
INDUSTRIAL NOTES.

SAMAR BASKETS OF THE ZAMBALES TYPE.

JOHN F. MINIER, Industrial Supervisor.

Baskets of the Zambales type with a set of outer ribs of blackened bamboo are now made in Samar. These baskets are of small size, not being over 5 cm. in height. They are neat in appearance and are made only of materials carefully selected and prepared. Their popularity has caused the demand for them to be considerably greater than the supply. They are made to nest and as many as five of them may be shipped in a package 15 cm. square and 5 cm. high. Two models of these baskets are shown in the illustration.

The standard measurements of the basket with vertical sides are as follows:

	Centimeters.
Height (including the rim).....	5
Height from standard to rim	3.7
Height of rim	1.3
Width of rim	1
Diameter at top (including rim)	12.5
Diameter at bottom	11

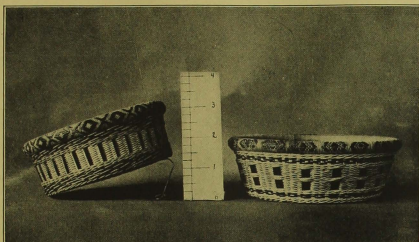
The basket may be made of nito, rattan, bamboo, banban and air roots. There should be 8 spokes 22 cm. long and 3 mm. wide, 16 spokes 10 cm. long and 3 mm. wide, and 32 spokes 8 cm. long and 3 mm. wide. The longest spokes should taper gradually from each end to 2 mm. in width at the center. The basket is begun in the same way as the work basket as shown in Fig. 1, Plate XIV of the July issue of THE PHILIPPINE CRAFTSMAN, except that 8 spokes are used instead of 16. After a measure of 5 mm. is woven

with two weavers, three rounds are made with the triple weave and the 16 spokes 10 cm. in length are inserted. Three more rounds are woven with two weavers to hold the 16 spokes in place. Seven rounds are now made by using the triple weave, after which 32 spokes of the 8 cm. length are added. These spokes should always be bound in place by using two weavers. The weaving is now continued until the desired diameter is obtained. The bottom should be decorated, with spiral and arrowshaped designs, and the like.

The sides are usually begun with the triple weave. After several rounds have been woven 2.5 cm. of the side should be done with two weavers of the same color. 32 blackened bamboo spokes not more than 3 cm. in length and 4 mm. in width are inserted in the triple weave in such a manner that the lower ends of the bamboo are hidden from sight. The tops of the bamboo spokes are now bound in place by weaving around with the triple weave. If a small number of bamboo spokes are used they may be made more than 4 mm. in width. The rim is slightly elliptical and is 1.3 cm. high and 1 cm. thick. When the design has been put on the rim it should be so uniform that the beginning and end can not be detected. Only the finest and best materials should be employed and the workmanship should be of the finest.

CORN DEMONSTRATION IN CAPIZ.

The first corn demonstration in the province of Capiz was held on September 6, 1912, at the provincial



Two Samar baskets of the Zambales type.

capital. The report of Mr. John C. Early, who is in active charge of the corn campaign in that division, shows that the demonstration was a "real corn fiesta," and that it was attended by a large number of the people from outside towns.

A prominent place in the program was given to addresses by the following leading citizens of Panay: Mr. R. R. Hancock, general manager of the Philippines Railway Company; Mr. C. E. Wright, Division Superintendent of Schools; and Mr. Sam W. Sherard, Agricultural Inspector, Bureau of Agriculture. Mr. Hancock spoke of the agricultural possibilities of Panay and told of the results which have been secured in other countries by the extensive and intensive cultivation of corn. Mr. Wright spoke of the general trend toward practical education and of the ever increasing emphasis that is being placed by the Bureau of Education on vocational instruction. He also explained the corn campaign in detail. Mr. Sherard spoke on corn. He explained the nature of the plant, the kind of soil needed, the selection of seed, and the planting, cultivation, and harvest of the crop, as well as

the food value of different kinds of corn. His lecture was illustrated by samples of corn and specially prepared charts.

After the program, the provincial and municipal officials of the provinces were invited to the department of home economics of the provincial school, where a daintily served luncheon of corn products had been prepared for the visitors by the girls of the school. Mrs. Wright, the wife of the Division Superintendent, was in charge of the preparation and serving of the lunch.

Among the prominent visitors at the corn demonstration were the Honorable Francisco Santa Maria, Judge of the Court of First Instance; Governor Altavaz of Capiz; Third Member Arnaldo of the provincial board; twenty-five municipal presidents; and a large number of up-to-date farmers from all parts of the province.

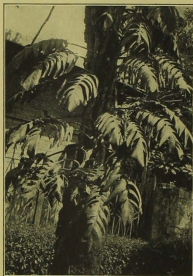
The booths in which the demonstrations were conducted were fitted with equipment to illustrate every feature of corn and its use, from the selection of the seed and means of cultivation to the consumption of the various corn foods.

CULTIVATION OF AIR ROOTS.

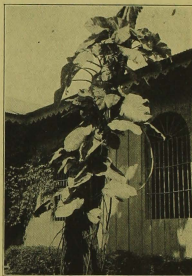
In response to a communication regarding the possibility of cultivating various species of Araceae for the fiber produced by their air-roots, Mr. Elmer D. Merrill, Botanist, Bureau of Science, states that in all probability but two species are adapted to conditions found in and about towns in the Philippines; that is, species that will thrive under cultivation. These are: *Raphidophora merrillii* Engl., which is now found in and about most towns in

plants; that is, those that thrive only in rather dense forests, and in regions where the rainfall is fairly well distributed throughout the year. It is not believed that any of the above can be cultivated with profit in or about the average low country town in the Philippines.

As to *Raphidophora merrillii* and *Scindapsus aureus*, both grow well in regions like Manila and vicinity where the rainfall is interrupted by a long dry season; if attempts are made to cultivate any of these plants,



Raphidophora merrillii Engl.



Scindapsus aureus Engl. and Krause.

the Archipelago, wild and cultivated, an endemic, widely distributed, and well known species; and *Scindapsus aureus* Engl. & Krause. The latter is a coarse vine, with very large, pale-green leaves mottled with yellow or paler green, quite common in cultivation in Manila, and in some of the larger towns. It is a native of the Solomon Islands, but was introduced into the Philippines some years ago; it is never found growing wild here. *Pothos ovatifolius*, *P. philippinensis*, *P. rumphii*, and *Raphidophora perkinsae* all are sylvan

it is believed that these two are the ones that will give the best results. The former is generally known as "tibatib" or "among," but the latter has no definite native name.

Both are very easily propagated by cuttings; it is only necessary to cut the stems into sections, each section showing at least two internodes, and then root the cuttings in wet sandy soil. Naturally they grow on the trunks of trees, though sometimes, in towns, trailing over stone walls; presumably, in practice, the only feasible method of cultivation

will be by planting them about the trunks of shade trees. In very dry weather they will naturally thrive better if occasionally watered. Common "tibatib" grows naturally in thickets, etc., without any cultivation, but will undoubtedly respond to attention, such as the destruction of weeds about the roots, occasionally stirring the soil, watering, etc.

There are no data available on which to base an estimate of the time necessary for the plant to produce long air roots. Plants started from cuttings will in all probability not yield long roots within a year or so, for the stem must make its growth in length before the necessity arises for the production of long roots. Old plants, thoroughly established, will doubtless produce new long roots in a few weeks or at least in a few months. Naturally, in removing the roots, care should be taken not to injure or destroy the plant itself. The air roots are produced from the nodes (joints), and the short horizontal ones serve to hold the plant in position on its supporting host. The much elongated pendulous ones which yield the fiber supply the plant with water and food. Eventually most of these reach the ground and root at their tips. Naturally when these long roots are removed new ones are produced either from the same or from different nodes, and having a well established plant on which to draw for nourishment, the growth of these new roots will be comparatively rapid. It is suspected that the roots make most of their growth in the rainy season.

EMBROIDERY NOTES.

In *Modern Priscilla* for August, 1912: The Irish crochet bag, page 5, is pleasing, but would be better still if the bowknot, a much hackneyed motif, were omitted. A quiet

space of the same background stitch with another small group of roses where the fern stems come together would be less commonplace and would give unity of design. There seem to be too many different motifs for such a small space. The Venetian crochet, page 6, is good. In Fig. 5, however, it would be better to shorten the tabs as they curl and launder poorly when long.

Of the punched work on page 7, Nos. 12-8-5, 12-8-6 and 12-8-4 are the best. The bunch of grapes in No. 12-8-1 looks lonesome and lacks unity of design. The flowers in No. 12-8-7 seem too large for the space allowed for the design. The use of a pot of flowers to ornament a sofa pillow, even though it is of old colonial design, is open to criticism.

Of the crochet pillow tops, page 8, No. 12-8-8 is good; but in No. 12-8-9 the apparent use of a section of the alphabet as the center of interest is giving too much importance to a commonplace thing. Neither of the embroidery designs on the same page is satisfactory. The design on No. 12-8-10 shows a monotonous use of an uninteresting unit and the whole is too compact and hard in line and figure. The arrangement of stems in design No. 12-8-11 is a poor, distorted one. The color scheme might redeem the other units of the design.

Of the gold thread bags on page 9, Fig. 1 is very nice in shape. Fig. 3 would be a little too long for the width when drawn up, and Fig. 4 is not at all attractive; the edge of the flap is particularly poor in shape.

The stole on page 10 is pretty and suggests a new application for Roman cutwork or some of the other hand embroideries.

The embroidery designs on page 11 are pleasing with the exception of No. 12-8-18, which is ordinary. No. 12-8-19 offers the practical suggestion of making the center top

of the cushion of open work; that section of a cushion usually wears into unsightly pinholes long before the other parts of the cushion are effected. No. 12-8-23 would be improved by using a more simple curve for the tendrils and working them closer to or over the edge of the upper boundary line of the design.

Of the underwear on page 12, only No. 12-8-30 is worth considering. This is a rather interesting border. No. 12-8-28 gives the appearance of having been cut off at the top and the detached sprays at the sides show a lack of coherence in design. The flounces, Nos. 12-8-31 and 12-8-35, are pretty; the others are not so good. All the chrysanthemum designs on page 15 are very nice.

The rabbit motif in such an obvious arrangement as used in the designs on page 17 seems better suited to decoration of children's things than to table linen, even when used for the purpose suggested.

The shirt waist designs on page 19 are pleasing in themselves but do not conform well to the structural lines of the garment. An additional spray reaching out toward the shoulder would improve No. 12-8-56. No. 12-8-57 could be placed upon the cloth in a more slanting position in order to give greater width at the top and less at the bottom, and No. 12-8-58 would be improved by adding a little to the length at the bottom.

The designs in *Modern Priscilla* for September, 1912, are very nice as a whole. Only the following changes are suggested:

In the infant's robe, page 5, the motifs in the lower part of the panels are pleasing, but the units in the upper part could have better placing and the pendant basket of flowers seems unsuited to its use; the small sprays with the bowknot would be quite enough.

The design on collar No. 12-9-16,

page 9, is good, but the shape of the collar itself sacrifices good construction to novelty. The "bite" out of the back is displeasing. There is also a lack of correlation between the straight band and the corner motifs in collar No. 12-9-18. The latter motifs are nice and could be repeated in the back of the collar with a more pleasing result. Again novelty seems to have taken precedence over good design.

In the luncheon set on page 17, the edge of the largest doily in No. 12-9-52 is too heavy. Either of the other two arrangements is better.

On page 8, Nos. 12-9-10 and 12-9-14 are particularly pleasing.—S. C. J.

COORDINATION OF SHOP AND CLASSROOM.

The radicals in industrial education plan their courses solely for industrial efficiency, paying no attention to training for citizenship. The conservatives outline their educational policies so as to train for citizenship with no regard for industrialism. The educational policy in the Philippines, however, aims at giving a training that will prepare the pupils not only for civic responsibilities but also for industrial efficiency.

Shop work alone may produce good workmen. Academic work alone may produce good citizens. Our combined shop and academic work will produce good citizens who are at the same time good workmen. To obtain the maximum good out of the combined teaching of industrial and academic subjects, a close coordination of the shop and classroom must be made. Usually, the academic teacher possesses but little knowledge of shop processes and frequently shows even less interest in what goes on outside of his classroom. Unless the shop work receives steady, hearty, and judicious

coöperation in the classroom, the best results will not be obtained.

As an aid toward bringing shop and classroom into closer sympathy, a regular schedule of visits to the shops has been arranged for all academic and drawing teachers of the Philippine School of Arts and Trades. This school contains nine shop departments and nine teachers in drawing and academic subjects. Each teacher visits at least one shop per month and in the course of the nine school months makes a complete round of all shops during the school year. The results of these visits are various. A new teacher learns at once that the shop work is not a mere side issue, and imbibes the spirit underlying the school work in far less time than otherwise possible. The older teachers keep in touch with what is going on in their own school and acquire material for use in their English and arithmetic teaching. The pupils learn that their shop work is of as much importance as their academic work and naturally take increased pride therein. The shop instructors realize that their work is being upheld in every possible way and are thus stimulated to their best efforts. In short, these visits are doing more toward coordinating shop and classroom than any other single feature of the school program.—W. W. M.

NATIVE SEED CORN.

During the past year there has been a general demand for information regarding the relative values of different varieties of corn, of various types of ear, and of seed from different regions. The experience of farmers has been that seed corn brought from one locality to another, will often not give good results the first year in the new locality.

At the Nebraska agricultural ex-

periment station it was demonstrated after a three years' test that local native corn averaged 6.3 bushels more per acre than the corn from Illinois and Iowa. A more striking result was secured later when varieties representing three degrees of acclimatization were grown in a comparative test. One group was grown from prize ears from Illinois and Iowa and produced 39 bushels per acre. The second lot was grown from selections of corn grown in other parts of the state and a yield of 45 bushels was secured. In the third experiment, the seed corn was secured from a collection of varieties grown for several years by farmers near the experiment station. An average yield of 48 bushels was secured from this seed.

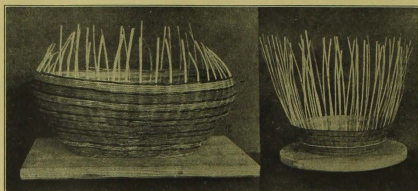
These experiments plainly indicate the value of native seed, and prove that seed from a distance produces much less corn than varieties already acclimatized. On the same principle, seed from different sections of the Philippines would necessarily undergo a process of acclimatization before the best results could be secured. It is to be concluded from this that it will be safer for Filipino farmers to use their native seed than to try importing seed even from other sections of the Philippines.

There is an excellent opportunity for the improvement of acclimatized seed corn by careful selection. If the corn is wisely selected, a good native variety can be developed which will with time improve in yield—N. H. F.

USING MOUNTS IN MAKING BASKETS.

Mounts are very necessary in making certain forms of baskets to prevent the bottom of the baskets from twisting out of shape when the sides are being woven.

A very simple contrivance (see illustrations) is an ordinary board larger than the bottom of the basket



Board basket mounts.

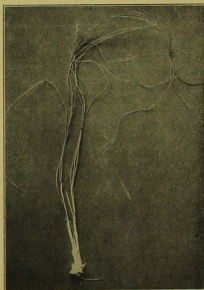
with small holes bored at intervals of about two inches. These may be placed in an elliptical or circular form depending upon the shape of the bottom of the basket to be woven. The basket is secured to this board by strings or cords passed through the holes from below over the rib and back through the same hole, carrying the same cord all the way around. Another advantage of this mount is that it furnishes a plane surface from which the horizontal and lateral measurements of the basket may be taken, enabling the weaver to make a more symmetrical basket than is possible otherwise. In certain baskets like the book baskets and others which have perfectly plane bottoms the board may be fastened inside instead of outside. In this case it must be made the exact form of the bottom desired, as it serves also for a mold in fashioning the basket.—ULYSES S. ANDES, *Normal School*.

"COBBOOT."

The Industrial Museum of the Bureau of Education recently received from Mr. Gil Raval, industrial supervisor for Ilocos Norte, specimens of a grass known in Ilocano as "cobboot." This is used in the schools of the division for making slippers

and seems well adapted for such purpose. It has been identified as *Ischaemum angustifolium* and has also been collected by the Bureau of Science in the Provinces of Cagayan, Nueva Vizcaya, Pangasinan, and in the Mountain Province. In the latter it is known as "pueng" (Igorrot). It is therefore believed that this grass is of general distribution throughout northern Luzon.

In India the grass is utilized for making paper, but such an industry

Cobboot (*Ischaemum angustifolium*).

would not be advisable for the Philippines as a great amount of machinery is needed for a modern paper mill.

Mr. Raval gives this information about cobboot:

"The plant grows best in dry, open, grassy slopes. The average height of a mature stalk is three feet. The leaves are long and narrow. It bears flowers during the months of May and June. In the months of August and September it is in full growth and is cut to be made into rope. Slippers are made of it in the schools.

For rope, the plant is cut at its base; it is dried in the sun for three days and is then ready to be twisted. For slippers, the base of the stalk one foot long is used. The straw to be twisted or woven must be kept soft and moist by wrapping it with banana petioles. The material is used for both the upper and under soles of slippers and is very strong.

It may be added that this grass is woolly at the base and that its flowering spikes are from 2 to 4 inches long, of a light brown color, hairy, and easily blown away by the wind.

Specimens of the plant may be obtained by interested parties on application to the Bureau of Education.

THE NESTING OF BASKETS.

In Volume I, No. 1, of this journal, in the article on Philippine Baskets, the point was brought out that freight rates to Pacific coast ports and on railroads in the United States were by hundred pounds as applied to baskets. The effect of this rate lessens the desirability of making baskets so that they will nest. The General Office of the Bureau is in receipt of a letter from Mentzer-Piaget Co. of Chicago, Illinois, the body of which is quoted herewith:

"Regarding freight.—The ocean

proportion of freight from Manila to the Pacific Coast Ports, is \$0.75 per hundred pounds, and the rail proportion is \$1.50 per hundred pounds to any common point east of the Mississippi River. This rail proportion of course applies only to shipments originating in the Orient; therefore you could figure \$2.25 per hundred pounds as the freight on baskets from Manila, to Milwaukee, St. Paul, New York, or any point designated on the tariff issued by the Trans-Continental Freight Bureau. This tariff we are mailing you a copy of in today's mail, and we hope that it will be of assistance to you.

"In reference to packing.—These goods can either be boxed or baled; our Japanese products usually are packed in wooden cases, while our Chinese baskets are usually packed in bamboo loose woven hampers which are afterwards covered with a coarse woven matting; the ocean and rail rates are the same on either kind of packing.

"In reference to nesting of baskets.—The custom of manufacturing a certain style of basket and nesting one inside of the other is not a good commercial idea, for the reason that the one size is not as good a seller as another. This idea of nesting baskets of one style, one in another, was adopted at the time when our ocean freight was on the cubic foot basis; therefore the baskets that were nested did not cost any freight on the ocean, and for that reason the temptation was great to manufacture a lot of baskets in sizes that are practically unsalable. The samples the writer saw when in Manila were styles that would readily sell, but such baskets as desk baskets, waste baskets used for commercial purposes, would not meet with a ready sale for the reason that this market is already thoroughly covered with products that are more suitable and much lower in price than what could

be produced, we think, in the Philippines. Odd shaped baskets, or work baskets, and fancy baskets in original designs would be much better and would command a better price than baskets that would have to compete with merchandise already in the market."

The superintendent of schools for the division of Isabela has issued a circular giving a schedule and instructions pertinent to the industrial work to be accomplished by the schools of that division. The outline, which is intended to be used in connection with a provincial industrial outline heretofore issued, gives complete and explicit directions as to the manner and time for doing all the industrial work, with the exception of gardening. In some respects this circular is in advance of other division industrial outlines already issued, and the ideas contained are worthy of being included in future industrial outlines for other divisions.

One of its special features is an industrial vocabulary for each grade of the primary course. These vocabularies are in keeping with the work prescribed for the respective grades and, if properly used, the teachers should be able to make the industrial work a basis for supplementary language or conversation drill.

In further carrying out the idea of having the industrial work supplement the academic work being done, each pupil is required to keep an accurate cost tag showing the amount and cost of all materials entering into the making of each article. The measurements of all articles are shown by means of drawings, and as a result of this and the cost tags the pupils will become familiar with costs, profit and loss, and linear measurements, and will learn something of mechanical drawing.

That part of the circular that pertains to needle-work is very complete; not only are the instructions explicit and the measurements exact, but the suggestions regarding the sanitary conditions under which the pupils should work and live are excellent. With the training prescribed, the pupils of the division should be able to do excellent needle-work.

Owing to the fact that the province of Isabela is remote and the cost of transportation high, the price of imported household furniture is excessive. To relieve this condition and to allow the pupils to have training in the use of carpentry tools, the pupils assigned to the primary shops are making two excellent types of chairs. One of the types is known as the bamboo chair, while the other is called the rattan chair. Both of the chairs are servicable and there is quite a demand for them.

It is probable that actual experience will suggest several modifications and eliminations, but the circular as a whole is so well arranged that it will undoubtedly prove of great benefit to the division.—
R. B. R.

PAINT.

It may be useful to know that a gallon of paint will cover from 450 to 630 superficial feet of wood. On a well-painted surface of iron, a gallon of paint will cover 720 feet. In estimating painting to old work, the first thing to do is to find out the nature of the surface, whether it is porous, rough or smooth, hard or soft. A correct estimate on repainting woodwork can not be made from the quantities only; a personal examination ought to be made in every case where there is much work to be done. A great many painters trust to the quantity; the consequence is nothing is allowed

for removing old paint, for scouring, or for stopping cracks.

Painting can be done well and artistically, or indifferently, and few trades allow of greater scamping. In first-class work, after the first two coats have been put on, the paint, when dry, should be rubbed down with pumice stone before the finishing coats are put on. Inferior painting is so common that it has a demoralizing effect on painters of the day. The quality of the material, especially the white lead, has much to do with the permanency. We find painting done on old work without any cleaning, stopping, or even pumicing. A slovenly and in-artistic class of grainers is also met with, who repaint and regrain on work that ought to be well rubbed with pumice stone or sandpaper before the first new coat is laid.

For painting three coats, the following materials are given for 100 superficial feet of new work: Pigment, 8 pounds; boiled linseed oil, 3 pints; spirits of turpentine, 1 pint; the work taking three men for one day. According to Saxton, 45 yards of first coat, including stopping, will require 5 pounds of white lead, 5 pounds of putty, 1 quart of oil. The same quantity of each succeeding coat will require the same allowance of white lead and oil. The best materials will last for seven years, but the ordinary painting seldom lasts three.

MALABON, RIZAL, CORN DEMONSTRATION.

A very successful corn demonstration was held at Malabon, Rizal, September 7, 1912. It is estimated that five thousand people attended this demonstration. Corn foods were prepared and served from eight attractive booths, which were well ornamented and so arranged that the public could have free access to them. Corn foods were

served and many recipes were distributed to the public. A "Corn Queen" and an "Indian Girl" were features of the demonstration. The cost of the demonstration was ₱170. The demonstration was attended by the Acting Governor-General, Newton W. Gilbert, and many other officials and prominent people from Manila.

In connection with plans under way in the division of Leyte to prepare and select articles for the carnival exhibition of 1913, detailed rules have been issued to teachers for industrial contests which are to be held in the several school districts of the province. Both municipal and district exhibits have been so arranged that the quality of work done in various municipalities and districts will be judged under several headings, as baskets, lace, embroidery, crochet, plain sewing, abaca work, hand weaving, garden products, and miscellaneous. The preceding articles constitute the main lines of our industrial work as at present organized, and an efficiency classification is to be given on this basis. Ten articles from each heading will be expected from each district and they will be given a weight varying from 5 to 20 points. The municipality receiving the largest number of points under the industrial groups previously mentioned will be awarded a trophy known as the "Casalla Banner" in indication of superior industrial efficiency and attainment for the division.

CORN DEMONSTRATIONS IN PALAWAN.

Plans have been made for holding large provincial corn demonstrations in Cuyo, Puerto Princesa, Coron, and Agutaya. From these central points the demonstrations will branch out into the small municipalities and barrios.

REPAIR PARTS FOR PLANES.

For some time past it has been noted that many of the trade schools and school shops have been handicapped by the lack of planes to properly equip the wood-working classes. Many planes are lying idle on account of the breakage of some small part which costs only a few centavos.

In order to keep the school equipment up to its highest state of efficiency, the Bureau has decided to make arrangements so that a considerable quantity of repair parts for planes will be kept in stock in Manila.

It will be of interest to note that there are 7,727 planes on hand in the various school shops in the Islands; of these 3,769 are block planes, 1,550 fore planes, 972 jack planes, 267 smooth planes, 980 assorted planes, 143 jointers, 30 combination (universal) planes and 16 circular planes.

During the past year the Bureau has ordered 3,940 repair parts for the above planes.

About the first of September a complete machinery outfit for making shell windows was shipped to Camiling, Tarlac, by the Bureau of Supply, upon requisition from this office. This is the only machine for making shell windows and doors which has been furnished to any of the schools by the Bureau.

Denver, Colorado, opened a trade school last year which is known as the Denver School of Trades. Instruction is offered in carpentry and cabinetmaking, printing and book-binding, painting and interior decoration, plumbing and gas-fitting. Trade drafting, history, mathematics, English, and science are included in the courses. Half of the time of each day is given to shopwork, and the remaining time is divided between

drafting and academic subjects. The school is open to boys of Denver of sixteen years or over who have completed eight grades in the public schools or the equivalent of that time. The enrollment is limited to two hundred during the first year.

The establishment of the school met with the approval of the trades unions and the American Federation of Labor.

The following directions were prepared by the supervisor of needlework in the provincial high school of Leyte. These instructions give definite information relative to standard articles which are made in the schools of that division, and as they may be of value to other teachers and students of needlework, they are published herewith:

EMBROIDERY.

1. Handkerchiefs:

- (a) Ladies'. Cut 12 inches square. One yard is sufficient for 9 handkerchiefs.

Hem when finished, $\frac{1}{4}$ inch.
Draw 3 threads.

Catch 3 threads to 1 stitch.
Number of threads depends on fineness of linen.
Embroidery—single design.
Make one dozen with same design.

- (b) Gentlemen's. 1 m. is sufficient for 4 handkerchiefs 20×20 inches.

Hem, when finished, to be $\frac{1}{2}$ inch.

Draw three threads—catch 4 to 1 stitch.

Initial when certain of purchaser.

For general market do not letter.

2. Table linen:

- (a) Doily sets, round, run 22, 18, 15, 12, 10, and 6 inches in diameter. Plate

doilies, 10 inches, in sets of 6. Tumbler doilies, 3 inches, in sets of 6. Dessert doilies, 5 inches, in sets of 6. Design on each doily of set should be the same.

- (b) Rectangular or oval. Runners, 60×24 inches, or 72×27 inches. Platter doilies, 27×15 inches, oval; 22×11 inches, oval; 12×6 inches, oval. Tray cloths, 27×14 inches, hemmed; 20×10 inches, 12×6 inches, hemmed; 8×4 inches, hemmed.

Lunch cloth, 34×34 inches, hemmed.

Lunch cloth, 35×35 inches, round.

- (c) General instructions:

1. Use doily linen, or Irish linen, coarse, or Butcher's linen, fine.
2. Use scallop—conventional designs—not close work—sprays, knots, etc.
3. Hemstitch and drawn work; only one row of drawn work.
4. Hemstitch tray cloths and use bobbin lace; width of hems depends on size of piece; hem largest piece 2½ inches, smallest hem ½ inch wide.
5. Draw only three threads unless the hem is double hemstitched, then as many as 6 or 8, depending on texture of linen.
6. Hem tray cloths ½ inch and use bobbin lace. Do not hemstitch.

7. Lunch cloths may also be finished with patterns of Irish crochet.

8. Tray cloths may be hemmed or hemstitched—two styles.

9. Hemstitch rectangles.

10. Hem rounds and ovals.

11. A hemmed hem should never be more than ½ inch wide. Lace is always placed on top of the hem, never on the edge.

The Sorsogon siesta chair which has been quite popular at the Bureau of Education Carnival and Exposition exhibits of former years has undergone a recent change in design and finish and will be sold in the future for ₱17.50 instead of ₱12.50, the old price.

In using nito straw, a very pretty effect can be secured by scraping away the black epidermis from the sides, thus having a central strip of black and on each side of it a white strip. Another variation consists in scraping the central part. This gives a white central strip and two black strips.

PRODUCTION OF CORN.

A good corn crop throughout the world would mean a production of 2,000,000,000 cavanos. Of this amount the various nations would furnish the following figures:

United States	1,000,500,000
Argentina	200,000,000
Austria-Hungary	200,000,000
Mexico and Central America	200,000,000
All other countries	399,500,000

In connection with the work for the improvement of designs used in industrial work, a set of drawings for dolls' faces has been worked out in the General Office of the Bureau of Education. This has been done in a simple way with no shading and as few lines as possible. Stencils can be cut from them so that the application may be made easy and the result a pleasing and typical Filipino countenance.

PRICES OF PICTURE FRAMES.

Picture frames are made in large numbers in most trade schools and considerable time is lost in estimating the prices thereof as each new order is received. To obviate this delay and to insure uniform prices, the Philippine School of Arts and Trades has worked out a price list of frames, covering all current sizes and kinds of wood. By its use, a prospective purchaser may be informed, quickly and definitely, of the exact price of his frame, and may be assured that the price given is neither higher nor lower than that previously quoted to some one else for a similar frame.

Prices naturally vary with local conditions and Manila prices are usually higher than those prevailing in the provinces. The price list of the Philippine School of Arts and Trades may be of value to other schools in fixing local prices if used as a basis from which a definite discount is made. Any trade school principal desiring a copy of this price list may secure one gratis by requesting the same from the Superintendent of the Philippine School of Arts and Trades.

JUNIOR INDUSTRIAL TEACHER EXAMINATION.

The last civil-service examination for junior industrial teachers was held May 24, 1912. Tests were given

in agriculture, domestic science, woodworking, and ironworking.

Twenty-five applicants tried the examination in agriculture and eight passed. Of the successful candidates, seven had been pensionados at the College of Agriculture and one had been a teacher in Ilocos Sur since 1908.

Twenty-three girls tried the domestic science examination and only four were successful. Two of these were returned students from the United States and two were formerly pensionadas at the Normal School.

Five boys attempted the ironworker's test and only one, a graduate of the Philippine School of Arts and Trades, passed.

All six contestants in the weaving examination failed to make the required grade.

In woodworking ninety-five were examined but only sixteen passed. Of these, nine were pensionados from the Philippine School of Arts and Trades and four were graduates from the same institution. Of the remaining three, one each came from Albay, Cebu, and Pangasinan.

Experience has proved that loom weaving is one of the most useful industries which can be taught to Igorot girls in the Mountain Province. For several years past these girls have been trained in the weaving of cloths in their schools. Now, where the girls have had sufficient training to understand the necessary processes connected with the weaving of cloths on such looms, it is proposed to go a step further and introduce the loom into Igorot homes. After the introduction of looms into the homes, the supervising and other teachers of the Mountain Province will be expected to oversee the work and to assist the girls in securing thread and other materials, as well

as in disposing of their products. It is expected that considerable progress will be made along this line during the present school year.

In the city of Manila over 780,000 umbrellas are manufactured each year. Most of them are of the common type which consists of black cotton cloth, steel spokes, and a curved bamboo stick which has had both ends filled with rattan to keep it from splitting or breaking when bent.

It is easily understood that the steel and the cotton cloth should be imported; but it is even true that nearly every piece of bamboo and rattan which is used in this big industry is imported from China or Japan. Yet an almost unlimited supply of rattan and bamboo, which would be well suited for this purpose, is to be found in nearly every part of the Philippines.

A POLISH FOR WOOD.

The wooden parts of tools, such as the stocks of planes and handles of chisels, are often made to have a nice appearance by French polishing; but this adds nothing to their durability. A much better plan is to let them soak in linseed oil for a week, and rub with a new cloth for a few minutes every day for a week or two. This produces a beautiful surface, and has a solidifying effect on the wood.

IN FAVOR OF SMALL TIMBER.

The statement that a 12 by 12 inch beam, built up of 2 by 12 planks spiked together, is stronger than a 12 by 12 inch solid timber, will strike a novice as exceedingly absurd. An authority on the subject says every millwright and carpenter knows that it is so, whether he has ever tested

it by actual experience or not. The inexperienced will fail to see why a timber will be stronger simply because the adjacent vertical longitudinal portions of the wood have been separated by a saw, and if this were the only thing about it, it would not be stronger; but the old principle that a chain is no stronger than its weakest link comes into consideration. Most timbers have knots in them, or are sawed at an angle to the grain, so that they will split diagonally under a comparatively light load. In a built-up timber no large knots can weaken the beam except so much of it as is composed of one plank, and planks whose grain runs diagonally will be strengthened by the other pieces spiked to them.

In many of the towns on the island of Panay, especially those near the mountains, it is no uncommon thing to find bolos with handles carved to represent the heads of certain animals, notably those of the monkey and tiger.

Since the tiger is not of the fauna of the Philippines, but is found in the Malay Peninsula, it is evident that this custom reaches back to the Peninsula and was probably brought to the Philippines with the Orang Laut in their early migrations or excursions during the first centuries of the Mohammedan domination of the Malay Archipelago. Some fine specimens of this carving can be obtained in Banga of Capiz Province in the barrios of Alfonso XII, Rizal, and Ortega. The same work is done in the hill barrios of northern Antique.

In Miagao, Iloilo Province, there is a large number of blankets or "hammocks" woven of cotton on the old "sicad" hand looms. These hammocks were woven from cotton

raised near Miagao and were used for decoration of arches on feast days.

The designs woven in the cloth are representative of certain stories and myths that probably had their origin long before the emigration of the Borneans to Panay. There are certain similarities in design between the cloths of Borneo and those of these Miagao "tapestries."

The art of weaving this cloth has been lost and the present examples of the art are becoming rare and costly; they are held as heirlooms by the families possessing them.

Buri raffia cloth is woven in the barrio of Bayan, municipality of New Washington, Capiz Province, and has been woven there from time immemorial. Tradition has it that the Island of Panay was originally settled by seven datos from Borneo who probably brought this craft with them. In some of the isolated barrios in Iloilo Province, this buri raffia cloth is yet being woven on the "sicad" or old hand loom similar to that in use among several non-Christian tribes of the Philippines and to the "tumpoh" of the Dusuns in British North Borneo.