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## INDUSTRIAL NOTES.

THE INDUSTRIAL EXHIBIT TAKEN TO  
THE UNITED STATES BY  
THE DIRECTOR.

In the first issue of the CRAFTSMAN, mention was made of the Mohonk exhibit of Philippine school industrial work, now in the United States with Mr. G. N. Briggs. The schools which were represented in this exhibit, the attention which it centered upon our efforts in the Philippines, and the information which it gave us as to the attractiveness and salability of Philippine industrial articles, have fully demonstrated the value of keeping such an exhibit in the United States. For this reason, last March letters were sent out to almost all of those divisions which had unusually meritorious displays at the Bureau exhibit in the Philippine Exposition, for the purpose of assembling a much larger and better exhibit which should be sent to the United States to be merged with the former one. The exhibit was duly assembled, and was taken to the United States by the Director, Mr. Frank R. White, who left on leave of absence for the United States on June 22, 1912.

The inspection, classification, and labeling of the articles included in this exhibit necessitated so much work and time, and so many of the articles arrived only a few days before Mr. White's departure, that it was not feasible to show the exhibit complete. However, those persons who were fortunate enough to see the articles on display while the finishing touches were being placed upon the exhibit felt that they represented by far the best work that

has yet been done in the Philippine schools. Some idea of the scope of the exhibit may be obtained from this description:

On 138 herbarium sheets are mounted specimens of Philippine plants and materials which are obtained from them. These sheets also include specimens which show the preparation of the materials; for examples, the colors in which tikug straw is dyed, and the brown and gray shades and tints which result from scraping palm petioles.

There are 87 baskets, each differing from all the others in type, shape, or decoration. Many new basket types which have been originated since the 1912 Exposition are included. Both the coil baskets and the slippers include a great many articles made of abaca, and there are other abaca specialties, such as handbags, footstools, belts, model lupis chairs, and the like, to the number of 17.

The exhibit of textiles is headed by a doll dressed in the native costume of the Filipino women. There are 29 samples of native cloths, including those made of abaca, buri raffia, silk, and cotton. Much of the cotton cloth is of Igorot design. The silk cloth is made entirely of material raised, reeled, and thrown in the schools.

Former exhibits have contained no products of the school shops and trade schools, the work of these institutions being shown merely by photographs. The present exhibit contains 32 small articles from these schools, including paper knives, canes, trays, napkin rings, card boxes, can-

dlesticks, jewelry boxes, and indian clubs.

Embroidery, lace, and Irish crochet make up fully one-half of the exhibit. Altogether they comprise 158 pieces. The lace is mounted on special cards of a rich red color which brings out the designs perfectly. These cards have strips on the sides under which the loose ends of the lace are hidden. All the embroidery and all complete articles of lace and Irish crochet are mounted in heavy white cardboard boxes made to order for their accommodation. Each article is sewed firmly to a piece of cardboard, which in turn is glued to the bottom of the box. This arrangement displays the articles to great advantage and protects them from being crumpled in travel and from being soiled by the fingers of the overcurious. The pink mounting paper is used for the embroidery, with the exception of that done on piña. The piña pieces and sets are contained in nine boxes. Some of the embroidery is most exquisitely done, the light and shade effects being perfect. All piña embroidery is mounted upon a rich brown silk, which brings out the pattern much better than does the pink paper. Many splendid new designs in embroidery, laces, and Irish crochet are to be found in this exhibit.

Other articles comprise 18 slippers of various types, 10 fans in different designs, 11 hats of different materials and weaves, mattings in 7 materials, 8 mats of various materials and in new designs, 8 cushion covers, 12 pocketbooks, cigarette cases, book bags, 10 brushes and brooms, and 23 miscellaneous articles such as hand and school bags, coconut-shell ware, canes, and door mats.

Along with the exhibit are 53 bulletins and textbooks published by the Bureau or specially prepared for Philippine schools, and a photograph album consisting of approximately

150 photographs of such exhibits as the 1912 Exhibition, school buildings, physical training, athletics, gardening, the Teachers' Camp at Baguio, and other school activities.

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#### REVIEW OF PERIODICALS ON HOUSEHOLD ARTS.

With a view of placing before industrial teachers throughout the Islands new designs for lace, embroidery, Irish crochet and the like, the Bureau of Education has subscribed for a number of copies of certain publications along these lines. In some cases the magazines which have thus been placed in the hands of teachers are not all that could be desired, and even the best contain many designs and ideas which are mediocre. Beginning with this issue, the material in these periodicals will be reviewed. The designs and ideas which should be avoided will be pointed out and those of special merit will be noted together with suggestions on the improvement of any designs which are not up to standard. From time to time also general notes will be given on the latest modes. In this way it is hoped to better utilize these periodicals in obtaining and keeping the highest possible standard in household arts.

In *Modern Priscilla* for June, 1912: page 5, the Irish crochet lace design is pleasing as applied to the costume; however, the relation of the parts of the motif to each other could have better arrangement. Of the Irish crochet and embroidery designs on page 7, Nos. 12-5-9 and 12-6-11 are particularly nice. The pillow designs on page 8 are pleasing with the exception of No. 12-6-17 which design seems disjointed and splattery. The Irish crochet on page 11 is simple and good. Of the bags on page 13, figures 4 and 5 are most satisfying although the arrangement of drop ornaments could be improved. The

punch embroidery design on page 15 is pleasing in itself and seems a very fit trimming for tailor garments. Of the collar designs on page 17, No. 12-6-49 is the better. The designs on page 18 are good; also those on page 22, with the exception that No. 12-6-57 might be too heavy and so lack the daintiness required in such an accessory.

In "The Paris Journal of Fancy Work" Album 5: The Venetian lace squares—Fig. 9 is better planned than Fig. 8, while the darned net, Fig. 10, is good and satisfying. The "foilage" Table Linen Set is generally good, although Figs. 9, 16, and the table center on page 5 seem flimsy and unsupported on the edge which should be more substantial. Fig. 8 is the least attractive while Figs. 17, 51, 52 are well planned. The crochet lace cushion is not beautiful enough to be worth while. The lingerie cushions for chair back and seat seem over decorated and show an inappropriate use of batiste and ribbon. A quiet space would be better for the center here than the inset of lace. Album 11: The conventional design for the Chesterfield couch cover is interesting and well planned, and the dragon fly design in Richelieu embroidery, Page 8, is also very satisfying. The lace and net sofa back, and the imitation Milan lace, pages 9 and 10, are good, but the night dress case, lace box, globe box, soiled linen bag, sachet, photograph frame and doily or tray cloth are commonplace.

#### THE MOUNTING OF EMBROIDERY AND LACES.

It is usual to mount all embroidery and lace upon tissue paper of a delicate pink. In connection with the Industrial Museum of the Bureau of Education and exhibits which have been sent to the United States, considerable study has been made of the

colors over which various forms of embroidery and lace can be best displayed. It is probable that for most embroidery, Irish crochet, and such products through which the pink color is but dimly seen, the standard pink tissue paper is best. Such open designs as occur on bobbin lace, Teneriffe lace, and Renaissance lace show to best advantage over a rich deep red cardboard known by E. C. McCullough & Co., Manila, as "Cardinal Tough Check" and retailing for 20 centavos a sheet (22½ inches by 28½ inches). The same cardboard when reënforced with cloth on one side is very good for punching lace designs, and retails at 30 centavos per sheet.

Embroidery on piña is shown most beautifully upon a medium brown. A "café-au-lait" India silk has been used, but it is rather expensive. Almost the same effect has been obtained by mounting piña upon dark brown wrapping paper usually known in the trade as "jute paper," though sometimes called "Manila paper." The term "Manila paper", however, is usually applied to very much lighter yellowish brown material which does not show piña embroidery to advantage.

For the past two years the school people of these Islands have felt that something should be done to impress upon the merchants the necessity of supplying the demand for needlework supplies, a demand which has been growing wonderfully since the teaching of this class of work in the schools, and for which the market has been entirely inadequate. This question has been repeatedly brought to the attention of Manila merchants in an informal way, but up to a year ago very little had been done to improve the condition of the Manila market in this respect, nor was any early action anticipated. The mer-

chants hesitated because of lack of information on which to base orders for supplies; they did not know what was being done or the amount of work which was being done, and could not be expected then to place orders for goods. Nor could these merchants determine from orders which were received from time to time from teachers just what the demand would be.

In view of this the Bureau of Education itself took steps to remedy the situation, and about ten months ago a committee was appointed to consider the amount and nature of the work done by the girls of the schools and to make recommendations for supplies. Pursuant to the recommendations of this committee the Bureau placed, through the Bureau of Supply, a preliminary order for needlework supplies which it was thought would be sufficient for several months. At the same time about one dozen of the Manila merchants who handle these goods were furnished copies of the order placed and were advised of the action of the Bureau. They were then asked to consider this matter further and with the idea of placing such orders as would make it unnecessary for this Bureau to interfere further in supplying the demand for such materials. Acting upon this suggestion, many of the more prominent merchants immediately placed large orders for the standard goods which were recommended. These goods should already be arriving from the United States and Europe, and it is the purpose of the commercial houses interested to continue their orders and to have on hand a continual supply of needlework materials.

The goods which were ordered on the requisition placed with the Bureau of Supply are now being received in the General Office and instructions are being sent out as to the proper manner of ordering. This stock will

consist chiefly of materials for Irish crochet, bobbin lace, embroidery work, and plain sewing. It is the intention of the Bureau to continually oversee the supply of goods which Manila merchants keep in stock; when they fall short or fail to keep up the supply, the Director will place further orders for distribution by sale from the General Office. It is believed, however, that the market will soon be adequately supplied by a number of reliable Manila houses.

The industrial department of the Philippine Normal School was organized in January, 1910. Its development since that time has been very rapid and it is now one of the large features of that institution. It is constantly adding to its curriculum new courses along those industrial lines which have been developed and found satisfactory in the public schools of the Islands. At the present time the following courses are given:

- (1) Domestic science, including sewing, cooking, and housekeeping.
- (2) Agriculture, with special emphasis on gardening.
- (3) Loom weaving, both textiles and grass mattings.
- (4) Elementary hand weaving for the primary grades.
- (5) Hat weaving—buri, sabutan, buntal, bamboo, and calasiao.
- (6) Basketry, and bamboo and rattan furniture.
- (7) Embroidery.
- (8) Lace making and crochet.
- (9) Slipper making and abacá work.

The heaviest of these subjects require two years for completion, while others may be finished in one year's work.

The extension of the industrial department as indicated was in answer to a demand for courses which would aid provincial teachers

in training themselves for the various handicrafts and industries which they would later be expected to teach in their home provinces. Each regular student who now enters the normal school is required to complete two years of industrial work before graduation. In addition to this the department offers special courses to teachers who do not expect to graduate from the general teaching course but who wish to train themselves along some special line of industrial work. Aside from class instruction this department also carries on experiments in connection with the General Office of the Bureau of Education. During the past year it has developed a matting loom, a textile loom, a screen loom, an alcohol oven, and a buri stripping machine. All of these will be available for distribution, or for construction in the provinces. Experiments in the preparation, bleaching, and dyeing of the raw materials used in industrial classes are also performed. The most successful experiments of this nature which have been carried on during the past year were in the preparation of bamboo weavers for baskets and of pandan raffia for matting.

The increasing demand for industrial education in the schools has been accompanied by a growing dissatisfaction with the nature of the problems found in most arithmetics. It has been felt that more stress should be placed upon problems dealing with conditions such as actually arise in the industrial world. Texts embodying such problems are already beginning to make their appearance in the United States and elsewhere. The need of a collection of mathematical problems adapted to local conditions has been felt in the Philippine Is-

lands and particularly in the trade schools. In view of the unusual conditions obtaining in this country, no text prepared for American or English schools is suitable for our work. For this reason, Mr. W. W. Marquardt, Superintendent of the Philippine School of Arts and Trades, is at the present time working out supplementary arithmetics to correlate the standard intermediate arithmetic text of the Bureau of Education more closely with local industries. Groups of practical problems in carpentry, cabinetmaking, domestic science, and agriculture have been prepared by the teachers of the Philippine School of Arts and Trades and by industrial specialists in various provinces. This text will probably be ready for distribution during the coming school year.

The Industrial Information Department of the Bureau of Education has in course of preparation a bulletin on "Philippine Industrial Fiber Plants." The ultimate purpose of the bulletin will be to put within the reach of the field reliable and accurate information concerning the principal fiber plants now being used in the public schools of the Philippines. The task is not an easy one; there are approximately 120 different species of plants that are now used in the various phases of industrial work, most of them yielding several materials. This large number does not include hundreds of plants which have not yet been thoroughly tried in the schools, and about which there is at present too little specific information to make it advisable to include them in the bulletin.

This work has been based on the collection of fiber plants received from each province in response to Circular 175, s. 1910. The specimens sent in have been carefully dried, poisoned, and mounted on

herbarium sheets, and scientifically classified as to species and family, and they are now in the Industrial Museum of the Bureau of Education, at the disposal of teachers for consultation and reference. Local names and information submitted with the specimens have been carefully noted and filed. In the scientific determination of the plants, the Bureau of Education has had the assistance of the Bureau of Science.

The bulletin will take up each fiber plant under its most common native name, give its scientific name, its name in the various local dialects of the country, and its distinguishing features, so that, if unknown, it will be easily recognized. It will also tell where to look for the plant. Illustrations of the most important plants will be included.

The preparation and uses of the materials obtained from each plant will be carefully discussed.

The bulletin will be indexed according to native and scientific names and according to the uses of the materials.

It is probable that the first preliminary issue will be a limited one. It will be sent to each province for corrections and additions. In this manner the information furnished from the field on industrial plants and materials will be placed in shape for ready reference and close study.

The Manila Trading and Supply Company with headquarters in Cleveland, Ohio, bought a large assortment of baskets at the 1912 Exposition in Manila. These consisted of wastebaskets, market baskets, sewing baskets, coiled baskets, and the small fancy baskets of Samar. The company states that their purchase of these articles amounted to ₱1,500 and that the whole lot was sold out immediately upon being displayed in their retail store in Cleveland, Ohio.

THE FILIPINO TEACHERS' VACATION  
ASSEMBLY AT MANILA.

The session of the Annual Vacation Assembly for Filipino Teachers for 1912 extended from April 15 to May 27, and was held at the old Philippine Normal School and at the Philippine School of Arts and Trades.

The total number of teachers who took advantage of this opportunity for vacation study reached 1,719, which is about one-fifth of all the Filipino teachers in the Islands. This number is nearly double the enrollment for 1910, which totaled 890, and is a great increase over the 1,076 enrolled in 1911.

The following table will show the enrollment by divisions in the normal and trade departments:

Divisions.	Normal.	Trade.
Agusan .....	4	0
Albay .....	20	5
Antique .....	4	1
Bataan .....	19	5
Batangas .....	167	19
Bohol .....	12	3
Bulacan .....	227	14
Cagayan .....	6	1
Camarines .....	7	5
Capiz .....	4	3
Cavite .....	10	6
Cebu .....	54	7
Ilocos Norte .....	21	10
Ilocos Sur .....	35	5
Iloilo .....	8	4
Isabela .....	2	1
La Laguna .....	28	8
Leyte .....	44	16
Manila .....	70	29
Mindoro .....	6	0
Misamis-Surigao .....	4	3
Mountain .....	1	1
Occidental Negros .....	9	3
Oriental Negros .....	3	2
Nueva Ecija .....	122	7
Nueva Viscaya .....	7	9
Palawan .....	7	2
Pampanga .....	112	15
Pangasinan .....	260	21
Rizal .....	20	13
Samar .....	3	4
Sorsogon .....	12	3
Tarlac .....	21	1
Tayabas .....	25	13
Union .....	57	6
Zambales .....	3	0
Total .....	1,474	245
Grand total .....	1,719	

The courses given were along the same lines as in former years—methods, academic work, and industrial

instruction. The following table shows the enrollment in all the industrial courses:

Basketry .....	478
Gardening .....	343
Slipper making .....	201
Embroidery .....	196
Elementary hand weaving .....	194
Irish crochet .....	177
Hat weaving .....	171
Sewing .....	102
Commercial work, trade .....	79
Cooking .....	75
Shop exercises as prescribed by the Manual of Elementary Carpentry .....	59
Lessons on simple furniture construction..	56
Advanced woodwork .....	54
Intermediate industrial drawing .....	53
Finishing .....	44
Loom and mat weaving .....	40
Lectures on teaching woodwork in manual training classes .....	35
Free-hand decorative design .....	31
Estimating applied to woodwork .....	30
Lessons on advanced furniture construc- tion .....	25
Reports, property, and correspondence of trade school teachers .....	24
Primary industrial drawing .....	20
Saws .....	14
Shop mathematics .....	14
Elements of building design .....	8
Advanced mechanical drawing .....	6
Lecture on teaching woodwork in trade schools .....	6
Mechanical and free-hand lettering .....	2

#### CORN PRODUCTION IN THE UNITED STATES.

In the United States, for the year 1911, the average yield of corn per acre was 23.9 bushels. The highest average yield amounted to 48.5 bushels for the State of Connecticut. The State of New York produced an average of 38.5 bushels per acre, Indiana 36, Illinois 33, and Iowa 31 bushels, respectively. Due to attention to proper methods of seed selection, fertilization, and cultivation, the State of New York has steadily increased her average yield of corn. On the other hand, the yield in Nebraska has decreased during the last two years, the decrease in 1911 amounting to 5 bushels per acre, or 22 per cent; the average yield was

21 bushels. Although the North Atlantic States, through modern methods of intensive cultivation, have increased the yield 5 per cent, and the South Atlantic States have had a 1 per cent increase, the general average for the United States has shown a decrease during the past two years. It is evident that this decrease has taken place in the great central corn States, where, due to the natural richness of the soil and the extensive methods which are employed, the fertility of the soil for corn production has been allowed to run down.

But even with these figures, so preëminently is corn the leading crop that three-fourths of the world's crop of corn is grown in the United States. Its value is almost equal to that of cotton, wheat, and oats combined. Corn to the value of \$3,130,516,000 was produced last year.

*A Good Lubricator.*—It may not be generally known that tallow and plumbago thoroughly mixed make the best lubricator for surfaces when one is wood or when both are wood. Oil is not so good as tallow to mix with plumbago for the lubrication of wooden surfaces, because oil penetrates and saturates the wood to a greater degree than tallow, causing it to swell more.

Dr. J. Paul Goode, of the University of Chicago, who will be remembered by all who attended the Teachers' Assembly at Baguio in 1911, and by many others in the Philippines, says in a letter of recent date: "I only wish the Bureau of Education had a mail-order establishment, and that our Government were civilized enough to give us a parcels post, so that we in America might order extensively from the beautiful things the Bureau is having the people make in the schools."

A very gratifying result of the efforts of this Bureau toward making gardening a home occupation for boys as well as a part of their school work is shown in the annual report of the division superintendent for Camarines. Of the 108 schools in the province 104 report successful school gardens. In addition to this prescribed garden work, 1,523 home gardens were conducted under the supervision of the teachers of the province. Forty-five schools report improved premises, and 13 have good school lawns. Such results along practical lines of agriculture are an encouraging feature of the industrial activities of the Bureau.

During the closing months of the past school year, reports concerning local economic conditions were received from representatives of the Bureau in every section of the Philippines including the Batanes Islands and the Sulu Archipelago. These reports totaled 120. Their examination and classification has now been completed. The data thus secured constitute an interesting and valuable fund of information which will be included in the work in the field of economic conditions in the Philippines. Important features of these data are the opportunities given for a comparative study of local industrial effort and an insight into causes which have united to bring about present industrial conditions, as well as suggestions for possible remedies where these conditions are especially unfavorable. This is the first time that reliable data on comparative economic conditions in the Philippines have been brought together. They show many surprising differences between various portions of the islands.

The above data will constitute a

prominent part of the text on Economic Conditions in the Philippines, both in actual subject matter and for illustration. It is hoped that the book will be available for the next school year.

A suggestion has been submitted to this office that school pupils be encouraged to invest their earnings from school industrial work in the purchase of school books and other books for their homes. This suggestion is worthy of consideration. It offers a means of correlating the industrial work very closely with the academic work of the pupil. There are of course other objects in which the school boy or girl may invest his money with profit. The boy's athletic equipment may require some slight expenditure, and the girl will want many things for her comfort and convenience. But in any case the purpose for which the product of the pupil's industrial work is spent should receive some supervision.

The extract quoted in the front of this issue is taken from an address by Arthur D. Dean at a meeting of the National Society for the Promotion of Industrial Instruction, held in Milwaukee, Wisconsin, on December 3, 1908. Mr. Dean is Chief of the Division of Trade Schools for New York State, and is very popular as a speaker and magazine writer. It is hoped that he may be present at the next session of the Teachers' Vacation Assembly at Baguio.

In the September number of THE CRAFTSMAN will appear the first section of a comprehensive article on "Philippine Mats," which will continue through three numbers.