THE PHILIPPINE CRAFTSMAN

SEPTEMBER, 1914

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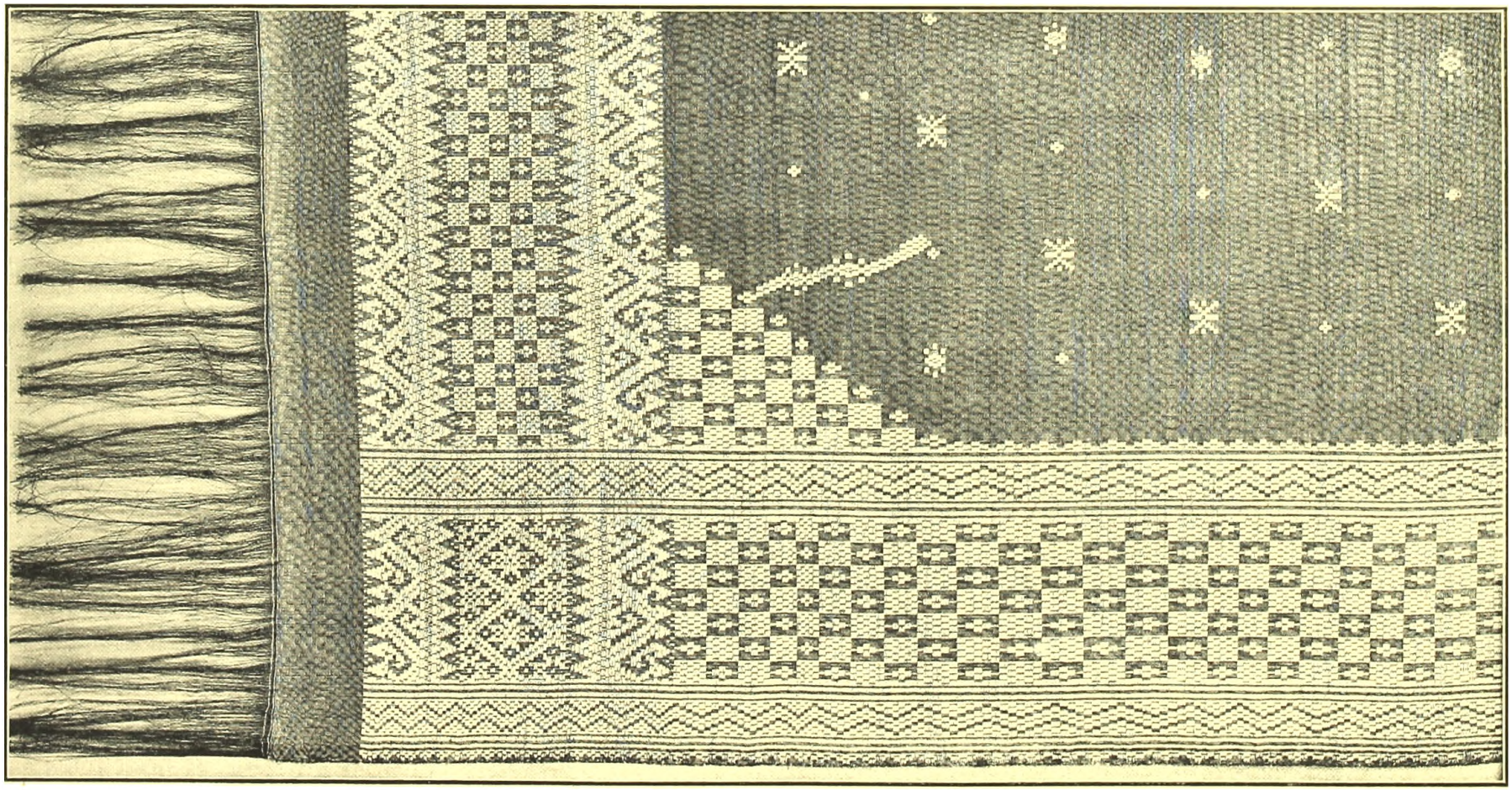

Table runner of hard twisted cotton yarn; hand woven in Java, after a Malayan design.

The Philippine Craftsman

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The successful men are they who have worked while their neighbors' minds were vacant or occupied with passing trivialities, who have been acting while others have been wrestling with indecision. They are the men who have tried to read all that has been written about their craft; who have learned from the masters and fellow-craftsmen of experience, and profited thereby; who have gone about with their eyes open, noting the good points of other men's work, and considered how they might do it better. Thus they have carried themselves above mediocrity, and in striving to do things the best they could, have educated themselves in the truest manner.

—From The Furniture Manufacturer and Artisan for June, 1914.

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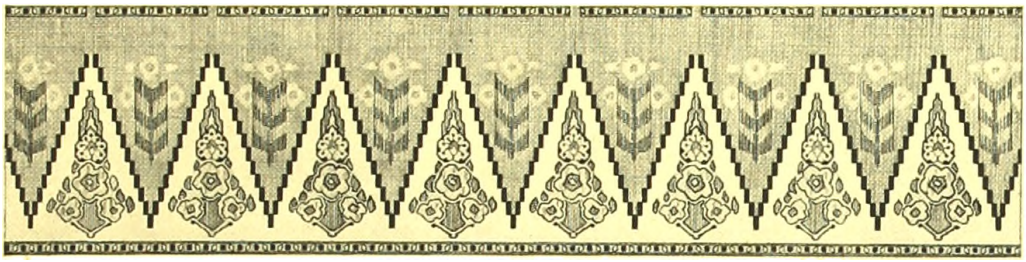


A TEACHER'S IMPRESSIONS CONCERNING SOME JAVANESE HANDICRAFTS.

By SUSAN C. JOHNSON, General Office, Bureau of Education.

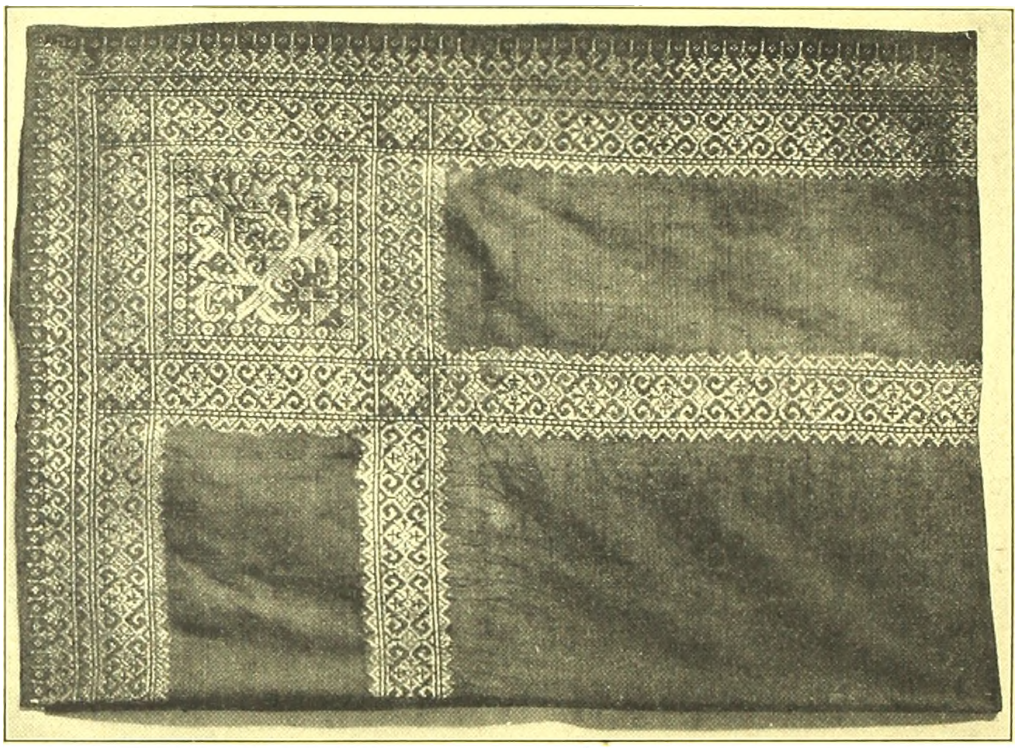
THE steamer on which I was traveling arrived in Singapore December 28, 1913, and on the following day, Monday, I visited the Raffles Museum. Upon presentation of my letter to the director I was given access to all exhibits and to the library. The following days were spent, first, in a general survey, and later, in a detailed study of the articles there which bear relation to the industrial work of the Philippines.

The museum exhibit represents all classes of native craft among which are numerous types identical with or similar to those of the Philippines. I selected 32 articles to be photographed, which included basketry, loom and hand weaving, pottery, metal and wood work, and carved blocks used by Malayan people in the art of wood blocking upon cloth. Special reference to this last process appears later in this report.

I left Singapore for Java on January 3, arriving in Batavia on the 5th. As the result of information gained through conversation with a Dutch official whom I met on my way from Hongkong, I made it a point on arrival in Java to seek out Mr. Jasper. This gentleman is in the department of commerce and labor and is making a study of the industrial work in Java for the Dutch Government. With this purpose in view, I called upon the American consul from whom I obtained a letter to Mr. Hazew, director of education. He telegraphed to Buitenzorg and so located Mr. Jasper for me, gave me a letter to the director of commerce and labor, and also secured permission for me to visit the Batavia Museum on my return trip. The museum was dismantled just then and not open to the public because of the repairs which were being made. I also visited the sales agency in Batavia. This is a government institution and is both a sales and display room, not all articles however being for sale. The agency operates on a very small scale and the work is not of the best quality, although I purchased some spec-

imens of weaving and wood carving which I consider good examples of those crafts.

On the afternoon of January 6, I left Batavia for Buitenzorg, arriving there the same evening. My efforts to see the director of commerce and labor were unsuccessful on the 8th and, as I wished to get my introduction to Mr. Jasper through the director, I waited until the next day when I was able to do so. The interview with Mr. Jasper was most satisfactory, not only because of his sincere interest in industrial work in the Philippines and in the industrial design of the Malayan peoples, but also because of his being the one person in Java, probably, who is



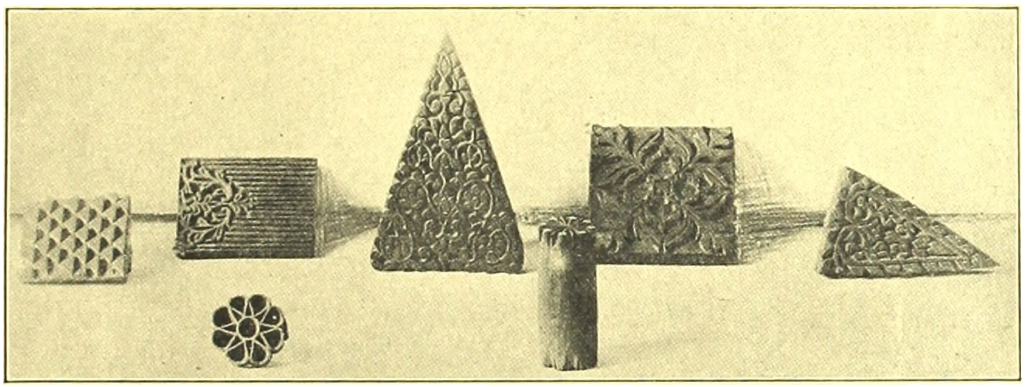
Sarong from Palembang, Sumatra, designed in gold on brown cloth.

entirely familiar with the craft work of the Dutch East Indies. He gave me a copy of his letter to the Bureau of Education which I had not seen, showed me his books which have been published on basketry and weaving and the manuscript of those for the other crafts, listed the places I should visit, and gave me letters to several people who could be of assistance to me. Mr. Jasper also expressed a desire to keep in touch with the development of the work in the Philippines. The next morning, the 9th, I continued the trip through Java.

Little basketry is made in Java, this craft being followed for the most part on the other islands. However, there is a

private industrial school at Tusic Malaya where rattan basketry is taught and I went there to see the work. I found that the school was closed but was able to see the articles which had been made and purchased several models. The school is self-supporting, I understood, and I was impressed by the excellent quality of the work and the very low sale prices. The shapes were satisfying, the ornamentation very simple but very good, and not a single article was poor or shoddy in technic or design. The whole emphasis seemed to be put upon quality rather than the quantity produced.

The next day I proceeded to Djockja and Solo. These towns being located in the district inhabited by the true Javanese people, it is there that we find the native crafts of Java still practiced to a larger extent than elsewhere on the island. I reached Djockja on the evening of the 10th and the next morn-



Stamps for printing patterns on cloth.

These stamps are made from wooden blocks and came from Pahang, Malay Peninsula.

ing presented my letter from Mr. Jasper to Mrs. Terhorst who is the head of quite an extensive craft business there. The articles produced for this business are designed and fabricated by native artisans under the guidance of Mrs. Terhorst and other Dutch ladies. The concern is a private one and has no Government support; it is furthermore a thriving, prosperous business and is recognized as a real art depot on a good commercial basis. All the various arts and crafts of the Dutch East Indies were represented—woven fabrics from Java, Timor, and Bali; wood carving and metal work from Java and Bali; stone and leather carving and "batik" work from Java. Practically no basketry was exhibited, as it appears that very little has been done outside of the work at Tusic Malaya toward commercializing this craft.

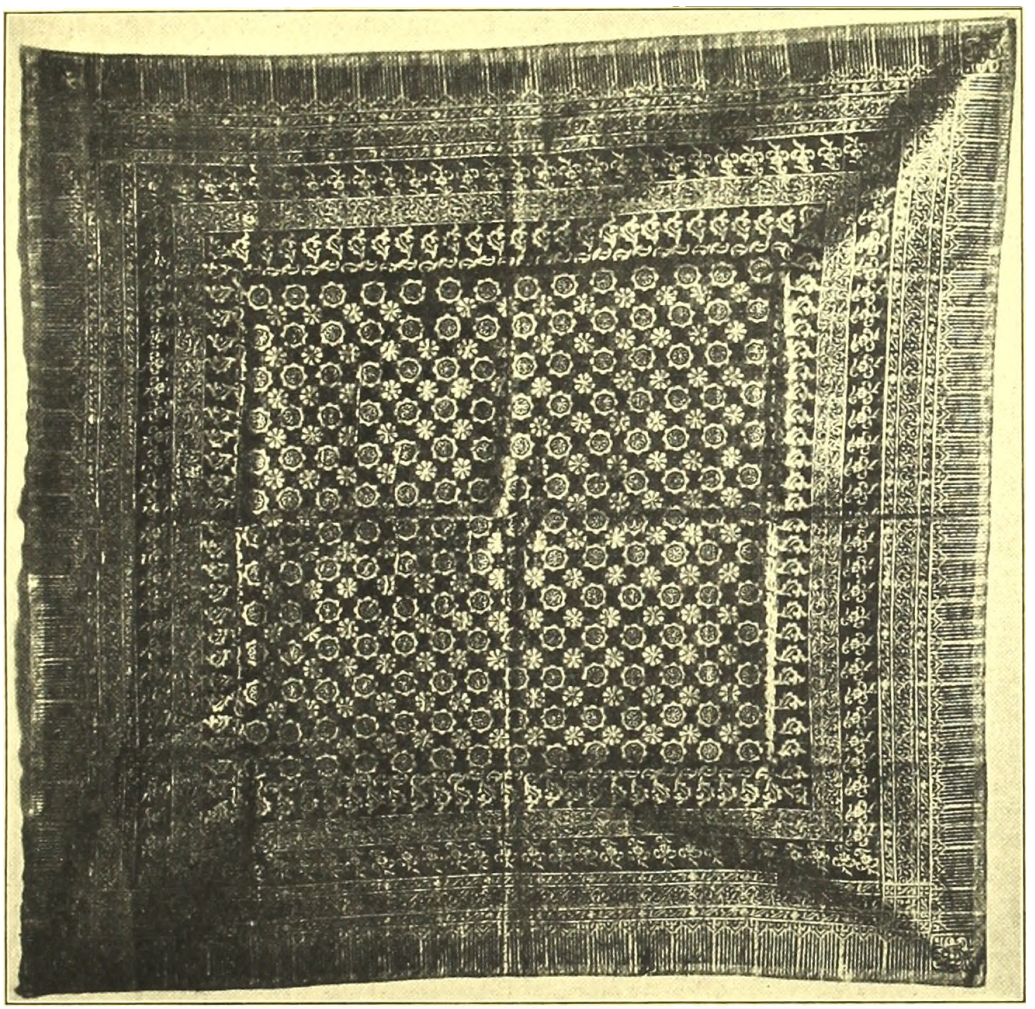
The batik work is an interesting process and it is of great

commercial value to Java but not suitable in any way for use in the Philippines. It would be profitable only where the very

Silk sarong with very rich red ground and figures in purple, green, white, yellow, and red brown; From Bali, Dutch East India.

cheapest labor was obtainable and its local value is due to adherence to ancient custom in dress rather than to the intrinsic

value or beauty of the article itself. The colors used are all from natural dyes, mineral or vegetable, and the tones are very rich and soft. It is interesting to note that the Chinese in Java make use of a rapid and cheap way of producing batik cloth through a combination of the wood-block and batik processes. This however, like most short cuts, results in a poor and inferior quality, very shoddy in effect.

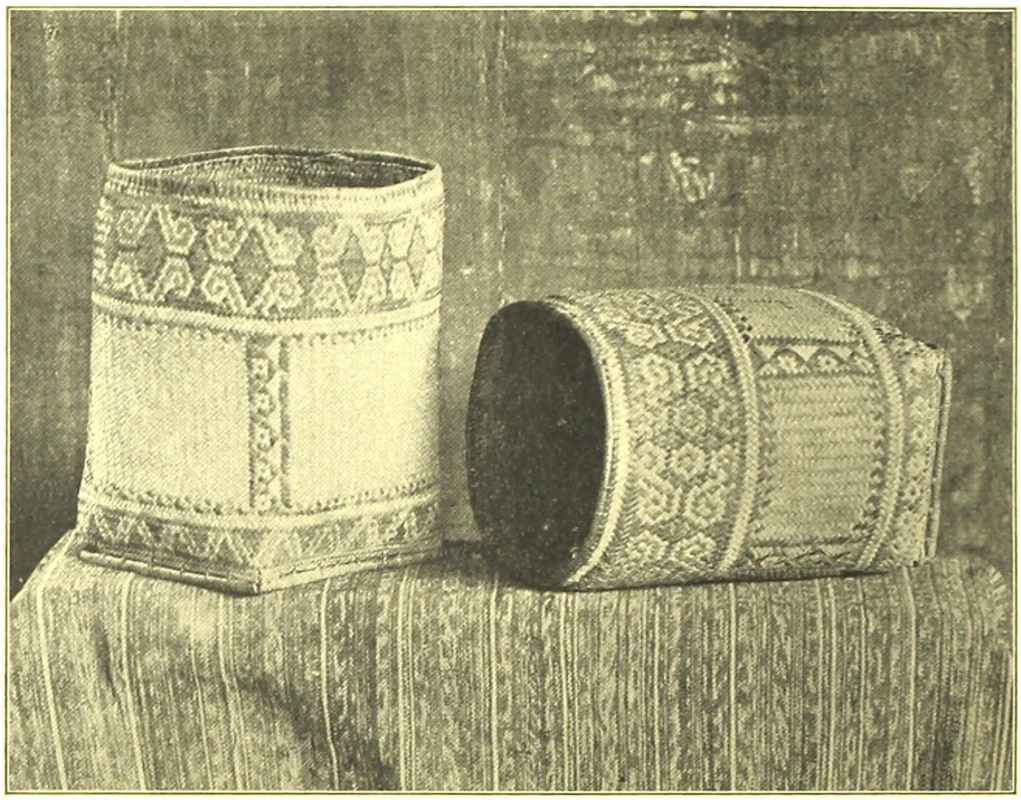


Cotton cloth from Bandur, Kaula Langat, Malay Peninsula.

The design is stamped in gold on dark-blue ground. (See Wood blocks.)

The other lines of work all showed many excellent examples of a native craft turned to good account in the production of articles for present-day commercial use. The knowledge of working in silver, gold, and brass, which was formerly applied to the decoration upon arms and utensils suited to the demands of native life, now serves for the production of cigarette boxes, table bells, vases, bowls, and other articles of modern commerce.

Many of these are exceedingly beautiful in both the constructive and the decorative design. The carving and painting of stone and leather, the former employed in the decoration of the temples and the latter in making the "wayang" figures used in certain semireligious rites and the decoration of ancient books, are now the means by which small ornaments and articles of utility are made and decorated. The belts, fans, candle shades, bookmarks, card cases, hand bags, needlebooks, and numerous other things made of the carabao leather, carved and



Silar leaf box from Java.

painted with wonderful skill, are beautiful articles. There is much gilt and many bright colors used, but these are always harmonious and a very rich effect results. The art of horn turning is also utilized here and the polished horn used in combination with the leather is most attractive. None of the primitive arts are developed to better advantage than the weaving. The woven tray cloths, slipper tops, tablecloths, bags, and cushion covers are all truly artistic productions. Excellent wood carving, also an ancient native craft, appeared upon boxes, cigar holders, flower tubes, and other articles of modern shape and purpose.

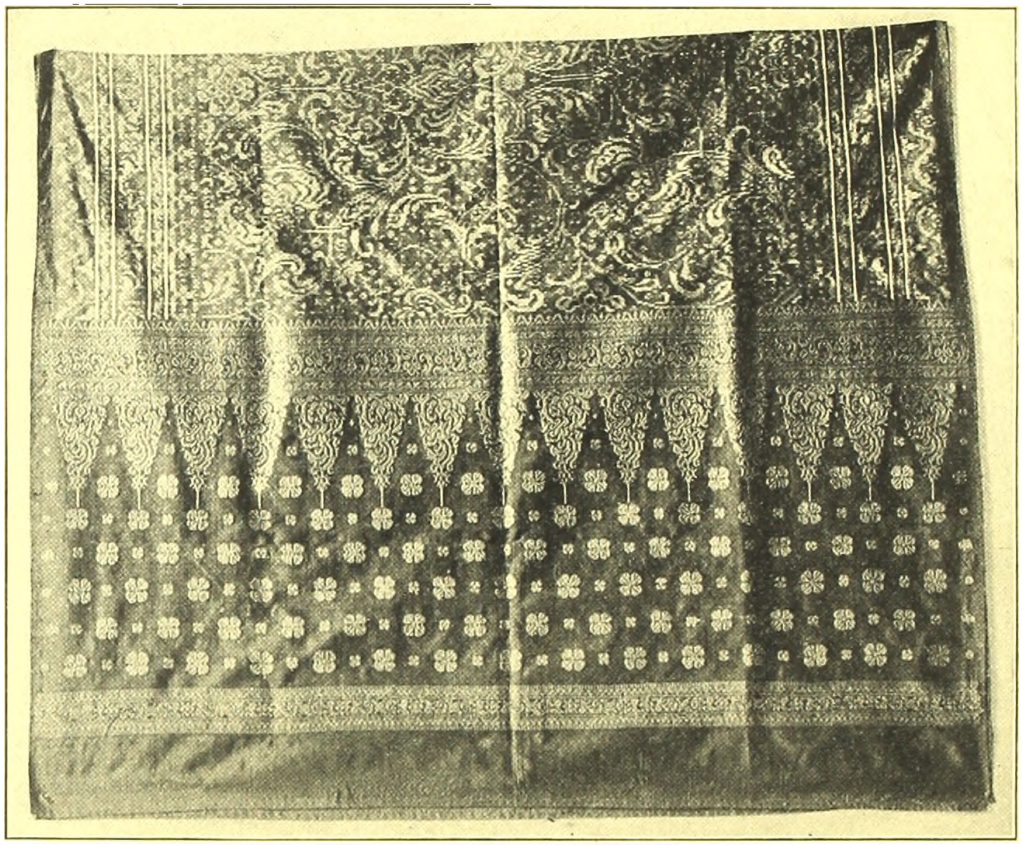
While the prices at this store were higher than those charged by native dealers and at the sales agency in Batavia, the articles for sale were of such excellent workmanship that the difference in price was justified and also this was low compared with the cost of such things in the United States. The designs applied are adapted from native ornament by Javanese artists, those upon the woven fabrics being taken largely from the old sarongs and head cloths and those for the batik, wood, and metal work from the decorative design which was an expression of the religious

Sirih pouch from Timor.

worship of the people. The designs retain the Javanese style, which is distinctive, and are pleasing without exception. Here again, as in Tusic Malaya, I was impressed with the excellent workmanship and the evident appreciation of the beautiful. Mrs. Terhorst gave the better part of a forenoon to explaining the source of designs and the processes employed in the different crafts. She pointed out that all of Javan decorative art was greatly influenced by the religion of the people and that the designs used in central Java were largely those from the temples. I decided, therefore, to visit the most famous temple ruin, the Boroboedoer, where the study of this monument on the

following day helped me to gain some appreciation of Javanese art.

On the way to Boroboedoer I stopped at a small village where one of the main industrial products was a wide belt worn universally by the natives. This was produced by applying cross-stitch embroidery to coarse canvas so that a close fabric was the result. The industry is of considerable local value and many of the belts were very attractive in their bright colorings. The belts were fastened with buckles of tin and brass. These were



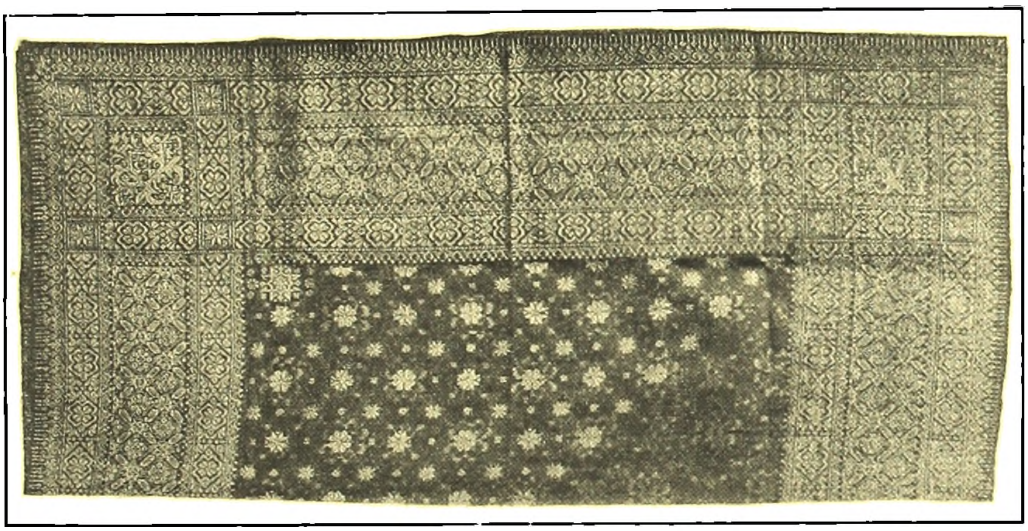
Silk sarong from Palembang, Sumatra.

also a local product and beautifully designed. The whole effect was quite European, but the industry is a very old one among the natives.

Following Mr. Jasper's instructions, I next visited the only Government technical school in Java, which is situated at Ngawi. This is a small school in which the pupils are instructed and partly subsisted at Government expense. The head teacher, who also gives the instruction in design, has received all of his education in the public schools of Java and has a salary of ₱120 per month. For each of the several crafts there are special

teachers who receive ₱36 per month. Again I found the production limited in quantity, but the standard of work high. There were excellent examples of pottery, wood carving, basketry, and applied design. The work in the last deserves special mention. It was largely applied to batik and the colored plates done by the pupils were very attractive. While there were a number of well-made articles completed and more in the course of construction, there was very little to be purchased as most all was being reserved for the approaching exposition to be held a few months later. However, I was able to get a few good examples of simple pottery.

Reaching Solo the next evening I called upon a gentleman to whom Mr. Jasper had given me a letter. The following morn-

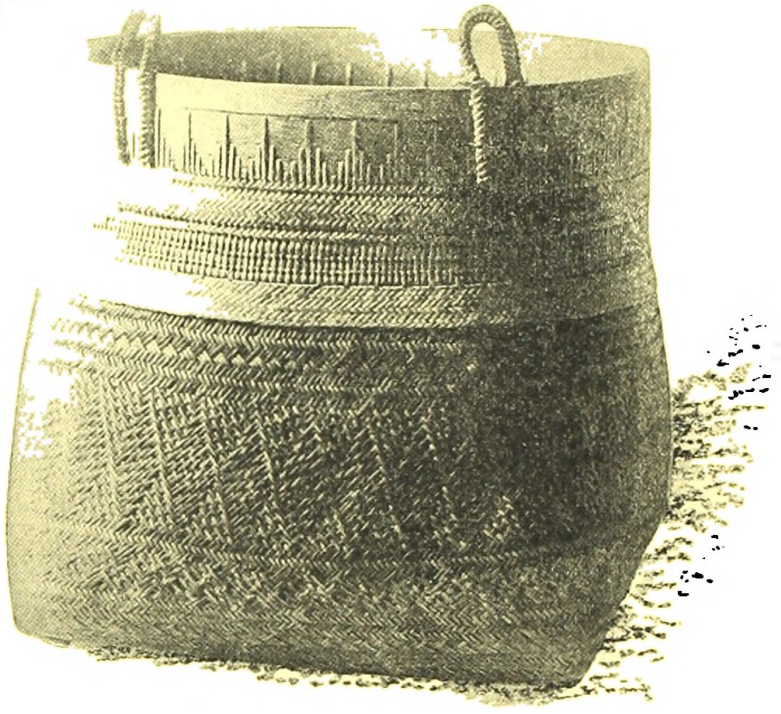


Headcloth from Palembang, Sumatra, in colors.

ing I went to the museum which is a very small one and contained little which bore upon the work in hand. However, I saw some beautiful silk sarongs woven by Javans upon primitive looms and some good examples of ancient metal work. It was interesting to me to discover among a collection of gold ornaments marked "Budda relics," which had been taken from temple ruins of ancient date, a replica of an earring which was a unique shape and peculiar to the Igorots of northern Luzon. My main purpose in visiting Solo was to see an exhibit which was being prepared for the insular exhibition mentioned above. I was disappointed in this because it was not open to the public and the gentleman to whom Mr. Jasper had sent me, the only person there upon whom I could depend for assistance, reported his failure to get permission to see the work owing to the illness of the men in charge of it. There was no other industrial

work of importance except the manufacture of batik which is extensive in Solo. This small town exports 80,000 sarongs of batik cloth per month. Each sarong requires about 3 square yards of cloth. Late that afternoon I left for Sourabaya, reaching there the same evening.

I had not expected to find much of direct interest in Sourabaya as it is a commercial rather than an industrial center. However, through a chance result of visiting the pawnshops, I located the largest and rarest collection of metal, porcelain, and woven fabrics in Java. This was a private collection owned by a Mr. Römer. It consists of 6,000 pieces valued at ₱400,000

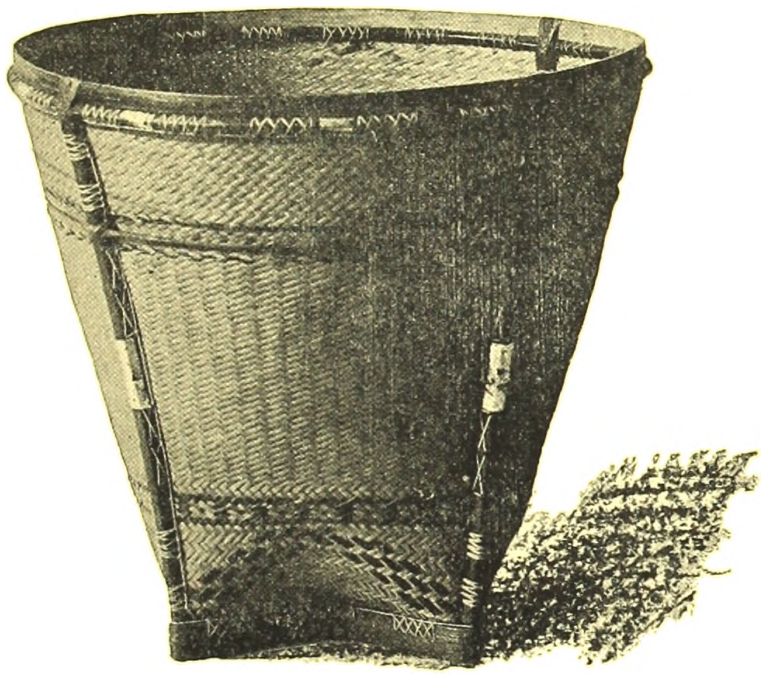


Paddy basket from Kaleka River, Sarawak.

and contains Chinese, Japanese, French, German, Hindoo, Siamese, and Dutch East Indian specimens. Among the latter were many fine examples of metal work and primitive loom weaving. I regretted greatly that the time remaining for me in Java prevented my doing full justice to this collection, but I spent what time I had in sketching and getting photographs of as many designs as possible. In addition to the photographs and sketches from this collection, I obtained several specimens of native fabrics from the pawnshops, but a trip to a village near Tosari in search of basketry proved futile. I am furthermore of the opinion that some time spent in research on the islands of Bali, Timor, and Sumatra would yield good returns,

but owing to the unsatisfactory connections and the inconvenient sailing schedules, I could not make any one of the trips within the limit of time allowed me.

On January 23, I left Sourabaya by steamer to return to Singapore, stopping at Batavia for one day which I spent in the museum. The collection here is a very extensive one where a month's time might well be devoted to the study of Malayan ornament. My limited time and the dismantled condition of the museum resulted in my visit being more tantalizing than satisfying. I therefore made a few sketches and selected a number of articles to be photographed. At Singapore I re-



A rattan basket found in a Singapore museum.

ceived the photos ordered previously from the museum there and had several others taken. I made notes of historical interest and of the color schemes employed and spent the intervening time until my boat sailed in making sketches from museum articles and notes from certain books in the public library. I also visited several pawnshops and batik factories where the Chinese "short cut" of wood blocking was used instead of the real batik process, but I found no specimens of interest.

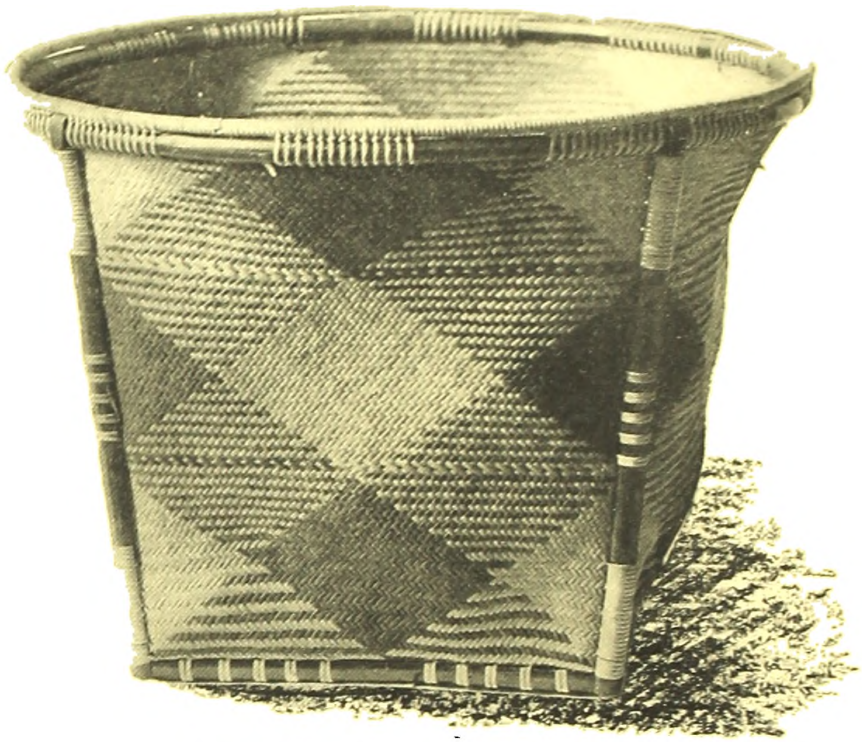
On January 31 I left for Hongkong. While there, I made some study of the drawn work and lace of Chinese manufacture and purchased 38 samples of lace made at Amoy. Some of these have already been copied for use in the primary lace course now

being prepared by the Bureau of Education. Leaving Hongkong on February 7, I arrived in Manila on February 9 having been away about seven weeks.

As a result of the study afforded by the trip I have reached the following conclusions:

1. (*a*) That designs used for crafts indigenous to the Philippines should be derived through the study of the ornament of Malayan peoples.

(*b*) That numerous, carefully selected examples of such ornament should be circulated among the teachers and industrial supervisors in the employ of the Bureau of Education in order



Malay basket from Sarawak, Kanowit tribe.

Black and white plaid with upright supports, top and bottom rims of reddish-brown bamboo.

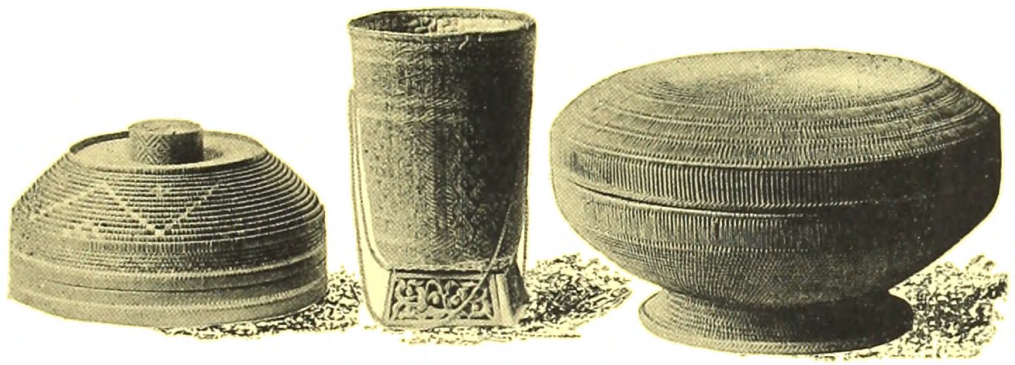
that they may become familiar with the style of Malayan ornament.

(*c*) That since there appears to be no book published which deals primarily with the historic ornament of Malayan countries, and as examples of such ornament can be found only in museums, private collections, and in the illustrations in books devoted to ethnological subjects, the examples which have been collected by the Bureau of Education should be compiled along with such descriptive and historical notes as can be assembled, and the whole put together in convenient form for circulation. This collection already contains a considerable number of illustrations

and specimens of Malayan ornament applied to the several crafts, and it should be augmented as much as possible, as the style can be understood only through the study of a large number of examples of the same nature.

2. That designs to be executed in the schools should be simpler, easier, and carried out with better technic than heretofore, and that certain more intricate designs should be executed by expert craftsmen for exhibition purposes and as incentives to more ambitious work.

3. That the crafts of metal work, pottery, weaving, and wood carving, including bamboo carving, should be fostered and encouraged in the public schools of the Philippines to a greater extent than has already been done. The metal work of the Moros shows many specimens no less beautiful than those which are being turned to good account commercially in Java. I have



Coiled basket of flat bamboo, coils wrapped with grass.

This basket is in beautiful color tones of gold and yellow with stepped triangles, in upper part, of green, and border lines of brick red, gray, brown, and black. Brown and green squares and triangles are used in lower part of basket, with harmonious borders.

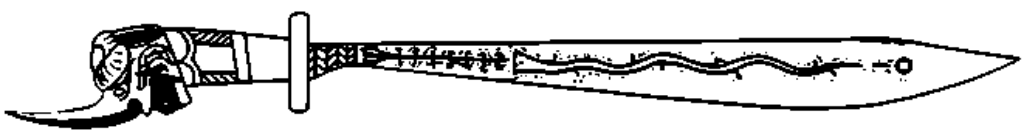
seen some excellent examples of wood carving by natives of the Philippines, but almost no results worth while in the few attempts made to produce commercial articles through this craft.

4. That what has been done in Java in fostering loom weaving could be emulated profitably in the Philippines. Since the use of both the primitive loom and the improved foot-power loom, with and without the flying shuttle, is common in both countries, no mechanical difficulty should be in the way. Much of the cloth woven now by the people of Mindanao, Panay, and northern Luzon shows the mastery of quite as difficult mechanical problems as those involved in producing the most attractive loom products in Java. There would remain only the necessity for directing the energy of weavers toward profitable results. Neither would it be necessary to seek out new designs as many of those already in use have much merit. In Iloilo it would perhaps

not be advisable to deflect the lines of the weaving industry from those already established, but in northern Luzon and Mindanao, where social conditions are different, doing this would contribute to the betterment of the industrial conditions. The technical knowledge and the designs which the people there already have could be applied with little difficulty to the production of just such good and salable articles as one finds in Java and Sumatra and which result from turning to account a knowledge of the crafts indigenous to the country. This movement would be expedited, I believe, if the technical instruction were given by the old native craftsmen instead of by novices in the crafts.

Besides the weaving and batik processes, other means of decorating cloth which were known to early Malayan peoples are by the wood-block and tie-and-dye methods. The carved blocks used for the former bear beautiful designs and the cloth decorated in this way, either alone or in conjunction with woven designs, is exceedingly attractive. It is a simple process and one productive of quick and pleasing results. The tie-and-dye process is too tedious a one to be practicable for modern use, but the same soft outline and good effect can be secured by stenciling the design on the warp before the woof threads are woven in. As both the Chinese and Japanese employ the wood-block and stencil processes, especially the latter, in the manufacture of modern textiles, it would seem that no question remains as to their being practical.

The articles purchased for the Bureau of Education Museum include photographs and specimens which illustrate the points made in this report. Samples of pottery, basketry, wood carving, weaving, carved leather, batik, and wood blocking are represented.



SOME NOTES FROM JAVA.

TWO countries so closely allied by ties of ancestry and similar customs must inevitably come together at some point of contact. After many years Java and the Philippines again touch in their common interest and endeavor to bring about a restoration and development of their native arts and crafts and in the friendly exchange of information and materials relating to this work. A very kindly reception was recently accorded to a representative of the Bureau of Education who spent some weeks visiting craft centers in Java, by the Dutch authorities, and facilities were placed at her disposal for obtaining some good samples of Javanese handicraft work and photographs. The Bureau of Education in turn, at different times, has furnished the Dutch authorities with its different publications pertaining to this line of work. This exchange of material and information will be of mutual value and help to enrich the field of knowledge in the two countries regarding these matters.

Among other most interesting material thus far received have been three extensive and handsome volumes upon Javanese arts and crafts donated to the Bureau by Mr. J. E. Jasper, the leading authority in that country on its native industries. Mr. Jasper recently published in a Batavia paper, the "Java-Bode," of June, 1914, some impressions occasioned by the reading of a number of THE PHILIPPINE CRAFTSMAN, which are believed to be well worth quoting in these pages. Unfortunately, it is only possible to give selected extracts.

From the Philippine Islands I have just received the March issue of the well-known art and trade publication THE PHILIPPINE CRAFTSMAN, which contains a beautifully illustrated article with a detailed account of how the fancy basketry made by the Filipinos is made suitable for exportation to the world markets.

In Asia, Japan has made such progress in the application of the art of weaving baskets, etc., that the products of that industry have, through their artistic character, originality, and special charm, gained fame as an *article de luxe* which can be used also in a western interior. In the big cities of Europe you see here and there the quaint products of Japanese basketry, beautifully lacquered and exquisitely and admirably woven flower baskets, fruit baskets, bowls, etc., which show what superior work a people like the Japanese can turn out by using as a material bamboo, which is not only cheap but available in enormous quantities.

In those parts of Europe where weaving has not yet reached a state of absolute decadence as a popular art, efforts are made, by the State or by private initiative, to raise the artistic and technical standard of

that branch of manufacture along practical lines. In the Scandinavian countries this work has been taken up by societies. In Norway basket making has remained a household art which has been generalized by artistic and commercial instruction. In Italy, important societies and co-operative associations have been successful in opening new markets to the small basket industry of Sicily and the straw-lace work of Sardinia, which is also the product of a simple household industry.

The distinguishing features of the work of the Japanese are its beautiful construction and technical perfection, and with the proper technical and artistic instruction this will be said also of the Indian work, which has the additional charm of its original designs.

That our Indian ornamental basketry can be greatly developed, so far as exportation is concerned, seems evident if one considers the importance obtained by the Japanese work in the European market, and the result of the efforts made in the Philippine Islands to lead the art of basketry into useful channels.

A pottery jar made at Kaula Kangsar Art School, Perak, Malay Peninsula.

The work done in the Philippine Archipelago resembles, in execution as well as in ornamentation, the work done in Sangir. The bamboo work is in many respects the same as that of Minahassa, so far as the motifs are concerned, and boxes made of leaf stems remind one in form and ornamentation of the work done in the Ambon Archipelago.

The instruction given by the teachers of household arts in the Philippine Islands in the line of decorative design and practical work might be called a completion of what the Filipinos of the various islands already know in this respect, and an effort is even made to study the symbolism of old, almost forgotten patterns, in order to make the drawing lessons more attractive.

The task of the instructor consists in the logical evolution of existing forms and motifs, without injury to the original cachet, the artistic pith and marrow of the popular art.

And whenever this can be done under the immediate supervision of a competent artist, whose idea is not a quick transformation, but who en-

deavors to develop the art of the younger workers methodically, in accordance with the acceptable ideas of the older ones, with a view to utility, then it will be possible to imbue the pupils gradually with the necessity of working regularly and correctly, and then the first steps shall have been taken to make the products of the household industries suitable for exportation.

Judging by the illustrations and descriptions contained in the article in the THE PHILIPPINE CRAFTSMAN now under review, they have been very successful in this respect in the Philippine Islands, so far as the artistic feature is concerned.

The illustrations show a number of pretty baskets and boxes in various well-designed forms, with typical ornaments, genuinely Philippine work patterned after the old specimens of which photographic views are also

Brass bowls with Malayan design, from Java.

given, which seem to be perfectly suited for the world market and will compare favorably with Japanese work of this kind.

The so-called Polangui basketry is especially decorative in design and can be easily converted into any useful form. The development of the industry in the Philippines is not unattended by difficulties, especially on account of local conditions. The material from which the Polangui basketry is made is plentiful in regions where very little handiwork is done, while there is a scarcity of it in those inhabited by many skilled workers.

The same as on Sangir and Talaud, the coil method is used in the Philippine Archipelago, in which the weaver uses either rattan or strips of a sort of bark, known in the Philippines as nito and on Sangir and Talaud as ginto.

The basketry of Sangir and Talaud, and also that of a certain district

in the Philippines (Nueva Vizcaya) is made according to the same method as that of Singaparna; the dark decorative designs are woven in, brown strips of nito or ginto being used.

The same as in Singaparna, forms have already been adopted there with a view to utility. Besides sewing baskets, jewelry boxes, bread

Borneo charms—black incising on bone.

baskets, fruit baskets and wastebaskets, we find the more ornamental types, which are very desirable for flower baskets, for instance. Still more ornamental are the coiled baskets made of the finer abaca fiber, which come from Luzon and the Visayas, and remind one of Peruvian basketry. They are not quite so substantial as the rattan baskets, but the finer material

Dancing staff from Borneo, Sea Dyaks.

Carved bamboo with background stained red.

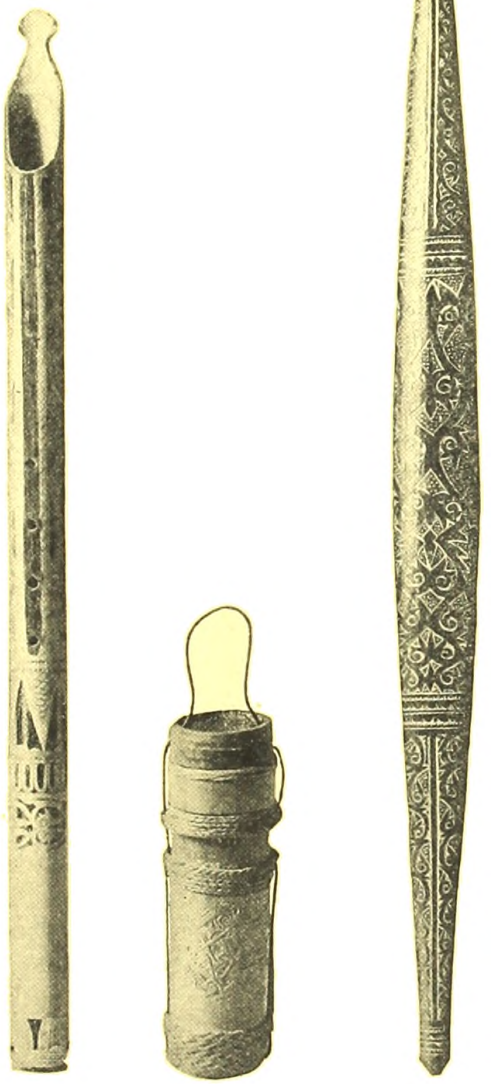


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Fig. 1. Dyak bamboo flute from Sarawak. [Design in low relief with background stained dark red.]

Fig. 2. Carved bamboo lime box from Sarawak.

Fig. 3. Painted wooden shuttle used by Balañgai Dyaks.

makes it possible to weave into them more exquisite, detailed, and attractive motifs. The photographs accompanying the article show beautifully made baskets and boxes, which are very well suited for exportation. It appears from the description that the forms and motifs for the abaca work were designs by the Bureau of Education.

If I still mention the fact that the so-called *drierichtings* method, in vogue in the east part of our archipelago, is also used in isolated parts of the Philippine Archipelago, such as Romblon, Catanduanes, Guimaras, etc., where the basket makers using that method employ narrow strips of pandanus and turn out every good, typical specimens of artistic basketry, I shall have acquitted myself of the task of reviewing the work by the development of which the Americans endeavor to benefit the people in the Philippine Islands.

The openwork hand bags made in Tayabas from lukmoy (an air root) have already stopped the importation of Japanese articles of this kind. Tayabas hand bags are now sold in large quantities in Manila.

Such is the result of practical, technical, and artistic instruction, commercial guidance, and assistance in finding a market. Any organization in this sense is bound to have good results.

Since manual training has been introduced into the curriculum of the Philippine schools, there has been a growing inclination to engage in industry and the useful arts. It goes without saying that the people, who for the time being are still working under supervision, will realize more and more the value of well-regulated labor. New branches of domestic industry have thus evolved from the primitive household work.

The articles manufactured are not only fancy articles showing the artistic sense of the people, but useful articles are also made for exportation, such as, for instance, sandals.

The Japanese sandal and slippers, of which large quantities are also imported in the Dutch East Indies, are being crowded out by sandals from the Philippine Islands.

The first attempt to manufacture the article for the market on a large scale was made in the district of Capiz. The product turned out at first was crude and was made of sedges. However, little by little the work improved, and now abaca, which is plentiful, is used as material, and slippers and sandals are exported, not only by Capiz, but by Bulacan, Sorsogon, Camarines, and Batangas. And what can, in our opinion, be called the most interesting feature of the history of the development of this industry, is that the workers did not stick to one type; but in the various districts where the abaca fiber was put to such good use, a number of different types of slippers and sandals was manufactured, and new types are being devised and invented. They have reached that state of constant progressiveness which every industry and useful art must maintain if it wishes to continue in a flourishing condition.

The photographs of the many artistically made sandals of various types, published in THE PHILIPPINE CRAFTSMAN, are very interesting.

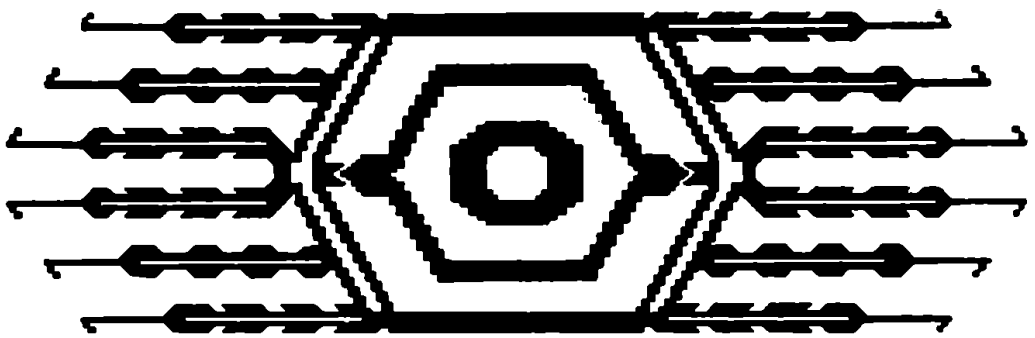
Not alone for the development of a useful art, but also to insure the permanency and extension of the simplest trade, it is necessary for the leader to constantly devise novelties.

In India the native artisan works only when he feels like it. And he does not yet feel like it very often. Under such circumstances it is, of course, a difficult task to generalize the industry and make its products

fit for exportation; but instruction, direction, and organization have given the Filipino worker an idea of the value of time and the distribution of labor.

This is expressed in a very characteristic manner by the Bureau of Education of Manila, in the following terms: "Considerable attention has also been given to the time element in basketry; it should be more generally understood that it is unprofitable to use 2 pesos' worth of time in making a 1-peso basket."

Especially the basket makers of Singaparna, whose articles could be made suitable for exportation, should, through artistic, technical, and commercial direction, be induced to adopt as their motto a variation of the American principle, viz, "Don't waste a florin's worth of time on a thing the price of which is to be 10 cents!"



RÉSUMÉ OF THE 1913 CORN CAMPAIGN.[1]

By North H. Foreman, Inspector of School Gardens and Sites.

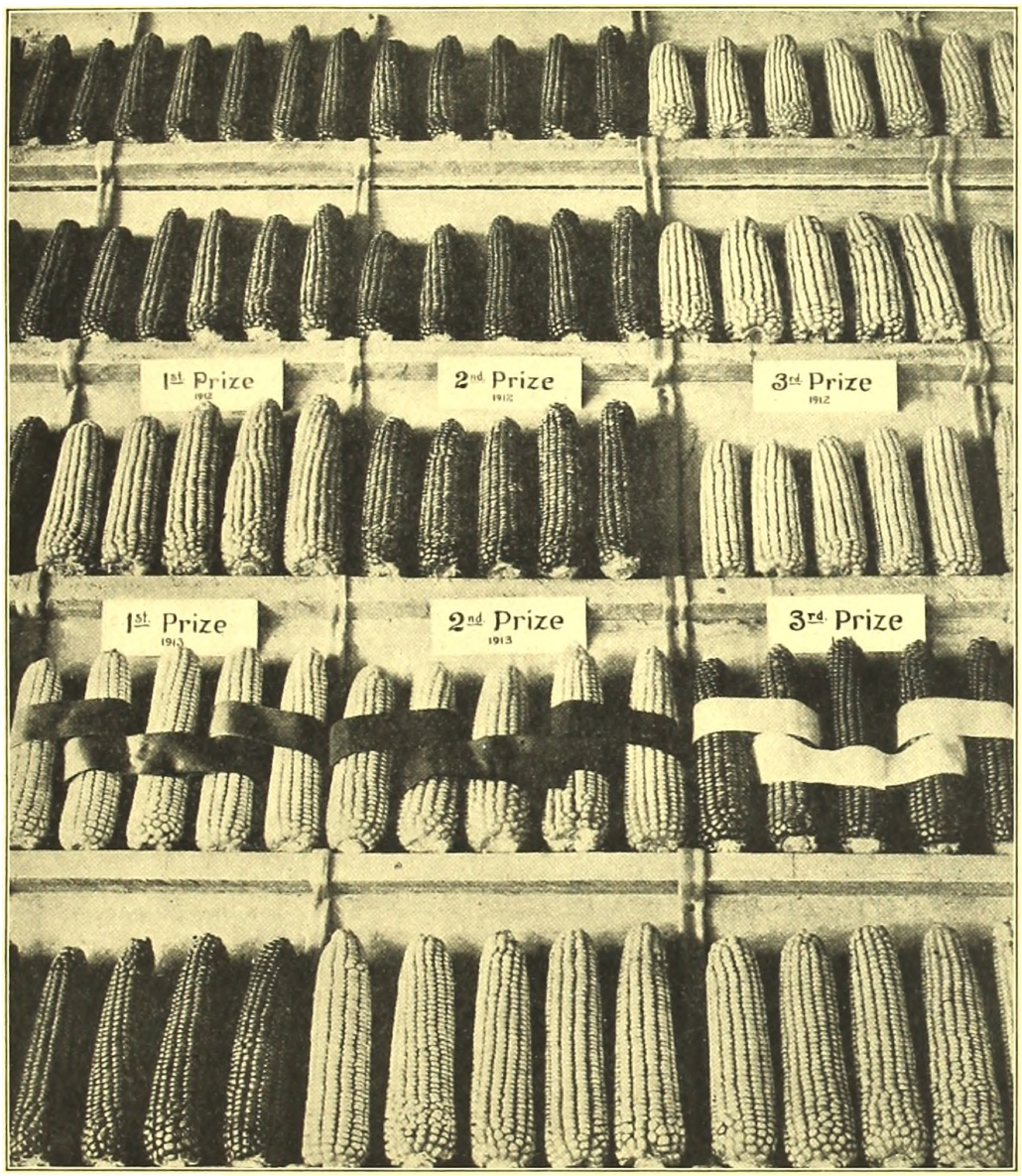
THE opportunity is again present to record another year's success in emphasizing corn growing through the public schools by a campaign which was begun in 1912, for the purpose of promoting the production and use of corn by means of corn-growing contests and corn demonstrations. The public interest aroused during the previous year was maintained and the actual work of bringing the merits of the various features of the corn campaign to the attention of the people was continued without any loss of enthusiasm on the part of the people, the teachers, or the pupils. This article attempts to present to the general public some of the important results secured.

The campaign as conducted shows in an evident manner how one feature of practical industrial instruction has been given in the public schools and carried into the homes by means of supervised home work as a part of the pupil's industrial requirement and for which he receives school credit. The work of the previous year had indicated a wider opportunity for the usefulness of the schools through continued emphasis upon the production and use of a staple food. The advantage of having complete plans, of outlining in detail the various points to be emphasized, and of specifying the means to be employed in obtaining the desired results was demonstrated by the way the instructive and the purely demonstrative features were combined. These plans insured that schoolboys would be taught proper methods of selecting seed and of growing corn, and that schoolgirls would learn in actual practice how to prepare palatable corn dishes with such ingredients and cooking utensils as are common in the average Filipino home.

The larger part of the population of the Philippines was reached through the school boys and girls, so carrying to the people in a public and private manner the direct instructions received from teachers. The number of difficulties encountered, however, seems to have increased rather than decreased during the past year. Locusts continued to ravage vast sections of the Philippines, and in many provinces these devastations caused tremendous losses in crops. Droughts and destructive storms

[1] For an account of the 1912 Corn Campaign see No. 5, Vol. II, of this magazine.

were also experienced. The actual corn-growing work of schoolboys suffered as well as the plantings made by their parents. Notwithstanding these difficulties which well-laid plans cannot anticipate, the work was successfully carried on. Corn is now grown in some quantity and used in homes where little of it



Final corn exhibit, Manila, January 31 to February 14, 1914.

Note the marked improvement in the winners for this year over those of the year previous.

was previously eaten. The experience of the previous year was of great value in establishing the best seasons for planting corn in many localities, as this cereal was an unusual crop in many sections and correct information as to seasons was not available.

The corn posters used during the 1912 corn campaign were again distributed and displayed in all public buildings. The placing of this illustrative matter in the public places which practically all people visit kept corn production before the general public and encouraged many farmers to plant corn. In addition to the three illustrated posters, fourteen follow-ups were prepared and distributed during the year. These follow-ups contained practical lessons on corn growing, which were taught to all pupils taking either gardening or corn growing as their industrial work. They were distributed from the General Office at intervals during the year and were of value in making the campaign a live one. The press gave considerable space to

Interest shown in the demonstration of the use of a modern hand corn mill, Balaoan, Union, 1913.

the instructive matter and news notes pertaining to the corn campaign. This cooperation was very valuable and was much appreciated.

An enrollment of 43,561 boys was secured in the corn-growing contests. According to the official records 19,270 of these boys entered Contest No. 1 (the 100 square meters contest) and 24,291 entered Contest No. 2 (the ear contest). Every locality in the Philippines was reached directly, in so far as the school system has extended into remote sections. Boys were trained to select seed corn and to observe the various important facts to be considered in producing a good crop of corn. As an aid in teaching these facts, a folder for recording this information was prescribed for each pupil. This form included the keeping of data pertaining to both the growing and the storing of the crop.

Pertinent facts were taught by regular class lessons given to the boys on days when field work was not possible. In order to extend this instructive work to adults a civico-educational lecture on corn was prepared. On holidays and during the corn festivals the lecture was given in the local dialect to the older people of practically every community. The way this feature interested the people is evidenced by the fact that 1,783 lectures were given, at 997 of which pertinent questions were asked the lecturer. The interest was also so great that at 817 lectures an open discussion of corn growing took place. In all 373,185 people attended the lectures, of which 131,129 were men, 67,604 women, and 174,452 children. In speaking of the value of the civico-educational lectures, Mr. James C. Scott, acting division superintendent of schools for Agusan, makes the following statement:

> At one of these lectures at which I was present, I never observed greater interest by any audience. Much discussion was raised. It may be of special interest to know that most of the discussion and pertinent questions were made by women. To a larger extent than is perhaps realized, agriculture in the Philippines is directed by women.

In a similar manner the growing of corn and its use as a human food became a subject of discussion all over the Philippines. That the interest aroused has been more than merely academic is shown by the following comparative statistics for the years of 1912 and 1913.

	1912	1913
Hectares planted	302,506	383,709
Cavans harvested	2,485,396	4,339,339
Average yield ..... cavans	8.2	11.3

A most interesting and valuable part of these comparative statistics is the fact that this additional corn which was worth ₱5,000,000 to the producers was consumed by the people almost entirely as a human food.

As a means of encouraging the boys to enroll in the corn-growing contests and to maintain their interest, prizes in the form of certificates and articles were provided. The Bureau of Education issued certificates to the winners of first, second, and third places in each contest for the entire Philippines and for each province. In addition to these certificates, material prizes were provided in 24 provinces.

Corn exhibits were held as a means of determining the winners in Contest No. 2 and of interesting the general public in im-

proving the quality of corn produced in the Philippines. The 578 exhibits were attended by 141,563 people, who in every case probably saw better corn they had ever seen before. The fact that the corn exhibited was produced by school pupils in their own neighborhood and under conditions similar to those existing at their own homes made the lesson of greater value. The corn displayed was in demand by the farmers as seed. Two and three pesos an ear were offered for corn exhibited at the final corn exhibit.

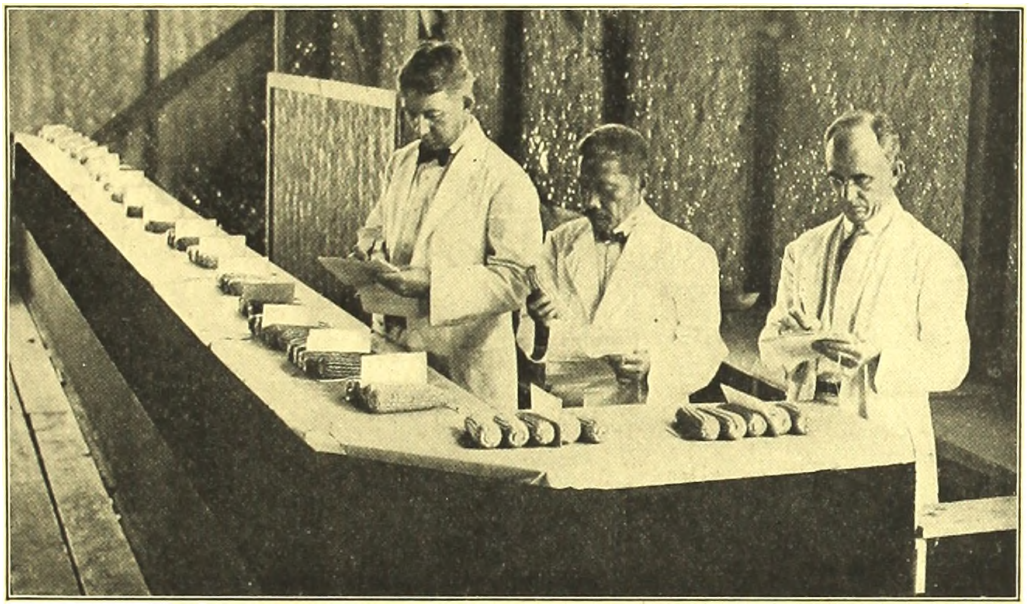
This exhibit, together with the corn demonstration, was held in Manila during the Second Philippine Exposition, January 31

The corn demonstrators at Agoo, Union; 8,835 of these schoolgirls prepared and served corn foods to the crowds at the 400 corn demonstrations.

to February 14, 1914, in a special building erected for the purpose. The various features pertaining to the production and use of corn were displayed in the corn building and explained to the general public by demonstrators brought in from the provinces. Seed selection, storing of corn, preparation of corn meal, and the use of corn implements were demonstrated. A display of corn containing 216 exhibits of five ears each, submitted by contestants representing every province in the Philippines except Isabela, was the principal center of attraction. This corn was of most excellent quality and showed an improvement of 60 per cent over that exhibited one year previous. Mr. H. T. Edwards, Director of Agriculture; Mr. Melecio Severino, Assemblyman; and Mr. J. F. Boomer, formerly editor

of the Cablenews-American, were the judges who scored the final exhibit. The corn building also contained a demonstration of the use of "lagunde," a native plant found to be effective in preventing weevil damage to stored corn. From the food booths in this building, Filipino girls from the Philippine Normal School served the general public with such tasty corn dishes as can be prepared with the cooking utensils and ingredients found in all Filipino homes. The building with its various exhibits and efficient corps of demonstrators attracted a great deal of attention and received much favorable comment.

It will be of interest to those concerned in the development of the Philippines in general, and especially in the supervision



Judges at work. Final exhibit of the 1913 Corn Campaign.

Left to right: H. T. Edwards, Director of Agriculture; Melecio Severino, Assemblyman; and J. F. Boomer, formerly editor Cablenews-American, Manila.

of the corn campaign in the public schools, to learn who were the boys awarded prizes in the various provinces. The names of the winners in the contests are as follows:

WINNERS OF THE 1913 CORN CAMPAIGN.

INSULAR WINNERS.

Contest No. 1:

1. Melchor Roldan, Narvacan, Ilocos Sur.
2. Adriano Rabe, Santa Catalina, Ilocos Sur.
3. Edao Dickenson, Lagangilang, Ilocos Sur.

Contest No. 2:

1. Luis Cariño, Tubao, Union.
2. Luis Platon, Tanauan, Batangas.
3. Conrado Mendoza, Balanga, Bataan.

PROVINCIAL WINNERS.

Agusan.

Contest No. 1:
1. Restituto Dumanlag, Bugcaon.
2. Ancelmo Kilem, Malitbog.
3. Froilan Torralba, La Paz.

Contest No. 2:
1. Gregorio Guzman, Bunawan.
2. Francisco Linquet, Linabo.
3. Benito Bongcaet, Puntian.

Pedro Carino, Tubao, Union, winner first place, Contest No. 2.

Albay.

Contest No. 1:
1. Angel Grageda, Camalig.
2. Andres Pante, Guinobatan.
3. Tomás Torre, Bacacay.

Contest No. 2:
1. Gregorio Otivar, Guinobatan.
2. Florencio Talavera, Ligao.
3. Nicolas Buitre, Albay.

Antique.

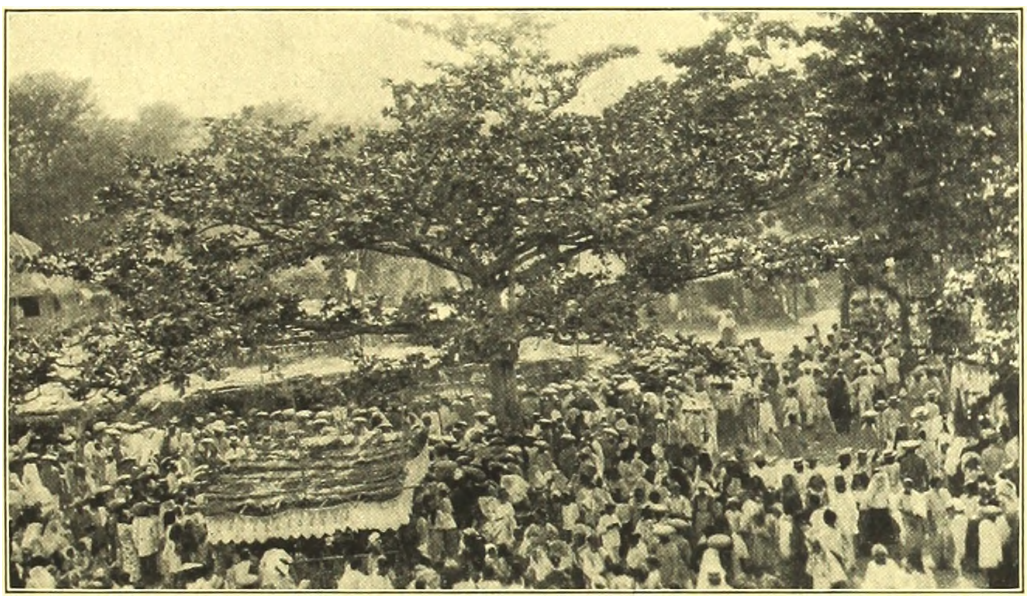
Contest No. 1:
1. Florencio Macuja, San Jose.
2. Francisco Mosquera, San Jose.
3. Domingo Huelar, Dao.

Contest No. 2:
1. Ildefonso Cahilig, San Jose.
2. Aniceto Clameras, San Jose.
3. Cayo Masa, San Jose.

Bataan.

Contest No. 1:
1. Conrado Mendoza, Balanga.
2. Mariano Tuason, Balanga.
3. Jose Ramires, Balanga.

Contest No. 2:
1. Conrado Mendoza, Balanga.
2. Jose Navarro, Balanga.
3. Mariano Camacho, Balanga.



Crowd at the corn demonstration, Luna, Union, 1913.

Batangas.

Contest No. 1:
1. Vivencio Montenegro, Balayan.
2. Leovigildo Perez, San Juan.
3. Andres Cabarrudia, Balayan.

Contest No. 2:
1. Luis Platon, Tanauan
2. Cayo Manzo, Tanauan.
3. Damaso Saguan, Tanauan.

Bohol.

Contest No. 1:
1. Lino Maceren, Balilihan.
2. Jose Romero, Loay.
3. Lorenzo Romero, Loay.

Contest No. 2:
1. Pelagio Albesa, Corella.
2. Julian Tocmo, Corella.
3. Apolinario Danhog, Corella.

Bulacan.

Contest No. 1:
1. Leon Gonzales, Baliuag.
2. Felipe Rojas, Calumpit.
3. Petronilo Cruz, Calumpit.

Contest No. 2:
1. Cornelio Andres, Norzagaray.
2. Julio Villena, San Miguel.
3. Basilio Reyes, Norzagaray.

Cagayan.

Contest No. 1:
1. Tomas Maribbay, Tuguegarao.
2. Andres Bacud, Tuguegarao.
3. Artimo Obispo, Peñablanca.

Contest No. 2:
1. Vicente Addulan, Mauanan.
2. Eutetiano Ganaban, Mauanan.
3. Benito Taguba, Mauanan.

Camarines.

Contest No. 1:
1. Pablo Belmonte, Iriga.
2. Paciano Pardo, Labo.
3. Agaton Brisinio, Iriga.

Contest No. 2:
1. Eulalio Abad, Calabanga.
2. Vicente Hernandez, Libmanan.
3. Apolinar Medroso, Calabanga.

Capiz.

Contest No. 1:
1. Jose Villarruz, Capiz.
2. Eleuterio Advincula, Capiz.
3. Regalado Atubang, Capiz.

Contest No. 2:
1. Emilio Andaya, Capiz.
2. Jose Villarruz, Capiz.
3. Eleuterio Advincula, Capiz.

Cavite.

Contest No. 1:
1. Macario Maranan, Silang.
2. Pablo Salazar, Silang.
3. Florentino Toledo, Silang.

Contest No. 2:
1. Pedro Flores, Indang.
2. Macario Maranan, Silang.
3. Eulogio Acuna, Indang.

Cebu.

Contest No. 1:
1. Pedro Montera, Catmon.
2. Vicente Albao, Catmon.
3. Damaso Cedeño, Dumanjug.

Contest No. 2:
1. Salomon Bascon, Talisay.
2. Ambrosio Basnillo, Talisay.
3. Santiao Banzon, Dumanjug.

Ilocos Norte.

Contest No. 1:
1. Leon Labrador, Bangui.
2. Monico Cadiz, Bacarra.
3. Pedro Balbag, Bangui.

Contest No. 2:
1. Regino Franco, Batac.
2. Ignacio Bayag, Piddig.
3. Juan Rigonan, Batac.

Ilocos Sur.

Contest No. 1:
1. Melchor Roldan, Narvacan.
2. Adriano Rabe, Santa Catalina.
3. Edao Dickenson, Lagangilang.

Contest No. 2:
1. Felix Venzon, Vigan.
2. Paulo Galanto, Candon.
3. Quirico Battad, Vigan.

Iloilo.

Contest No. 1:
1. Simplicio Ferraris, Pototan.
2. Sancho Ceballos, Pototan.
3. Simplicio Ceballos, Pototan.

Contest No. 2:
1. Marcos Gaub, Buenavista.
2. Bonifacio Barrera, Cabatuan.
3. Julian Saforno, Pototan.

Isabela.

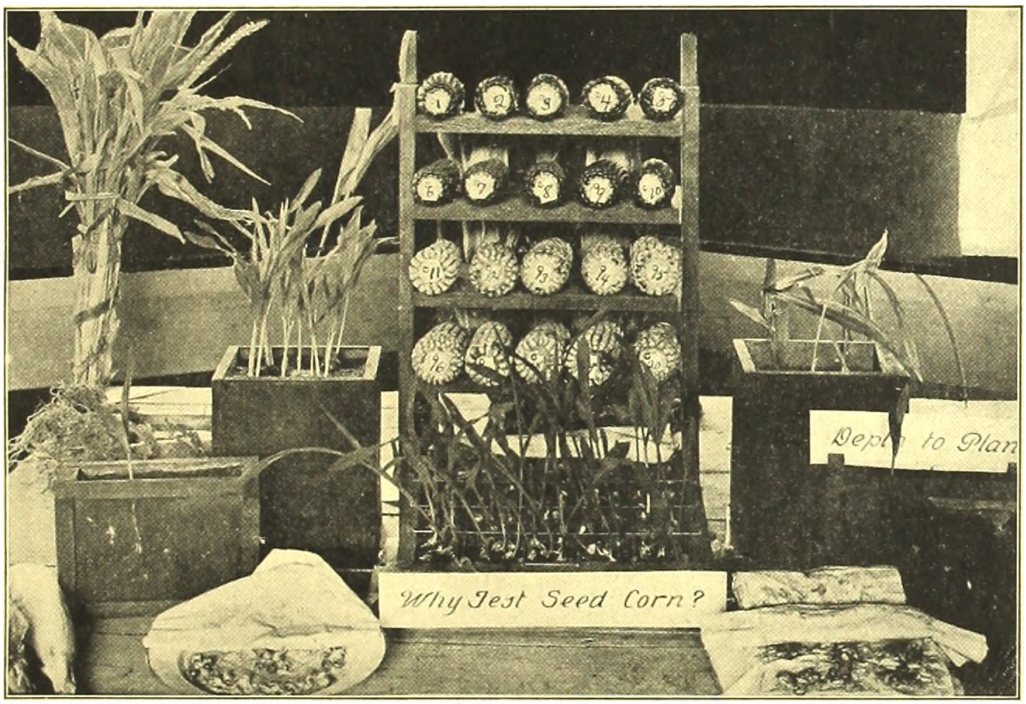
Contest No. 1:
1. Marciano de la Peña, Ilagan.
2. Juan Aggabao, Ilagan.
3. Bartolome Gumaru, Cabagan Nuevo.

Contest No. 2:
1. Juan Aggabao, Ilagan.
2. Bartolome Gumaru, Cabagan Nuevo.
3. Juan Gumaru, Cabagan Nuevo.

Laguna.

Contest No. 1:
1. Francisco Acuña, Santa Rosa.
2. Fermin Valsorable, Famy.
3. Jose Jamilan, Famy.

Contest No. 2:
1. Francisco Hibas, Los Baños.
2. Pelagio Potenciano, Biñan.
3. Fermin Mangeron, Calamba.



An instructive booth in the corn building at the Second Philippine Exposition, Manila, 1914.

Leyte.

Contest No. 1:
1. Melicio Briones, Dulag.
2. Sofronio Gabrino Dulag.
3. Catalino Serrano, Dulag.

Contest No. 2:
1. Alberto Nirja, Tanauan.
2. Julian Fumar, Baybay.
3. Domingo Cinco, Bato.

Mindoro.

Contest No. 1:
1. Eugenio Panopio, Calapan.
2. Braulio Conti, Calapan.
3. Ramon Bautista, Calapan.

Contest No. 2:
1. Ramon Bautista, Calapan.
2. Meliton Montales, Calapan.
3. Braulio Conti, Calapan.

Mountain.

Contest No. 1:
1. Rufino Lozano, Tagudin.
2. Juan Manganaan, Tagudin.
3. Leoncio Deleguis, Suyo.

Contest No. 2:
1. Antero Garces, Sudipen.
2. Marcos Ragojo, Sudipen.
3. Leoncio Deleguis, Suyo.

Nueva Ecija.

Contest No. 1:
1. Gregorio Rivera, Santa Rosa.
2. Leonardo Fileo, Santa Rosa.
3. Jose Tuazon, Santa Rosa.

Contest No. 2:
1. Leonardo Gochico, Santa Rosa.
2. Valentin Flores, Santa Rosa.
3. Vicente Sampoleo, Santa Rosa.

Nueva Vizcaya.

Contest No. 1:
1. Juan Castañeda, Dupax.
2. Dionicio Pampala, Santa Cruz.
3. Guinalteb, Maquebenga.

Contest No. 2:
1. Adriano Ramel, Dupax.
2. Bernardo Vidal, Dupax.
3. Guinalteb, Maquebenga.

Occidental Negros.

Contest No. 1:
1. Fortunato Besijos, Cadiz.
2. Jose Abelarde, Cadiz.
3. Emilio Bendicion, Cadiz.

Contest No. 2:
1. Pablo Custodio, Bacolod.
2. Wilfredo Duyungan, Manapla.
3. Vicente Ahunin, Bacolod.

Oriental Negros.

Contest No. 1:
1. Federico Padayjag, Larena.
2. Genaro Mueco, Guijulngan.
3. Alejandro Oliveros, Maria.

Contest No. 2:
1. Arcadio Beliot, Guijulngan.
2. Epefanio Telog, Guijulngan.
3. Domingo Ramirez, Guijulngan.

Palawan.

Contest No. 1:
1. Azufre Apisan, Aborlan.
2. Esmel Akog, Aborlan.
3. Ampon Huya, Aborlan.

Contest No. 2:
1. Arting Cansa, Aborlan.
2. Ampon Huya, Aborlan.
3. Asandi Lintad, Aborlan.

Pampanga.

Contest No. 1:
1. Luis Lising, Magalang.
2. Cipriano Calma, Arayat.
3. Remigio Dizon, Arayat.

Contest No. 2:
1. Domingo Nacpil, Bacolor.
2. Simeon Teopaco, San Fernando.
3. Marcos Magpayo, Arayat.

Pangasinan.

Contest No. 1:
1. Francisco Sagaonit, Manaoag.
2. Eustaquio Surat, Mangaldan.
3. Damaso Abilla, Agno.

Contest No. 2:
1. Valeriano Castillo, Bayambang.
2. Adriano de Guzman, Mapandan.
3. Cipriano Gonzales, Mangatarem.

Rizal.

Contest No. 1:
1. Fidel Hernandez, Montalban.
2. Procopio Bautista, Montalban.
3. Meliton Ramos, Montalban.

Contest No. 2:
1. Nicolas Calagay, Navotas.
2. Fidel Cruz, Navotas.
3. Jovito Elemia, Las Piñas.

Melchor Roldan, Narvaoan, Ilocos Sur, winner first place, Contest No. 1.

Samar.

Contest No. 1:
1. Santos Dacia, Calbayog.
2. Crispin Sagadal, Calbayog.
3. Fermin Liray, Calbayog.

Contest No. 2:
1. Jose Ignacio, Catbalogan.
2. Jacinto Nebras, Catubig.
3. Pastor Colapo, Catubig.

Sorsogon.

Contest No. 1:
1. Cornelio Figueroa, Juban.
2. Jose Lasala, Juban.
3. Arcadio Pacion, Masbate.

Contest No. 2:
1. Jose Lasala, Juban.
2. Matias Bajar, Masbate.
3. Liberato Gualvez, Juban.

Surigao.

Contest No. 1:
1. Brexicio Arizalita, Cantilan.
2. Ambrosio Orgino, Cantilan.
3. Liborio Bandola, Hinatuan.

Contest No. 2:
1. Florentino Rosas, Cantilan.
2. Florencio Orozco, Cantilan.
3. Florencio Orteza, Cantilan.

Misamis.

Contest No. 1:
1. Santiago Lumacang, Baliangao.
2. Victorino Abao, Balingasag.
3. Remedio Lugod, Gingoog.

Contest No. 2:
1. Salvador Pacana, Cagayan.
2. Juan Teres, Oroquieta.
3. Damian Baal, Cagayan.

Tarlac.

Contest No. 1:
1. Felicisimo Supan, Tarlac.
2. Leon Mangrobang, Camiling.
3. Memicio Mangrobang, Camiling.

Contest No. 2:
1. Benito Ebron, Gerona.
2. Pedro Bartolome, Gerona.
3. Justino Simon, Tarlac.

Tayabas.

Contest No. 1:
1. Melquiades Lagmao, Mogpog.
2. Roman Berinado, Infanta.
3. Paulino Mollo, Boac.

Contest No. 2:
1. Gregorio Arelis, Lucban.
2. Hilarion Deveza, Lucban.
3. Gelacio Sades, Gasan, Marinduque.

Union.

Contest No. 1:
1. Maximino Maron, Bangar.
2. Hermogenes Desesto, Balaoan.
3. Gregorio Morta, Bangar.

Contest No. 2:
1. Pedro Cariño, Tubao.
2. Eusebio Rivera, Agoo.
3. Rosendo Cariño, Aringay.

Zambales.

Contest No. 1:
1. Bonifacio Eduacot, Masinloc.
2. Pedro Edora, Masinloc.
3. Matias Edaño, Masinloc.

Contest No. 2:
1. Mauro Canomizado, San Antonio.
2. Agustin Rodolfo, San Antonio.
3. Juan Pascasio, San Antonio.

Manila.

Contest No. 1:
No entries.

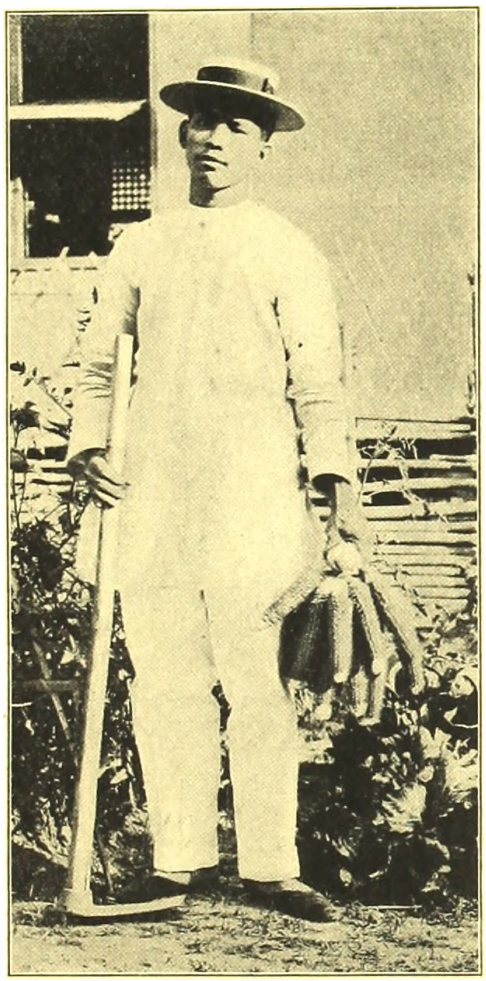
Contest No. 2:
1. Benito Barican, Manila.
2. Emilio Layog, Manila.
3. Simon Santiago, Manila.

Normal.

Contest No. 1:
No entries.

Contest No. 2:
1. Mauricio Bermudes, Manila.
2. Moises Geotina, Manila.
3. Benito Rubio, Manila.

A feature of more than ordinary interest was introduced during the 1913 corn campaign in the form of garden days. The garden exhibits as promoted by the Bureau of Education contain



Conrado Mendoza, Balanga, Bataan, winner third place, Contest No. 2.

garden products and crops of the farmers of the community. They represent an effort to encourage the holding of agricultural fairs which are excellent means of securing the cooperation of the farmers of the community and of bringing to their attention improved agricultural methods. Garden days were featured in 26 provinces. In all 300 garden days were held throughout the Philippines, at which 8,722 school pupils exhibited products from their school and home gardens and 816

Filipino farmers products from their farms. These figures do not include the boys who submitted corn to the corn exhibits and both vegetables and corn to the exhibit of the Bureau of Education at the Second Philippine Exposition.

The extension of the use of corn as a human food was made of special importance. This part of the corn campaign has been discussed in a special article in THE PHILIPPINE CRAFTSMAN. It may be stated that the old feeling of shame at having to set a corn dish before a visitor is being overcome. The series of corn demonstrations which were valuable features in the previous year were continued in the form of popular corn demonstrations, market demonstrations, corn lunches, and lessons to girls enrolled in cooking classes. By these means proper methods of preparing corn foods were taught and the information taken into the homes in a manner that will insure it reaching the people and being received by them. What was done along this line of work is shown by the following statistics:

Popular corn demonstrations held	367
Continued market demonstrations conducted	43
Schools giving regular corn lessons to domestic-science pupils	352
Schools giving corn lunches	213
Lunches prepared and served by school girls	859

While the tabulated data noted above furnishes an idea of the way the use of corn was brought to popular attention, it will be of additional interest to know how many people were actually reached by these demonstrations. The following tabulated data will give some idea of this:

People attending corn demonstrations	498,834
People purchasing food at market demonstrations	28,081
People served with food at the Insular corn demonstration	20,000
People served at corn lunches	25,146

Along with these data should be considered the fact that 8,835 girls were taught corn recipes, and that the lessons so learned were taken by them into their homes. Mr. Clarence A. Belknap, formerly division industrial supervisor for Oriental Negros, makes the following statement in a report concerning the corn demonstration work:

> The lessons given in the domestic-science classes attracted a great deal of attention from the public in general. A large number of people visited the classes while the work was going on. Many requests were made for providing demonstrations in the homes and one teacher reports having spent Saturdays and Sundays in teaching the people in their own homes.

The corn mill introduced by the Bureau of Education as a

part of the corn campaign also merits mention. These mills were demonstrated 482 times and it is reported that large sales of hand corn mills have been made by business firms. In speaking of this feature of the corn campaign, Mr. Gilbert S. Perez, division industrial supervisor for Bohol, says:

The Pacific Commercial Company had a man at all corn demonstrations selling and demonstrating corn mills. The Chinese merchants in this

Luis Platon, Tanauan, Batangas, winner second place, Contest No. 2.

province who sell corn have installed corn mills in front of their stores for the use of the general public at a small charge.

The fact that 43,561 boys grew corn in these contests as organized means that agricultural education in the form of practical demonstrations was carried on among the people under conditions existing at their own homes. If combined with this influence there is taken into account that exercised by the 8,835 girls who were taught how to prepare corn dishes and who will take this information direct into their homes along with the

recipes distributed in every locality, a clearer idea will be had as to the value of this work. It is doubtful if other means could be devised whereby the work could be conducted in a manner more suitable to reaching the people directly. With the winners of Contest No. 1 producing corn at the rate of 146, 121, and 118 cavans per hectare, respectively, and more than 2,000 boys pro-

In the corn building at the Second Philippine Exposition.

ducing corn at the rate of more than 60 cavans per hectare, which is practically five times the average yield of 11.3 cavans for the Philippines, both the yield and the acreage must increase. The people are being shown what seed selection and proper cultivation will do.

In speaking of the results obtained, a statement made in the report of Mr. Benjamin Levin, division industrial supervisor of Occidental Negros, is quoted:

> There is a marked increase in the yield and in the appreciation of corn as a food. Corn as a food has risen in the estimation of the people. Many farmers this year feed their laborers on rice and corn mixed. The men

prefer it to rice alone. More corn is to be seen in the market and tiendas for sale to the people than ever before.

The Bureau of Customs' report shows that there was a decrease of ₱4,260,000 in rice importations during the year 1913. This is interesting information along with the other data given in this article pertaining to the way corn is being considered by the people as a human food. It may be stated in definite figures that 1,010,597 people were directly reached through their presence at the public functions of the corn campaign, and beyond doubt practically the entire population has been reached indirectly by posters and by pupils instructed in the public schools.

What has been accomplished in 1913 furnishes the basis for a broader campaign and more successful work during the 1914 corn campaign which is now under way. The most striking new feature this year will be the granting of Insular prizes in addition to the customary certificates. These prizes are shown on poster No. IV and will consist of the following articles to be given to the Insular winners of first, second, third, fourth, and fifth places in each of the two contests: First, a bullock; second, a set of tools; third, a plow; fourth, a corn mill; fifth, baseball goods. A standard dictionary (2 volumes) will also be awarded to the teachers who supervise the work of the boys winning the first prizes.

The corn campaign has succeeded in arousing a spirit of wholesome coöperation between the various Government agencies, schoolboys, and the adult members of the Filipino people. The boys learn to assist their fathers in providing a supply of food and the girls to aid their mothers in preparing more wholesome food for the family.

MY CORN.

No use for a boy to look forlorn
When it's too dry in the Ozarks to raise good corn,
He can feed the fodder to the goats
And throw the nubbins to the shoats.
I have done the best that I know how—
I used the harrow, then the plow.
I plowed it deep and close at first,
Then plowed it shallow to quench its thirst;
But it remained dry as dry could be.
I looked and looked and looked in vain—
If I do not succeed I'll try again.

—*Floyd E. Fish in The Industrial Arts Magazine for January, 1914.*

THE TAYABAS SEWING BASKET.

By VICENTE R. CONCEPCION, Division Industrial Supervisor for Tayabas.

THE Tayabas sewing basket was first presented to the public at the Industrial and Sales Exhibition held by the Bureau of Education in connection with the Philippine Carnival of 1912. The basket was suggested by a picture appearing in a number of the Ladies' Home Journal during the year 1911, and while not a direct reproduction of this picture, it at first varied but slightly from the original illustration.

The basket was found to be very popular at the 1912 Industrial and Sales Exhibition. Two were purchased for the permanent museum of the Bureau and several hundred could have been sold had they been brought to the exhibition. Encouraged by this popularity, the basket was taken up in the central schools of Tayabas, Lucban, and Boac. It was improved in these schools as to shape, color, and design and at the subsequent exhibition proved to be even a better seller than had been hoped. Some of the improved baskets were sent to the Teachers Vacation Assembly of 1913 and to Teachers Camp and an effort was made to teach this work in both places.

The basket is very ornamental, lends itself to various color schemes, and can be made of any material which is sufficiently flexible. The different styles of weaving can be used for giving it a distinctive appearance and adding to its attractiveness. It has found a place in the homes of the people of Tayabas as a handy sewing basket and tobacco receptacle.

The first specimens of this basket were made wholly of air roots. These were found especially suitable because of their great flexibility and length as well as because of the ease with which they are obtained and prepared. Great flexibility is necessary in both the spokes and the weavers, since stiff materials are not adapted to securing the curved outline which gives this basket its chief beauty and grace.

At Lucban buntal is being used for weavers with great success. Buntal is easily dyed and it is found that the most beautiful baskets can be made by using buntal and combining carefully the tints.

In addition to dyed buntal, nito, banban, tipon-tipon, and other weavers having a good natural color are used in increasing the color richness of this basket. At Lucban a very beautiful

sample is being made of buntal with obalan [1] for ornament. Obalan is a fern which has a long leaf stem and grows on the slopes of Mount Banajao. From this leaf stem a beautiful brown weaver of unusual flexibility and strength is obtained.

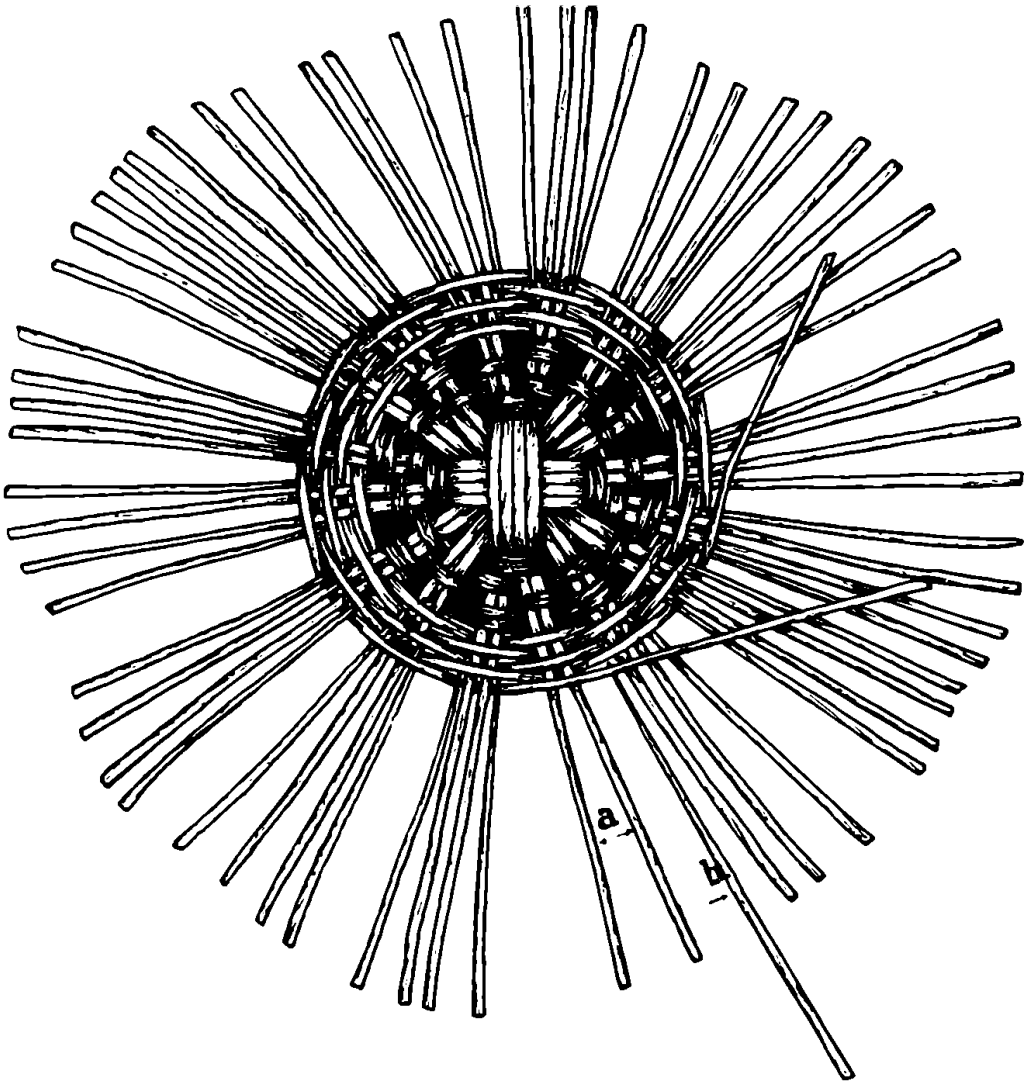


Plate I. Showing the beginning of the bottom of the Tayabas workbasket. (*a*) Primary spokes. (*b*) Inserted secondary spoke.

CONSTRUCTION.

Dimensions:	cm.
Greatest diameter of basket	20
Diameter of cover	17
Diameter of top of basket	17
Diameter of bottom of basket	14
Diameter of standard	14
Height of cover	3
Height of basket, including cover	12

[1] This plant has not been identified as yet at the Bureau of Science, but is probably the same as kilog (*Gleichenia lincaris*).

DIRECTIONS.

To begin this basket (see Plate I), 64 strips of lucmoy 1½ meters long and 2 millimeters in diameter are required. Take these strips in groups of fours and lay them one across the other as if beginning an ordinary work basket, then begin to weave. Spokes have to be separated into pairs as in the illustration *a*, Plate I. When the bottom reaches a diameter of 9

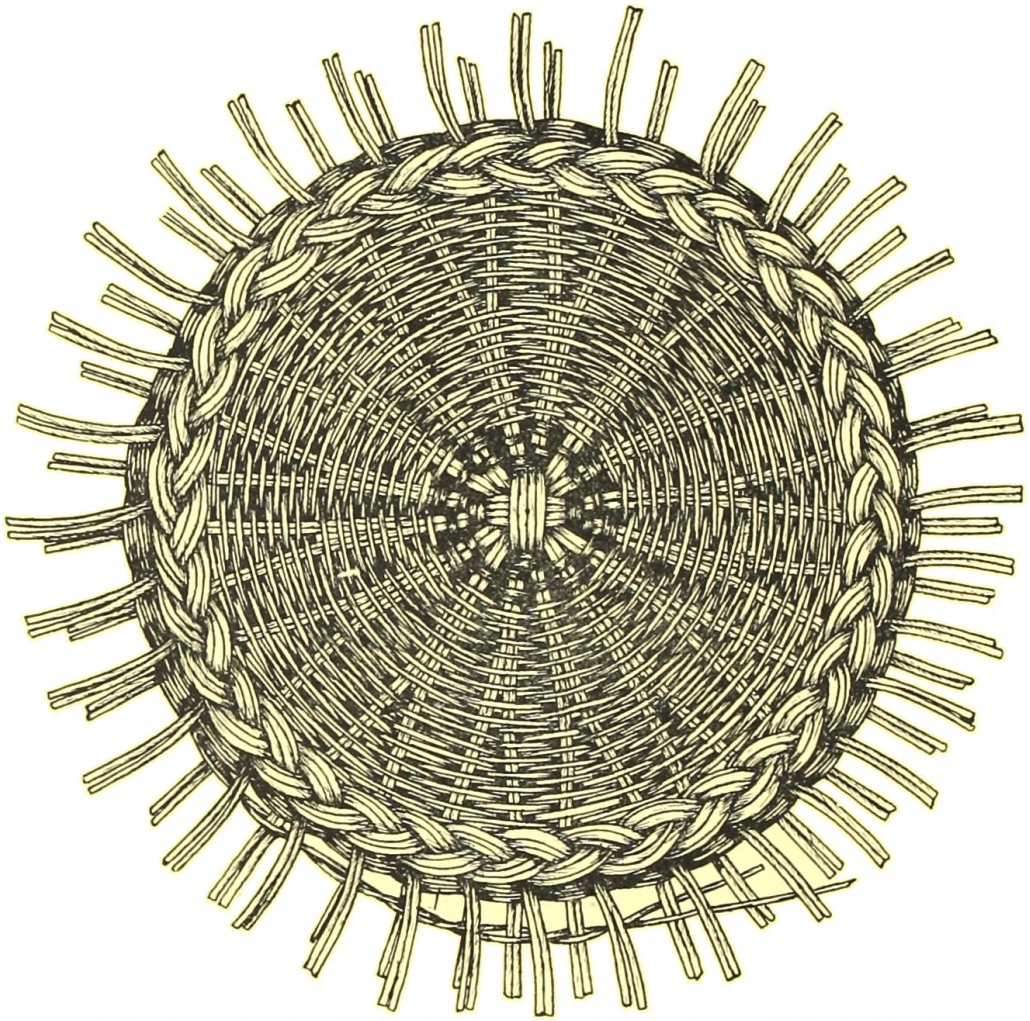
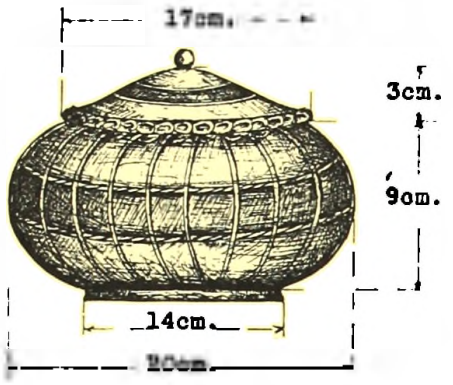


Plate II. Showing the finished bottom and a triple weave standard of air roots.

centimeters, 32 additional secondary spokes 0.75 centimeter long and 2 millimeters in diameter should be added. The weaving is continued, using the same method of separating spokes into pairs until the desired diameter including the standard is obtained (see *b*, Plate I). A triple weave of lucmoy 3 millimeters in diameter will finish the bottom (see Plate II).

The side should be woven in triple weave of either lucmoy or buntal, except in the middle where tipon-tipon or banban in the



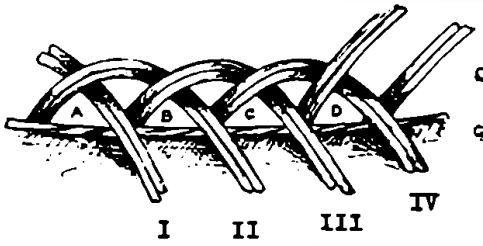


Fig. 1-A.

Fig. 1-B.

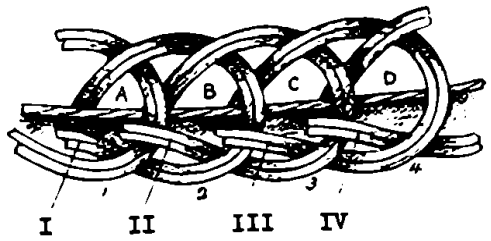


Fig. 2.

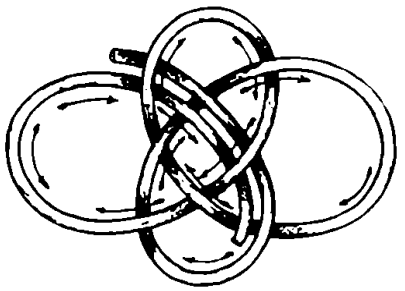


Fig. 4.

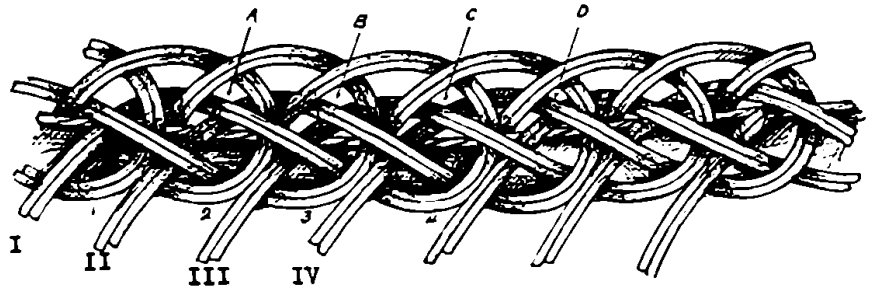


Fig. 3.

Plate III. Showing dimensions and steps in weaving standard and finishing top.

over and under weave should take its place. A line of nito or obalan between the weavers of lucmoy or buntal and banban or tipon-tipon will be found to be very satisfactory for decoration. In fact, any kind of decoration may be applied to this basket, but usually a plain one is more appropriate. In weaving the side considerable patience on the part of the maker is necessary, because difficulties will be met in forming the proper shape of the basket. A few experiments were tried to overcome this difficulty, but up to the present time none has resulted satisfactorily. However, in some of our schools a sort of temporary form of bamboo is used by beginners. The spokes are arranged and temporarily tied to this form to give the lower part of the basket its proper shape before weaving. This, of course, results in slow progress, but nevertheless it answers the purpose fairly

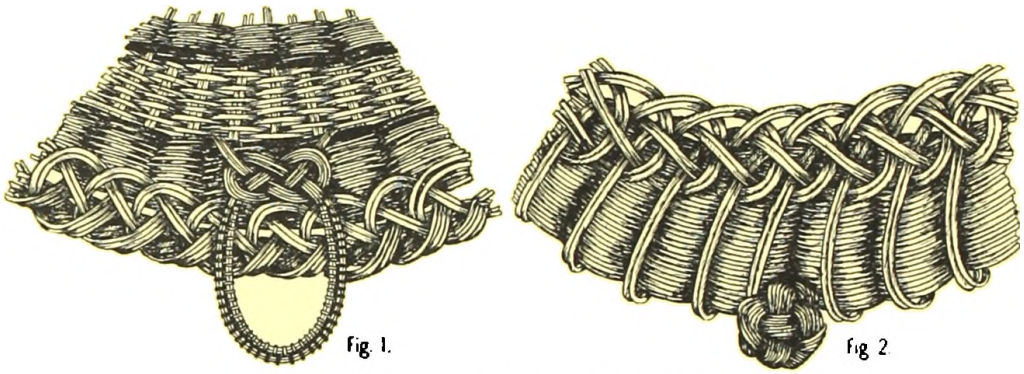


Plate IV. Detail of fastening and knob or button.

well. Care should be taken to give the sides the same curvature in order to secure the proper shape of the basket.

When the side is finished and the desired diameter for the opening at the top is obtained, the remaining spokes should be placed as shown in the illustration figure 1–A, Plate III, by turning them downward and passing them through the standard, figure 3, Plate III.

HOW TO WEAVE THE RIM AND VISIBLE SPOKES.

Number the spokes as in the diagram (fig. 1–A, Plate III) and weave from left to right as follows: Spoke No. 1 under spoke No. 2, spoke No. 2 under spoke No. 3, spoke No. 3 under spoke No. 4, and so on until the circuit is completed and the loops *a*, *b*, *c*, *d*, etc., are formed.

Figure 2, Plate III, illustrates the second step. Here the weaving should be from right to left. Place spoke No. 4 under

spoke No. 3, spoke No. 3 under spoke No. 2, spoke No. 2 under spoke No. 1, and so on until the circuit is completed.

The last step is shown in figure 3, Plate III. Note carefully the illustration so to avoid any mistake. Take spoke No. 5 and have it passed through loop *d* out to loop *c* under the spokes Nos. 1 and 2, bringing it opposite to 3 (see the figure). In like manner take spoke No. 3 and have it passed through loops *b*

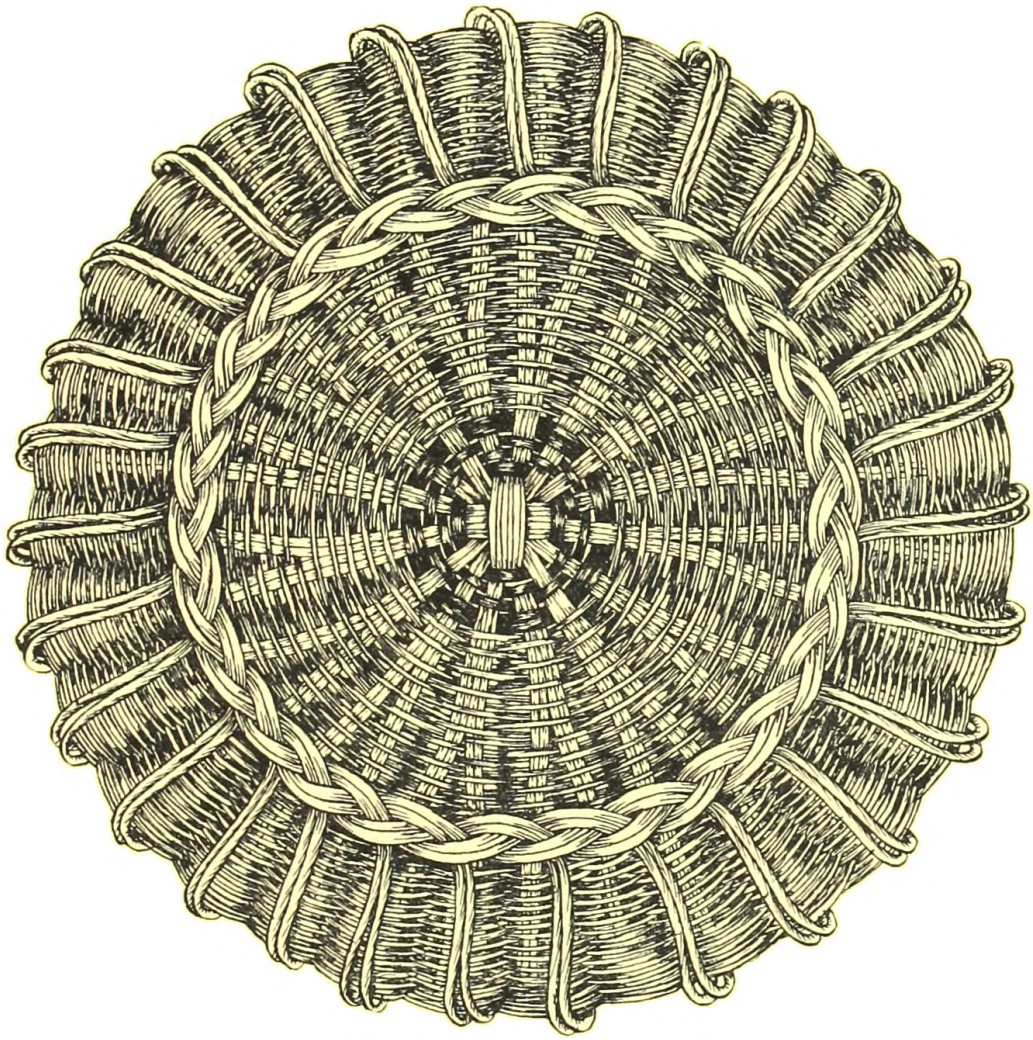


Plate V. Underside of basket showing bottom, curved side, standard, and outside spokes of a finished Tayabas workbasket.

and *a* and it will come out opposite No. 2. This process is continued by taking the spokes in succession. When the circuit around the basket is completed the spokes are then brought downward as is directed in the preceding paragraph, passing through the standard, figure 3, Plate III. In weaving the braid, follow carefully figures 1–A and 1–B, Plate III. If a higher braid is desired a repetition of 1–A and 1–B is necessary.

COVER.

The cover has the same beginning and number of spokes as the basket. The weaving is similar to that of the side—that is, triple weave of lucmoy or buntal and over and under weave of banban with nito or obalan between the bands of lucmoy and banban. It is very necessary that the design of the cover should match with that of the side of the basket.

The remaining spokes of the cover are also woven using the same method as shown in figure 3, Plate III. Here the spokes are inserted through the side (with the main spokes) instead of bringing them downward as in the above. The basket is then cleaned by cutting off all the surplus materials and it is now ready for attaching the cover. This is usually joined to the basket by a sort of hinge.

HINGE.

A piece of lucmoy about 1.5 meters long and 2 millimeters in diameter, when made as shown in the diagram figure 4, Plate III, will be preferable for the hinge to attach the cover to the basket. Follow carefully the arrows in the illustration given until a similar circuit is made. Use your weaver four times in following this circuit. With the same beginning a small knob or button as in figure 2, Plate IV, can be formed when making a smaller circuit.

No definite number of turns following this circuit is fixed. Make your knob as round as possible by increasing the number of turns. This knob is usually attached to the cover by its two ends. A similar method, when properly made as in the illustration figure 1, Plate IV, will serve as a catch. Finally the basket should be well cleaned.

NOTES ON EDUCATION IN SHANTUNG.[1]

IT was only a few years ago when Shantung Province was generally regarded as highly conservative, antiwestern or antiforeign. On this account it has been very difficult to overthrow the timeworn and inefficient Chinese system of education in the province and to introduce in its place the elements of western education and western culture. That this has finally been done is due largely to the enlightened progressive governors who have ruled Shantung during the past twenty years. Governor Yuan Shih Kai in 1901 established the first provincial college of western learning in Shantung, under the presidency of an American missionary educator, and Governor Sun Pao Chi also did much to encourage institutions of learning in Shantung. By October, 1911, the time of the outbreak of the revolution, Tsinanfu, the capital city, had modern educational institutions with an enrollment of 39,320 pupils, not including those enrolled in a military college and military preparatory school, a police training school, an industrial school, and a commercial school.

Considering that Shantung is a province with an estimated population of 30,000,000, the public educational facilities accorded the people of the province, judging from the above enrollment were, prior to the revolution, extremely meager. They were in fact far more inadequate than figures would make them appear, for the schools were with but few exceptions makeshifts. The students in the higher schools were what might be called subsidized, for their board and lodging, books, etc., were provided to them free of charge by the state and in numerous instances spending money was allowed the students in addition to the above favors.

But these concessions tended to accustom the students to overindulgence and failed to call forth initiative on their part. Very little was accomplished by these schools. The lecture

[1] These notes have been taken from a paper on Education in Shantung by the Hon. Julian Y. Arnold, now American consul-general at Hankow, China. Mr. Arnold describes briefly the educational system in Shantung and shows what has been done along industrial-training lines. Shantung Province lies on the east-central coast of China, southeast of Peking, and southwest and across the Yellow Sea from Korea.

method prevailed almost entirely; examinations were loosely conducted; teachers were poorly equipped; and funds were often misappropriated. The middle and primary schools were even more glaring examples of inefficiency and little attempt was made to prepare the pupils for their future work.

In order to improve these conditions, there is at present much interest being taken by the provincial government in the question of education. The governor, Chow Tsz Ch'i, for a number of years Chinese consul-general in New York, is keenly alive to the importance of strong Government schools honestly administered. The provincial commissioner of education was trained in Japan and has a reputation of being capable.

The Shantung Provincial College is housed in a beautiful set of buildings, with spacious athletic grounds, dormitories, and residences for its instructors. The president of the institution, Mr. K. V. Wong, a Cantonese, was graduated from the University of Wisconsin in 1910. Besides this college, the Province of Shantung has a normal school, two law schools, an industrial school, a military school, and a commercial school. In the latter two institutions good results are being obtained, but in the others it seems to the casual visitor that in general the students are getting but little from their instructors.

A most disappointing institution in Tsinanfu is the Provincial Agricultural College. Although the Shantung people have been farmers for 40 centuries, yet the Shantung farmer of to-day—and the bulk of the province's 30,000,000 people are engaged in farming—knows nothing of scientific seed selection, deep plowing, pests, pruning, animal breeding, and scientific fruit growing, etc. Shantung raises cattle for export, but has never raised a milch cow and knows nothing of dairying although it is now importing hundreds of thousands of tins of condensed milk each year. Shantung's bare hills attest to the evils of deforestation, yet the farmer knows nothing of forestry and afforestation. Improved agricultural methods, new products capable of profitable introduction, better fruits, deep wells, dairying, afforestation, improved farming implements, more intelligent use of by-products, introduction of rural industries—these could increase the wealth-producing powers of the 30,000,000 of Shantung manyfold and no institution could be of greater service in inaugurating this important work than a strong central agricultural college and experimental station, provided it made the proper connections with the farming villages of the province. Instead, we find at Tsinanfu a college which probably represents an outlay of $50,000 to $100,000, with splendid equipment,

doing a work which is counting for nothing. Two high-salaried Japanese instructors, receiving $300 and $200 a month, respectively, have been with the institution for four or five years, yet profess to speak not a word of Chinese, all their instruction, which is purely theoretical, being done through interpreters, while the students in their classes laboriously take notes from the interpretations of the lectures. A laboratory, or rather showroom of bottled seeds and plants, is one of the buildings on the grounds, yet none of the students ever go into the building, as they are not required to. The sinks in the chemistry laboratory are rusted and the copper of the faucets covered with green deposits, showing that the laboratory has not been in use for months. A model silk filature was erected on the grounds at a cost of about $20,000 several years ago, with operating provisions for 30 or 40 students, yet the furnaces show that fires have never been made in them. There are 180 students in attendance at the college and they are all provided with dormitory accommodations on the grounds and their board provided by the Government free of charge to them. In addition to board and lodging the Government provides them also with books free of charge. Although facilities are provided for practical instruction, yet none other than theoretical instruction is given and this by the lecture method entirely, and to students, who, to judge by their appearances, attend the institution because they receive there free board and lodging, something which their parents may be reluctant to accord them at their homes. This institution is costing the provincial government $35,000 a year.

In addition to the above schools, the provincial government maintains in Tsinanfu three middle schools at an aggregate expenditure of about $9,000 a year. These three schools have an aggregate enrollment of 250 pupils and 15 teachers. It also maintains five elementary schools at an aggregate cost of about $10,000 a year. In these elementary schools there are enrolled 400 pupils.

In addition to the provincial schools there are in Tsinanfu, as in other cities of Shantung, certain elementary and middle schools supported by benevolent societies and individuals, and these schools are in many cases doing comparatively good work.

The provincial educational policy up to the present may be criticised for its lack of recognition of the greater importance of lower schools and for not doing more at this time with the total funds at its disposal for the institution of good strong elementary schools. The system of subsidizing students in the higher schools is pernicious as it must lead to infusing into the

minds of the students supported at State expense something of the idea that the State owes them a living. The Chinese seem to recognize this fact and undoubtedly within a few years we shall find no more students as charges of the State, except possibly in normal schools under contract to render service to the State for some years after graduation.

A paper on education in Shantung would not be complete without some reference at least to the German educational administration in their colony at Tsingtao and to the extensive educational work being carried on by the foreign missionaries engaged in work in this province.

For the children of German nationality the Government maintains a reformed grammar school whose final examination confers on the successful candidate the right to the rule of only one year of military service. The school is open to all Europeans and to boys and girls. There have also been opened a number of State boarding schools in which a five years' course of instruction is given, the curriculum comprising an elementary knowledge of Chinese, arithmetic, physical and political geography, natural science, and German.

Besides the State schools there is the girls' boarding school and day school of the Franciscan nuns giving a complete course.

For secondary instruction in European and Chinese subjects there is the German-Chinese High School (see below). The apprentices' school at the wharf may be regarded as a kind of technical school. Good opportunity is offered for the acquisition of Chinese and occidental knowledge in the various mission schools to which reference is made elsewhere.

The German-Chinese High School was opened on October 25, 1909. Its aim is to give a thorough education, founded on a knowledge of science and arts as they are taught in Germany, so as to enable the pupils later on to render useful service to the State. The high school is divided into two grades—the lower grade with a six years' course of instruction. In German: History and geography, mathematics, botany and zoölogy, physics, chemistry, also English stenography, drawing, gymnastics, singing, and in the highest class, philosophical propaedeutics. In Chinese: Classics, language, ethics, morals, geography, and history.

There is a final examination for the pupils in this lower course.

The upper grade is at present composed of three chief branches: (1) A natural-scientific-technical faculty; (2) a faculty for the study of jurisprudence and political economy;

(3) a faculty of husbandry and forestry. A medical branch is to be established later.

There is attached to the high school a translation institute at which Chinese and German savants are engaged in translating the necessary text books into the Chinese language, there being at present no German scientific books translated for the use of Chinese scholars.

In its way this high school is unique as it is the first institution of its kind in which a foreign power and China have combined. The high importance attached to this establishment in Chinese official circles found expression by the envoy of the Chinese Government in his opening speech.

In the Province of Shantung, missionaries have been very active, and a large number of missionary societies are now established. Some of the denominations operating are the Baptist, Presbyterian, Congregational, Methodist, and Catholic. In all, there are a total of 404 foreign missionaries in Shantung, operating a total of 648 schools with an aggregate attendance of 10,780 pupils.

Many of the mission schools under direct foreign supervision and with foreigners in the teaching staffs are doing splendid work in distinctly modern buildings with modern equipments. The courses of study in these schools generally include the ordinary branches as taught in an American grammar school, except that chapel exercises and courses in Bible study are included in the prescribed curricula. Very few of the mission schools are equipped with laboratories or laboratory apparatus or give much practical instruction in the natural sciences. Naturally the Union College at Weihsien is an exception, being of the status of a college and offering courses of study in the arts and sciences.

The Union College at Weihsien is the only real missionary college in the province. This institution does the equivalent of the freshman and sophomore years of an American university. It has an excellent faculty, including foreigners (Americans and British). It gives a four-year course of instruction, including a splendid training in the Chinese language, literature, and history. Science, geometry, physiology, trigonometry, botany, surveying, physics, zoölogy, astronomy, chemistry, geology, and calculus are included in the curriculum. English is the only foreign language taught. Studies in the Old and New Testaments and a course in comparative religion are prescribed throughout the curriculum. An advanced course of two years has been arranged for, to give the equivalent of a master of arts degree in a western university. There is a small medical de-

partment located at Tsinanfu and a theological department located at Tsingchowfu.

Regarding missionary institutions in Shantung it may be said of them that they have done much good work and have been responsible for training many a young man for positions of trust and responsibility and undoubtedly have won a warm place in the hearts of many of the native populace. In the absence of anything of any merit in the way of native schools, they have stood out, in contrast, as something of some consequence, but once the Chinese institute good efficient native schools it is feared that unless the missionary educational institutions substantially improve, they will be relegated to the place of second or third rate institutions. It is indeed strange that in a province whose whole population depends upon agriculture so much as do the 30,000,000 of Shatung, the mission schools have not in the least sense of the word made any effort whatever to give even the rudiments of an agricultural training, especially so when we consider the people of Shantung have so much to gain by a knowledge of modern agricultural methods as contrasted with the old wasteful methods in vogue to-day, methods which are of no improvement over those which obtained two thousand years ago.

It is also strange that the mission schools have neglected their wonderful opportunities to give the Chinese girls good sound training in domestic science and the care of babies. Anyone who has traveled about China must have had his attention attracted to the appalling infant mortality. It is estimated that in China 7 or 8 out of every 10 children die before reaching 2 years of age, thus making it necessary for the mothers to produce 10 children to guarantee the raising of 1 or 2. The mother has not yet learned the use of cow's milk in rearing her children. The mission girls' schools do much for the Chinese girls, but neglect the very essentials to their future welfare. Courses in sewing, lace making, embroidery, and other industries adaptable to a woman could also be included profitably in curricula of girls' schools.

The mission schools have done and are doing but little for industrial training, yet a people as poor as are the natives of Shantung has far more to gain by a bit of good substantial industrial training than by all the history, geography, and arithmetic which could be possibly crammed into their heads. Moreover, courses in industrial training could be so given as to include instruction in common school branches, thus in no way would the pupil's regular education be impaired.

EDITORIAL.

Certain pet expressions abound in the educator's vocabulary as in those, for instance, peculiar to baseball and agriculture. One constantly encounters the former in perusing educational magazines. In two successive numbers of a leading American industrial monthly the writer took occasion to contrast the three R's and the three H's. At the risk of being monotonous to our American readers we wish for the benefit of the Filipino teacher to "decipher" these "terms"—the first into the well-known Reading, wRiting, and aRithmetic, familiar subjects in the elementary schools, and the Head, Hand, and Heart, the human factors involved in man's rounded education.

The Three R's and The Three H's.

Without attempting any pedagogical discussion of their value and applicability in other countries, we will not transcend accepted educational precepts in stating that no educational system can rest on a solid foundation which does not include training to secure the proficiency of the individual in these subjects and the development of these elements in his make-up. Efficient citizenship demands both; and the teacher of trades, handicrafts, and domestic arts needs particularly to keep the second trio of letters constantly before him in order to bring into existence in his own life and that of his pupils the results which such training represents.

If the buying public of the United States and Europe is taught to recognize Malayan applied art when they see it, there will result a condition which will, more than anything else, place Philippine craft products on a firm commercial foundation. The sale of articles of luxury or of those having an art value, such as handicraft products, depends not only on the beauty of the articles, but also on their individuality. What natural color will accomplish in making Polangui basketry distinctive, Malayan art will do to individualize Philippine craft products in general. To accomplish this purpose in the markets of the world is the principal object of the Bureau of Education in its endeavors in the field of Malayan applied art.

Malayan Art.

Unfortunately, examples of Malayan art are not abundant in the Philippines. Among the Christian people not more than half a dozen localities exist in which Malayan ornament is uti-

lized in carving or mat making. Among the non-Christians the indigenous decorative art is found to a great extent in baskets and textiles and in metal work and carving. The ancient Malayan countries are, however, richer in the applied art of this race. The Dutch East Indies, perhaps the original home of the Malays, may be drawn upon for the sources from which Malayan art has been brought down to modern days.

It is not the intention to reproduce original Malayan art objects themselves. Most of them are useless to Americans and Europeans and unsalable in the markets of the world. Such articles as incised bamboo products may be copied, but above all our interest in Malayan handicraft products is not the articles themselves but the art which is employed to decorate them. The distinctive features of this art—the peculiar stripings, the geometric figures, the conventionalized animal and human forms, and the color combinations—can be applied to the texture and form of articles made by the peoples inhabiting the Malay countries of the present day.

Taking Stock.

Once or twice annually large business houses take stock—that is, an inventory is accomplished of all merchandise on hand, whether for sale or consumption. In this way the head of the concern obtains definite information on which to base his future plans and aims. The amount and character of stock on hand demonstrate the efficiency of his buying and selling force as well as the value of his general methods of administration. A glance at the inventory will tell a well-trained executive how closely the methods of his subordinates have approached the highest standards of efficiency, as recognized by the leaders in his special line of work. Surplus stock might denote sluggish salesmen; dead stock would point to lack of judgment on the part of his buyers. In fact this periodic stock taking is the most important means with which to "take bearings."

Stock taking of methods of administration is of even more importance than the checking up of material assets. In a large organization where the development of an efficient system calls for constant modification and perfection of methods, each worker is too prone to concentrate his attention upon the details of his particular duty and the system as a whole is either beyond his range of vision or out of focus. To correct this narrow though intensive view of a subject, it is necessary to stand away from it occasionally and regard the work in its entirety. In this way only can a correct estimate of any field of endeavor be arrived

at. The more or less tedious details of routine merge into the large issues and the harmonious interrelation of such parts may be judged.

Upon a rather unstable foundation, with no applicable principles of guidance in the work of education, the Bureau of Education set out to establish a system that would meet the various demands and produce adequate results from its inception. This work has involved considerable experimentation, frequent modification and continual adaptation to an unfamiliar environment. The greatest difficulty encountered was to maintain the system in operation and at the same time remodel or rebuild such parts as had become unsuitable because of new or more vital demands. In a country where education was not general, where the dignity of labor was not commonly recognized, and where the physical well-being of the individual did not receive adequate attention, a system had to be evolved which would give due regard to these factors in human betterment and yet be sufficiently elastic to meet the advancing educational needs of the country.

A retrospect brings the conviction that the general purpose in view is being attained. A closer survey on the part of those not in close touch with the activities of the Bureau might give rise to some questions. Some might ask whether the Bureau of Education has put into effect the many demands made upon it; others might conclude that the Bureau had overstepped the limits of its scope of activity. These questions having been answered satisfactorily, as they could be, the work of planning for the future would be in order. In addition to a continuance of the present policy several concomitant questions call for attention. The problem of vocational guidance, in its broadest significance and application, demands solution. To accomplish this will represent a further development in the educational system of the Islands that will go far toward rounding out the present plan of industrial instruction.

Funds for agricultural education.

The rapid extension of agricultural work in the form of gardening and special campaign work as well as the need for more farm schools, make the lack of special funds and endowments for agricultural education in the Philippine public schools increasingly evident. To a greater extent than is generally thought, real advancement along this line is due to the wisdom and foresight of those who make a permanent source of income available, thus enabling persons in charge of educational work to

plan for the steady growth and the necessary expansion of agricultural schools. The beginning of successful schools of this class in the United States was a consequence of the Morril Act of 1862, giving to each State for agricultural education 30,000 acres of public lands for each member of Congress. This furnished an endowment fund of practically $17,000,000. Most of the agricultural colleges were developed under the provisions of this Act.

As yet no special endowment has been provided in the Philippines for the establishment and support of agricultural and farm schools, notwithstanding the need for more settlement farm schools for the mountain people and rural communities, and a farm school for each province. Prominent American educators who have visited the Philippines have expressed their admiration of the agricultural work being done through the public schools and have cited the urgent necessity for its wider extension. Among the number was Dr. H. J. Waters, president of the Kansas Agricultural College, who recently made a survey of the agricultural work of the Bureau of Education. He took occasion to publicly express his approval of what is now being done in the schools and urged its continued development.

Steady financial support and a knowledge of the probable income in subsequent years is urgently needed if the present farm schools are to be developed and new schools to be established where necessary. The advancement and ultimate prosperity of a country is influenced by its educational system to a far greater extent than is usually realized, and the prominent part which the public schools will play in the development of this country of unbounded agricultural resources should receive more general recognition.

Visual instruction.

Within the last ten years various forms of picture-projection apparatus have come into general use in the larger schools and colleges, and in many of the smaller institutions, while the state of New York maintains a regular organized division of visual instruction as a part of its educational system.

The efficiency of this method of instruction is undoubted. It is asserted that the eyes are twenty-eight times more efficient than the ear in presenting to the mind impressions that will last. Moreover, there is the present general waste of school buildings to be considered, for the average school building is idle one hundred and thirty-three hours out of every week, includ-

ing nights. The Chicago Daily News has demonstrated that school buildings may be made social and intellectual centers, and the Daily News illustrated lectures are a regular feature of the school year in the school buildings of that city.

In the Philippines, where the medium of instruction is understood with difficulty by a large percentage of the pupils and not at all by many of the parents, the value of the projected picture as an educational medium cannot be overestimated. As a means of bringing in sharp contrast the work done in different sections of the Islands, as an aid in standardizing the various articles produced in school industrial work, as a method of introducing "good form" in athletic exercises and games, as a vitalizer of history, literature, and the sciences, a few good lantern slides with short appropriate explanations are worth far more than a bald statement of facts or brilliant verbal descriptions which an untrained mind cannot visualize. The Bureau of Education has already done some work along this line. The rapid increase in the number of modern school buildings with commodious assembly halls in the Philippines offers an excellent opportunity for the further extension of this work.

School lunches.

School lunches have been served in many of the schools throughout the Islands for a number of years. In no other division, however, has the system of serving school lunches been so thoroughly developed as in the Manila schools. At present there seems to be an awakening of interest in a number of school divisions in respect to this matter. To those who have not had experience in the establishment and maintenance of school lunches, the system in vogue in the Manila schools will be of interest and value. The primary schools of the city operate under peculiar conditions which differentiate them considerably from the schools in the provinces. The conditions at the Philippine School of Arts and Trades more nearly approach the conditions found in the provinces. A study of the different systems used by the city schools and by the Philippine School of Arts and Trades will be of assistance to such school officials as are planning to inaugurate a lunch system in their schools.

Lunches are served in all schools in the city of Manila with the exception of the Manila High School, the School of Commerce, and the Central School. The daily session of these schools is from 7.30 a. m. to 12.30 p. m. and many pupils come to school without breakfast. The school lunches provide food,

at the lowest possible rates, suitable to keep the pupils in proper physical condition for their long morning's work. The cooking and serving of the food involves the training of a large number of boys and girls. The sanitary methods used in the preparation and serving of the lunches are effectively brought home to all pupils whether engaged in the actual handling of the lunch or not.

A compilation of lunch sales for July 23, 1914, shows that 16,290 pupils were in attendance at schools where lunches were served; of this number 9,740 secured a lunch of one kind or another at a total cost of ₱156.31. An approximate profit of ₱40 was made and was turned into the various school funds for the purchase of athletic equipment, pictures, industrial materials, and articles of a similar nature. The menus of the different schools contained from 3 to 11 items; the average number per menu being 5. The principal articles of food were sandwiches, soups, stews, ice creams, bananas, macaroni, and sweets, most of which cost 1 or 2 centavos per portion. During the school year 1913–14 the total receipts derived from city school lunches were ₱23,198.77. The total cost of material was ₱17,397.32.

The largest lunch established in the city of Manila is that connected with the Philippine School of Arts and Trades. The system in vogue at this school is quite different from that of the other schools in the city. The food is prepared by hired help and is planned as a noon-day meal for pupils older than those enrolled in the primary schools of the city. The lunch sales of this school on July 23, 1914, amounted to ₱19.67. Approximately 400 pupils were served out of the total enrollment of 700. Rice, stew, fish, bread, and rolls were the leading articles on the menu. In addition to the pupils a large number of the faculty secure their noon-day meal in the school at the uniform rate of ₱0.50 per meal. The lunch feature is entirely self-supporting and the profits are turned into the school fund.

PHILIPPINE FIBER PLANTS.

PHRAGMITES VULGARIS.

Description.—Tambo is a large erect grass 1.5 to 3.5 meters high. The stems are often as much as 1 centimeter thick, growing from a large underground stem or rootstock. The plant has long flat leaves and a large nodding brownish panicle. The main stem often bears many branches at the nodes.

Habitat.—Tambo grows best in low wet places, along fresh-water streams and the like.

Distribution.—It is widely distributed in the Philippines.

Material.—The young panicles are used as industrial material before they turn brown with maturity.

Uses.—The prepared panicles are made into brooms. For the best brooms the panicles must be collected just before the tiny flowers begin to open. Poorer grades of brooms are made from older or younger panicles.

ISCHAEMUM ANGUSTIFOLIUM.

Description.—The most distinguishing feature about coboot is its fuzzy white base, which is somewhat thickened or bulbous. The downy inflorescence, creamy white in color, is borne at the apex of the stem. The leaves are long, slender, and wiry.

Habitat.—The grass grows best on open, dry slopes where the hot season is not of long duration.

Distribution.—In the Philippines it is found only in northern Luzon.

Material.—The long, slender, tough leaves are cut from the stem and used as industrial material. The dark-green color of the leaves does not fade.

Use.—For many years coboot has been used in rope making by the Filipinos. It has recently been found to be a good material for slipper making, novelty basketry, and similar handicrafts in the schools.

COCOS NUCIFERA.

Description.—The coconut palm is very common and widely known. It is a large palm, reaching a height of 25 meters. The leaves and fruit are crowded at the apex of the slender scarred trunk.

Habitat.—The coconut is widely cultivated. It does not thrive in localities where there is a long dry hot season. It grows best in places where the dry season is either of short duration or is interrupted by frequent rains.

Distribution.—It is found throughout the Tropics.

Materials and uses.—Aside from the food product of the coconut this remarkable palm furnishes several excellent industrial materials.

The hard shell of the nut is used for making various novelties such as savings banks, dippers, buttons, bowls, and trays. It takes a beautiful polish.

The fiber of the husk which surrounds the nut is known as coir. Coir, once thrown away as waste, has been found to be an excellent material for doormats and some other articles.

The midribs of the leaflets are used in basketry and other hand weaving.

The reddish roots of the palm are long and of uniform size. They may be used as a substitute for amlong, or, when split up, as weavers in baskets.

PANDANUS TECTORIUS.

Description and habitat.—This is the common seashore pandan. It thrives best just back of the beach along the seashore and the banks of tidal streams. It is seldom found elsewhere unless in cultivation.

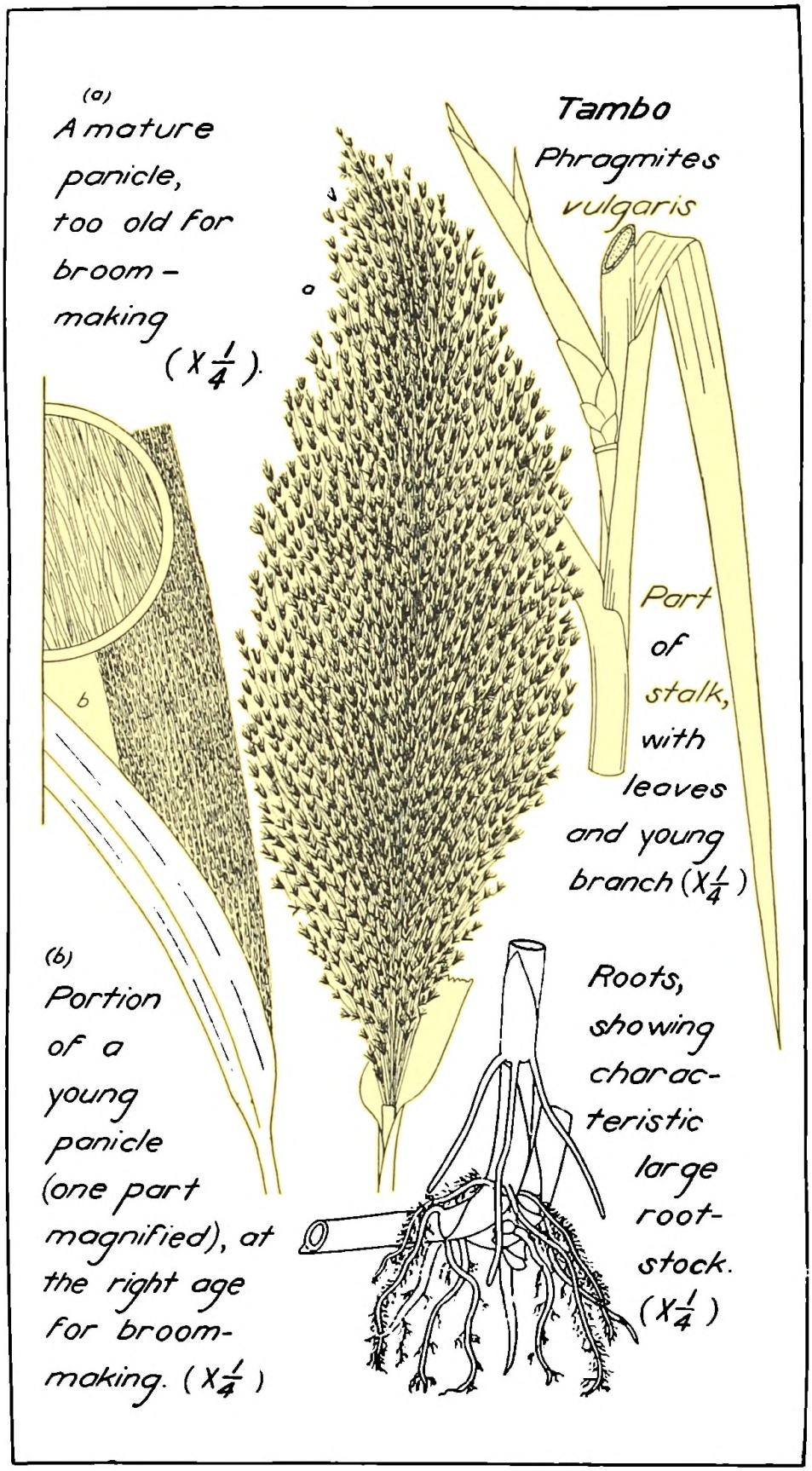
Distribution.—It is found throughout the Philippines near the sea.

Materials.—Pandan strips are prepared as follows: The spiny margins and midrib of the leaf are cut away by means of a knife, leaving two wide smooth half-leaf strips. These wide strips are then split into narrower strips of the width desired.

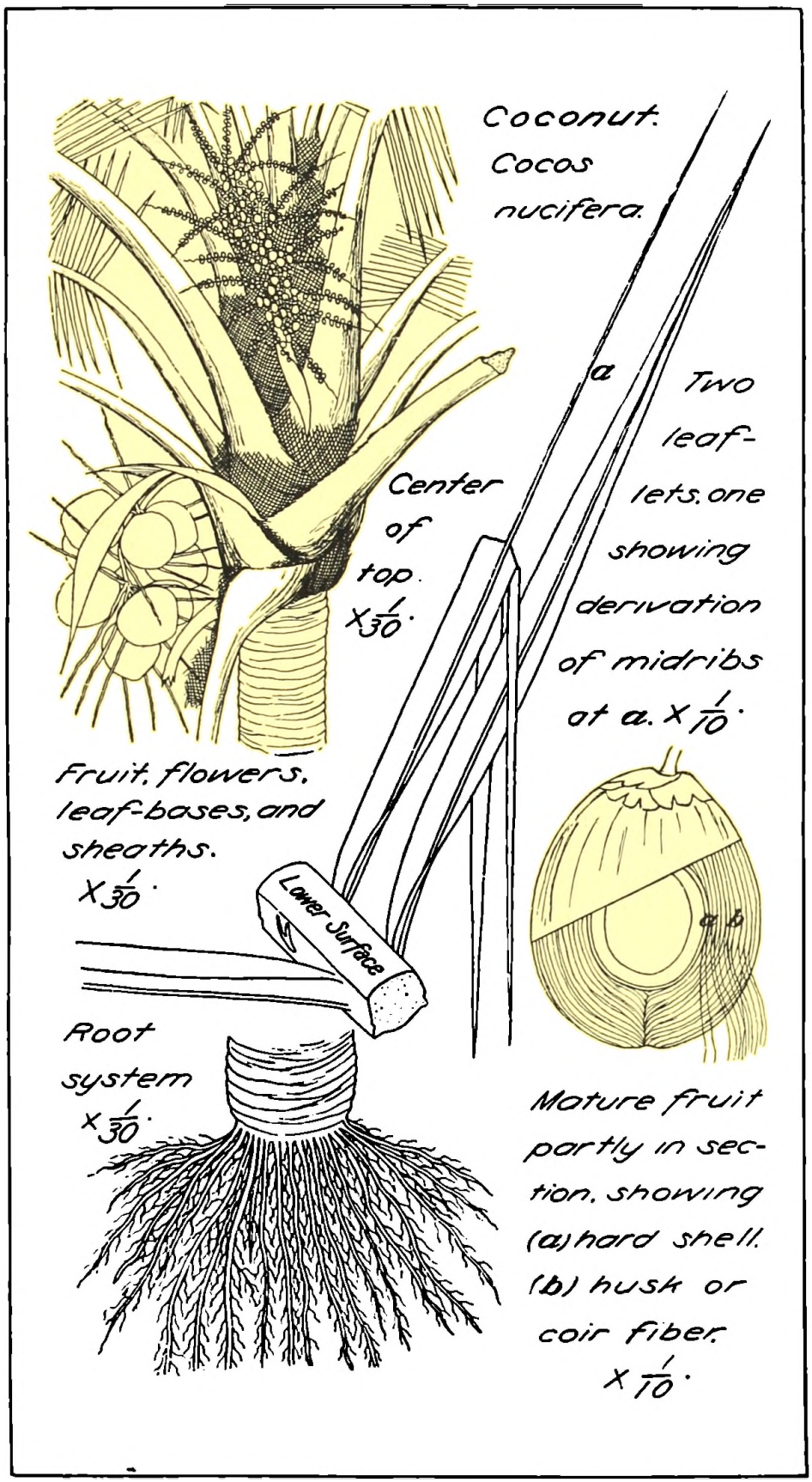
Pandan raffia is the skin of pandan strips and is obtained by pulling the green skin from the cellular inner structure of the leaf. This raffia is usually bleached before using.

Uses.—Pandan strips are used in hats, mats, baskets, and small articles. Raffia is used for matting, cushions, and hats. The interior cellular fiber may be found useful as a matting material.

Although not extensively used in the Philippines this common pandan is believed to be of great possible value.

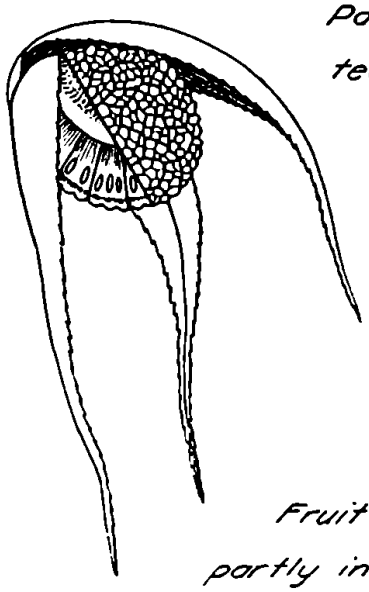

(a)
A mature panicle, too old for broom-making (X 1/4).
Tambo
Phragmites vulgaris
Part of stalk, with leaves and young branch (X 1/4)
b
(b)
Portion of a young panicle (one part magnified), at the right age for broom-making. (X 1/4)
Roots, showing characteristic large root-stock. (X 1/4)


Coboot.
Ischaemum angustifolium.
A complete plant, X 2/5, showing the peculiar characteristic white fuzzy base, the long slender leaves used as industrial material, and the inflorescence.
The inflorescence is of a rich creamy color.
A single flower spikelet, magnified, X5, showing the usual parts.

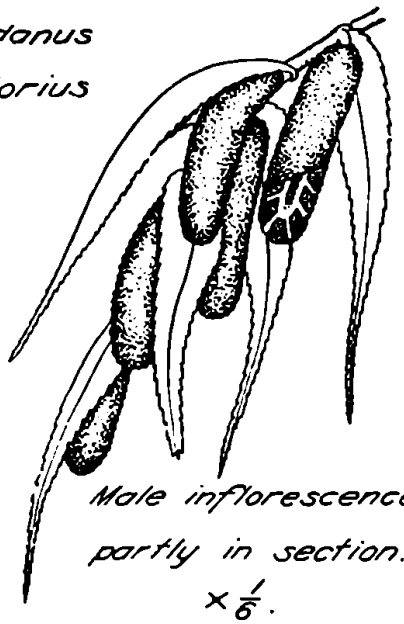

Coconut.
Cocos
nucifera.
a
Two
leaf-
lets. one
showing
derivation
of midribs
at a. X 1/10.
Center
of
top.
X 1/30.
Fruit. flowers.
leaf-bases, and
sheaths.
X 1/30.
Lower Surface
a b
Root
system
X 1/30.
Mature fruit
partly in sec-
tion. showing
(a) hard shell.
(b) husk or
coir fiber.
X 1/10.

Common Pandan

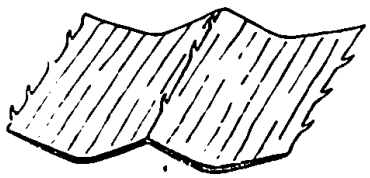
Pandanus tectorius



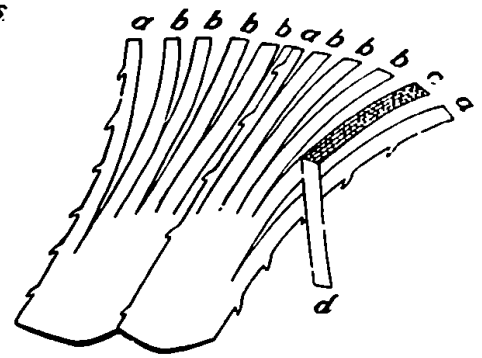
Fruit partly in section with surrounding leaves. Seeds shown. $\times \frac{1}{8}$



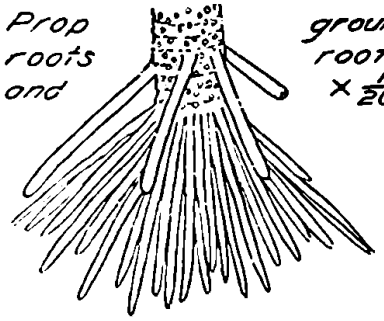
Male inflorescence partly in section. $\times \frac{1}{6}$.



Section of leaf showing the under-surface and inner structure $\times \frac{1}{2}$



a. Margins and midrib first removed in preparation of material from leaf.
b. The commonly used pandan strips
c. A strip with skin removed
d. A pandan raffia strip — the skin



Prop roots and ground roots. $\times \frac{1}{20}$

INDUSTRIAL INSTRUCTION IN EGYPT.

A COMPREHENSIVE statement on the progress and condition of public instruction in Egypt has been received by the Director of Education. This report was signed by Douglas Dunlop of the ministry of education. It contains a review of the historical conditions of Egypt leading up to the present system.

At the bottom rung of the educational ladder the ministry of education has under its control 32 higher primary schools for boys, 11 of them being in Cairo and 21 in the principal provincial towns, and also 2 higher primary schools for girls, both in Cairo. The secondary schools now number 5, the last having been established in 1910. There are 4 training colleges, a school of law, and a school of medicine.

A new departure has, in recent years, been made in the promotion of technical education. Upon this subject Mr. Dunlop is quoted as follows:

Owing to the rapid growth in educational and commercial enterprise, and to the rise in the standard of material comfort due to the widespread advance in prosperity, it had for some time been felt that special measures were needed to lift native workmanship, both in its quality and to some extent in its scope, more nearly to the European level. It was doubtless felt, too, that it was desirable to counteract in some practical way the besetting tendency to follow after education of a too exclusively literary character. Lord Cromer, alike in his tours in the provinces and in his annual reports, did much to awaken interest in the question.

In 1901 an effort was inaugurated to establish industrial schools for children of the artisan class by an appeal to local enterprise and private benevolence. The project was explained by Sir Eldon Gorst, the financial adviser, in his note on the budget for 1902 as follows:

"A further problem has lately attracted the serious consideration of the Government, viz, the question of providing technical instruction of a practical character for the artisan class. At present the more difficult and delicate descriptions of work in the various trades are largely in the hands of Europeans. There seems no reason to suppose that the Egyptian, if properly trained, could not attain to as high a level. What is required is not so much a school, which has a natural tendency to drift into book-work and theory to the detriment of practical application, as a model workshop in which Egyptian boys of the artisan class would be trained in good methods in the same way as they are now trained in inferior methods. It is proposed to start an institution of this character in Cairo. It is very desirable that in process of time similar institutions should be created in all the larger towns. The Government cannot, however, do more than

lead the way by founding an establishment which may serve as a model to others of a like character. The rest must be left to private enterprise and benevolence."

The Government fulfilled its promise by inaugurating "model workshops" at Bulak in 1903 and at Assiut in 1906. In 1904, in response to the Government's appeal, a native notable, Mahmoud Suleiman Pasha, constructed at his own cost, at Abu-Tig, and liberally endowed a trade school in which are taught the industries of the locality (weaving, carpentry, smiths' work, etc). About the same time the Moslem Benevolent Society, "El-Orwa El-Woska," invoked subscriptions for the establishment of a trades school at Alexandria. In 1905 the Coptic Tewfik Society founded in the Faggala, Cairo, a small trades school for engineering and woodworking. In 1906 the provinces of Fayum, Beni-Suef, and Beheira took up the challenge and set about with commendable energy and public spirit to establish trades schools for themselves.

In view of the extension of this voluntary movement, with all its fruitful possibilities, and confronted by the rapidly growing needs for skilled labor, in 1907 the Egyptian Government created a special department of "agricultural, technical, and commercial education" under the ministry of education.

Under the stimulus given to the movement by the creation of this department no less than 15 agricultural and industrial schools have been opened through local initiative and support. These schools receive assistance from the department not only in the form of grants-in-aid for buildings, equipment and maintenance, but also in expert guidance. Attendance at the schools also receives State encouragement in the form of exemption from the obligation to military service.

The Government model workshops at Bulak and Assiut, previously referred to, each provide accommodations for about 300 pupils. The training extends over four years. No fees are charged and a small wage is given after the first half year. The trades taught are engineering, smiths' work, foundry work, metal plate work, carpenters' and wood work, leather work, and painters' and decorators' work. The instruction is mainly practical, but a certain amount of class instruction in drawing and elementary technical subjects is also provided.

The Mansura Trades School, also a Government institution, was established in 1889. It provides a three years' course in carpentry and joinery or in engineering.

On a higher level is the Bulak Technical School. This institution dates back, with some intervals, to 1839. The course extends over five years, the standard of admission being the primary education certificate. Practical training is given in four principal workshops, viz, the fitting and metal-work shop, the carpentry and pattern-making shop, the smiths' shop, and the iron and brass foundry. Each student passes successively through the four workshops. Theoretical instruction and training in design are also provided.

The School of Engineering is a higher college, providing the most advanced technical instruction, mainly in preparation for service in the irrigation and towns and buildings services of the public works department. Through numerous vicissitudes and interruptions the school dates back to 1834. The course extends over four years, branching off after the second year into special courses in hydraulic engineering and architecture. The school occupies an extensive new building at Gizeh, replete with

the latest equipment. During the summer vacation the students are attached to the public works department for further practical training, while the students of the third and fourth years also go on tours for about one month each year, visiting important public works and making surveys and hand sketches.

The School of Agriculture at Gizeh was founded in 1890. The standard of admission is the primary education certificate, and the course extends over four years. About 100 acres of cultivated land are attached to the school, all the students taking part in its practical working and in the management of the model dairy.

The school is in process of being raised to the status of a higher college with a course based upon the secondary education certificate. An intermediate school of agriculture has recently been established at Mushtohor.

TREE-FERN WOOD.

Tree-fern wood may be used to the best advantage by employing it in its natural form, namely, that of a cylinder. The grain of the wood is of such a nature and structure that by cutting or smoothing it in various ways some very striking and symmetrical designs may be brought out.

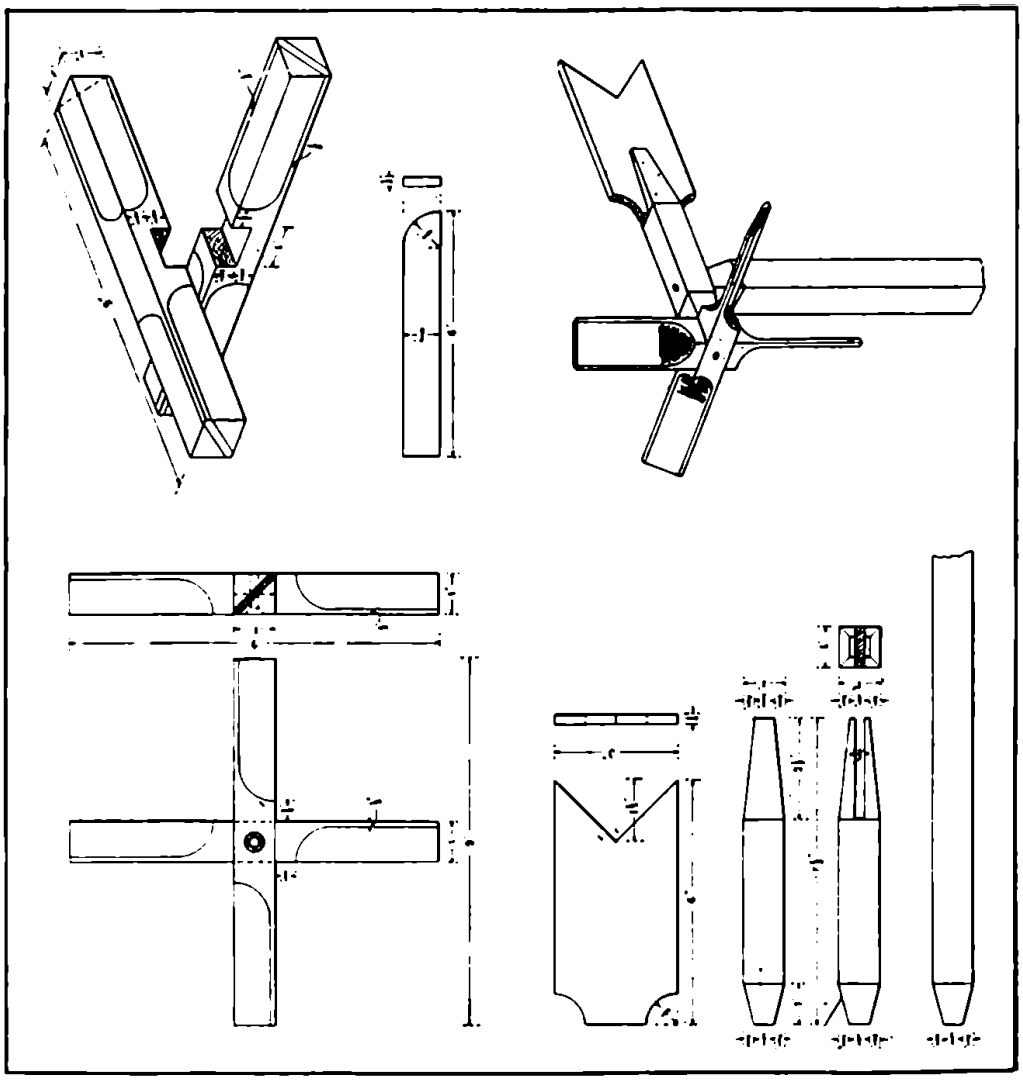
After the outer fibrous covering and the inner pith have been removed, the woody remainder is seasoned in a dry place in order to preserve its natural colors. The seasoning should not be hastened by placing the wood in the sun, as this is likely to bleach it too much or to cause it to crack. A wood filler and wax will give it a good finish. The stem is naturally quite rough on the outside. There are deep furrows in it in regular and symmetrical positions. This roughness may be left in some cases to advantage. In other cases, it is best to smooth the stem off and thus bring out the beautiful dark-brown designs in the grain of the wood. The design that is shown in the cross section of the stem is very striking and, for this reason, this part should be given prominence wherever possible.

Tree-fern wood may be best employed for such articles as vases, pencil holders, and novelties. It may be used also for legs of flower stands and tables. The wood may be cut into strips and used for making small boxes or picture frames. It will also serve for inlaying. Umbrella holders may be made from trunks of large diameter.

MISCELLANEOUS.

OF SPECIAL INTEREST TO THE BOYS.

The teacher in a primary shop is often in a quandary as to how to keep his more advanced pupils busy while the rank and file of the class are doing the regular exercises. In many cases there is no commercial work or school repairs required and it is therefore necessary to supply some kind of work, which



A simple type of windmill.

will be interesting and, at the same time, instructive. In Circular No. 97, series 1912, of the Bureau of Education, a number of special exercises, such as windmills, water wheels, etc., are suggested as suitable for use in connection with the regular course. Some of these exercises have been worked out in the

city schools of Manila and will be illustrated from time to time in these columns.

The drawings accompanying this article represent a simple type of windmill. It can be inserted in the regular course after a pupil has become fairly proficient in the use of the plane, saw, and lining tools. Very little material is needed and the dimensions may be varied to suit the stock on hand. The half-lap joint and the blades of the wheel can be cut out either with a chisel or with a pocket knife, depending upon the skill of the workman with these tools.

To locate the point where the standard is attached to the crossbar, the wheel, crossbar, and fan are first put together, and the whole balanced on the edge of the square.

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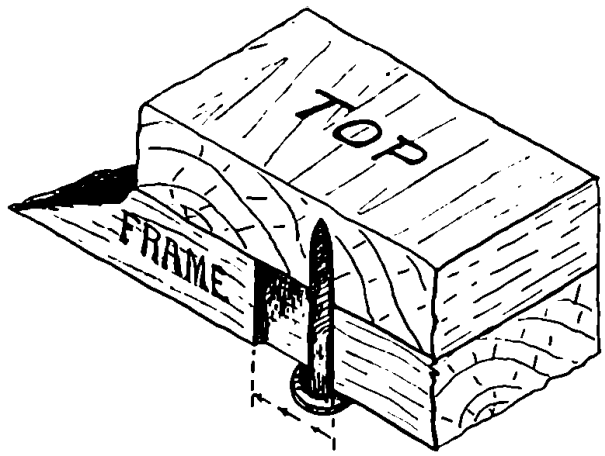
COMPENSATING DEVICE.

The "compensating device" here illustrated is a very simple contrivance, but remarkably effective in making tops take up their shrinkage or expansion automatically, thus relieving the teacher of the necessity of cutting them apart to make new joints. It consists essentially of a roundheaded screw with a cup washer against the head, and a slot in which the shank of



Compensating device.

the screw slides perpendicularly to its axis. Before attaching the top, a frame like a picture frame must be attached to the pedestals (or base, or posts and rails). This projects over sufficiently to allow for slots to be cut so that screws may be inserted from below into the top. This frame usually appears as a molding placed below the top. The slots extend perpendicularly to the main axis of the top and will be longer for those screws near the outside edge, the two center screws requiring no slots.—*Bruce Ingersoll.*

THE MAKING OF A SUNSET.

In the teaching of color the problem of the sunset is of value, possessed of many chances of individual treatment.

As a problem in color the sunset resolves itself into one of complementaries for contrasting sky and objects seen against it. Different parts of the sky itself will usually be analogous in color.

At sunset the brilliant sky is opposed by the dark silhouetted objects against it. These latter will be found to be strongly tinged with the complementary color to the sky. This tone is rarely pure or of full intensity, but is neutralized by gray and very dark in value. Variations in color, value, and intensity of sky tones will be balanced by approximate variations in the opposite colors below. If, for example, the sky ranges in color from yellow through orange-yellow to orange, there will be a play of violet, blue-violet, and blue in the silhouette.

Work of this kind will open up a field of natural beauty which, to many pupils, will be entirely new.

In nearly every town will be found a church tower that will lend itself to this treatment with surprisingly pleasant results.

The roof lines and towers may be treated in innumerable ways, thus opening up a chance for rivalry and competition in the class for the most pleasing arrangement.—*The School Arts Magazine.*

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THE EPIC OF THE CORN.

It was Frank Norris, that promising young author of California cut off in his prime, who wrote the great epic of the wheat. Here in these Islands to-day there is being writ, in more material form, the great epic of the corn. In field, schoolhouse, and *fiesta* the gospel of the golden cereal is being preached and its virtues extolled, and, better than the proverbial making of two blades of grass to grow where only one grew before, diversity of crops is being taught, and a new and staple article of diet is being introduced, to a crop-poor and diet-impoverished people.

People here in Manila have little idea of the tremendous work being wrought in the provinces by the corn campaign the Bureau of Education is conducting. The various schools have taken up the matter with the most ardent enthusiasm and all over the Archipelago plots have been planted to the cereal and have been cultivated with the most intense interest by the children and their sires. Even down in the wild Manobo country of Mindanao the warrior who has lived for centuries in his treetop house

and jealously guarded his precious little camote patch with his spear has succumbed to the seductive invasion and is planting corn.

From the campaign there has sprung a new institution. It is known as "corn day." Some one day between the opening of the school year and the end of January each school, even out in the remotest little barrio, must have its corn day. This means that a *fiesta* is arranged and all the people of the barrio or town attend the school where an enjoyable program is rendered as an attraction. Then there is set before the visitors a host of tempting dishes cooked from corn by the teachers and the pupils, they are shown what the school children have done in growing it, and there is a general propaganda conducted, all tending to exalt corn and popularize it with the masses. And to-day reports are pouring into the Free Press telling of town after town and barrio after barrio having its corn day and of thousands of the people being in attendance. Just how far-reaching the effects of this corn campaign of the Bureau of Education are going to be is very hard to estimate, but it seems assured that corn as a staple article of diet has come to stay. It looks as if the impossible had been accomplished and the century-old habits of at least this part of the unchanging East had been changed. With variety of crop insuring against dearth and famine, and variety of food insuring against a limited dietary and possible consequent debility, the laboring classes of the Filipino people will have cause to rise up and bless the Bureau of Education and those who are "doing the work." (Philippine Free Press.)

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The complete aim of education may be subdivided into four principal concrete aims, each having a definite place in contemporary education: (*a*) Physical education, which prepares persons for prolonged physical health and bodily usefulness; (*b*) vocational education, which prepares the individual for the useful and effective performance of the duties related to self-support; (*c*) civic and moral (or social) education, which trains the individual for effective participation in group life as citizen, patriot, parent, etc.; and (*d*) cultural education, which fits the individual for effective participation in the æsthetic, intellectual, and other cultural activities of civilized life. (Cooley and Snedden, in the N. E. A. Proceedings for 1913.)

Plate I. Luncheon set—centerniece and doily.

INDUSTRIAL NOTES.

A CORRECTION.

On page 113, No. 2, Vol. III, of THE PHILIPPINE CRAFTSMAN, the first part of the sentence under the heading "Trinket Basket, Triple or Quadruple Weave," should read: "Requires 8 spokes of rattan 34 cm. long, 3 mm. wide, 1 mm. thick for the beginning."

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COMBINING FILET CROCHET AND EMBROIDERY.

One of the later numbers of 'Modern Priscilla" for 1913 gave an illustration of filet crocheted corners used in a table runner. Taking this as a suggestion, many novel and pretty articles of dining room service may be made. Plain linen sheeting, damask and butcher's linen are suitable materials. A few examples are mentioned below.

Plate I shows part of a luncheon set—centerpiece and doily. D. M. C. No. 30 was used in making the filet corners which were appliqued to squares of linen. This set was exhibited at the Cebu Carnival last December, where it aroused favorable comment. The embroidery design used in this set might be improved. Simple designs are most appropriate for this kind of work. The centerpiece, somewhat enlarged, would serve well as a tea cloth. An oblong piece of linen of suitable dimensions, with appliqued corners makes a good tray cloth. A piece of linen 15 by 45 inches (40 by 120 centimeters) makes a buffet cover when treated in a like manner.

Plate II, figure 1, represents a guest towel with a filet crochet insertion in frieze pattern and made of linen thread. Size No. 14 of this thread, used in pillow lace work, is most suitable. Figure 2 shows a tray cloth with a filet border and embroidered medallion. Plate III illustrates corner applications for towelling.

Complete borders of set-in filet insertions of old freize designs are more popular for table linen and household furnishings than wide filet or Irish crochet edgings. The former possess the advantages of simplicity, neatness and durability and never sink to the plane of fads. Combined with designs of French embroidery, the effect is much the same as the drawnwork and embroidery combination adopted by the Japanese and Chinese. (B. T., Cebu.)

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MONGO SEEDLINGS.

Experience has shown that most of the failures to get mongo seed to grow is either caused by the seed coat of the dry seed being so tough that the embryo cannot force its way out or that the vitality has been lost by prolonged drying. Few losses will be experienced if the following method in local use in sections of Pangasinan Province is followed:

Take a fresh, plump seed just removed from the fruit and with a pair of scissors carefully cut the thin edge of the seed coat. This edge will cut readily. The shell or outer cover of the seed can then be removed with ease. If the seed is black or badly shriveled it should be thrown away. When planting seeds place the thick side down in a well-prepared nursery bed. Cover with about 3 centimeters of fine soil and keep moist. Shade slightly or cover with a mulch. The seeds should be planted about 2 decimeters apart each way in the sprouting plot.

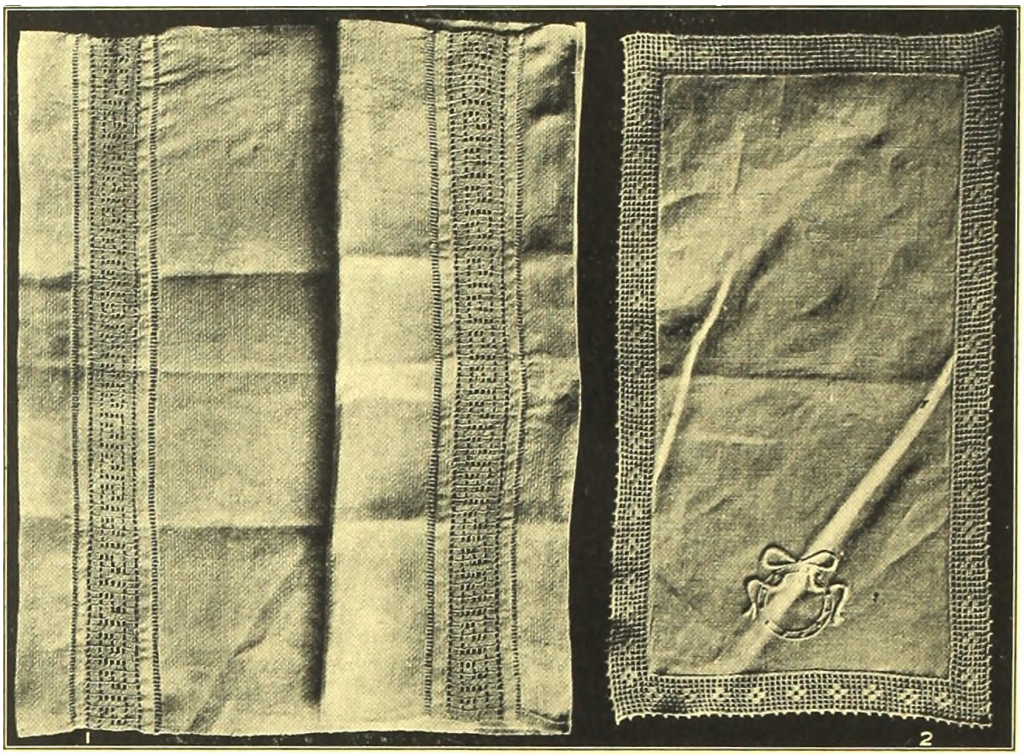

Fig. 1. Guest towel with filet crochet insertion. Fig. 2. Tray cloth with filet crochet edging.

Plate II. Filet crochet insertions and edgings.

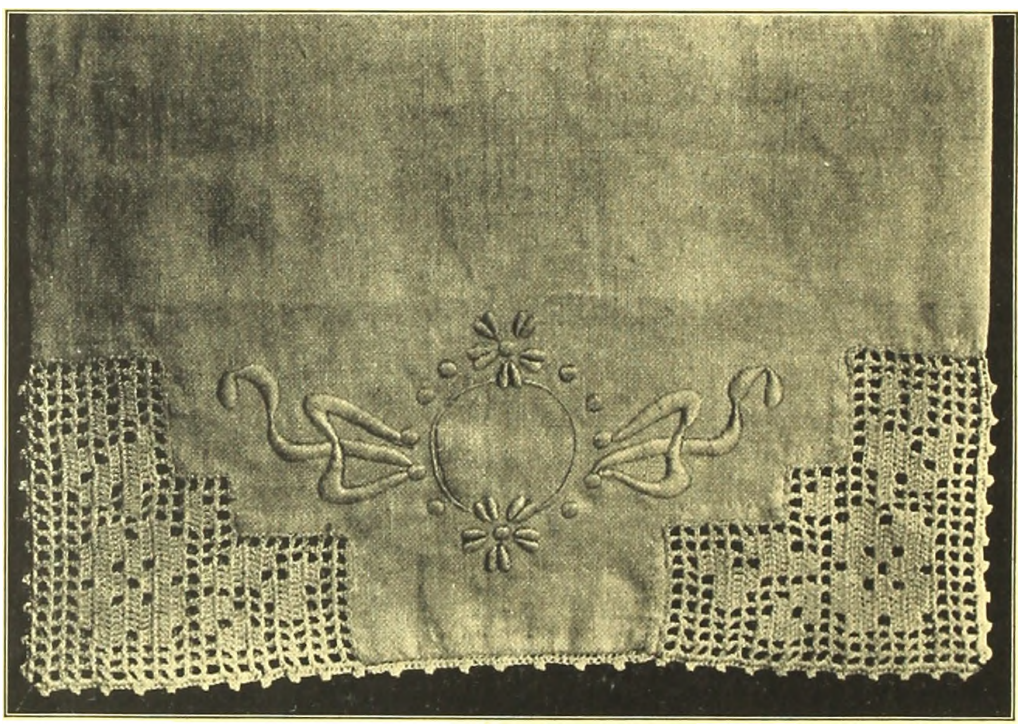

Plate III. Corner applications for toweling.

The seedlings ought be transplanted to a larger plot when they are about 2 decimeters high and have their real leaves. The plants should be set 1 meter apart and remain in this plot until they are about 2 meters high. If desired, the seedlings may be transferred direct from the sprouting plot to their permanent places, in which case they should remain a few days longer than if set in the larger plot. Reports on file show that seeds were planted in this manner on May 5, and the young seedlings transplanted on June 27 of the same year with an almost perfect stand.—H. A. Miller.

[NOTE.—It may facilitate the later planting if the seeds are planted in large bamboo tubes. By splitting the tube with a bolo or some other sharp tool the young seedling can be removed without the slightest injury to the roots. It also furnishes safe protection to the seedlings while being transported to the field. It may also be of interest to learn that authorities state that when a single seed sends up more than one young shoot each of these should be planted as they are very desirable. Such seeds are more likely to come true and to produce trees which will bear as desirable fruits as the one planted.]

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CARE OF BABIES MADE PART OF SCHOOL COURSE.

Philadelphia is the first city in the United States officially to make a course in the care of babies a regular part of the curriculum for girls in its elementary public schools. There are about 11,000 girls taking the domestic science course, in which the class in the care of babies is to become compulsory, and of this number one-third are said to be partly or wholly responsible for the care of at least one small child.

This new departure in education was suggested to the elementary school committee by the Child Federation. This committee in turn recommended it to the board of education, which has formally approved the step. The classes will be held this winter in the following schools where the housekeeping centers are situated: Wyoming, Durham, Jackson, Madison, Northwest, Sharswood, McCall, Forten, and Southwark. The pupils of other schools than these will go to the nearest one for their class in this subject.

Last summer the Child Federation ran three experimental classes in the career of babies which, though entirely voluntary as far as the pupils were concerned, were continually taxed beyond the handling ability of the teachers. Twenty noncompulsory classes were also conducted last winter under the supervision of baby specialists of the federation with equally gratifying results.

Mr. Cross, of the Child Federation, says that this innovation is without doubt an advance step toward the time when the care of babies will be taught in the elementary schools of every large city in the country. Several other cities have been watching developments here with the intention of adopting the same course after it has proved of certain benefit. The baby experts are unanimous in their belief that such a course will do much to decrease the infant mortality resulting from unnecessary ignorance on the part of those who have babies under their care.

The voluntary classes will be continued as usual during the coming winter for those girls not taking the domestic science course who may wish to learn something about the care of a small child. (From the Philadelphia Public Ledger.)

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Irish crochet lace, which was and is one of the most satisfactory lace products, has been suffering an undeserved neglect for several seasons. For many purposes nothing can equal it, especially the real, closely made Irish crochet, employing fine

linen thread. However, imitations coming into the market did a good deal to damage the fine reputation of this splendid product and many feel that whenever Irish crochet of the typical sort comes in again it will be forced out of the market again by the cheaper product of a similar character.

There are, however, in Ireland and elsewhere, thousands of women and girls adept with the crochet needle who are getting little to do. It is almost as if a huge plant were lying idle. One of the oldest men in the Irish lace business makes a suggestion that there is an opening for a new lace with Irish crochet characteristics, something done with the crochet needle that shall have all the durability, washability, delightful delicacy and whiteness of the Irish crochet lace and yet be so different that it will be a new lace. He suggests that it would be worth the while of the Irish Government to institute a competition offering large prizes for design suggestions for a new lace which could be made by the Irish peasantry. This is an idea full of possibilities and deserves serious consideration by all interested in the welfare of Irish crochet lace and Irish crochet workers. (From the Lace and Embroidery Review, Vol. XII, No. 4.)

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COTTAGE INDUSTRIES.

It is evident to those who have studied the subject that the revival and development of cottage industries in this country need to be placed on a commercial rather than a philanthropic basis. In Great Britain the peasant mind is less independent than here and peasant activities thrive best under patronage, though even there, notably in Donegal, Ireland, the commercially organized crafts have proved the most successful.

In America the attempts of wealthy patrons to revive village industries have met with only partial success. On the other hand, such industries, on account of sharp competition, do not thrive except under direction. They need a standard of production and some form of cooperation in advertising and selling.

Two institutions that are making a success of cottage industries under philanthropic auspices, though on a business rather than a charitable basis, are the Southern Industrial Educational Association, with headquarters at Washington, D. C., and Berea College, Kentucky. Both operate among the mountain whites of the South, where conditions are such as to justify the intervention of philanthropic patronage.

The Allanstand Cottage Industries, started near Asheville, North Carolina, and now conducted by the Southern Industrial Educational Association, directs the work of women in the Southern Appalachian Mountains and maintains a salesroom in Washington. The old arts of home spinning, weaving and dyeing have been revived and vegetable-dyed jeans, linsey, coverlets, rugs, pillow covers, curtains, etc., are made, as well as mountain baskets, wood work and shuck hats, and they find a ready market. A room at the White House has been furnished with this mountain handiwork, including blue-and-white homespun fabrics woven by Mrs. Elmeda Walker of Paint Creek, Tennessee, and a blue-and-white jute rug, woven by Mrs. Finley Mast, of Valle Crucis, North Carolina.

The excellence of the material and the craftsmanship of such products can hardly be duplicated by a factory and there is a powerful appeal to the imagination in this pioneer idea of raising one's own cotton, flax and wool, making one's own dyestuffs, spinning the yarn and weaving the old colonial patterns. It is a modern revival of the spirit of Ruskin and Morris.

BUREAU OF EDUCATION PUBLICATIONS.

(Abbreviated list.)

ANNUAL REPORTS:

First to Tenth Annual Reports of the Director of Education. (Supply exhausted.) 1901–10.

Eleventh Annual Report of the Director of Education. 1911.

Twelfth Annual Report of the Director of Education. 1912. (Supply limited.)

Thirteenth Annual Report of the Director of Education. 1913.

BULLETINS:

1 to 30. Various subjects relating to the early activities of the Bureau. Editions for the most part exhausted and material obsolete.

31. School and Home Gardening. 1910. Revised, 1913.

32. Courses in Mechanical and Free-hand Drawing. 1910. (Edition exhausted.)

33. Philippine Hats. 1910. (Edition exhausted.)

34. Lace Making and Embroidery. 1911. (Edition exhausted.)

35. Housekeeping and Household Arts. 1911. (Edition exhausted.)

36. Philippine Normal School—Catalogue and Announcement. 1911. (Edition exhausted.)

37. School Buildings and Grounds. 1912.

38. School Buildings—Plans, Specifications, and Bills of Material. 1912.

39. A Manual of Free-hand Drawing for Philippine Primary Schools. (In course of preparation.)

40. Athletic Handbook. 1911. Revised, 1913.

41. Service Manual of the Bureau of Education. 1911. (Edition exhausted.)

42. Intermediate English. 1911.

43. Philippine School of Arts and Trades—Catalogue. 1912. (Edition exhausted.)

44. Libraries for Philippine Public Schools. 1912. (Edition exhausted.)

45. The School of Household Industries. 1912. (Supply limited.)

46. The Industrial Museum, Library, and Exhibits of the Bureau of Education. 1913.

47. Good Manners and Right Conduct. 1913. (In course of revision.)

48. A Course in Civics. (In course of preparation.)

49. Industrial Fiber Plants of the Philippines. 1913.

50. Arbor Day and School Holidays. (In course of preparation.)

51. Philippine School of Commerce. 1913. (Supply limited.)

BULLETINS—Continued.

52. Philippine School of Arts and Trades—Nautical Department. 1913. (Supply limited.)

53. Elementary Course in Plain Sewing. 1913. (Edition exhausted.)

THE TEACHERS' ASSEMBLY HERALD:

Volumes I–V. 1908–12. (Supply exhausted.)

Volume VI. 1913. (Supply limited.)

THE PHILIPPINE CRAFTSMAN:

Volume I. 1912–13. (Supply limited.)

Volume II. 1913–14. (Supply limited.)

Volume III. (Now current.)

TEXTBOOKS:

Woodworking—A Manual of Elementary Carpentry for Philippine Public Schools. 1908. (Supply exhausted.)

Selected Short Poems by Representative American Authors. 1911. Reprint, 1913.

Commercial Geography; the Materials of Commerce for the Philippines. 1911. (Supply limited.)

Samuel Johnson, Macaulay; Self-Reliance, Emerson; Gettysburg Address, Lincoln. 1911. Reprint, 1913.

Supplementary Problems for Trade Schools and Trades Classes in the Philippine Public Schools. 1913.

Supplementary Problems for Domestic Science Classes. 1913.

Housekeeping—A Texthook for Girls in the Public Schools of the Philippine Islands. 1914.

Economic Conditions in the Philippines. 1913.

MISCELLANEOUS:

Domestic Science—A Guide to Practical Instruction in Housekeeping, Sewing, Cooking, and Laundering in Grades Three and Four of the Philippine Public Schools. 1908. (Supply exhausted.)

Some Recipes for Preparing Jellies, Preserves, Pickles, and Candies from Philippine Fruits. 1911. (Supply exhausted.)

Second and Third Annual Reports on Private Schools and Colleges of the Philippine Islands. 1911. and 1912. (Supply exhausted.)

A Statement of Organization, Aims, and Conditions of Service in the Bureau of Education. 1911. (Several editions printed at Manila and Washington.) (Supply exhausted.)

A Talk on Health Conditions in the Philippines. Dr. Victor G. Heiser, Director of Health. 1912.

PHILIPPINE CRAFTSMAN REPRINTS:

1. Philippine Mats. 1913.