
INDUSTRIAL NOTES.

THE PASIG CORN DEMONSTRATION.

The first public demonstration in the present campaign to popularize corn as a human food was held on the grounds of the Pasig provincial school throughout the entire day of August 24. Those instrumental in carrying out the arrangements for the demonstration were the division superintendent and the teachers and pupils of the provincial school and the central school of the municipality. In addition to the features bearing upon the subject of corn, an extensive program of athletics, consisting of basket ball and volley ball contests and group games, also had a place in the day's program.

Judging from the number of people who visited the grounds and sampled the various palatable dishes prepared from corn, and the taste and skill shown in the general arrangements, the demonstration is pronounced an unqualified success.

The scheme of decoration deserves special mention. Corn in one form or another was employed for construction or ornamental purposes in connection with all of the six booths in which the demonstrations were given. Walls and tops were of corn stalks or corn ears, railings were of bamboo covered with corn husks, signs and notices were of strung corn ears and grains and, in one case, of sections of the cob surrounded by kernels. Festoons of strung kernels, plain and popped, adorned the front of the largest booth.

The making of corn bread was demonstrated in one booth, with the work actually in process under the

care of girl students. Large signs conspicuously displayed invited attention to the formula for making the bread and individual recipes were distributed for home use. In an adjoining booth, stewed and fried corn were cooked and served, and printed directions for preparing were given out. Still further on were the booths for the confection and serving of corn and tomatoes and corn mush. In the booth next to the domestic science building, hand implements of American and Filipino design for shelling and grinding corn were exhibited in connection with a series of posters giving pertinent facts regarding the production and consumption of corn in various countries of the world and the possibilities open to the Philippines as a corn producing country. At the entrance to the grounds was the hominy booth, the arrangement and working plan of which were particularly effective. The making of the lye was shown from the stick of guava wood to the completed stage, as well as the actual preparation of the hominy in earthenware pots. On the counter were displayed appropriate forms for serving it, either fried, or with grated coconut, or with milk and salt.

A conservative estimate of the number of people who tasted one or more of the corn recipes, based on records kept in the booths, may be placed at 1,800. In view of the practical character of the work presented, it was hoped that the laboring class in field and town would be drawn toward the demonstration grounds. In this the results were highly gratifying.

The sum of about one hundred pesos was expended for materials used for the construction and decoration of booths and for the products consumed. It has been estimated that this sum will in many cases be ample for holding a corn demonstration in which all the necessary features and details may be presented; for half of that amount, the subject can be satisfactorily demonstrated in one of the smaller towns.

The constant moving of the public to and fro from booth to booth, the interest and enthusiasm shown in all the features pertaining to the demonstration, and the spectacle of Filipino girls appropriately dressed behind the counters all formed a pleasing picture. "Corn Day" on this occasion was a typical out-of-door gathering, in which intelligence, enthusiasm, practical training and social interests all had their parts.—
L. R. S.

PENSIONADOS AT THE PHILIPPINE SCHOOL OF ARTS AND TRADES.

At present there is enrolled in the Philippine School of Arts and Trades a class of forty-five Insular teacher pensionados and thirteen student pensionados, of whom twenty-three are taking their second year's work at this school. Ten of them are classified as Grade VII, thirty-three as first year secondary, twelve as second year secondary, and three as third year secondary. Their shop qualifications vary from no experience at all to graduation from provincial trade schools with several years' additional teaching experience. Their previous training in drawing varies as much as does their experience in woodworking.

When the pensionado system was first introduced, the pensionados were put into one class irrespective of their qualifications. In academic work they were given a review of

arithmetic and English and a course entitled Home and Town Improvement which aimed at teaching in a practical way many things connected with their homes, their towns, and their schools. In shop work and drawing, the work was graded according to individual ability.

In July, 1911, a change was made in the academic program and they were placed in regular academic classes according to their attainments. The work in the seventh grade consists of the prescribed arithmetic with additional material based upon practical measurements, the completion of the grammar, civil government, and reading. The principal text in reading is Parton's *Captains of Industry*, an admirable set of biographies of men like Ezra Cornell, the mechanic, David Maydole, the hammer-maker, Elihu Burritt, the learned blacksmith, and Henry Bessemer, the steel-maker. This is supplemented by class use of daily papers.

The work in the first year secondary consists of algebra with additional work from Cobb's *Applied Mathematics*, Fee's work in English, and reading in *Great American Manufactures* supplemented by current magazines.

In the second year secondary, the algebra and geometry as prescribed by the Bureau is taught in connection with Cobb's *Applied Mathematics*, Fee's course in English is given, "*American Minerals*" supplemented by current periodicals is read, and work in physics is begun.

The third year secondary work is taken at the Manila High School as this class is not large enough to maintain a separate existence at the Trade School. Chemistry, and the prescribed English and mathematics are taken.

In woodwork, most of the pensionados are put into the woodbench department. Many pensionados as

well as the officials from the schools from which they come feel aggrieved because they are not given more advanced work. It has been found, however, that very few have really mastered all the exercises in Blackman's outline. Some claim to have completed all the exercises in their home schools, but a great many of them are unable to do the work as a teacher should, and must therefore review it. Moreover, most of the pensionados must take up bench work upon their return, and a course on the use of wood machines would be of far less value to them than further drill in accuracy in bench work. Individual instruction is given and no one is held back for the rest of the class. As soon as a student demonstrates that he is able to handle tools in a workmanlike manner he is given cabinet work graded according to his ability. In addition to this, he takes up the sharpening of tools including saw filing, staining, practice in wax and shellac finishing, instruction in methods of teaching woodwork, and in many cases, practice teaching.

Advanced pupils are placed in the wood machine shop where they receive a course in wood-turning, use of planer and circular saws, advanced cabinet work, and methods of teaching.

Three pensionados are enrolled in the building course which has been but recently instituted. At present the building class is erecting a reinforced concrete oil house. Two pensionados are studying the manufacture of pottery in the ceramic department.

In drawing, Bulletin 32 is taught in correlation with the regular trade school course. Blue prints of standard designs of furniture are made and furnished to pensionados upon request. Advanced pupils are given practice teaching by serving as assistants to the regular teachers.

Last year two of the pensionados completed the regular drafting course. This year, however, none was recommended by his superintendent for this special work although quite a number expressed their desire to take it up.

In addition to the regular classroom and shop work, the pensionados conduct a literary society in which industrial topics form the basis of the literary activities. In athletics, the pensionados are required to take part in a regular series of group games and many of them are on the regular volleyball and track teams. They also participate in a large degree in the summer inspection visits to various business and manufacturing centers of the city.—W. W. M.

From information received from industrial supervisors and teachers the following industrial notes have been compiled with the object of encouraging the observance of proper sanitary and health precautions, as well as securing a better quality of work in industrial classes.

The work should be accomplished in a sanitary manner and with a proper regard for the health of the pupils. Care should be taken to have the work done where an adequate supply of fresh air will be assured. The practice followed in some schools of allowing the pupils to do their industrial work out of doors should be encouraged both at their homes and at school.

Pupils when working should be seated so as to allow the fullest expansion of the lungs. Their feet should rest on the floor or on a stool and their arms and bodies should be kept in a natural and unstrained position.

They should receive the light under the most favorable conditions.

As close application to certain kinds of industrial work is apt to be trying to the eyes, pupils should not be required to apply themselves for too long a period at work which may cause fatigue from undue strain upon the eyes.

Pupils should wash their hands often. Neat, clean, unwashed needlework is in demand, while careless, dirty, washed articles are not. Even hands which are apparently clean should be washed frequently; perspiration not only stains the cloth and thread, but causes them to become soft and difficult to handle. Perspiration also causes the metal utensils and tools to rust. Particularly in macramé work, or in the making of mats, hats, baskets and similar articles, the hands should be kept clean; it is very difficult to clean the finished articles.

Each pupil should have a measure or rule suitable to the class of work being done. In basketry and other forms of handweaving a measure at least one decimeter long should be made by each pupil. It should be marked off into centimeters and one centimeter should be marked off into millimeters. In sewing classes a tape measure is necessary as it is important that hems and other parts of an article, including the article itself, be of a given size. As an example it may be said that a piece of cloth one yard long and one yard wide should be measured and folded so as to make four handkerchiefs for men or nine handkerchiefs for women. The hem on men's handkerchiefs should be at least 13 mm. (one-half inch) wide, while the hem on ladies' handkerchiefs should not be more than 6 or 7 mm. wide. Without a measure it would be impossible to make these standard handkerchiefs.

Utensils and tools should be kept clean, sharp, and free from rust. In

making baskets dull tools produce "stringy" material or ragged ends. In cutting sewing materials it is impossible to make neat clean edges with dull scissors. In cutting embroidery thread dull scissors cause the thread to "pull" thus making the work uneven or leaving exposed ends. Not only are rusty needles dangerous, but they prevent the pupil from doing neat and clean work.

Before beginning any work, the directions for that line should be studied so that they can be followed in every detail. They are given to aid the pupils and thus make the work easier. The directions given are usually the best and by following them the pupil will avoid the necessity of undoing the work or doing it over again.

Only the best materials should be used. In handweaving the material should be of uniform size, color, and texture. It should be smooth and free from knots and other imperfections. By drying basket materials under different conditions, different shades or colors are produced. As an example it may be said that sun-dried materials produce lighter shades than do materials dried without exposure to the sun. Materials grown in low wet ground are darker than the same class of materials grown on high, dry ground. Materials taken from young plants are often lighter in color than those procured from older plants. Sometimes different shades are produced in sedges by suspending them by the roots with the blades hanging downward, and vice versa. Boiling weaving materials for mats, bags, baskets, and the like in vinegar, lemon juice or sap from different plants produces different shades.

In sewing, the selection of proper materials is of vital importance. First-class work done with cheap

materials is not advisable whether the work is intended for sale or for the personal use of the pupil. Teachers should use great care in comparing the thread to be used with the texture of the cloth; there is a tendency to use thread that is too coarse. In doing embroidery work on cloth of a fine texture it is best to select small delicate designs rather than the larger and coarser ones. Appropriate needles and hooks should be used; it is impossible to do fine work with coarse ones.

Both in hand weaving and embroidery work knots should be avoided unless the design or directions indicate that a knot is necessary. In most cases knots can be avoided in embroidery work by carefully overlapping the ends in the following manner: When the thread is about used up, take up a new thread and stitch it lightly into the cloth within the lines of the design. With the original thread embroider over the new thread for several stitches and then stitch it lightly into the cloth within the lines of the design. The new thread may then be taken up and embroidered over the old. In wrapping the rims and handles of baskets the ends of the material used may be hidden in a like manner.

During the industrial periods the teacher should pass among the pupils so as to detect mistakes and make constructive criticisms. A mistake should be corrected immediately and no work should be considered finished that contains errors. It is a good plan to allow pupils to criticize their own work and afterwards to correct the errors noted by them or by the teacher.

It should be the aim of both pupil and teacher to have each article completed better than the one that preceded it. With such an end in view, a high standard of workmanship for the school and for the division will be maintained.

DARUMACA¹ AND ITS USES.

Darumaca is found in abundance along brooks and at the foot of hills in Ilocos Norte. To-day it is being more and more extensively used as an industrial material in the public schools as well as in the homes of the people. Before American occupation this plant was used solely for tying rice straw and was preferred to bamboo on account of the long internodes of the stem. Occasionally hats made of this material were worn by Christians. Formerly some darumaca rice baskets were seen used by Tinguianes when they came down to the lowland, but where these were produced no one could tell, because in those days there was no market for home made articles such as baskets, hats and homespun cloth. The consumers themselves produced nearly everything they needed.

To-day darumaca is used in all the schools in Ilocos Norte. Hundreds upon hundreds of sun-hats are made in Pangasinan and imported into the Ilocano regions and even into the Cagayan Valley. These hats are finished in two shades, black and deep brown. Both

¹ *Donax cannaeformis*.

Ban-ban (Iloilo, Sorsogon, Albay, Mindoro, Cavite, Or. Negros, Capiz, Pampanga, Bohol, Tarlac, Laguna, Antique, *Ibanag* in Cagayan, Palawan, Occ. Negros, Tayabas).

Darumaca, Darumaka (Zambal, *Ilocano* in N. Vizcaya, Union).

Banay (*Ibanag*).

Bamban (Sorsogon, Ambos Camarines, Union).

Daromaca, Daromaka (*Ilocano* in Tarlac).

Langcuas (*Ilocano*).

Barasbarasan (*Tagalog*).

Aratan (*Gaddan* in N. Vizcaya).

Mattapal (*Isinay* in N. Vizcaya).

Mamban (Leyte).

of these look like genuine nito so that an inexperienced buyer who can not distinguish darumaca from nito is easily deceived. A darumaca hat wears longer than nito, but it costs less. The average price of a genuine nito hat is ₱4, while a darumaca hat of the same style and workmanship is worth ₱1.75.

In basketry, darumaca may be used either for spokes or weavers. It has several advantages over bamboo; it has long internodes, thus giving the surface of the woven article a smooth appearance. It yields four different colors: black, deep brown, light green, and white. If it is to be used for spokes it is always cut when young, for it is then strong and pliable. For weavers, either young or old stems are good.

In order to preserve the strength and pliability of this material, it is necessary to split it into quarters or eighths as soon as it is cut, then dry it in the sun for about a week. It is then ready for future use. If the whole round stem of darumaca is dried, it will wrinkle. The process of splitting will then be difficult, and the color and strength will be impaired.

If a deep brown is desired, scrape off the skin of a mature stem as soon as it is cut, split into quarters and dry in the sun. Begin to split darumaca at its upper end, and not at the base.

To produce white straw, scrape deeply the skin of a young stem, split it into quarters, and dry in the sun as usual.

For light green, the young stem of darumaca is prepared in a similar way, but without scraping off the skin.

If a black color is desired, scrape off the skin of a young stem and smoke it; that is, hold it over a slow fire. Burn a big heap of bamboo sticks covered with the darumaca

skin just scraped off and pass the darumaca many times over the fire. Continue doing this until it becomes black. When the stem to be smoked becomes very well heated, wipe it with a wet cloth. This is a quick way of smoking but the color produced is not very fast. The best way to make the color fast is as follows: Scrape off the skin as usual; split it into eighths and place the splints over a kitchen fire about a yard above the flame. Arrange them in such a way that the parts to be blackened are well exposed to the smoke. Burn stuffs that smoke well. Saleng (pine) and rice straw are good. Keep the fire burning slowly every day for about a week, until the splints are thoroughly blackened.

To prove that the color is fast, rub the colored stuff with a wet cloth. If the cloth removes much of the color from the splint, it is understood that the process is not yet complete and that it is necessary to smoke it more.—GIL RAVAL, division industrial supervisor, Ilocos Norte.

JUNIOR INDUSTRIAL TEACHERS.

At present there are forty-eight Junior Industrial Teachers in the service of the Bureau of Education. Forty are woodworkers, six are agriculturalists, one is an ironworker, and one is a domestic science teacher. It is understood, of course, that many more Filipino industrial teachers are employed by the Bureau of Education, but only forty-eight have thus far passed the civil service examination and have acquired the status of regular Junior Industrial Teachers.

It is of interest to note that eighteen of the forty successful woodworkers are returned pensionados from the Philippine School of Arts and Trades, four are graduates from the same school, and thirty-four have attended one or more sessions of the

Vacation Assembly. The Pangasinan trade school has six of the woodworkers to its credit. Five teachers were trained in the United States. Two studied at Bacolor, and Laguna, Capiz, Palawan, and Iloilo trade schools, have one representative each. One is unclassified.

Of the six agriculturalists, four received their technical training at Los Baños in the University, one was trained in the United States, and one studied agriculture at home in Cuyo after spending several years in the Philippine Normal School.

The only ironworker on the roll is Amado Ignacio who is a graduate of the Philippine School of Arts and Trades and is now an assistant in machine shop practice in the same institution.

The only female teacher on the list is Miss Pastora Sison from Pangasinan who is at present assigned to special work in lace-making and Irish crochet at the Philippine Normal School.

The Second Assistant Director is emphasizing the fact that all pensionados of the Philippine Normal School and the Philippine School of Arts and Trades are expected to take up some industrial courses, and that no pensionado should be excused from this work.

During the first week in September the large annual orders for drawing instruments and supplies were placed. These orders cover all supplies of this nature which will be required for the school year 1913-14, and include a quantity of freehand drawing supplies for girls.

Most of the foreign industrial materials which were ordered by the General Office in the early part of the present year have been received

They will be shipped out upon receipt of requisitions in accordance with circulars which have been issued recently.

REPAIR PARTS OF MACHINERY.

Outside of the larger cities in the Philippines, all workers with machinery, and especially trade school teachers, have had experience in trying to secure extra parts for the repair of machinery. In many cases this experience has included a wait of six months or more for parts that were not kept in stock by dealers here in the Philippines or by the Bureau of Supply, and consequently it has been necessary to order these extra parts from the United States. In the meantime, if the part needed is for the engine, the shop must be shut down for a long period of time. This shutdown would not be such a serious matter in the United States and in some of the larger towns here where milled lumber is available; but in most provinces, and especially in those that are doing a large amount of commercial trade work, the non-use of the machinery for several weeks or months is a serious handicap to the amount of work turned out by the school, as well as to the quality of instruction given. This latter point is explained by the fact that before making any article of furniture the pupil would be required to waste a large amount of time and energy in planing rough lumber.

It has been noticed in quite a number of provinces that the public has come to depend more or less on the school machinery for manufactured lumber. This is a good indication of progress and should be encouraged as much as possible; but it is difficult to build up a large trade with the public where the machinery is liable to be out of order for several months at a time.

In order to promote the efficiency of the machinery in all school shops,

the Bureau has found it necessary to carry a stock of repair parts for machinery in the storerooms of the General Office. These parts were ordered from the United States several months ago, and the engine parts have already arrived, while the parts for other machines are due to arrive in September.

These parts may be ordered direct from the Bureau of Education, using the names as given in the attached list. In case it is desired to order by telegram, reference should be made, to the parts needed by the serial numbers in the first column, e. g., "Machinery part " (filling in the blank by the number of the part desired).

List of parts.

ENGINE (12 H. P., M. & W.):

Note: All of these parts are for the Meitz & Weiss 12 H. P. Engine. Numbers refer to Catalogue No. 8, Meitz & Weiss.

- 1 Governor Weight Pin and Nut, Cat. No. 158.
- 2 Governor Weight Spring, Cat. No. 124.
- 3 Governor Slide, Cat. No. 160.
- 4 Suction Valves, Cat. No. 40½.
- 5 Pressure Valves, Cat. No. 40¾.
- 6 Injection Nozzles, Cat. No. 61.
- 7 Injection Nozzle Tips, Cat. No. 61½.
- 8 Crank Shaft Bearing Bushings (2 to set), Cat. No. 15.
- 9 Crank Pin Bushings, Cat. No. 136.
- 10 Crank Shaft Bearing Washers (2 to set), Cat. No. 100.
- 11 Fly Wheel Keys (2 to set), Cat. No. 88.
- 12 Ignition Balls, Cat. No. 64.
- 13 Lubricator Sight Feed, Cat. No. 97.
- 14 Piston Rings (4 to set), Cat. No. 87.

15 Connecting Rod Piston Pin Bushings, Cat. No. 137.

16 Float Valve Stems, Cat. No. 154.

PLANER (Fay & Egan 24 inch No. 2):

17 Feed Roller, Gears, Boxes and all connections for same as used on the machine.

18 Planer Knives, 24 inch, (2 to set).

19 Tongue & Groove Cutters.

20 Screws for holding planer knives to cylinder.

BAND SAW (Fay & Egan Band Saw No. 155):

21 Guide Roller Bushings.

22 Guide Plates.

CIRCULAR SAW (16 inch):

23 Mandrel, with yoke bearings and 5-inch pulley.

SPEED LATHES (11-inch Putnam):

24 Chisel Rests.

25 Driving Centers.

—B. I.

The General Office is preparing a circular which will provide for more adequate distribution of paper-covered books dealing with needlework. These books will be issued to the division superintendents, in so far as they are available, to be taken and accounted for the same as regular property.

THE USE OF EMBROIDERY FRAMES AND HOOPS.

The needlework editor of the Ladies' Home Journal says in an article headed "First Steps in Needle work":

"The fundamental principle of the art of embroidery lies in the nature of the ground work upon which the work is to be imposed." "Fabrics are made under tension and they come out of the loom smooth and equal throughout." "It is evident

then that if we are to lay a system of stitches over the surface to form another surface as a part of the foundation, we can not do this successfully unless we have it under tension." "Therefore framing embodies the 'first principle' and is absolutely essential to all work." "The embroiderer must rely in the first place on a stretched surface on which to place her stitches, and not on the possibility of being able to overcome the faults of drawing or looping by a hot iron when the work is finished."

He recommends, as the most convenient and scientific way of stretching fabrics, the use of the bar frame; on it the entire linen can be set up at once, and it has many other advantages over the hoop. However, he states that, if one prefers a less elaborate or less professional way of embroidering, the ordinary wooden hoops can be used; the hoop should never be held in one hand, but should be held by clamps so that both hands may be free to manipulate the needle and thread.

Regarding the size of the embroidery hoops used, it is stated that a 12-inch hoop is best for centerpieces and that a 7-inch hoop is best suited for linens to be decorated with small designs, such as doilies and handkerchiefs.—R. B. R.

As an aid to teachers in making out industrial outlines, a part of the industrial program prescribed for the division of Leyte is here given. It is thought that by making a careful study of all the industrial conditions found in a division, definite industrial courses may be prescribed for each grade.

The industrial program of the division of Leyte provides three courses, and all first grade pupils are required to take a double period

in one of them or a single period in two of them. The minimum time allotted to the first grade is sixty minutes daily.

The first years program in detail is as follows:

I. Simple Weaving (30 minutes).

Soft materials as buri, pandan, nipa and tikug.

1. Make book marks, napkin rings, square mat, wall pocket or fan.
2. Make square box or basket; round box or basket.
3. Make card cases or desk trays.

II. Simple Sewing (30 minutes).

Plain sewing; learn to handle the needle; make knot and make the plain sewing stitches; work with coarse material.

1. Teach basting, back-stitching, hemming, overcasting, cross-stitch, button-hole stitch, and sewing on buttons.

III. Simple Abaca Work (30 minutes).

Twisting, braiding and knotting with abaca (or maguëy).

1. Selection of the fibers.
 - a. Similar to the sample chosen by the teacher.
 1. Certain length.
 2. Certain color.
 3. Certain size (fine or coarse).
 - b. Counting of fibers and laying in groups for stitching, twisting and braiding.
2. Twisting a short two-strand cord.
3. Braiding a simple three-strand cord.
4. Knotting; tying the abaca fibers; using the weaver's knot; some of the simplest macramé knots.

In the Fancy Work Album for July, 1912: The designs for sforza lace are poor and the thing itself seems a cheap imitation of the classical. The designs for colored embroidery are very ordinary, except the two corners for covers on page 7 which are pleasing. Among those for white embroidery, the cushion squares on page 9 and the night-dress case on page 13 are acceptable. The Milan lace on page 12 is fairly good but the rose pillow in the same page is very poor.

In Modern Priscilla for July, 1912: The Mosaic cross stitch, No. 12-7-1 promises a pleasing effect, although the unfilled corners give a feeling of incompleteness which would be overcome by adding a small harmonious unit. Except the pillow design, No. 12-7-2, which is very poor, the motifs in the designs on page 6 are well placed but have a compact effect which spoils their grace. This might be overcome by working them in a lighter way than that suggested. The Hardanger patterns on page 7 are very nice with the exception of the placing of the butterfly unit in fig. 6. On a full size collar this same proportion would make the unit too large, and it would be better to decrease the size and use two units across the back and an additional geometrical unit in the center back. This would admit of very nice arrangement at the corners. The trousseau garments, page 8, are pleasing with the exception of the nightgown design which is poorly placed and has superfluous ornament. Also the bands of lace from armhole to yoke in the chemise would better be omitted and the ends of the embroidery spray should be turned upward to fill the space. Another inset of lace over the closing in the yoke would improve the garment. Baby things on page 9 are good, as are also the darned borders on page 10. The

designs for punched embroidery, page 14, are well planned and very pretty but the shape of the reverse is clumsy. The embroidery designs for breakfast caps, page 15, are good, and the waist and bag patterns on page 16 are particularly good. The beauty of the fruit centerpiece, page 17, is doubtful.

The Bureau of Education recently received from Marshall Field & Co., Chicago, Illinois, embroidery goods for the purpose of comparing the work done in our schools with that of other lands. This shipment consisted of marked patterns on night gowns and towels, and of a dozen embroidered handkerchiefs together with a dozen blank handkerchiefs on which similar patterns were to be executed. The work was finished recently and forwarded to the Director of Education who is now in the United States and who will deliver it personally to Marshall Field & Co. The stamper designs were very beautifully executed in the Manila schools. The handkerchiefs were worked out in the province of Sorsogon and as a whole compare most favorably with the originals from which they were made. Many of them are of even better workmanship than the handkerchiefs submitted by Marshall Field & Co.

The school division of Samar is publishing an interesting monthly paper called the Samar Bulletin which is devoted to matters of interest to the teaching force. Among recent items is an article urging teachers and pupils to make war on the large number of flies now infesting the province. Another article speaks of the indifference and failure of the people to co-operate with the local officials in ridding the province

of the grasshoppers that have been doing considerable damage in some sections of the province and asks that the teachers endeavor to explain to the people that their prosperity depends upon their own activity in destroying these pests. An interesting item says that the towns of Sulat and Basey will furnish a collection of mats and nito baskets for a Christmas Bazaar to be held in Kansas City, Missouri, and it is expected that the excellence of the work will prove to be quite an advertisement for the industrial work of the province and develop a broader market for the local products.

The third corn demonstration notice to reach the General Office was from Malabon, Rizal province. The corn harvest in this section comes at such a time that the corn demonstrations must be held early in the school year. In most parts of the Islands, it is probable that a better order for the campaign can be followed out in which the demonstrations will come further along in the campaign.

An announcement received from Malabon advertised a Corn Carnival to be held at "Corn City" (Malabon), on September 7, 1912. The program specified corn demonstrations, music, athletic contests, and then more corn features. The breakfast and dinner menus called for the following dishes:

BREAKFAST MENU.

Corn Mush, Carabao Cream.
Corn Cakes, Corn Sirup.
Corn Coffee, Cream.

DINNER MENU.

Corn Oysters.
Corn Soup.
Corn Meat.
Corn Vegetables.
Corn Bread.
Corn Salad.
Corn Desserts.

A new booklet entitled "Primer of Industry" is being put into the field for use in Grade I. The author is Austin Craig. About two years ago Mr. Craig made a careful study of industrial teaching in the schools of Japan; and many of the ideas worked into this little book are the result of impressions gathered on that trip, although in the main the booklet may be considered as a compendium of the Grade I busy work carried on in the Philippine schools for several years past.

The work is progressive, beginning with stick laying and passing up through such exercises as tablet and tile laying, tangrams, seed and shell work, grass and string ornaments, paper and leaf perforating and sewing, splint weaving, and buri interlacing, to regular hand weaving, involving the making of mats, bags, fans, trays, picture frames, and baskets. The booklet is replete with illustrations and has a pictorial dictionary.

An exceptionally commendable feature is that the materials prescribed for the actual schoolroom work are easily within the means and reach of even the poorest barrio school.—J. D. D.

A general trade school machinery outfit is being forwarded to the Division Superintendent of Schools for Palawan. It will be installed at Cuyo.

The following bulletins and circulars of the Bureau of Agriculture are issued free of charge by that Bureau:

Bulletins:

- No. 7. The Garden. (English and Spanish.)
No. 12. Abacá (Manila Hemp). (Revised.) (English and Spanish.)

Bulletins—Continued.

No. 13. The Cultivation of Ma-guey in the Philippine Islands. (English and Spanish.)

No. 17. Coconut Culture. (English and Spanish.)

No. 18. The Mango. (English.)

Circulars:

No. 3. Cultural Directions for Young Para Rubber. (English and Spanish.)

No. 6. Cultural Directions for Papaya. (Visayan, Tagalog, English, and Spanish.)

No. 7. Coconuts. (English and Spanish.)

No. 9. Directions for Planting Vegetables and Flowers. (Tagalog, Ilocano, Pangasinan, Cebuano Visayan, Bicol, English, and Spanish.)

No. 10. Directions for Planting Forage Seeds and Roots. (English and Spanish.)

No. 13. Rats. (English and Spanish.)

In one of the schools in the south-eastern part of the United States an 11-year old boy named Jerry Moore raised 228 bushels of corn on one acre of land. This is in the proportion of 340 cavans of corn from one hectare. This boy was a member of one of the Boys' Corn Clubs which enrolled some 64,000 boys in an extensive corn raising contest, carried on under the United States Bureau of Agriculture. It is not to be expected that any boy in the Philippines can equal or exceed this record, but each contestant in the present corn growing contest should produce the largest possible quantity of corn from the land cultivated. The boys must know that high yields of corn are the result of careful seed selection, well fertilized soil, and adequate cultivation. Here in the Philippines, the champion corn grower should be a boy who has the assistance of his

teacher in the work. The parents and neighbors of the school boys are watching them in their work with corn, and they will follow the same methods if the results show that it is worth while. From the same area, the corn crop of the Philippines should be double what it now is. No boy should be satisfied with the small yield of eight cavans per hectare which is the average corn yield in the Philippines now.

LOCUSTS IN CEBU AND NEGROS.

The leading corn producing provinces of the Islands, Cebu, Oriental Negros, and Bohol, have recently been visited by swarms of locusts which have devastated the country and along with other things have destroyed much of the young corn crop. The vegetation has been eaten even to the tough leaves of the coconut trees. The locusts traveled in swarms so thick that a man walking a few yards away could hardly be discerned. Leaves of the coconut trees, ordinarily strong enough to support the weight of a boy, were broken down by the masses of locusts which lighted upon them. A rice sack held open and carried along for a few yards through the flying insects would be half filled with a seething mass of locusts.

Wagon loads of these pests have been captured by means of sacks and nets and buried alive. Some of the farmers, with the aid of the women and children, have tried by beating tin pans, waving red and white cloths, and shouting, to frighten off the swarms, but to no avail. The locusts are great travelers, passing with ease over high mountains and frequently crossing from island* to island over sea channels several miles wide.

Coming as it does after a year of excessive drought, this scourge of

locusts will cause great distress in the devastated country. As in most other parts of the Orient, locusts are an article of food in some sections of the Philippines. They are boiled and roasted and form a dish which is well liked by the people.

A corn demonstration in connection with a general industrial exhibit was held in the town of

and normal institutes of other divisions.

On September 1, Bohol led all school divisions in the number of subscriptions received, with about 50. Cebu and Tayabas may also be mentioned among the divisions which have taken an active interest in the matter of subscriptions.

In Bohol an arrangement was



Photo by C. S. Jones.

The masses of locusts broke down the strong leaves of the coconut trees. It is interesting to note that in this picture they do not attack the banana leaves.

Tanauan, Batangas, on Saturday, August 31. One of the attractive features of the exhibit was a unique and instructive display of the growing plants that furnish material for the industrial classes. These plants were shown along with many of the articles made from the raw materials which they produce. Through such displays, the teachers, pupils and general public will become better acquainted with the economic value of the local plants. The plan is offered as a suggestion for the industrial

made with the Provincial Treasurer for placing at Government expense subscriptions for each municipality in the province. This plan has already been recommended to division superintendents and teachers in circular form. Attention is invited to the official statement on page 70 of the July CRAFTSMAN, which treats of this matter.

During the Batangas normal institute, which is to be held at Ba-

tangas from October 7 to November 1, 1912, it is planned to hold an industrial exposition of the best articles fabricated in the schools of the province since the beginning of the school year. In anticipation of this provincial exhibit, local industrial exhibits will be held in each district at least a week before the normal, and at this time the best articles in each line of work will be selected for the provincial exposition.

It is the intention to have each class represented by the work accomplished by it during the year and special efforts are being made to have a full exhibit of first and second grade sewing. During the exposition a committee will be appointed to judge the work of the different districts. This friendly rivalry among the districts should result in a splendid industrial display.

THE NEW COURSE IN SHOP WORK.

Ten thousand copies of a revised course in shop work for primary and intermediate grades are being distributed to all school divisions. Of these, nearly 8,000 copies are to be issued to intermediate shop pupils as a text, and the remaining 2,000 are for teachers and school officials.

This course appears as Circular No. 97 of the current series.

The circular will be used as a text in primary shops during the balance of the school year, or until the new text is ready for issue, probably about the beginning of the next school year. An intermediate text will be issued a few months after the primary text. Both of these will be in book form, well illustrated, and they will doubtless be appreciated by all who are interested in shop work.

Simultaneously with the appearance of Bureau of Education Civico-Educational Lecture No. 8, Corn, the Bureau of Agriculture also published its Bulletin No. 23, on Corn Culture in the Philippine Islands. This bulletin is somewhat more comprehensive and technical than Lecture No. 8, and would be a valuable reference for teachers who are giving this subject special attention. The Bureau of Agriculture is ready to supply a limited number of requests from teachers for Bulletin No. 23.

Corn Culture in the Philippine Islands was prepared by Mr. Sam H. Sherard, agricultural inspector, under the direction of Mr. H. T. Edwards, chief, demonstration and extension division, Bureau of Agriculture.