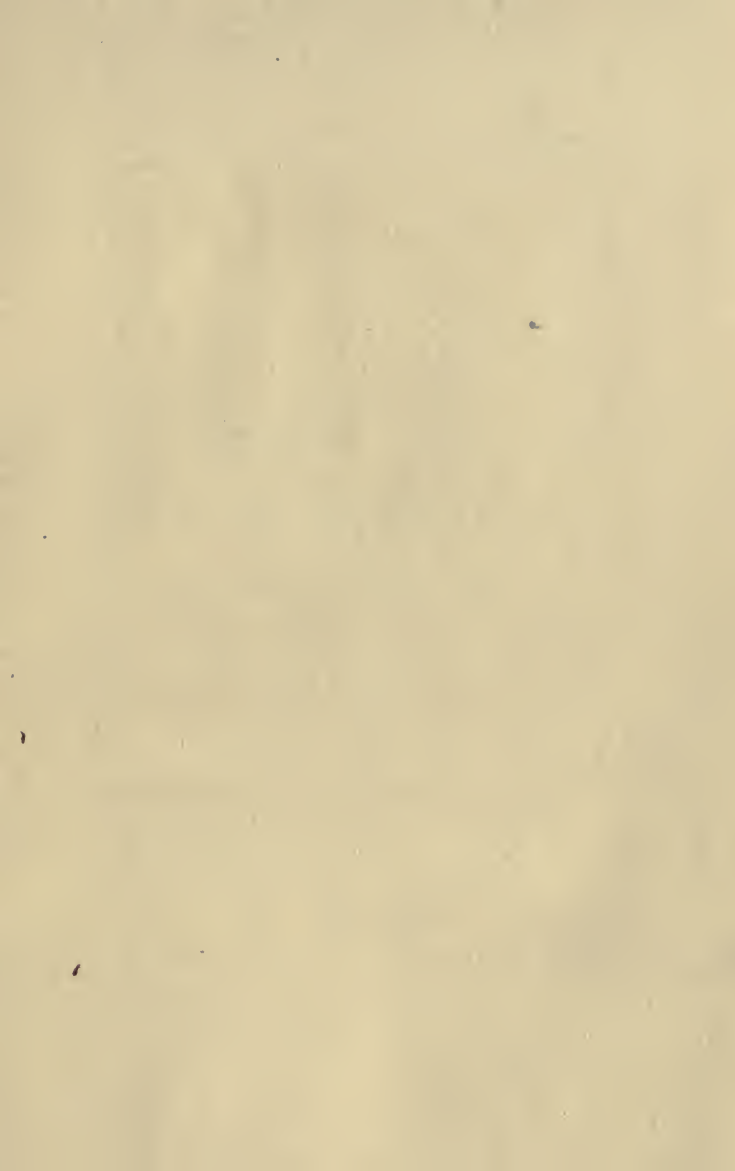


Wilhelmina Seegmiller

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Primary
Hand Work

A Graded Course for the First Four Years

Primary Hand Work

A Graded Course for the First Four Years

By
Wilhelmina Seegmiller
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Schools*



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The Preface

WHEN God created man in his own image
“to have dominion” he gave him power
to create in his turn.

“Into the dust of the making of man,
Spirit was breathed when his life began,
Lifting him up from his low estate,
With masterful passion the wish to create.”

Every child born in the image of the Father finds his highest joy in creation. In education we have learned that if we would best develop the three royal H's, the Head, Heart and Hand, it is necessary to provide materials which, with high effort and much love, may be fashioned into simple objects of beauty.

Because the materials presented in this little book have had charm for a few children “Primary Hand Work” is sent forth with the hope that some of the suggestions may add to the happiness of other children.

W. S.



Third year pupils showing work to the teacher

Primary Hand Work

The Introduction

ANY comprehensive plan for the development of Industrial Training in the public schools recognizes the necessity for close inter-relation of manual expression with the general interests and occupations of the school.

The flower pot is modeled and baked to hold the seed to be lovingly watched in plant unfolding in the school window, the school garden is dug and the house built for the birds winging their way from the Southland, the play house must have furnishings, it is delightful to fashion the wigwam of Hiawatha, the raft and ladder of Robinson Crusoe and the homes of the Seven Little Sisters.

For the general inter-relation of studies each teacher must plan and no course of study can be satisfactorily formulated.

Definite plans may be made, however, for the study of some of the Industrial Arts, and through happy employment pupils may gain skill in the handling of materials. Many studies may be related by the skillful teacher, to the definitely planned exercises in manual work.

This book presents a graded course of exercises for four years' work. It is not intended to present all the work desirable for any one year, as each teacher will wish to do considerable work, the plan for which will develop from general school interests.

The work of each grade is related to the work of all other grades. In the first year through folding, cutting, weaving and simple exercises in design, children lay the foundation for succeeding work. The second year is given to various forms of handloom weaving. In the third year woven materials, burlap and Tilo Matting serve many forms of constructive and decorative use, and make necessary the use of needle and thread. As the materials handled are of large weave, consistency demands coarse needles and thread. The power acquired in handling large needles and thread, makes simple the handling and guiding of fine needles and thread when in higher grades the girls begin the regular work in sewing. The boys acquire a power in handling materials which forms capital in the handling of many materials in later work. The fourth year is given to the study and making of various forms of Basketry. The last chapter gives suggestions for work for "red letter days."

The materials presented in this Hand Work Course are easily handled, and each material new to the child is used for a sufficient length of time for

him to master difficulties and gain some measure of independence in production.

Throughout the course, work in design is carefully planned, and all materials are of such a nature that they take cold-water dye readily. As the Easy Dye recommended can be handled in the school room as readily as water color, a training in color is provided. A chapter on color gives directions for coloring different materials.

A large part of the value of hand work lies in the relaxation it affords from other lines of school study. After the work is well begun, pupils should work frequently without the immediate supervision of the teacher. Part of the pupils in the room may be engaged in manual work, while the others are reciting, or pupils may be allowed to take up their hand work a few minutes at a time, whenever assigned work is satisfactorily completed.

As it is desirable to provide for independent work early in the term, it is well to give if possible more time to instruction during the first month than in succeeding months.

If decorative design and the study of color become a part of the art lessons, two hours a week during two weeks and an hour a week during the remainder of the term will suffice for instruction in manual work for the pupils of each class.

In the coming years there will probably be a much

larger amount of time devoted to manual work than can possibly be given it at present. As we learn to inter-relate varying lines of occupation more closely, courses of study simplify. There exists a relation between manual training and the various other studies—reading, geography, arithmetic, geometry—in fact, all studies.

Is not an occasional reading lesson, giving directions for the making of some article of use and beauty, a lesson of profit? Is there not a desire for the understanding of the printed page if children know that they may make the article which it describes?

Children are shown the map of a school garden with a large central bed and individual plats, and each child paints his own little bed with a wash of color to keep it well in mind. When children go into the garden and have the points of the compass located, is there not an immediate desire to use and understand a map in finding a little garden spot all one's own for love and care for a season? What better way to teach standards of measure than by creating a need for measurement of materials for constructive purposes?

In the making and decoration of a candle shade, terms such as circle, circumference, radius, concentric, angle and degree must be understood. Arcs must be drawn and angles measured. In the making

of a few articles an extensive vocabulary of geometric terms is acquired and many problems used.

While theoretical work will always be necessary, we should not spend all the time getting ready for life which may be ours in the distant future. From the first grade through the university there should be immediate need for the use of much knowledge acquired.

The great interest of educators in manual training and the joy of the children in carrying out their thoughts and aspirations through work with their hands, lead us to look forward to a school in the future in which various studies will exist, not in isolation, but in relationship, a school in which manual work will hold a large and important part in happy school living.

We are at present dimly grasping great truths.

“There are great truths that pitch
their shining tents
Outside our walls, and though but
dimly seen
In the gray dawn, they will be
manifest
When the light widens into perfect
day.”

The full light will come through the sympathetic desire and the work of many to bring the “perfect day.”

Hand Work for First Year

First Year—First Half

IN the recent growth of Industrial Training in elementary schools, there has come a widespread interest in weaving, one of the foremost of the industrial arts. The use of hand looms and the making of baskets in public schools are leading children to an appreciation of the art of weaving in rugs, textiles and basketry. The little people of the first year delight in "making" and take great interest in beginning the art of weaving.

The First Weaving

IT is well to begin weaving with coarse material. Soft wood slats, wide strips of heavy paper, or strips of holland (window shade material) will answer for the first free weaving.

A Weaving Mat

THE "Bogus-Paper Weaving Mat"* has been planned to give the little folk of primary schools a simple, flexible material through which they may learn the elementary principles of weaving. The papers used are sufficiently heavy for children to weave with the fingers without the use of a needle. While inexpensive they are beautiful in color and have a desirable roughness of texture.

**Patented August 18th, 1903, by Wilhelmina Seegmiller.*

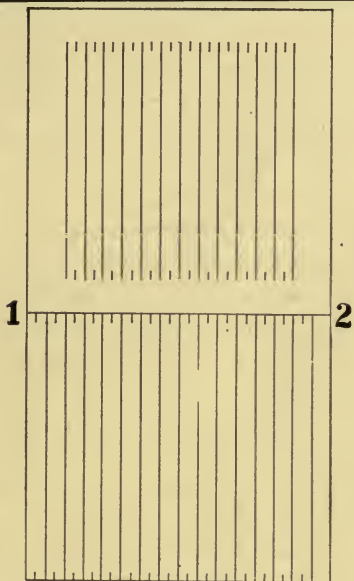


Fig. A

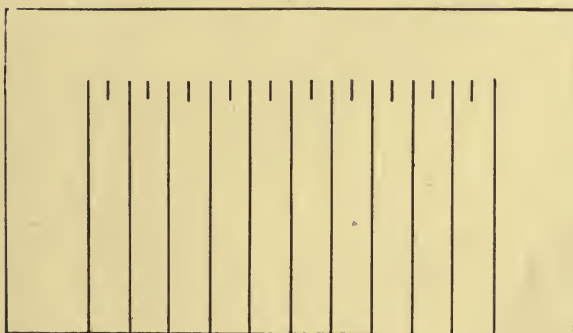


Fig. B

As the mat is planned so that variety of warp and weft may be secured, opportunity is given for infinite variety of design. Children do their own cutting in preparation for weaving and provision is made for ruling where teachers desire to have rulers used.

The Primary Mat is shown in Fig. A, on page 17. The mat sheet is 8 by 15 inches. Cutting on the line 1-2 children have in the upper part the mat of warp strips surrounded by an inch border. The lower part provides the weft strips.

In preparing the mat for weaving children fold and crease the diameter as in Fig. B. They then cut on the lines, cutting double the full length of the lines, or they cut a short distance on each line sufficient to allow the insertion of the point of the scissors, then opening the mat cut first one way to the end of the lines and then the other. The latter method will be found the more accurate. The weft strips can be obtained by cutting the full length of the printed lines.

The lines in both parts of the mat sheet are printed one-half inch apart with markings midway between the lines. When children have used the two-inch, one-inch and half-inch spaces in the first half year, they will be able to rule between the end markings in the second half year and thus to secure greater variety of warp and weft.

The mats are at present made in four colors,

gray, pink, blue and yellow. It is intended that gray be used with each of the other colors. For instance, having two mat sheets like Fig. A, one gray and one pink, two mats can be made—a gray one woven with pink strips, and a pink one woven with gray strips. One mat will have a gray border and the other a pink one.

When the mat is woven the printed lines should be on the under side. The ends of the weft strips should be pasted to the under side of the mat border.

Designs for Weaving

SOME suggestive designs are given on pages 25, and 26, for the use of teachers. In all of these the light tone represents warp and the dark weft. Fig. 1 shows an inch square checker pattern. This will probably be the first thing the teacher will wish to have worked out, as it is the most simple pattern.

This is a style of weaving very commonly used, and examples of the checker pattern can readily be found in basketry, matting and fabrics. As the work in weaving progresses it will be well for teachers to gather examples of different kinds of weaving, that children may see the relation of their work to that of the great industrial world.

In Fig. 2, two-inch warp and one-inch weft are used, producing a design with the repetition of the oblong.

In Fig. 3, with two-inch warp and two-inch and one-inch weft in alternation, a design of squares and oblongs is secured. If the teacher wishes to have finer material used there can be a greater number of repeats shown as in Fig. 4.

Fig. 5. gives another combination of squares and oblongs.

So far the weaving has been of the most simple kind, "over one and under one." In Fig. 6, the weaving is over three and under one, and in Fig. 7 over three and under two. The teacher can easily work out a simple sequence of lessons in number based on the work in weaving.

After a few of the number lessons, when the children have become used to counting in the weave, it is well to give simple patterns to be repeated. In preparation for the weaving of Figures 8 to 12, inclusive, a lesson in tablet laying might precede each weaving lesson, so that children may become familiar with the design to be woven.

In Fig. 8 the box unit is repeated in vertical rows. It is a step in advance to arrange the units as in Fig. 9.

When the little folks have woven the design in Fig. 10 they will be interested in making the change necessary to produce Fig. 11; then by using the two units with which they have become familiar they weave Fig. 12.

These designs are given as suggestions. A great many effective designs may be worked out by teachers and children with the inch and half-inch warp and weft.

Development of the Pattern in Weaving

THE best place to begin the weaving of a mat is at the upper right hand corner. In order that children may see the pattern as quickly as possible, it is well to lead them to place the first complete unit of design in the upper right hand corner.

After children learn the process of weaving, there are many ways in which the teacher can present the work.

A part of the design should be creative. The constructive imagination is the highest power of the human soul, a power to which all others are subservient. A wise teacher will guide the work so that children may at times make arrangements of their own choice. When the teacher has developed an understanding of the meaning of alternation, the little folks can decide upon the width of the strips they would like to use to form a pleasing pattern. Each time a new thought is developed children will be able to do some simple, creative planning.

Tablet laying is helpful in connection with weaving. When children lay the tablets to form a design they get the pattern well in mind.

Much is to be gained in the development of number, and directions for weaving, when number repeats are simple, may be given by number.

Children enjoy work from imitation. Designs may be quickly and easily placed upon the board by

“chalk painting.” If teachers use the full side of the chalk, working for surface, a single stroke will make a square or oblong.

When mats are woven in simple spacing, the warp and weft being of the same color, designs may be made with brush or with oil crayons, or soft pencil. Work of this kind is shown on page 35.

The regular repetition of units gives a feeling of rhythm even when the brush strokes and pencil markings are not accurate, so that the free work of the little people who have not acquired great power in accuracy may be very pleasing.

Through the weaving children get geometric arrangement of spacing for the field of design. This gives a basis for design. Beginning with simple washings of color, or toning with pencil, in the different spaces, children soon develop considerable skill in simple designing, arranging units given by the teacher, and inventing units of their own.

Children are very happy, occasionally, to use the woven mats in the construction of simple objects, (see page 36), like the basket or popcorn holder and toy lantern to be hung on the Christmas tree, when

“All the bells on earth shall ring
On Christmas day in the morning.”

Designing on Squared Paper

THESE are four kinds of squared Manila drawing paper available for school use. Squared paper No. 1 comes in sheets 24 by 36 inches in size, in heavy inch ruling. It is intended for the teachers' use and is heavily printed that spacing may be seen the length of the school room. When the teacher wishes to work up the design before the class the corners of the sheet may be lightly pasted on the blackboard without injury to the latter, as the paste will wash off.

Squared paper No. 2, 9 by 12 inches in size, is lightly ruled in three-quarter inch squares, No. 3, 9 by 12 inches in half inch squares, and No. 4, 9 by 12 inches in quarter inch squares. If children in the first half of the first year are supplied with No. 2 and No. 3 squared paper, it will be found a great help in design. After children have woven pattern in the paper mats they may on the squared paper work out the designs with which they have become familiar, experimenting in colored crayon or water color to produce good color schemes. After becoming accustomed to the use of the paper, they will be able to do simple inventive work. Patterns laid with tablets may be worked out on squared paper. (See page 37.)

The decorated squared paper may be used in

simple constructive work; as in the book cover and basket of the illustration on page 38. Designs on squared paper may also be made to decorate the walls of the play house.

A Portfolio

A HEAVY paper portfolio in which to keep completed work and work in progress will be a satisfactory possession for each child. As the material for making a substantial portfolio is too heavy and bulky for little children to handle, it is best to provide portfolios. See portfolio pictured on page 43.

Materials Needed for First Year

First Half

1. Heavy Paper Portfolio for each pupil.
2. Bogus-Paper Mats.
3. Squared Paper Nos. 2 and 3.
4. Squared Paper No. 1 for teacher's use.

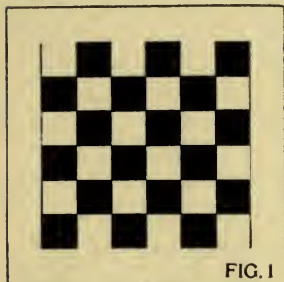


FIG. 1

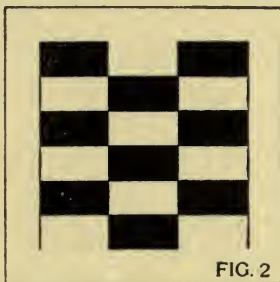


FIG. 2

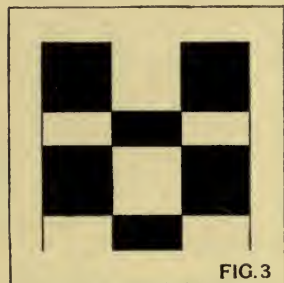


FIG. 3

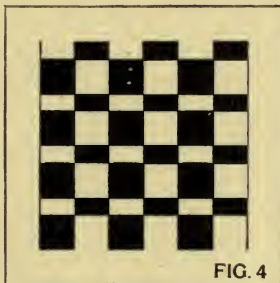


FIG. 4

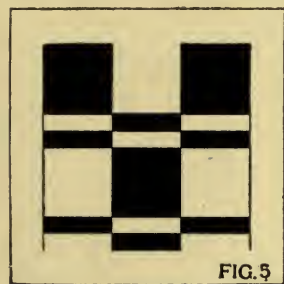


FIG. 5

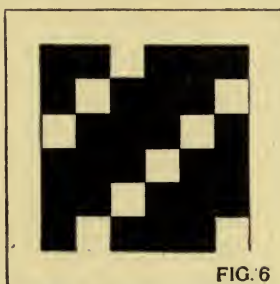
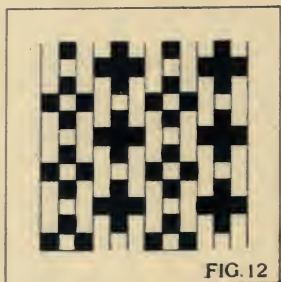
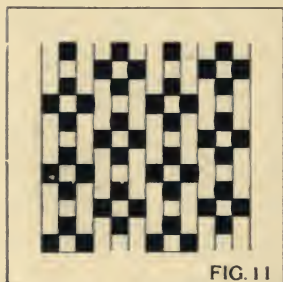
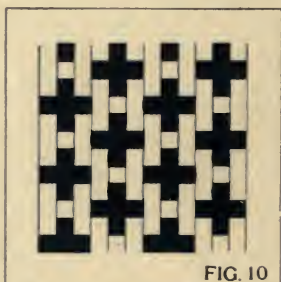
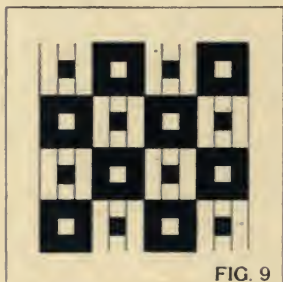
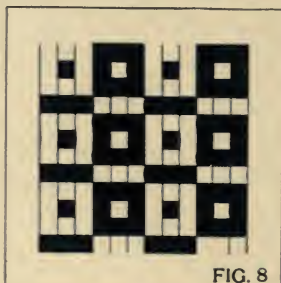
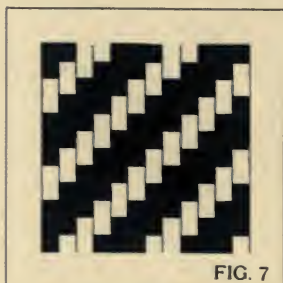


FIG. 6

Designs for paper weaving



Designs for paper weaving

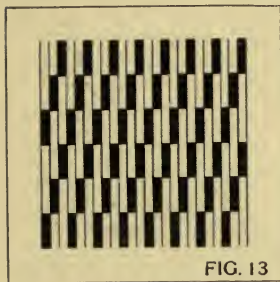


FIG. 13

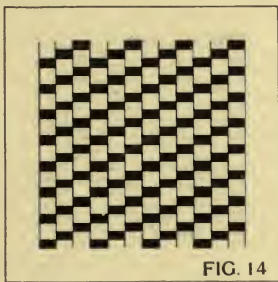


FIG. 14

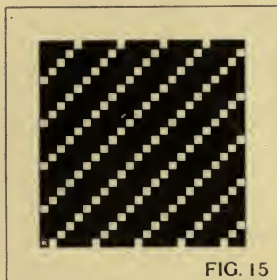


FIG. 15

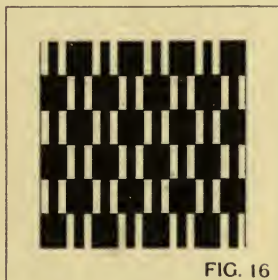


FIG. 16

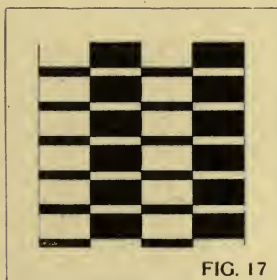


FIG. 17

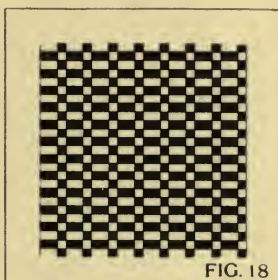
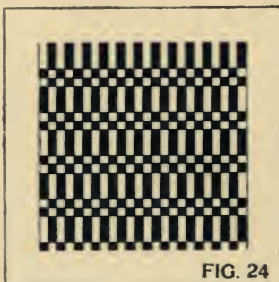
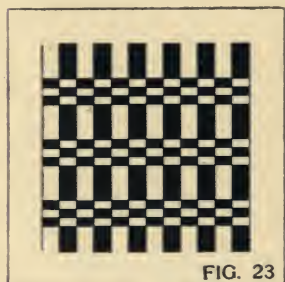
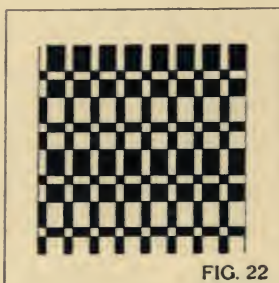
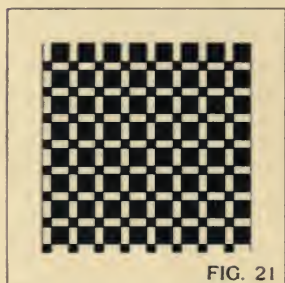
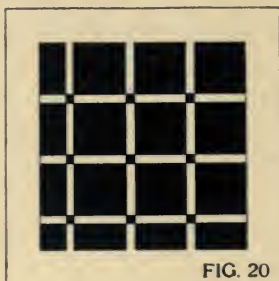
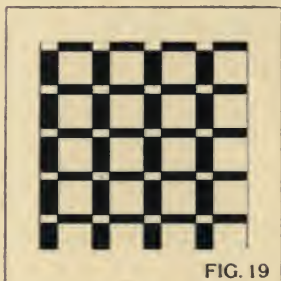


FIG. 18

Designs for paper weaving



Designs for paper weaving

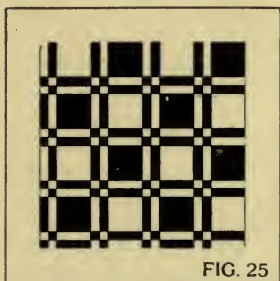


FIG. 25

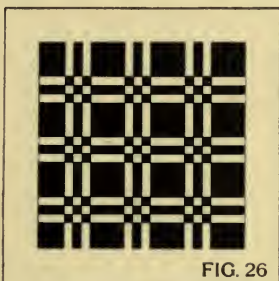


FIG. 26

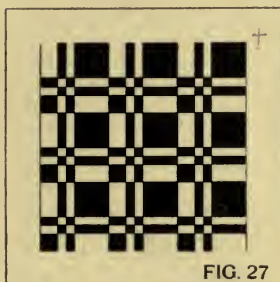


FIG. 27

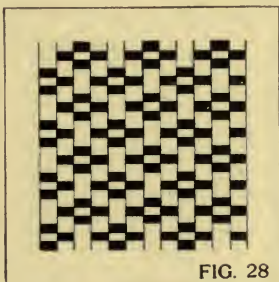


FIG. 28

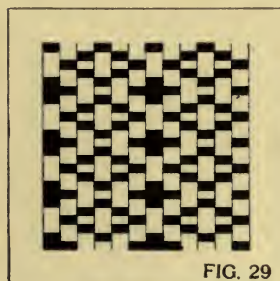


FIG. 29

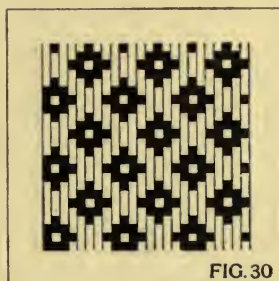


FIG. 30

Designs for paper weaving

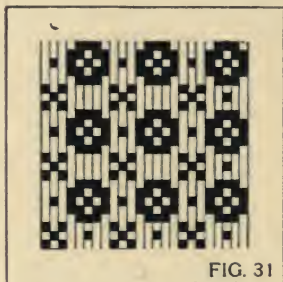


FIG. 31

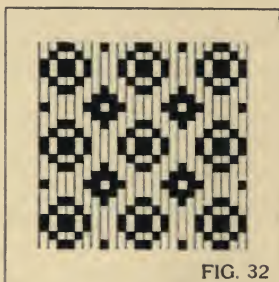


FIG. 32

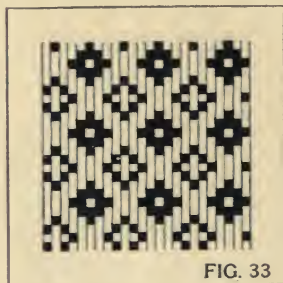


FIG. 33



FIG. 34

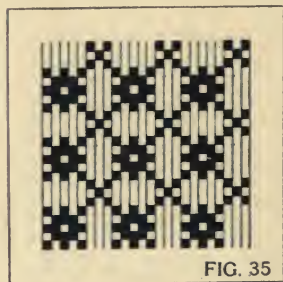


FIG. 35

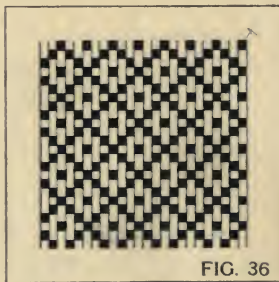


FIG. 36

Designs for paper weaving

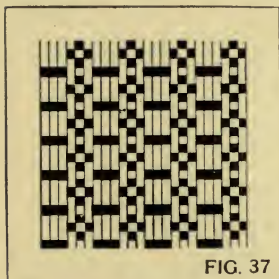


FIG. 37

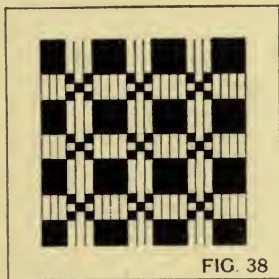


FIG. 38

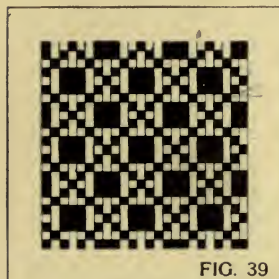


FIG. 39

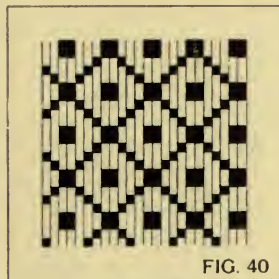


FIG. 40

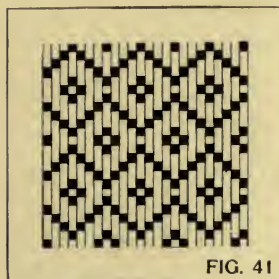


FIG. 41

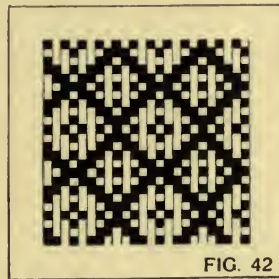
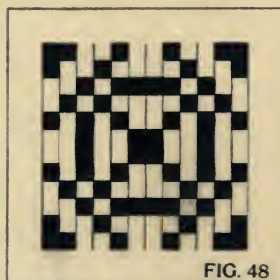
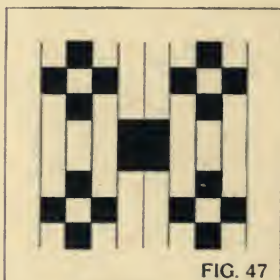
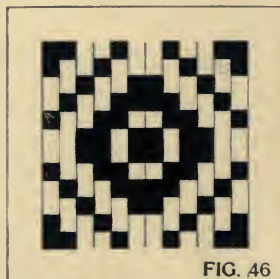
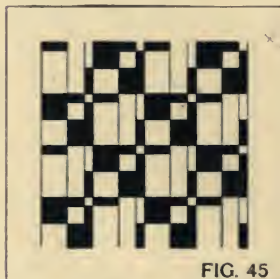
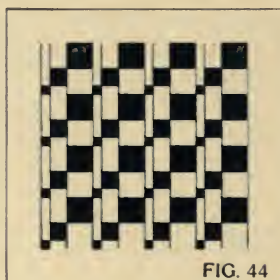
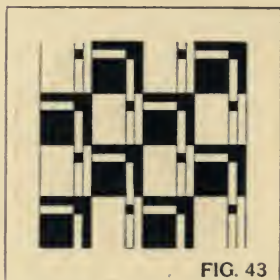


FIG. 42

Designs for paper weaving



Designs for paper weaving

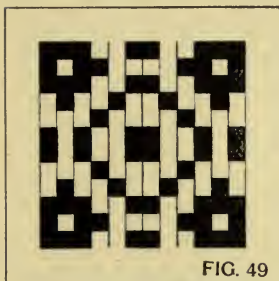


FIG. 49

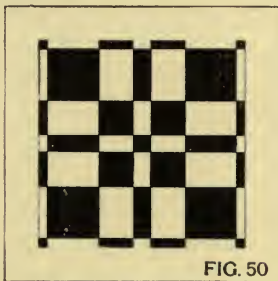


FIG. 50

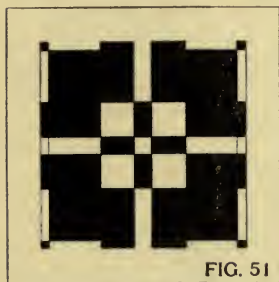


FIG. 51

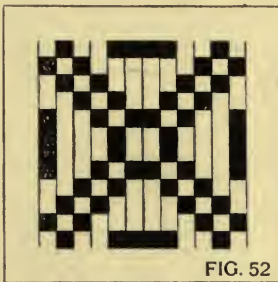


FIG. 52

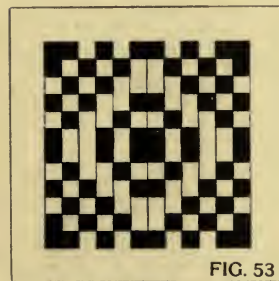


FIG. 53

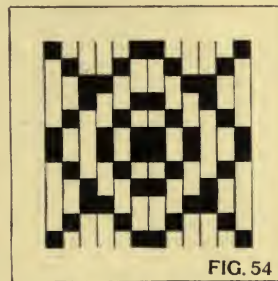
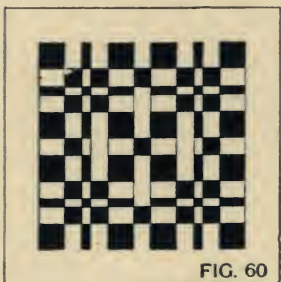
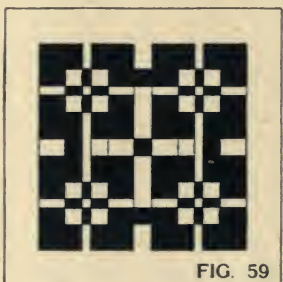
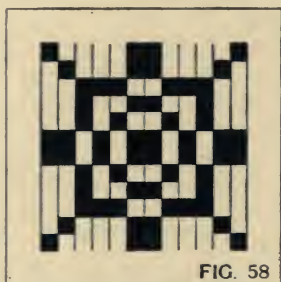
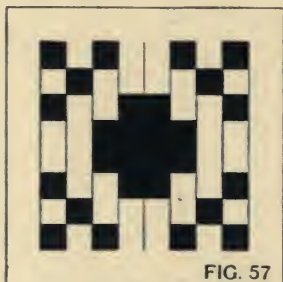
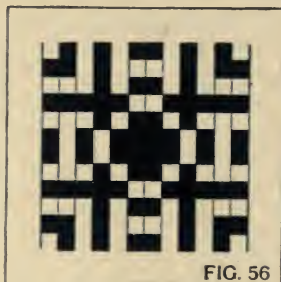
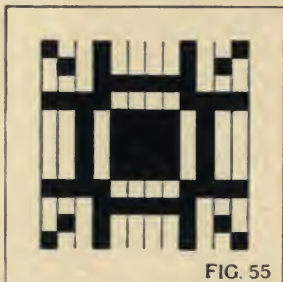


FIG. 54

Designs for paper weaving



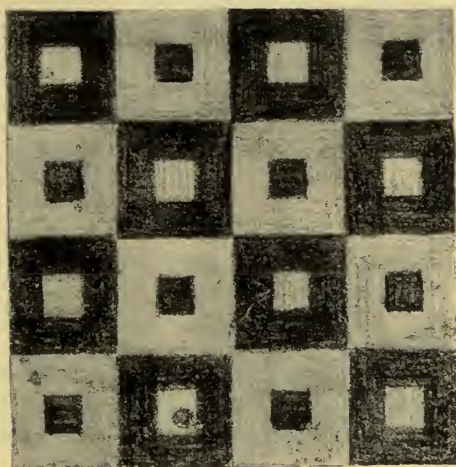
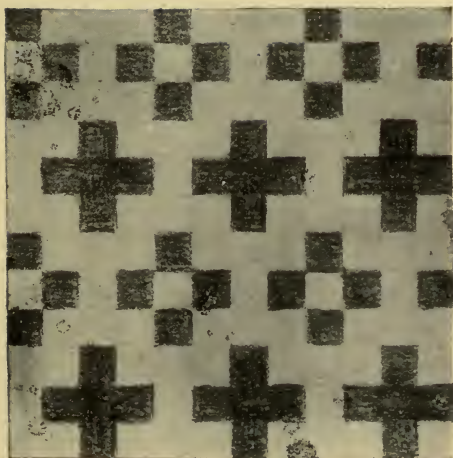
Designs for paper weaving



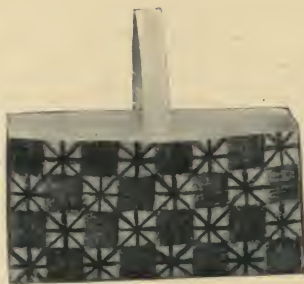
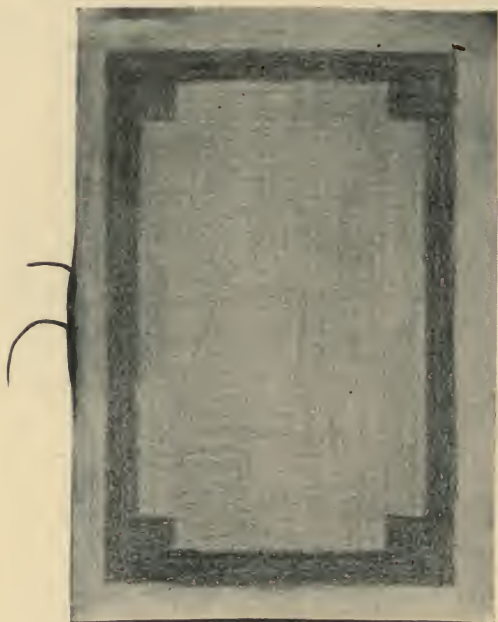
Mats showing decorations made with brush and oil crayon



A popcorn holder, toy lantern and basket made from Bogus-Paper Mats



*Designs made with colored crayon on squared paper
number 3.*



*Decorated squared paper used for a book cover
and paper basket.*

First Year—Second Half

Mat Weaving

IN the preceding chapter the use of the Bogus-Paper Mat has been explained. If the children in the first half of the year begin weaving, they will when they reach the second half work with care in preparing the mats and securing variety of weave. Weaving patterns 13 to 60 are given as suggestions. (See pages 27 to 34.)

Figures 13 to 16 show simple number combinations.

Figures 17 to 27 show patterns which can be obtained through simple alternation in warp, in weft, or in both warp and weft. In Fig. 17, with the inch-and-a-half warp spacing, three-quarter inch and one-quarter inch weft are used in alternation. In Fig. 18 there are two widths of warp alternating while one width of weft is used. In Figures 19, 20 and 21, there are two widths of warp and two of weft. Fig. 22 shows an alternation of two spacings in warp and three in weft.

Figures 23 to 27 show an alternation of large spacings with grouped smaller spacings; these may seem difficult to weave though they are very simple. For instance, to obtain Fig. 26, children cut an inch and then three one-quarter inch spacings in preparing the warp. For weft they use an inch and

then three one-quarter inch strips with the simple "over one and under one" weaving. An infinite variety of patterns can be obtained through simple alternation.

Figures 28 to 45 give diaper patterns of one or more units of repeat.

Figures 46 to 60 show arrangements around a center.

The Use of Squared Paper

THE use of squared paper for design is explained in the work for the first half year. Many of the mat designs will be effectively worked on the squared paper, either number 3 or number 4. The paper may be washed with water color or Easy Dye before being used for design.

Many primary schools are supplied with pegs and lentils. These may be obtained from Kindergarten supply dealers. There are circular and square lentils. Pegs may be obtained by the quart at a small price. Seeds of different kinds may be used instead of manufactured lentils. Melon seeds are particularly good. Sunflower and other large seeds answer well. Both pegs and seeds may be colored with Easy Dye.

After the children have had practice in free arrangement of pegs and lentils in design, they might lay them in exact spacing on squared paper.

When familiar with the design they might work it out with brush, crayon or pencil on squared paper. The cuts on page 42 show pegs, lentils and seeds placed on squared paper; the last illustration on the page shows a design made with crayon on a sheet of squared paper tinted with water color.

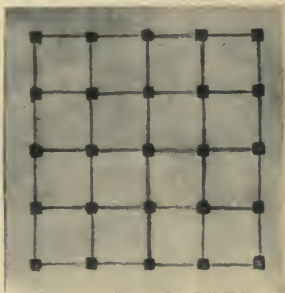
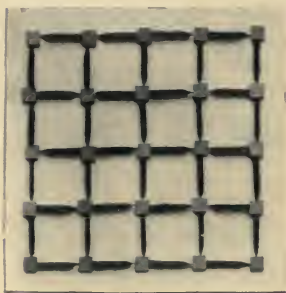
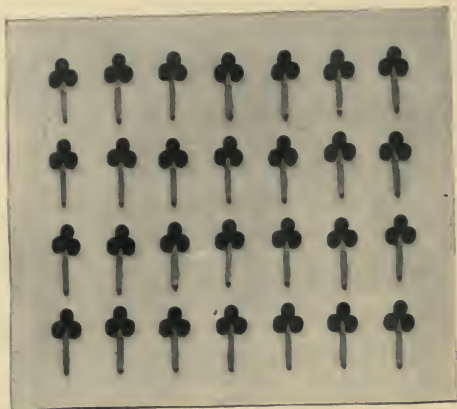
Decorating a Portfolio

IF each child is supplied with a firm paper portfolio for holding hand work materials, he will enjoy decorating it. Designs may be worked out on squared paper. Paper cutting and tracing around the pattern will form an easy method of placing the pattern on the portfolio. It may then be colored with crayon.

Materials Needed for First Year

Second Half

1. Heavy Paper Portfolio.
2. Bogus-Paper Mats.
3. Squared Paper numbers 3 and 4.
4. Squared Paper number 1 for teachers' use.
5. Easy Dye.
6. Pegs and Lentils or Seeds.



Designs laid on squared paper with pegs, lentils and melon seeds. In the lower right hand corner is a design drawn with colored crayon on squared paper tinted with water color.



Each pupil should have a heavy paper portfolio for holding unfinished work. To decorate the face of the portfolio make a design on squared paper. Trace around the paper design. Color with crayons.

Beauty, the end of art in
its essence is pleasure.

Oscar Lovell Triggs

Hand Work for Second Year

Second Year—First Half

Hand Loom Weaving

THE children in the first year have learned to weave with a simple paper loom. They will now be able to use a wooden hand loom. The loom shown in the illustration on page 47 provides for the making of a rug 9 by 12 inches. It takes nine yards and twenty-three inches of warp to string the loom.

Let a few children prepare the warp for distribution to the class. Give them pieces of cardboard on which to wind warp and tell them how many times to go around a piece of cardboard to have the amount needed for a loom.

To string the loom, make the end of the warp firm by fastening it around several teeth of the loom. The first thread of the warp should lie directly over the rod at the left side. The stringing then goes back and forth until the rod to the right is reached. String over this rod and fasten by winding the end of the warp around the teeth of the loom.

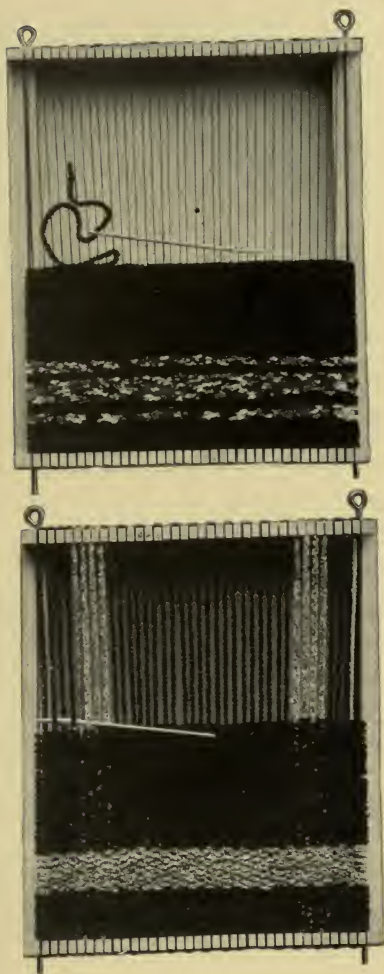
The weft goes over and under the warp. The rod at each side provided for keeping the mat in shape should be counted in with the weft thread directly above it.

In joining weft when a new weft thread is needed, lap the weft for about an inch, using care to put the new thread under and over the same warp thread as the old to prevent break in the weaving.

When the mat is taken from the loom, push the weaving toward the ends of the rug to cover the warp where it was strung over the teeth of the loom or finish the end by using the loops in a chain stitch as shown in the illustration on page 49. The latter will make the mat shorter than the former way, and the proportion will not be so pleasing unless a fringe is added. Work the ends of the warp threads in and out until they are out of sight.

Weaving with Cotton Chenille

IF the loom is strung with carpet warp, cotton chenille makes a good weft for early work as it fills in quickly and is easily handled. It can be readily carried in a packing needle and can be obtained in plain and mottled colors. The use of the chenille weft and carpet warp is shown in the upper illustration on page 47. The lower illustration shows the chenille used for warp as well as weft. A variety of beautiful designs in checks and plaids may be obtained from using the chenille to form the pattern in both warp and weft.



*A loom 9 by 12 inches is satisfactory for use in second year.
Cotton Chenille may be used with carpet warp. Cotton
Chenille may be used for both warp and weft.*

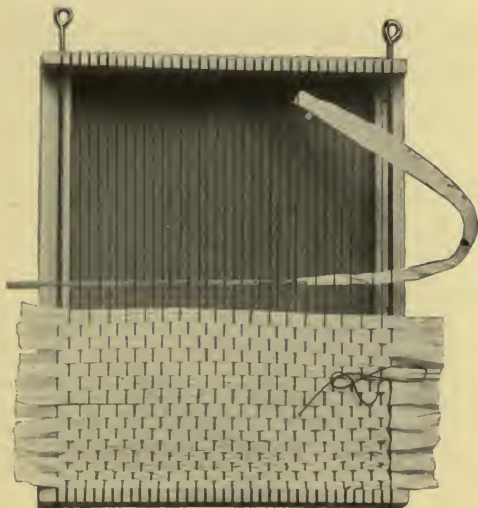
Patterns may be worked out on squared paper number 4, preparatory to weaving. The pattern may be pasted on a cardboard mount and tied directly under the rods of the loom. Pupils can then work to the pattern.

Weaving with Tilo Strands

VERY beautiful weaving may be done with Tilo Strands with pattern stained with Easy Dye. String the loom with carpet warp, dampen the strands of Tilo by dipping them in water. Do not leave the strands in the water. Dip in and take out immediately. Cut each strand into thirds. Weave each weft strand through the warp, using a Ball weaving needle to carry it through.

As it is difficult to splice Tilo Strands, it is best to let the strands form a fringe left and right. When the weaving is complete, the last warp strand at each side may be held in place with a warp stitching. Use a tapestry needle number 21 or any other that will hold the warp. Take one over stitch and a knot to each piece of the warp visible.

The Tilo may be as easily stained with a brush and Easy Dye as paper is colored with water color. The natural colored Tilo Strands may be used for weaving and the pattern stained in harmonizing tones, or as children delight to work with colored material the strands may be colored before the



Tilo Strands may be used with carpet warp. Use a Bah weaving needle for carrying the Tilo Strands. After the weaving is completed stain pattern with Easy Dye. Finish left and right with an over stitch and knotting of carpet warp. When the mat is taken from the loom finish the ends by making a chain of the loops.



*Mats made with Tilo Strands and carpet warp.
Pattern stained on woven mats with Easy Dye.*

weaving is done and the pattern applied on the colored Tilo Strands.

Surface patterns made in the paper mat weaving of the first year may be used for the new material, or new surface patterns may be invented.

Work on squared paper number 4, will form excellent design work preparatory to designing on woven Tilo mats. The spacing does not quite correspond, but children will have no difficulty in adapting designs made on the squared paper to the Tilo weaving. A series of borders may be dictated from which each child may make a choice, or borders may be invented by the children.

Such beautiful effects can be obtained through staining the Tilo weaving that children are very happy in this work.

Materials Needed for Second Year

First Half

1. Loom.
2. Mounting Board, Loom Size.
3. Carpet Warp.
4. Cotton Chenille
5. Tilo Strands.
6. Packing Needle.
7. Tapestry Needle number 21.
8. Ball Weaving Needle.
9. Squared Paper number 4.
10. Squared Paper number 1 for teachers' use.
11. Easy Dye.

Second Year—Second Half

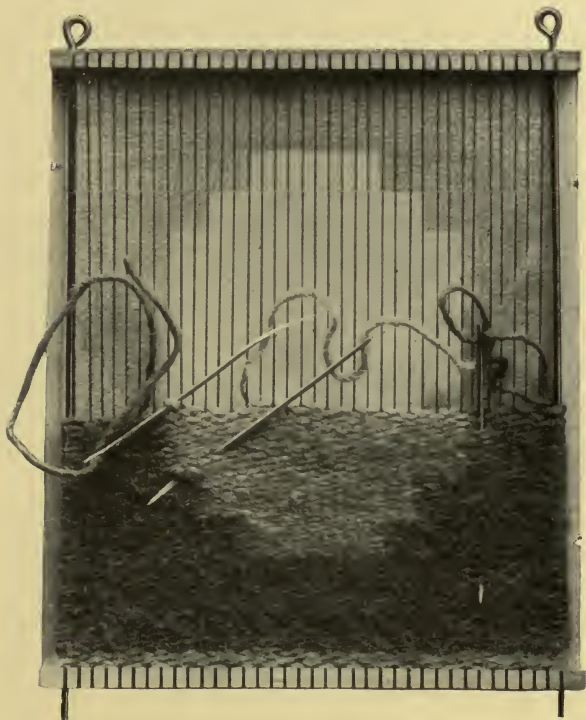
Hand Loom Weaving

IN the first half of the second year children have learned to use the hand loom and make simple patterns in borders and in checks and plaids. They can now take more difficult weaving.

Designs may be prepared on squared paper number 4, and pasted on mounting board. The mounting board, holding the design should be tied directly under the rods after the loom is strung. A thread of warp should lie directly over each vertical line of the squared paper, and the weaving should be made to follow the pattern.

The illustration on page 53 shows a mat being made over a squared paper pattern. The figure in the center is blue and the background gray. The gray is worked up to the figure. Three packing needles are then used instead of one. A few threads of the central pattern are woven and the background brought up to meet the pattern. Each background weft thread passes through a loop of the central figure.

A mat of this kind can be made with one needle. The whole central figure can be completed and then the background worked up to it. Children, however, are apt to draw the warp threads out of place unless they carry on the different portions of the work together.



Make the design on squared paper number 4. Paste it to a mounting board and tie the mount to the loom rods. In weaving follow the squared paper pattern.

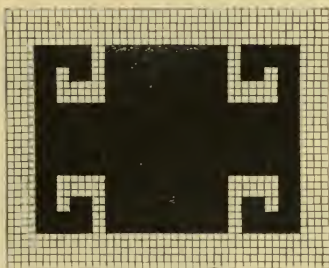
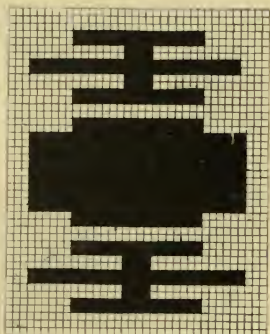
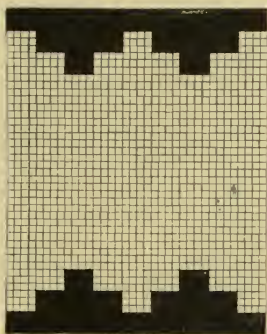
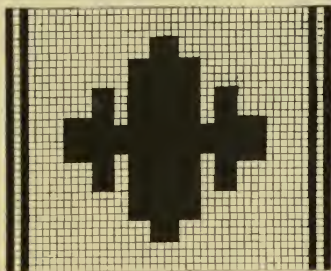
Designing Rugs

SQUARED drawing paper is invaluable for rug designing. Squared paper number 1 for teachers' use comes in sheets 24 by 36 inches. It is ruled in one inch spaces. These sheets may be pasted on the blackboard with a small amount of paste at each corner. Designs made by the teacher on this paper may be seen across the school room. Squared paper number 4, is drawing paper 9 by 12 inches, ruled in one-quarter inch spacing. As warp threads on the loom are one-quarter inch apart, this paper makes an excellent working basis for designs for looms, and children delight in its use.

Rugs, matting and woven fabrics give rich suggestion for design. Designs very much too difficult for children to attempt on blank paper may be very easily made by them on squared paper. Working designs from beautiful examples will give ideals and set standards in color and design.

On page 55 designs suitable for hand loom weaving are given. These may be dictated. If teachers place these and other patterns worked on squared paper number 1 before the children they will, if accustomed to working on squared paper, be able to work them out unaided on squared paper number 4.

The designs for rug center spots, page 56, show how the first design on paper was cut into four



Designs for rugs made on squared paper number 4.



Plan a central spot for a rug design. Cut spot into four parts and secure new designs by readjustment of parts.

parts and new designs obtained by laying the pieces in different relationship.

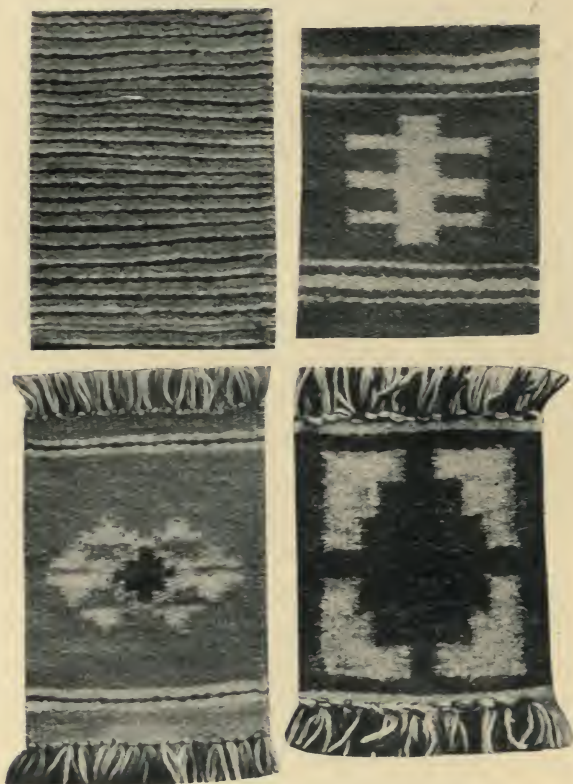
Dictate a simple design. Ask pupils to tint the paper on both sides with crayon or a color wash. Have the designs cut into parts and rearranged to make a new design.

After pupils have made designs from dictation and imitation and seen many good designs they will be able to make simple original designs. Much of the work in design may be given as seat occupation work. It is well for pupils to gain independence by working frequently without the immediate supervision of the teacher.

After the first lesson in weaving pattern, when the children have learned the process, it is well to have as much variety as possible in the designs woven. Each child profits by seeing the work of his neighbors.

Color in Weaving

MANY materials suited to weaving may be colored in the school-room with Easy Dyes, which are cold water dyes. Woolen materials, however, will not take color satisfactorily without boiling. The range of color purchased in the carpet yarns will of necessity be limited. Care should be exercised in choosing colors to select hues and tones which will produce harmony. When the colored



Mats made with carpet warp and carpet yarn.

yarns are obtained, skeins should be hung before the children so that they may learn the color range, and plan their color accordingly.

Colored crayons give the most simple and rapid work in designing although Easy Dyes and water color can also be used. The crayons work satisfactorily over washes of Easy Dye and water color. Children enjoy working out a design in a number of different color schemes and choosing the one they like best for the color scheme of the weaving.

Community Work

A NUMBER of rugs of the same pattern woven together after being taken from the looms make an attractive coverlet. The loom rods may be adjusted and narrow pieces of one color woven for border strips. The Principal would be pleased to have a coverlet made for her office or rest room. The little people of a children's home would enjoy a coverlet made by other little children.

Materials Needed for Second Year

Second Half

1. Loom.
2. Mounting board, loom size.
3. Carpet warp.
4. Carpet yarns of several colors.
5. Three packing needles for each pupil.
6. Squared paper number 4.
7. Squared paper number 1 for teachers' use.

And blest be Labor which
can deck its wares with
grace and beauty.

Rev. Phæbe A. Hanaford

Hand Work for Third Year

Third Year—First Half

GIVEN burlap, cotton twine, a tapestry needle, squared paper and Easy Dye, the possibilities for producing beauty in simple applied design are endless.

Staining Natural Burlap

IN the chapter on color, page 119, direction is given for the preparation of Easy Dye. It is quite as simple to place washes of Easy Dye on burlap as washes of water color on paper.

Sewing with Cotton Twine

COTTON twine may be made from the ball into skeins and dyed any desired color by dipping in Easy Dye. Set a standard for a skein. Wind the twine fifteen times around a school desk to form one skein. Teach pupils a few simple stitches. Give each pupil a small piece of burlap for a sampler and teach the stitches when there is need for them.

The stitches should be given in approved fashion. Authorities in sewing teach cross stitch, back stitch, blanket stitch, outline stitch, stem stitch and chain stitch as shown on page 62. Note the direction in which stitches are taken. These are good stitches



1



2



3



4



5



6

1. *Cross Stitch*
2. *Back Stitch*
3. *Blanket Stitch*

4. *Outline Stitch*
5. *Stem Stitch*
6. *Chain Stitch*

for decorative work on burlap. A selection may be made if there is not time to teach them all.

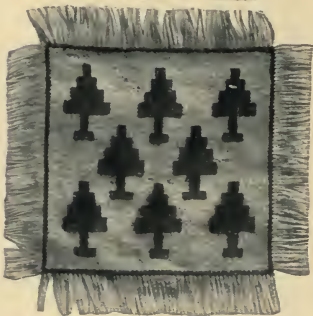
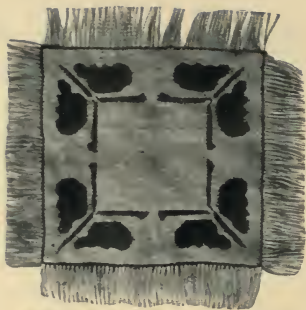
The simplest form of blanket stitching has all stitches of equal length. Great variation may be obtained by changing the lengths of the stitches used. The simplest form of chain stitch is the closed link chain. Many varieties may be obtained in the open link chain by change in direction and length of stitches.

Teach pupils not to make a knot, but to fasten thread by darning in and out on the wrong side of the burlap.

Stencil Designs

PROVIDE a stencil for use by each pupil. Three stencils and designs made from them are shown on page 64. Design motifs are the swan, fir tree and butterfly.

The stencil sheets are nine inches square. Cut burlap into twelve inch squares, giving a square to each pupil. Ask him to lay the stencil square in center of the burlap square and draw around it with a pencil. Then the outlines of the design motifs may be drawn with a pencil, the stencil removed and color applied with a brush. If the teacher can superintend the work carefully color may be applied to the burlap in regular stencil fashion. Stain cotton twine to harmonize with the color scheme. Use



Stencils with butterfly, fir tree and swan designs. Burlap mats for the decoration of which stencils were used.

blanket stitch, chain stitch, cross stitch or back stitch for the square edge, following the square drawn on the burlap. Then fringe the burlap to the stitching. Select one of the stitches for outlining the design or fill in the design with cross stitch or darning.

While the stencils are made in mat form the figures may be used for a variety of purposes. The swan may be used as the repeat in a border for a table cover or curtain. The fir tree may be used as the repeat in a surface pattern for a pillow cover.

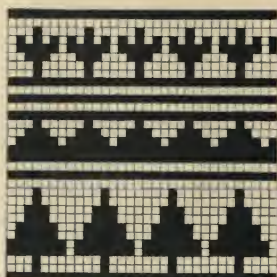
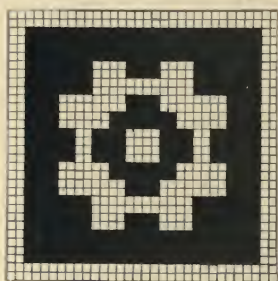
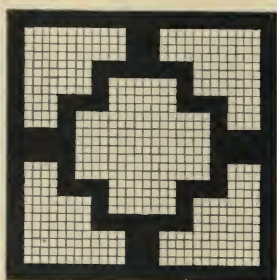
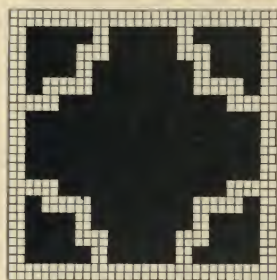
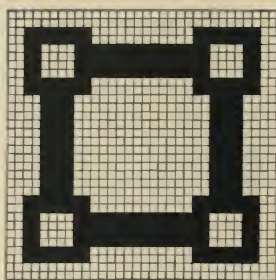
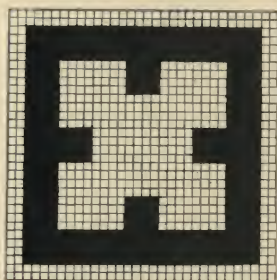
It is not wise to give young children in school work which takes a very great while for the doing. While children should be taught to hold themselves to their highest endeavor, work is not profitable which is unduly taxing.

If curtains, table covers and pillow covers are made, they should represent community work, each pupil having a part in the work of the whole.

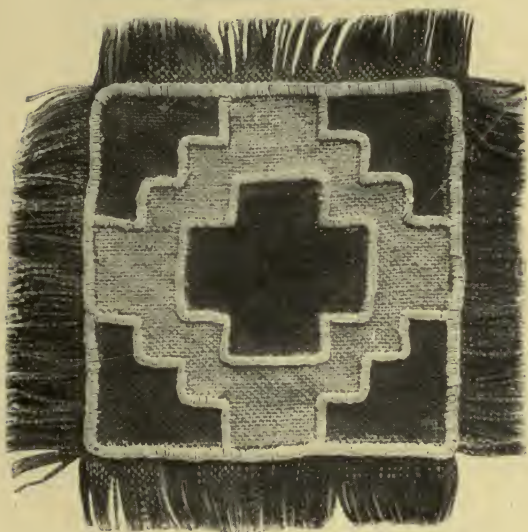
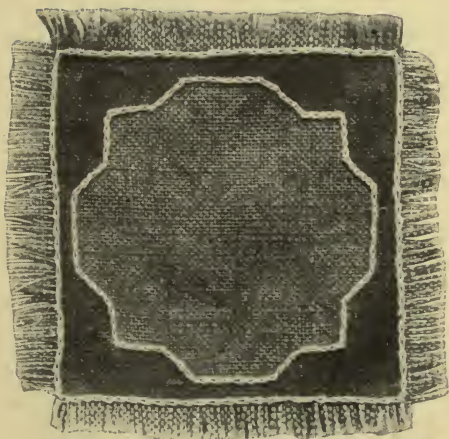
Designing Mats

ON page 66 there are designs for burlap mats. The square and oblong designs are intended for square and oblong mats and the borders for two ends of oblong mats.

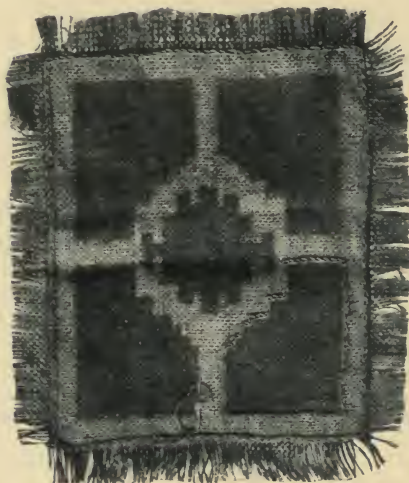
If the teacher makes designs on squared paper number 1, the designs may be seen across the school room. Pupils may make their designs on squared



Designs for burlap mats may be made on squared paper



*Patterns stained on natural burlap with Easy Dye.
Stitching done with colored cord.*



Draw design on squared paper. Cut out design and pin to burlap. Trace pattern on burlap with pencil. Stain pattern with Easy Dye. Use tapestry needle number 21 and colored cotton cord for stitching.

paper number 4. After making several designs under the direction of the teacher, pupils will be able to produce designs of their own. The medium which can be most speedily and easily used for the designing is colored crayon.

When a design is chosen for the burlap, cut it from the squared paper, pin the pattern to the burlap and draw around it. The paper may be cut to form a stencil and the design drawn from the stencil.

Use the natural burlap outlining the design with a stitching of colored cotton twine or stain the burlap in one or more tones of Easy Dye before outlining with a thread in harmony with the staining.

Three pages of cross stitch designs are given, pages 73 to 75. Suggestions may be taken from these for designs for mats and other articles made from burlap.

Making Bags

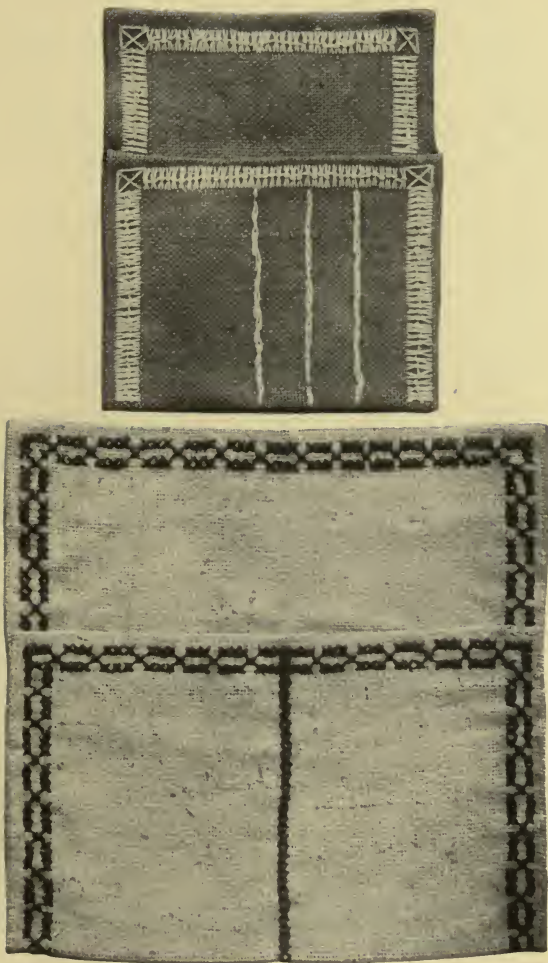
TO make a school bag, cut an oblong of burlap to be made into a bag. Turn down the edges and use a blanket stitch around the four sides.

Make a design for the bag on squared paper. Draw it on the burlap. Stain and stitch the design.

Fold the oblong to form the bag. Where the two rows of blanket stitching meet at the two sides of



*Bags made from natural burlap with Easy Dye.
Stitching done with cotton cord.*



*Case to hold paint box, brush and pencils
and shoe bag made from burlap.*

the bag, fasten the blanket stitches with an over-stitch.

Fold strips of burlap to make handles. Finish these with blanket stitching and secure firmly and neatly to the bag.

The size of the bag will depend on the use to which it is to be put.

Each bag of the illustration on page 70 was designed to carry a reader.

The oblong of burlap used was 9 by 13½ inches. Strips 2 by 9 inches were used for the handles. The long edges of these oblong strips were folded to the center, then one edge folded to the other so that the burlap in the handles is four ply.

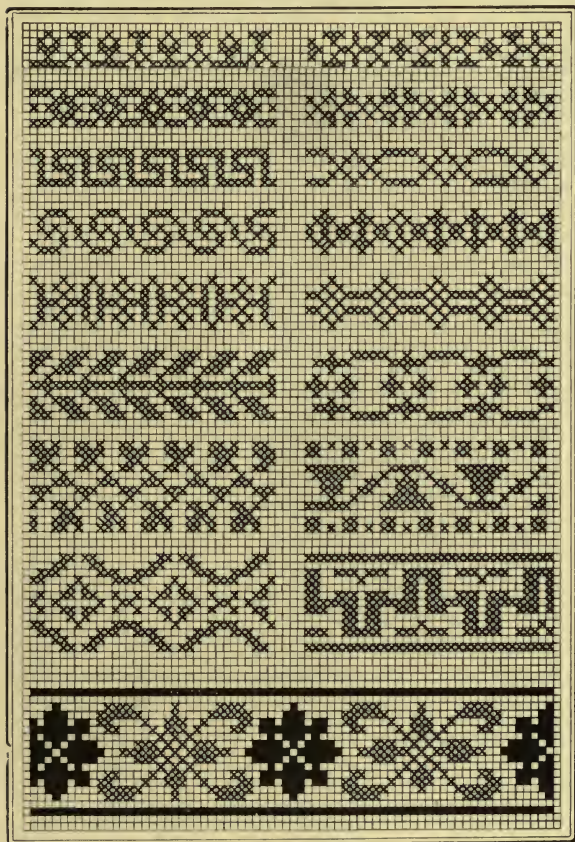
One of the bags has a handle made of braiding of ravelings of burlap stained in colors in harmony with the design.

On page 71 is shown a shoe pocket and a case made by a little girl, to hold her paint box, brush and pencils.

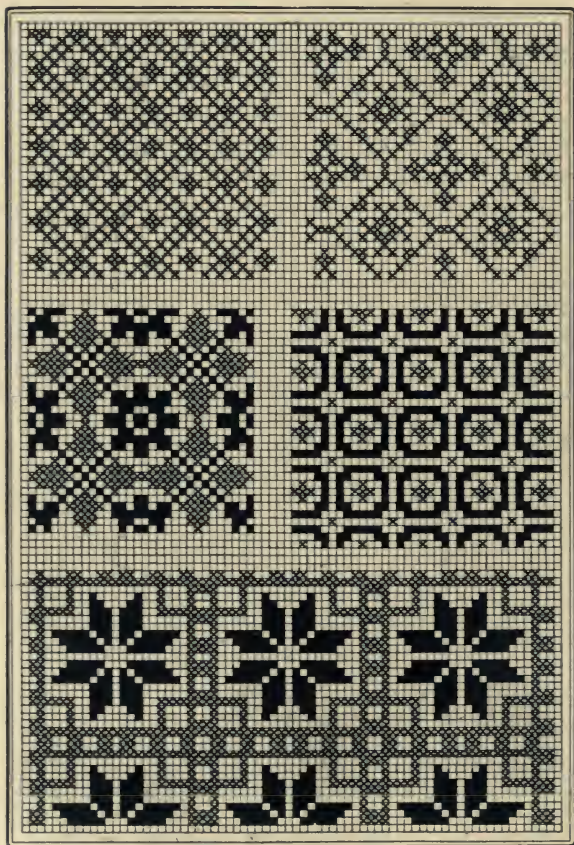
Materials Needed for Third Year

First Half

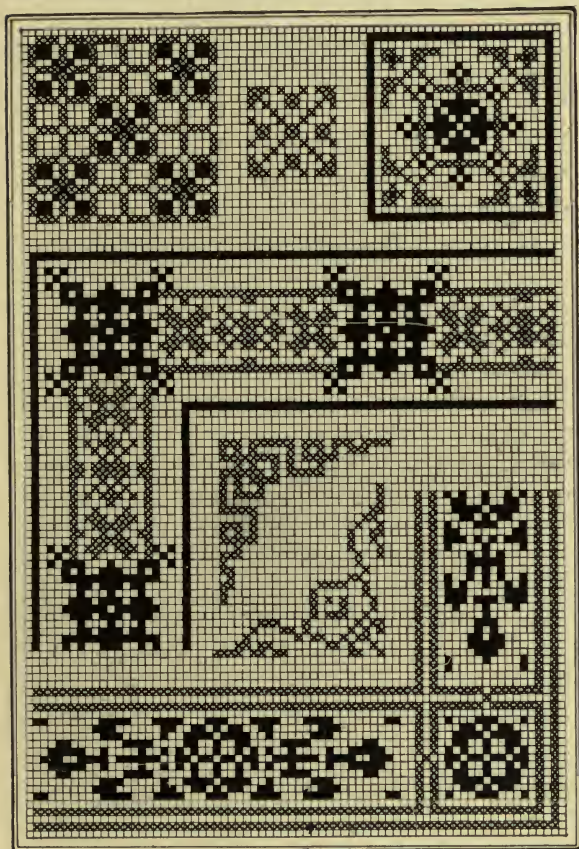
1. Natural Burlap.
2. Tapestry Needle number 21.
3. Cotton Twine—4-ply Veribest.
4. Stencils—Swan, Butterfly and Fir Tree Motifs.
5. Squared Paper number 4.
6. Squared Paper number 1 for Teachers' use.
7. Easy Dye.
8. Heavy Paper Portfolio for each pupil to hold unfinished work.



*Cross stitch designs suited for raffia decoration
on Tilo Matting*



*Cross stitch designs suited for raffia decoration
on Tilo Matting*



*Cross stitch designs suited for raffia decoration
on Tilo Matting*

Third Year—Second Half

The Use of Tilo Matting*

TILO Matting is a soft, pliable material, of checker weave, made in Japan from shavings of the fir tree.

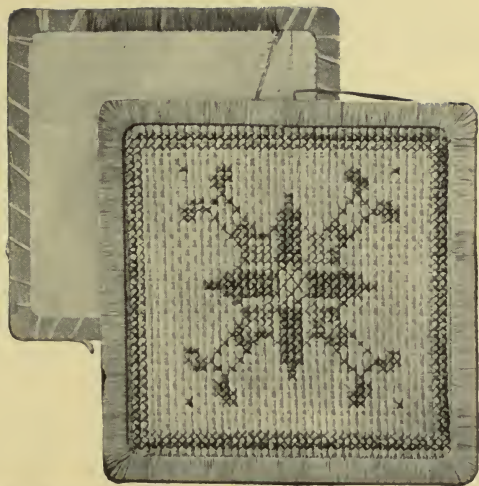
There is probably no other material available for industrial work in public schools that affords such wide opportunity for constructive and decorative design.

It may be made into mats, boxes, baskets, fans, needle books, portfolios, card cases, cushions, table covers and many other things. It makes a fine covering for benches and stools and facing for screens, and may be put to many uses in connection with the wood work in manual training shops.

As it is a very absorbent material Tilo Matting takes color instantaneously so that designs may be applied with the brush.

At first thought Tilo Matting seems to be a material too expensive for school use. However, a small amount goes a long distance. One yard will make thirty-six 6-inch square mats, ninety napkin rings or forty needle books.

**"Tilo Matting" and "Tilo Strands" are patented trade names for this beautiful material which is imported only by Atkinson, Mentzer & Grover, of Chicago and Boston.*



A mat showing use of strawboard frame on mat edge, a mat decorated with cross stitch in raffia and a mat decorated with water color

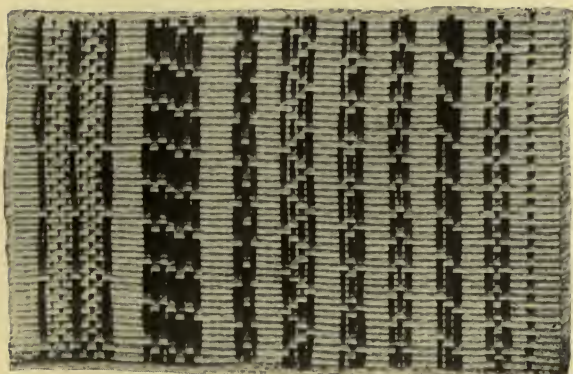
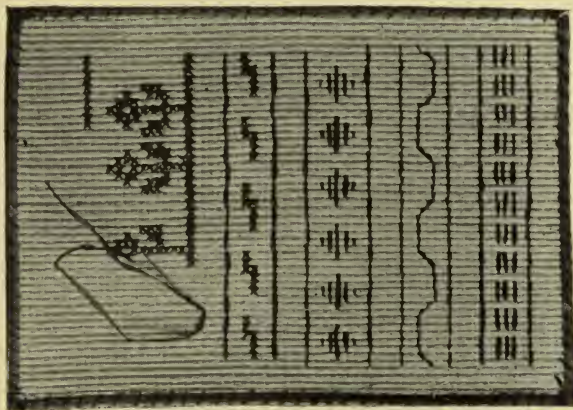
Square and Oblong Mats

STRAWBOARD mat edges with outside measurement 6 by 6 inches and 6 by 9 inches three-eighths of an inch in width may be purchased at a small cost. To make a mat cut Tilo Matting the full size of the mat edges. Have each pupil join the mat edge and the matting by an over stitching of raffia with stitches far apart. A narrow raffia thread should be used for this first over stitching.

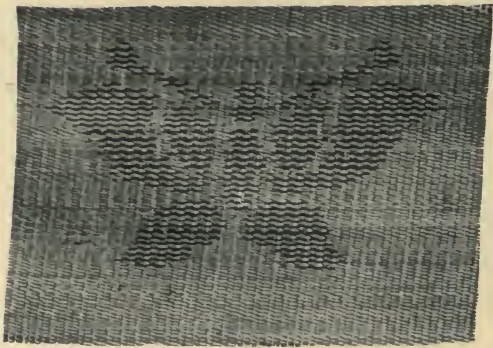
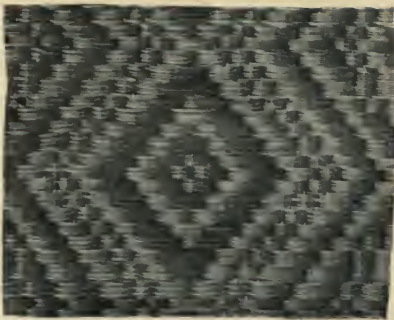
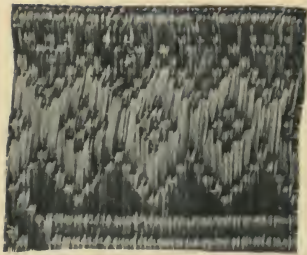
After the mat edge is secured in place, a wide raffia thread is needed for an over stitching that covers the mat edge. Ask pupils to begin this stitching a little distance from the upper left hand corner, so that they may have practice before turning a corner. Over stitching is usually done from right to left, but in this work where the raffia is to be spread over the mat edge, it is easier to work from left to right.

On page 77 the upper mat shows the mat edge attached to the matting by the first over stitching and the upper edge partly covered with the over stitching of wider raffia.

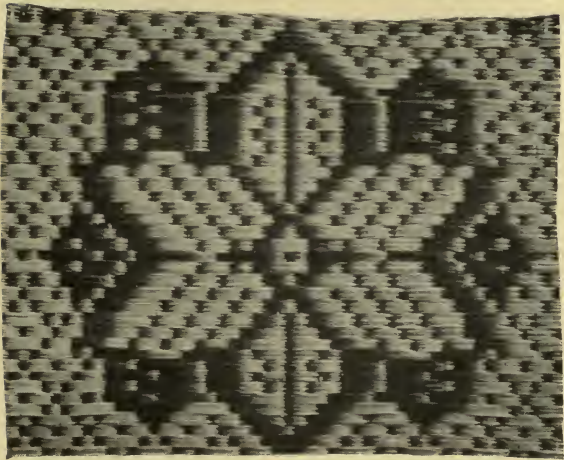
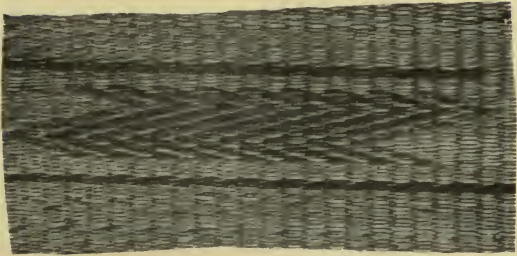
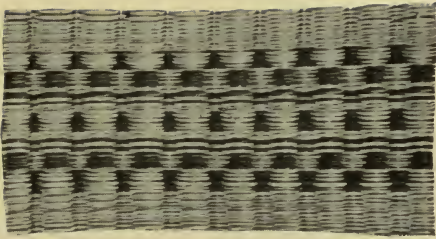
The second mat shows the edge completed and decorated with a design worked in colored raffia. The third mat is decorated with water color.



Samplers of Tilo Matting with patterns made in raffia



Patterns in matting suggesting designs for Tilo Matting



Patterns in matting suggesting designs for Tilo Matting

Designing Mats

READ the directions in the preceding chapter for the designing of burlap mats. As Tilo Matting will take staining with Easy Dye *instantaneously* the directions given for using squared paper for pattern making are as applicable to Tilo Matting as to burlap.

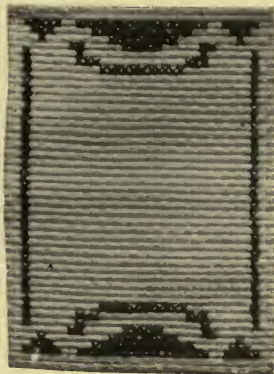
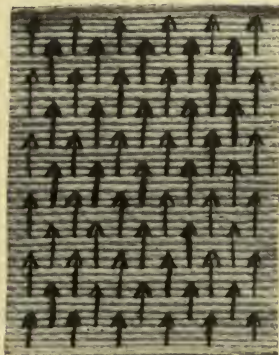
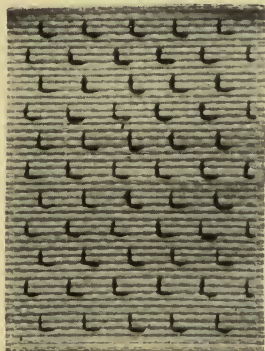
Give each pupil a piece of Tilo Matting for a sampler. Guide him in the making of a few designs with raffia stitching. Then ask him to make designs of his own to be used on a mat.

Many of the beautiful designs in ordinary floor matting will suggest designs to be worked on Tilo Matting. It would be well to make a collection of pieces of matting beautiful in color and design.

Napkin Rings

PIECES of Tilo Matting 2 by 7 inches in size may be bought with the edges machine stitched to prevent ravelling. These are called napkin ring oblongs.

In making napkin rings, the edges may be finished in various ways. A raffia overstitching makes a good finish. A very pleasing edge finish is made by using a single Tilo Strand for a binding, fastening it to the matting by an overstitching or blanket stitching of raffia with stitches set far apart.



Machine stitched oblongs of Tilo Matting decorated with designs worked with raffia. The oblongs are intended to be made into needle book covers.

Very simple spottings make pleasing decoration for napkin rings. An initial letter in cross stitch makes a satisfactory decoration.

Needle Book

TAKE a piece of Tilo Matting $4\frac{1}{2}$ by $6\frac{1}{2}$ inches in size with edges machine stitched to prevent ravelling.

Needle book oblongs machine-stitched ready for use may be purchased at a small cost.

Ask pupils to make designs on squared paper to be used for needle book decoration.

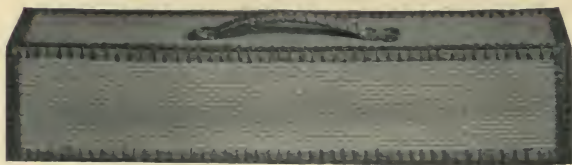
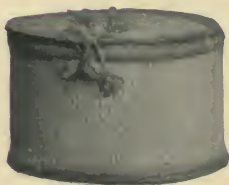
The simplest figures when used to produce rhythm by repeat make pleasing surface decoration. Treat the edges of the needle book cover by overstitching with raffia or binding with a Tilo Strand. For the leaves of the needle book use flannel to correspond with the color scheme of the cover.

Hexagonal Basket

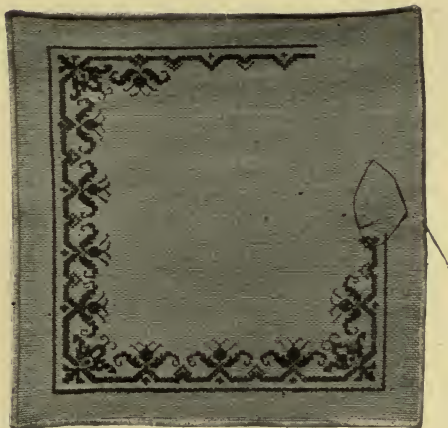
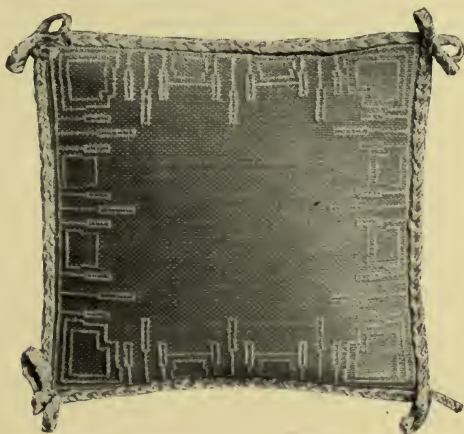
HEXAGONAL basket edges of strawboard may be given to the children. Each of the seven pieces should be fastened to a small piece of Tilo Matting, cut to fit the shape of the box edge, by a raffia overstitching with stitches set far apart. The edge finish should be a blanket stitching of raffia. When the pieces are finished, join together by an



Napkin rings, card cases, needle books, hexagonal baskets, boxes, and satchels may be easily made from Tilo Matting



*A handkerchief case, cuff box, square box and glove box
made from Tilo Matting*



A cushion and table cover made from Tilo Matting

overstitching, catching the thread of the blanket stitching.

The seven pieces of strawboard edges for making a hexagonal basket may be purchased in large or small quantities at a slight cost.

Boxes

BOXES of different shapes and sizes may be designed and edges cut from strawboard or any other firm material.

Cushions and Table Covers

BEAUTIFUL cushions and table covers may be made from Tilo Matting.

The sustained work necessary to complete one of these articles would be too great for a young child, but pupils enjoy working together on a cushion for the principal's office or on a desk or table cover for some friend of the school.

Flower Holders

WHAT a fascination there is in covered bottles, jugs and jars! Flowers seem to especially belong in a covered ginger jar. The Japanese have taught us how delightful it is to cover a beautifully shaped bowl or vase of some charming color with an open work design in reed, pith or raffia.

With the use of Tilo Matting and raffia we can make some charming flower receptacles.



A flower holder made from a can covered with decorated Tilo Matting.

While simple objects such as mats, needle books, napkin rings and boxes will be most satisfactory on most occasions for third year class work, it is well to know the possibilities of the material at hand.

Tilo Matting makes very beautiful flower holders. Every child can secure a can. A baking powder can is soon transformed into a simple but beautiful flower holder.

For the one in the illustration on page 89, an oblong was cut to fit over the curved face of the can and the edges stitched together. A circle was cut for the base and sewed on. Where the two edges of the oblong met a pale green ribbon of raffia was used to cover the joining. This was held in place by a stitching of natural raffia, forming a simple design. The same kind of decoration was carried out at regular intervals about the tin. The top is finished with a blanket stitching.

The large, cylindrical brown jars, used so largely by the florists, are made more beautiful by a covering. These jars are fine to hold such things as hollyhocks, sunflowers, wild asters and golden rod, and are especially charming for the weeds.

Tall stalks of the curly dock, with its wonderful rhythms of russets, greens and browns to echo the brown in the jar, are certainly a joy.

The dictionary tells us that a weed is "any unsightly, useless or injurious plant." To the artist's



*A brown jar covered with Tilo matting with
decoration of braided Tilo Strands.*

eye no thing that grows is unsightly, and the poet tells us:

“To win the secret of a weed’s plain heart,
Reveals some clew to spiritual things.”

A basket large enough to hold a flower pot is very useful. Such a one is shown in the illustration, page 93.

For the fern dish, page 93, in which the asparagus fern is growing two tins were secured, one to fit inside the other. If you prefer a cylindrical or conical fern dish buy your tins accordingly.

Cover the outside and upright part of the inside with Tilo Matting stained a color to harmonize with the plant growth. Stitch together and add what decoration you wish. Then set the small pan in its place.

One of the most delightful receptacles for flowers is the basket swinging from a bamboo stick. The baskets in the illustration on page 94 holding the lace flower are made in dull Pompeian red. An arrangement of this kind is a joy the year round. It may swing in a corner or over a window bracket. In the winter pots of ferns or of twining nasturtiums will give pleasure. In the spring the first blood roots that are dug up to bloom in the house or the early hepaticas are graceful in their swinging baskets. Later the flower pots are taken out and dishes to hold water set in. Then come the sprays



Flower holders made from Tilo Matting



Swinging baskets made from Tilo Matting.

of thorn, the dogwood, and one by one the procession of the flowers until finally the Christmas holly beautifies the corner of the swinging baskets for the Christmas-tide.

Some of the bake-dishes in yellow or blue and colored glass finger bowls may be effectively decorated with the matting and raffia lace insertings.

Toy buckets, such as children use at the seashore, and many other receptacles, if well covered and tastefully decorated, then filled with the blossoms, will make spots of beauty to be a "joy forever."

Materials Needed for Third Year

Second Half

1. Tilo Matting.
2. Raffia.
3. Chenille Needle number 4.
4. Mat edges, square 6 by 6 inches, and oblong 6 by 9 inches.
5. Hexagonal Basket Edges.
6. Napkin Ring Oblongs, machine stitched.
7. Needle Book Oblongs machine stitched.
8. Squared Paper number 4.
9. Squared Paper number 1 for Teachers' use.
10. Easy Dye.
11. Heavy Paper Portfolio for each pupil to hold unfinished work.

Nothing satisfies the soul!
but opportunity for nobler
work and glimpses of il-
limitable fields.

Lucy Larcom

Hand Work for Fourth Year

Fourth Year—First Half

Basketry

IF teachers wish to become adept in the Art of Basketry, they will wish to make a much more comprehensive study of basketry than a school manual affords.

The Annual Report of the Smithsonian Institution for 1902 contains several hundred beautiful plates showing thousands of basketry designs and about eight hundred pages of descriptive matter. This volume will probably be found in most public libraries.

The teachers and pupils of the Minneapolis public schools have made such progress in mastering the art that their baskets in workmanship and design rival in beauty the fine Indian baskets. Many of these baskets were photographed and are shown in "Industrial Work for Public Schools" by Holton and Rollins, published by the Messrs. Rand McNally Company.

"How to make Baskets" by Mary White, published by Messrs. Doubleday, Page & Company, contains such definite direction and clear illustration that it is a very valuable possession.

If a collection of a few baskets of good form and

beautiful weave can be secured, they will do much in establishing standards and setting ideals.

As pupils will probably not be able to make more than two or three articles in a term, the teacher will make a careful choice of the kinds of work to be done.

If children have had in previous grades considerable hand work and are deft in the manipulation of materials, they will be able to learn something of woven and coiled basketry in a term's work. Many teachers will probably wish to choose but one kind.

Rattan and its Use

A STOUT rattan cane is sent to America in quantities from India, Japan and China; it is commonly used as ballast for American bound vessels. It is cut in New York into caning, pith and rattan; the outer surface with a polished or glazed effect is cut into strips called caning and is used principally in the caning of chairs. When the outer surface has been removed two kinds of pith, the flat and oval, are cut from the cane. These have no polish. Finally the reeds known as rattan are cut from the central portion of the cane.

Rattans which are numbered 1 to 4 are best for school use. Rattan should be soaked in cold water to be made pliable before using. If left soaking too long it becomes discolored. Ten minutes is suffi-



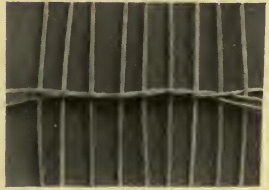
1



2



3



4



5



6



7

1. *Single Under and Over Weaving.* 2. *Double Weaving.* 3. *Pairing.* 4. *Triple Twist.* 5. *Splicing.* 6. *Beginning of a mat or basket.* 7. *Woven center of a mat or basket.*

cient time for soaking number 1. The heavier rattans should be soaked a little longer. Number 4 needs soaking for about a half hour.

Spokes are the pieces of rattan used for the foundation of a basket.

Weavers are the pieces of rattan worked in and out between spokes.

Single Under and Over Weaving, the simplest form, is most used. See illustration 1, page 99.

In *Double Weaving* shown in illustration 2, page 99, two weavers are used at once.

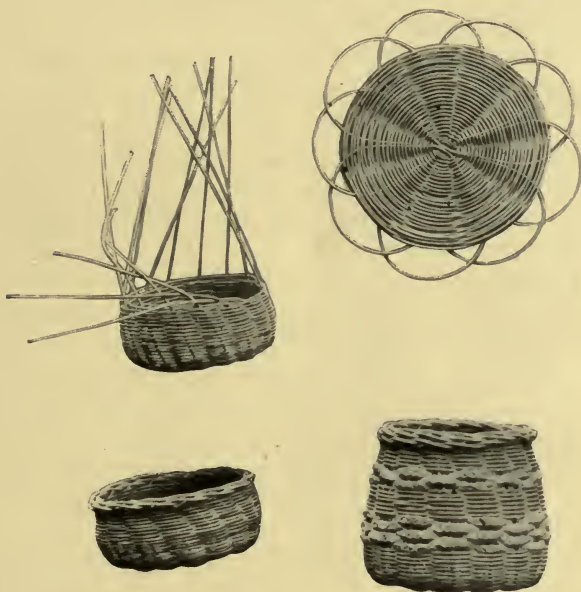
In *Pairing* shown in illustration 3, page 99, two weavers are started behind two succeeding spokes and crossed between spokes so that what was the under weaver becomes the upper each time.

Triple Twist shown in illustration 4, page 99, is made by placing three weavers behind three consecutive spokes. The first weaver, the back one, is taken and brought over two spokes and under one. The second and third weavers follow over two and under one.

For coloring rattan use Easy Dyes. Dip the rattan in the dye. See the chapter on color on page 119.

Rattan Mat

TO make the rattan mat shown on page 101, take four 22-inch spokes of number 4 rattan



Mat and basket of rattan and basket of rattan and braided Tilo Strands.

and one 12-inch spoke of number 4. Use weavers of number 2.

Find the center of two of the long spokes and with a sharp knife or a pin make a slit of about $\frac{1}{2}$ inch in the center of each.

Sharpen one end of each of the two long spokes remaining and also one end of the short spoke. These may be sharpened with a knife or each end to be sharpened may be cut on a slant with the scissors.

Through the slits made in the two spokes, insert the other two spokes. Place the short spoke between the two long ones and shove it through the slits until the end shows on the other side.

Take a weaver and weave around the groups of spokes until the weaver shows twice as shown in the illustration on page 99. Then separate the spokes evenly and weave under one and over one until the end of the weaver is reached. Pass the end behind a spoke and cross the new weaver behind the same spoke.

When the mat measures 7 inches in diameter use the unused portions of the spokes to form a border. See that all the ends are sharpened. Shove the ends of the spokes between the weavers to make the border illustrated.

Rattan Baskets

TO make the cylindrical rattan basket shown on page 101 use spokes of number 3 rattan and weavers of number 1. Take eight spokes 23 inches long and one spoke $12\frac{1}{2}$ inches long. Pass four weavers through the slits made in the center of the other four. Add the short weaver and begin the basket in the manner in which the mat was begun.

When the base of the basket measures $4\frac{1}{2}$ inches, wet the spokes and turn them up.

Leave eight inches of the ends of the spokes for finishing the top of the basket.

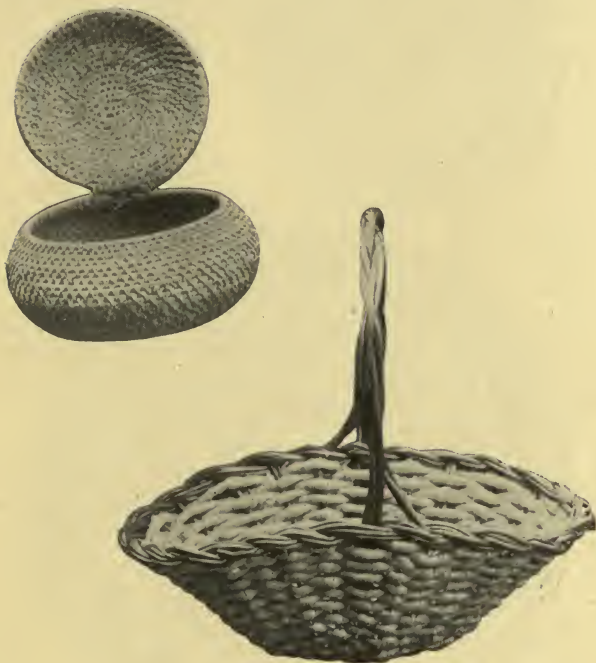
Note the beginning of the finish in the unfinished basket shown on page 101. Each spoke is placed behind the one to the left until all the spokes have been used. A fresh beginning is made and each spoke placed behind the neighboring one to the left. After the second stage is completed, begin again placing each spoke behind the one to the left, around the basket. This third round will complete a substantial basket finish. Clip any unused portions of the spokes.

The Use of Rattan and Tilo Strands

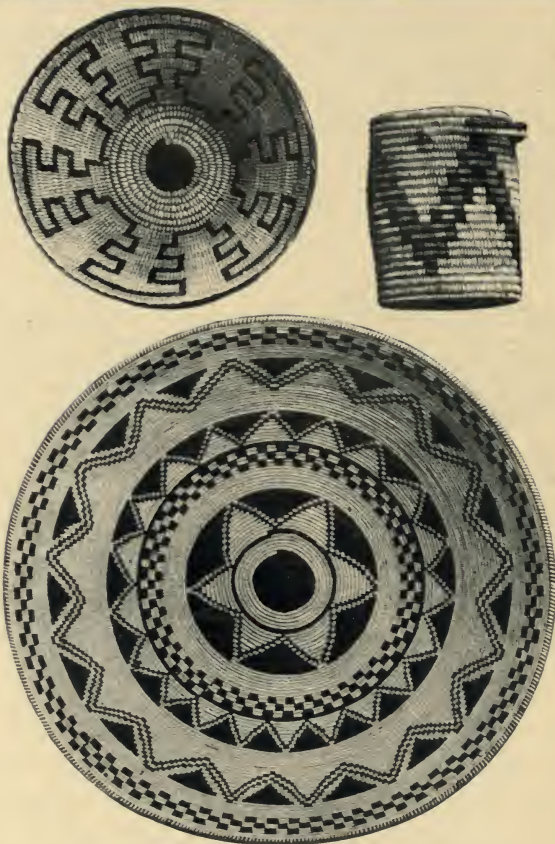
TILO Strands may be very effectively used with rattan. The basket to the lower right on page 101 shows the use of a braiding made of these Tilo Strands woven with the rattan.



Four ways of making coiled baskets.



*Button hole stitch coil basket and basket of rattan
and Tilo Strands.*



*Pupils will enjoy seeing fine examples of Indian
Coiled Basketry.*

The material used for weaving with the rattan in the woven basket on page 105 is Tilo. A rope was made by wrapping one Tilo Strand over three others. This rope was used for weaving.

Coiled Baskets

SEVERAL varieties of coil are shown on page 104. To make the upper right hand variety, take rattan number 4 or 3. Soak the end until it will coil readily. Use about $\frac{1}{2}$ inch of the end to form into a small ring. Thread a tapestry needle number 21 with raffia. Wrap the raffia around the $\frac{1}{2}$ inch forming the ring and fasten. Then wind the raffia from you twice around the rattan and bring it into the ring. Proceed wrapping twice around the rattan away from you and then bringing the needle into the ring from the back to the front. Fasten the third part of the coiled rattan to the second instead of to the ring, the fourth to the third, etc. When the piece of rattan is used, splice on a new piece of rattan. See splicing on page 99.

The upper left hand coil on page 104 is made in the fashion described above, excepting that there is a multiple coil of four Tilo Strands used instead of the rattan. As the Tilo Strands are soft and pliable and come in even yard length, they form excellent material for coil baskets.

The illustration to the lower right on page 104

shows a rope made by wrapping one Tilo Strand around three. This rope is formed into a coil and sewn with raffia, the thread passing through the center of the rope and not appearing in the completed work. Tilo Strands should be dampened before being made into a rope.

The coil basket on page 105 is made with a button hole stitch.

Have each pupil make a constructive paper cutting to show size and proportion of a coiled basket he would like to make. Teach one of the methods of making the coil explained above.

If decorative design is desired, work in colored raffia to form it.

Fourth year pupils can work patterns of a simple nature into their coil baskets. They will be interested to see beautiful examples of Indian coiled basketry.

See suggestions for coloring raffia in chapter on color on page 119.

Materials Needed in Fourth Year

First Half

1. Rattan.
2. Raffia.
3. Tilo Strands.
4. Tapestry Needle number 21.
5. Easy Dye.

*Fourth Year—Second Half***Braided Coiled Mats and Baskets**

VERY beautiful mats and baskets may be made from sewing a braiding of Tilo Strands and staining the design upon the completed mats.

Braiding Tilo

TO make the three-strand braid of Tilo, take two Tilo Strands. Fold one so that the ends are uneven. Take the folded strand and one complete strand and tie with raffia. You will have three uneven lengths to begin braiding and as the braiding proceeds you will have but one new strand to insert at a time.

Care should be taken to braid evenly as a large part of the beauty of the mat will depend on the beauty of braiding.

When a new strand is to be added, cut the strand ending and the new strand with a slanting cut. Wrap one inside the other and proceed with the braiding.

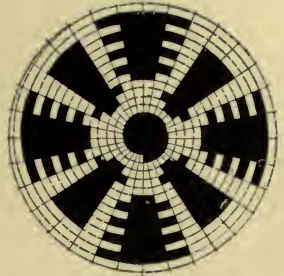
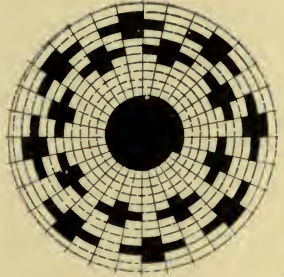
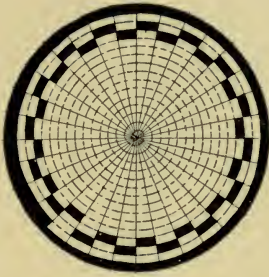
Sew the braiding into a coil as shown on page 104. For the sewing use a Chenille needle number 4 and raffia.

Design for Braided Tilo Mats

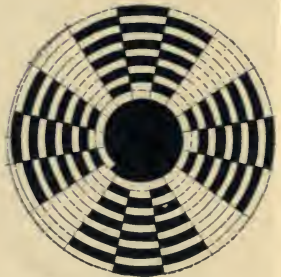
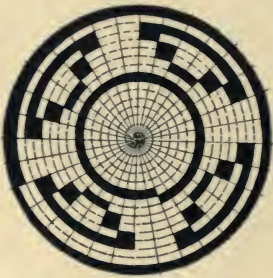
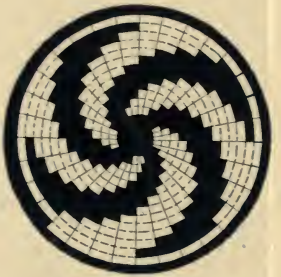
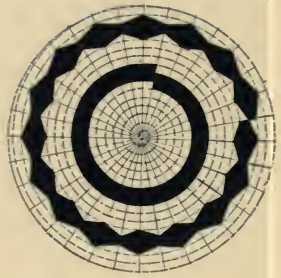
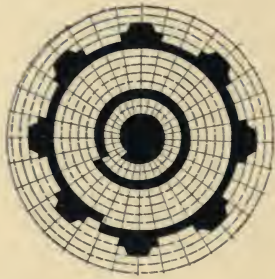
AS Tilo takes color instantaneously the design may be stained with Easy Dye upon the completed mat.



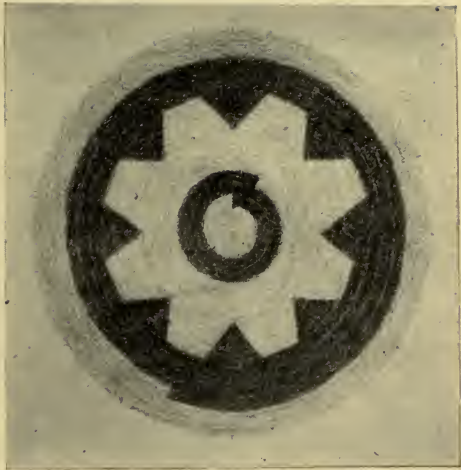
Spiral and design made for mat of braided Tilo Strands.



Designs for mats of braided Tilo Strands made on spiral paper number 2.



Designs for mats of braided Tilo Strands made on spiral paper number 2.



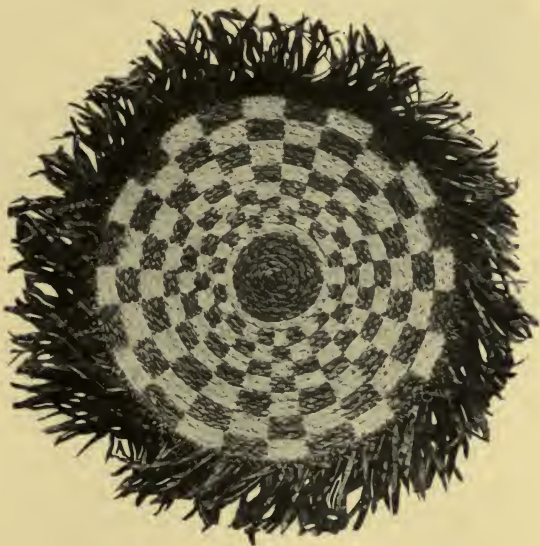
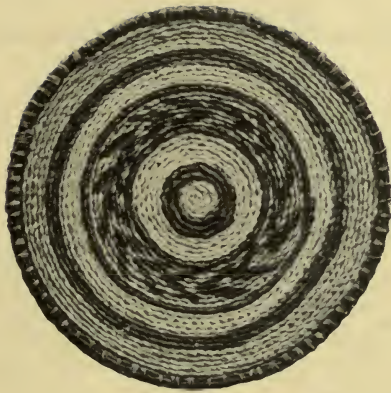
Mat design made on spiral paper and mat of braided Tilo Strands showing method of placing pattern and design partly stained.

It will be well for each pupil to draw a number of designs and select the one he likes best to be stained on the mat.

Spiral paper number 1 is planned for teachers' use and spiral paper number 2 for pupils. The latter has a lightly printed spiral about 8 inches in diameter. Each pupil should be given several sheets of spiral paper number 2. Markings at regular intervals on the outside spire and a cross in the center provide opportunity for drawing radial lines desired. With the provision of spiral paper pupils will very readily be able to make designs.

Page 110 shows the spiral paper and a design worked in the spires. On pages 111 and 112 are given a number of spiral mat designs. Page 113 shows a design worked on spiral paper and a method of placing and staining the design on the woven mat. The spire cut from the sheet of spiral paper was placed over the mat and pins placed to correspond with the markings of the spiral paper. Cord was then placed to form radial lines and used to locate necessary points in the construction. The design was stained with Easy Dye. For the handling of Easy Dye note the directions in the chapter on color on page 119.

The markings of the spire on the spiral paper may be readily used to secure constructive points for radial lines on mats smaller or larger than the



Mats made from sewing braided Tilo Strands. Design stained on completed mats with Easy Dye. In the upper mat the braiding is sewn in such a way that the edge of braiding appears on the mat surface. In the second mat the full width of the braiding is seen.



Baskets made from braided Tilo Stranas.

printed spiral. If the mat is smaller than the printed spiral, draw radial lines on spiral, cut off unnecessary portion, reducing the paper to size of the mat. If the mat is larger than the printed spiral, use a ruler for extending the lines to secure location of the points desired.

Braided Baskets

IT is a short step from the braided mat to the braided basket. Beautiful color effects may be produced by staining the baskets. The baskets on page 116 are made from sewing a three-ply braid of Tilo Strands. The four and five-ply braids are effective in the mat and basket braiding.

Materials Needed for Fourth Year

Second Half

1. Tilo Strands.
2. Raffia.
3. Chenille Needle number 4.
4. Spiral Paper number 2.
5. Spiral Paper number 1 for Teachers' use.
6. Easy Dye.

That thing which I understand by real Art is the expression by man of his pleasure in labor.

Morris

Color

Vegetable Dyes

WHERE it is possible for pupils to experiment in producing vegetable color from roots, barks, leaves, berries and other nature materials, wonderfully beautiful color can be obtained. Salt, alum and baking soda are used extensively in securing vegetable dyes, sometimes to act as mordants and again to produce changes of color.

Husks of the walnut and butternut, coffee, tea and onion produce brown; grape skins and purple cabbage make fine violets; pokeberries a red violet; cranberries a glorious red or an old rose, according to the ripeness of the berries; while nasturtium leaves and tomato leaves give beautiful greens.

Very many of the simple things we pass unheeded will give us beautiful nature dyes.

Nature materials must usually be boiled to produce dyes. As it is difficult for the ordinary school to provide the conditions necessary for making natural dyes, the vegetable dyeing must usually be done in the homes. It cannot therefore be general school work.

Easy Dye

EASY Dye is a very satisfactory dye for school use. It is soft and beautiful in quality and is

so easily handled that the teachers and pupils find no difficulties in its manipulation.

It is put up in tubes. While it is prepared in a large variety of colors, it is not necessary to have many. The colors mix as readily as water colors. Consequently, a few colors will give a wide range of color. Yellow, strawberry, cadet blue, golden brown, seal brown, olive green and black are satisfactory colors for school use.

Cold water only is necessary in the preparation of Easy Dye. It is convenient to have at hand a wide stiff brush (1 inch) such as can be bought at any paint shop for ten cents.

In preparing Easy Dye for any material, squeeze some Easy Dye from the tube into a pan. Stir with the brush. Pour in a few drops of water. Stir again so that the dye becomes a thick smooth paste. Then add the amount of water necessary to produce a liquid of the desired tone.

When colors are to be mixed they may be stirred together in the paste or after the colors have been made into liquid form.

Color should never be thrown away. Leave unused color in the dish. Let the water evaporate and the color dry. Add water to the dry color when you wish to use again.

Easy Dye will color cotton and linen goods, Tilo Matting, Tilo Strands and such materials very

readily. To color woolen materials it is necessary to use warm water.

As Easy Dye has no bad effect on brushes, pupils can use their water color brushes to apply the dye to materials.

To color paper.—Wash with brush and Easy Dye.

To color wooden splints and pegs.—Dip or soak in Easy Dye and rinse in water.

To Color Tilo Strands.—Dip in Easy Dye and rinse in clear water.

To Color Tilo Matting.—Spread Easy Dye on with brush.

To Color Burlap.—Spread Easy Dye on with brush.

To Color Rattan.—Dip in Easy Dye and rinse in water.

To Color Cotton Twine.—Make twine into skeins. Dip or soak skeins in Easy Dye, according to depth of color desired. Rinse in water.

To Color Raffia.—Raffia is the only material mentioned for color use in this book which will not take Easy Dye *without preparation of material*. To dye raffia with Easy Dye soak raffia in a dampened newspaper over night to soften it. Place the softened raffia in the dye bath and allow it to soak from five to fifteen minutes.

Art is the free and adequate
embodiment of an idea, in
a form peculiarly appropri-
ate to the idea itself.

Hegel

Holiday Work

Years 1, 2, 3 and 4

THROUGHOUT the year there are a number of "red letter days" for which teacher and pupils enjoy making special plans.

Simple and effective holiday play-work makes the gala days delightful for the little people, and a "Do something for somebody" plan gives the child the highest pleasure in the holiday.

Sunbonnet Baby Color Cards

THE Sunbonnet Baby Color Cards drawn by Bertha L. Corbett, the Mother of the Sunbonnet Babies, are cards 5 by 7 inches intended to be colored by the children with water color or crayons.

On their first appearance the Sunbonnet Babies were given a hand of fellowship by the children. "The Sunbonnet Babies' Primer" by Eulalie Osgood Grover ripened the friendship and the Babies have become known and loved by children throughout the length and breadth of the land.

In writing to Miss Corbett, Joseph Jefferson said: "You have attained the same result in your pictures that I have when I turn my back to the audience; then each individual fashions my expression to suit himself and pats himself on the back at

his satisfactory result. When you hide your baby's face by a bonnet you pique the curiosity of your audience, and at the same time each person puts the face of the baby he or she loves within it; thereby you hold the interest successfully."

One of the charms of the Sunbonnet Babies to the children has been that something is left out for the imagination of the child to fill in, so that he creates a part of the picture.

In the outline sketches of the color cards, there is something more left for imagination and creation. The color of the costumes is to be decided upon, and the color of the sky, ground, sea and shore.

The effort to produce color harmony in these little sketches is a lesson of decided art value. While painting the pictures children will be interested in the color sketches of picture books, and teachers will have an opportunity of showing good color in the picture books and magazine articles illustrated by such artists as Jessie Wilcox Smith, Elizabeth Shippen Green and others who are giving us child sketches in color harmony so beautiful as to be a joy.

When with laughter and song, with flower and dance, we usher in the May, children of first and second years enjoy the Sunbonnet Babies' May Day Card.



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The May day



Sunbonnet Baby Color Cards No. 10 Albinus, Mottson & Green, Publishers, Chicago

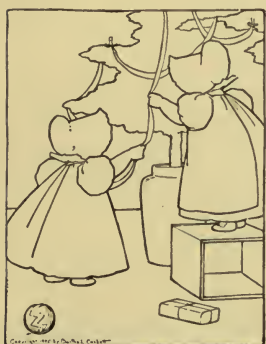


Copyright 1914 by Dutton & Co. Inc.

Thanksgiving Day



Sunbonnet Baby Color Cards No. 9 Albinus, Mottson & Green, Publishers, Chicago



Copyright 1914 by Dutton & Co. Inc.

The Christmas Tree.



Sunbonnet Baby Color Cards No. 7 Albinus, Mottson & Green, Publishers, Chicago



Copyright 1914 by Dutton & Co. Inc.

Greeting.



Sunbonnet Baby Color Cards No. 11 Albinus, Mottson & Green, Publishers, Chicago

Miniatures of four of the Sunbonnet Baby Color Cards.

When, after the harvesting, a day is appointed to offer thanks

“For peace and for plenty, for freedom, for rest,
For joy in the land from the east to the west.”

the Thanksgiving Day Card is ready, and when joy bells peal for the Christmastide, there is the Christmas Card with the Christmas tree.

The little gift prepared with loving care makes a very large gift, if the value of gifts is measured by the thought of the giver who works with “a little heart that sings” making a “Merry Christmas.”

For the New Year there is the card with the New Year’s wish. When it is daintily colored, it is an additional joy to make a pretty envelope to hold it.

Four of the series of Sunbonnet Baby Cards suited for use in first and second years are pictured on page 125. The complete series is as follows:

- | | |
|------------------------|-----------------------------|
| 1. A Breezy Day | 7. The Christmas Tree |
| 2. St. Valentine’s Day | 8. Swing High and Swing Low |
| 3. Greeting | 9. Waiting for the Parade |
| 4. Thanksgiving Day | 10. The Mayday |
| 5. The Sea Gull | 11. The Artist |
| 6. The Party | 12. The Snapshot |


Overall Boy Color Cards

AFTER the Sunbonnet Babies received so warm a welcome the Overall Boys appeared.

These color cards are similar in size and treatment to the “Sunbonnet Baby Color Cards” but




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 Milking Time.




COPYRIGHT 1955 BY BERTHA CORBETT

 On the hay stack.




COPYRIGHT 1955 BY BERTHA CORBETT

 Forward, march!



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Come on over! 

Miniatures of four of the Overall Boy color cards

give a pleasing variety. They represent little boys in blue overalls and big sombrero hats doing just the things boys like to do. They appeal particularly to boys and are very appropriate for little gifts when made up in the form of calendars, valentines, or gift cards.

There are twelve "Overall Boy Color Cards" in the set as follows:

- | | |
|--------------------|----------------------|
| 1. In the Hay Mow | 7. The Squirrel |
| 2. Milking Time | 8. Making Valentines |
| 3. Come On Over | 9. Merry Christmas |
| 4. Forward March | 10. Feeding Chicks |
| 5. The Bathers | 11. Indians |
| 6. The Birds-Nests | 12. The Fisherman |

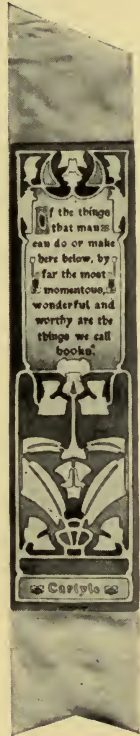
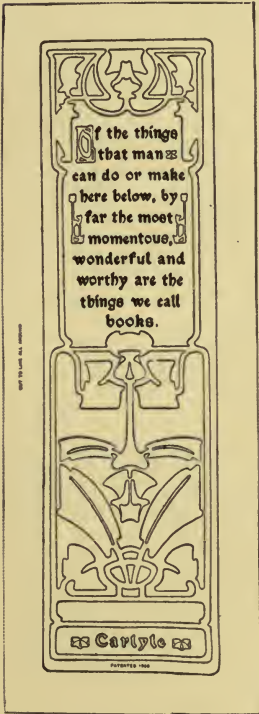
Educational Art Text Sheets

SHEETS known as Educational Art Text Sheets* have beautiful quotations set in beautiful type and surrounded by printed outline designs intended for hand-illumining.

Some of these sheets are intended to be mounted and hung or put under glass with passepartout binding. One text sheet is in the form of a Christmas folder intended to carry a greeting by mail. Another is a calendar. Each year something new is added to the list of Educational Art Text Sheets.

The children in the third and fourth years gain much in pleasure and profit from coloring the Art Text Sheets.

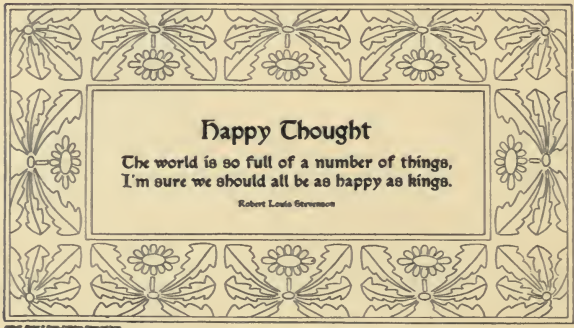
**Patented Feb. 10, 1903, by Wilhelmina Seegmiller.*



A Carlyle bookmark before and after it has been illuminated.



An Educational Art-Text Sheet Folder.





An Educational Art-Text Sheet.

In the upper grades pupils will study the art of printing. They may make an excursion to a printing establishment where the daily paper is being printed or where some book, magazine or advertisement is being prepared. The type-setters, the machines doing their appointed work with wonderful precision and effect, and the arrangements for folding and counting are never failing sources of wonder.

The visit to the printer arousing a new and delightful interest in the art of printing and lettering will be followed by a backward look to the beginning. The writing on tablets of stone, the papyrus roll and the monks with their labor of love devoting their lives to the illumining of parchment will be considered in a new light. The library books will be eagerly searched for the illumined pages showing the old-time work. Then there will be a study of the discovery of printing and the gradual changes and improvements with the recently made machinery as wonderful in operation as any fairy godmother or Alladin's lamp.



Next will come the study of books ; the recognition of standard types: Post Old Style, Priory Text, Old Style Antique and others; the study of initial letters and decorative borders enriching pages; the hand illumined embellishing of the printed outlines; the bookplate—the mark of rightful pride in ownership; the acquaintance with the work of some

For note, when evening shuts,
 If certain moment came,
 The dead off, call the glory
 From the grave
 If whisper from the west
 Shouts—"Add this to the rest,
 Take it and try its worth: here
 Was another day."
 —Edgar Poe

The Year 1907

MONDAY	TUESDAY	WEDNESDAY
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A

Christmas Tree

THE whole world is a Christmas tree, And stars its many candles be. Oh! sing a carol joyfully ♪ The year's great feast is keeping ♪ ♪ ♪





Brook Song

Little brook, sing to me:
 Sing about a bumble-bee
 That tumbled from a lily bell and
 grumbled mumbingly
 Because he wet the film
 Of his wings and had to swim,
 While the water-bugs raced 'round
 and laughed at him.

Little brook, sing a song
 Of a leaf that sailed along
 Down the golden-brashed center of
 your current, swift and strong,
 And a dragon-fly that lit
 On the tilting rim of it,
 And rode 'tween and 'waen't scathed
 a bit.

James W. Wainwright

A Page of Educational Art Text Sheets for Illuminatiton.

of the fine presses, and finally the appreciation of a great art.

In the third and fourth years through the Art Text Sheet the early interest may be aroused leading toward the wider study and appreciation of the higher grades.



A Price List of Materials

For Grades I-IV

Bogus Paper Weaving Mats, yellow, blue, pink and gray, 8 by 8 inches, <i>per hundred</i>	\$ 1.00
Heavy Paper Portfolio, 8¼ by 11 inches, <i>per hundred</i>	3.00
Squared Paper No. 1, 24 by 36 inches, ruled in 1 inch squares, <i>per hundred sheets</i>	2.00
Squared Paper No. 2, 9 by 12 inches, ruled in ¾ inch squares, <i>per thousand sheets</i>	2.00
Squared Paper No. 3, 9 by 12 inches, ruled in ½ inch squares, <i>per thousand sheets</i>	2.00
Squared Paper No. 4, 9 by 12 inches, ruled in ¼ inch squares, <i>per thousand sheets</i>	2.00
*Easy Dye, yellow, strawberry, cadet blue, golden brown, seal brown, olive green and black, <i>per tube</i>	.15
*Todd Adjustable Hand Loom, No. 1 . . . . .	.20
Mounting Board, Loom Size, 9 by 11 ³ / ₁₆ inches, <i>per hundred</i>	3.00
*Carpet Warp, brown, <i>per spool</i> . . . . .	.15
*Cotton Chenille, plain, <i>per pound</i> . . . . .	.90
*Cotton Chenille, mottled, <i>per pound</i>	1.00
Tilo Strands, <i>per pound</i> . . . . .	.35
Packing Needles, 5-inch, <i>per hundred</i>	3.00
Tapestry Needles, No. 21, <i>per</i> “ . . . . .	.40
*Ball Weaving Needles, <i>per</i> “	5.00
Burlap, natural color, yard wide, <i>per yard</i> . . . . .	.25
Veribest Cotton Twine, 4-ply, <i>per dozen balls</i>	1.50
*Carpet Yarn, light blue, dark blue, light green, dark green, red, pink, white, black, <i>per pound</i> . . . . .	.70
Stencils, three designs, Swan, Butterfly and Fir-Tree Motifs, <i>per dozen</i>	1.20
Tilo Matting, <i>per yard</i> . . . . .	.75
Raffia, best quality, natural color, <i>per pound</i> . . . . .	.20
Tilo Mat Edges, square, 6 by 6 inches, <i>per hundred</i>	.50

Tilo Mat Edges, oblong, 6 by 9 inches, <i>per hundred</i>	\$.50
Hexagonal Basket Edges (7 pieces in set) <i>per hundred sets</i>	3.50
*Napkin Ring Oblongs, Machine Stitched, <i>per hundred</i>	5.00
*Needle-Book Oblongs, " " " " " "	5.00
*Rattan No. 1, <i>per pound</i>	1.00
* " " 2, " "	.85
* " " 3, " "	.70
* " " 4, " "	.60
*Spiral Paper, No. 1, 24 x 36 in., <i>per hundred sheets</i>	5.00
* " " 2, 9 x 12 in., <i>per thousand sheets</i>	2.00
Sunbonnet Baby Color Cards (Corbett) 12 in envelope, <i>per set</i>	.15
Overall Boy Color Cards (Corbett) 12 in envelope, <i>per set</i>	.15
Educational Art Text Sheets (<i>Texts with decorative designs to be illuminated</i>)	
1. A Christmas Tree . . . <i>per hundred</i>	4.00
2. Happy Thought (Stevenson) " "	4.00
3. The Brook Song (Riley) " "	4.00
Calendar Text-Sheets (<i>Calendars with texts and decorative designs to be illuminated</i>)	
1. Another Day—Browning, <i>per hundred</i>	5.00
Book Mark Text Sheet	
1. Carlyle, <i>per hundred</i>	4.00
Educational Art-Text Sheet Folder	
1. Christmas (Dickens), <i>per hundred</i>	5.00

Additional Materials

For Grades IV-VIII

Educational Art-Text Sheets,

Large Art-Text Sheets, size 10 x 12.—

1. My Symphony, (Channing) Begonia Motif., <i>per hundred</i>	4.00
---	------

2. A Prayer, (Stevenson), Clover Motif., <i>per bund.</i>	4.00
3. Today, (Keiser), Linden Motif., <i>per hundred</i>	4.00
4. Be Strong, (Babcock), Conventional Line Treatment, <i>per hundred</i> ,	4.00
5. Pippa's Song, (Browning). Abstract, Motif.	4.00
<i>Small Art-Text Sheets.</i>	<i>Bookmarks.</i>
2. Dorothy Wordsworth Bookmark, size $3\frac{7}{8} \times 7\frac{1}{4}$ Ground Cherry Motif., <i>per hundred</i> , . . .	4.00
<i>Plain Text Sheets (without borders), size $8 \times 10\frac{1}{2}$, .</i>	
1. Just Being Happy, (Bennett), <i>per hundred</i>	2.00
2. Pleasant Thoughts, (Ruskin), " "	2.00
3. Waiting, (Bishop Potter), " "	2.00
4. That Was How, (Stevenson), " "	2.00
<i>Calendars.</i>	
Take Joy Home, Ingelow, size 5×13 <i>per hundred</i>	5.00
Colonial Calendar, (7 sheets), (Perkins) <i>each</i> .	.25
Sunbonnet Babies Calendar, 7 sheets, <i>each</i> . .	.10
Sunbonnet Baby's Letter to Santa Claus, (in envelope) <i>per hundred</i>	5.00
Perkins' Outline Pictures—Colonial Series (6 pictures), size $8 \times 10\frac{1}{2}$, <i>per set of six</i> . . . . .	.15
Alphabet Sheets, <i>per hundred</i>	4.00



THIS BOOK IS DUE ON THE LAST DATE
STAMPED BELOW

AN INITIAL FINE OF 25 CENTS

WILL BE ASSESSED FOR FAILURE TO RETURN
THIS BOOK ON THE DATE DUE. THE PENALTY
WILL INCREASE TO 50 CENTS ON THE FOURTH
DAY AND TO \$1.00 ON THE SEVENTH DAY
OVERDUE.

JUL 8 1935

JUL 22 1935

AUG 5 1935

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Saxifraga

