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## INDUSTRIAL NOTES.

### A SUCCESSFUL FARM SCHOOL.

The Batac Farm School is located on the provincial road connecting the principal towns of Ilocos Norte. It is 10 kilometers northeast of Currimao, the port of the province, and 19 kilometers southeast of Laoag, the provincial capital. The farm is just 1 kilometer west of the presidencia of Batac. Practically all traffic into the province passes by the school farm. Being so favorably located, the work being performed receives the maximum degree of publicity. The land is nearly level, there being only about  $2\frac{1}{2}$  meters difference in altitude between the highest and lowest points. By a lift of about three meters from an irrigation canal along one boundary, water may be pumped over the whole area of the farm. Plans are now being worked out to increase the area of the farm to 15 hectares.

People usually come to the Batac farm and buy all of our field crops. Some vegetables are sold in this way, but the larger amount of vegetables is sold in the markets of Batac and neighboring towns. The boys sometimes meet the boats at port Currimao, supplying them with fresh vegetables. When boys are assigned to sell vegetables, the unit price is fixed by the teacher and an accurate account kept of all products taken by the boys. The boys are required to bring back the money or the vegetables, even though they are wilted; and are never permitted to sell at a lower price than that fixed by the teacher. The people have learned to accept or reject our products at the price set, thus doing away with the bartering so common in transactions in the Philippines. Silk is disposed of in the same manner as needlework

articles. The boys are permitted to harvest for their own use a one-third share of all individual gardens.

The farmers of Ilocos Norte are copying the crop rotations and are planting legumes, which yield well in this locality. A few years ago the school could gather all the manure needed by hauling it away from the corrals, but now the people refuse to let the pupils take manure on the ground that they need it for their own fields. Until last year men and animals could be hired to do plowing in the busy seasons, but now the far-



Cabbage growing on Batac farm.

mers refuse to work at such times with the excuse that they must not delay their own plowing. Although these changed conditions are compelling the farm school to purchase more work animals and to resort to commercial fertilizers, they indicate that the community is being benefited by the work done in the school. These benefits will be realized more fully when more of our school boys take up farming as an occupation. Until recently the majority of the boys completing the farming course have been employed as garden teachers in the central and barrio schools of this locality, which accounts in part for the high standard of garden work

done in the primary schools of the province.

A few of the Batac Farm School boys have taken up work with the Bureau of Agriculture, inspecting demonstration gardens and fields. Some have taken homesteads in the outskirts of the cultivated area of the province. Some are farming for themselves while others are farming with their fathers or brothers. Of last-mentioned class Eulalio Mangapit is a good example.

Two years ago Eulalio Mangapit left the Batac Farm School to assist his brother in the management of a 115 hectare ranch belonging to the family. Although his brother was considered a good farmer, as soon as Eulalio went on the farm it began to show improvement. This improvement is most noticeable in the diversification of crops raised. The land, partly upland the remainder lowland, is made to produce rice, corn, tobacco, kaffir corn, cowpeas, vegetables for home use, sugar cane, maguey, pine-apples, and papayas. Cowpeas are planted between the rows of corn at the last cultivation. Mr. Mangapit is attempting to plant one crop of legumes on all his fields at least once in two years. From the profits from the farm last year the family has purchased a 5 hectare addition to their holdings.

After leaving the farm school Hermolasco Franco was appointed a municipal policeman. He saved a large percentage of his salary for two years and leased land which he is now farming. He has animals and plows sufficient for the cultivation of the 3 hectares leased. This young man began farming unassisted by parents or others.

With few exceptions the boys who have completed the farming course and are now working for a salary are saving their earnings with a view to investing in land and engaging in agriculture. (Joseph L. Davis.)

#### THE AMERICAN CONSUL IN CALAIS WRITES ON THE LACE INDUSTRY.

The Bureau of Education has recently received from Mr. J. B. Milner, American consul in Calais, France, a number of pieces of Valenciennes and torchon laces that are very beautiful both in workmanship and design. Several parts of his letter transmitting these laces to the Bureau of Education are of interest to the field and are quoted as follows:

"Now the fact is that Calais never had a handmade lace industry. Here only mechanical laces are made. So I was still in the dark as to what you really wanted. However, as Calais machine-made laces of the Vals and torchon type are noted throughout the world, I divined that handmade Vals and torchons were what you were wanting. So I set about to get these.

"After diligent inquiry in Calais and in Boulogne-sur-mer, I learned that real Vals and torchons were made in Bailleul, Nord, France, and that this was the nearest place to Calais where handmade laces were made. So on the 8th instant I went to Bailleul which is 60 miles from Calais. There I remained several days trying to get the articles you requested. You cannot imagine the difficulty one has in securing articles like this, as they are collected from women who make them, by small merchants who in turn sell them to Paris houses. I found no great stock from which to make a selection. So I purchased rather what I could get than just what I wanted, first satisfying myself that the laces were really handmade of the pillow or bobbin type. This I did by going into the country villages about Bailleul and in Bailleul itself among the women who make this lace. I saw them at work and have their word that they were working for the merchants from whom I bought. As a matter of fact it is impossible to

buy this real lace from the makers who make it a piece at a time and deliver it to a merchant. The makers have no stock at all and are not disposed to sell direct as they are dependent upon their merchant who really not only wants all they make but much more than they make.

"You will note that the quantities of each kind are not as you requested. My excuse for this is that I had to take, as to quantity of each, just what I could get as the merchants refused to cut in 3-yard lengths, except only in a few instances as you will note. The prices I paid are the same as those paid by the Paris buyers. So the merchants told me and I have assurance that they told me the truth.

"I note what you want as to insertions and edgings to match, but, both in Vals and torchons, I have been unable to get the exact insertions. I took what I could get and if it does not meet your wants it is the best I could do after spending much time in search.

#### HISTORY OF THE INDUSTRY AT BAILLEUL, FRANCE.

"The industry of handmade lace at Bailleul is little known. In the museum at Bailleul are exhibited the handiworks of this old Flemish town, from the commencement of the eighteenth century down to the present time. In fact only the older class of women are capable of making the finer articles such as the one which is invoiced 17.85 francs per meter.

"I visited a school at Bailleul where young girls are taught by two old Flemish maids who have reached their fourscore years. A strong effort is being made to keep the handmade-lace industry alive. The cost of living is so high that the younger people cannot afford to work at lace making and prefer to go into the linen mills where they can earn more. The demand for handmade

laces is said to be much greater than it was a few years back. As to designs one cannot remark any great progress. Even now some of the older designs are most sought after. Naturally, in point of design, the handmade lace does not equal the machine-made lace in Calais, as a machine can work designs that would take a woman too long to make by hand. While Calais is the world's most noted center for making laces in imitation of those sent by me, yet the comparison of the two shows the handmade much more beautiful. It is just the imperfection of handmade lace which after all adds to its beauty, and just this imperfection is most difficult of imitation by mechanical means. However some of the Calais makers have arrived at such a high degree of imitation in Vals and torchons that one must be an expert to tell the difference. This fact no doubt has a depressing tendency on the handmade lace industry in Bailleul. In point of designs in all kinds of lace, Calais can be said to be the richest center in the world. Here all kinds of laces are imitated, that can be imitated on weavers' machines."

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#### THE LITTLE THINGS THAT COUNT.

*Wooden drawer pulls.*—The writer has in his bedroom a colonial mahogany dresser with wooden pulls of the knob variety. These were given the preference in selecting the dresser over glass because they harmonize with the material in the dresser itself, but they are disappointing because they are poorly finished. They have evidently been turned on some automatic or semi-automatic machine, made in quantities and apparently at a price which, according to the manufacturer's reasoning, precluded a careful finishing off of the work with sand paper. When it came to staining and finishing they were brought to the same

general color as the face work, but the finish on them looks like a cheap smear as compared with the face and top of the dresser.

These pulls are the only displeasing things about the piece of furniture and it would only have taken a little work and pains to have made them of equally high quality in finish as the rest of the woodwork. It would not have added a dollar to the cost of the piece of furniture, and it certainly would have added more than a dollar to its value.

*Edges and insides.*—Another little thing in connection with finishing is that now and then one finds a lack of careful attention to the edges of the tops and to the edges and insides of drawers, and many other little things of this kind. The finisher, no doubt, goes on the theory that the things that the eye of the observer is centered on are tops, panels, drawer fronts, and that these little details are not important. Consequently it is a waste of time to give them the same attention as is bestowed on the more conspicuously exposed parts of the furniture. This may have been a tenable theory one time, but it is a poor standard these days. It is a well-known fact that the furniture buying public to-day is a discriminating public, especially that portion of it looking for quality in furniture. More attention is often given to a careful examination of edges and insides than to the general outside appearance which can be taken in at a glance. Therefore messy work in staining, which makes splotches and ugly streaks extending from the outside to the inner edges of the furniture, and poor finishing on the edges, tells the discriminating buyer that these things are made for show rather than satisfaction. It is only when this same discriminating buyer finds a piece of furniture that has been as carefully looked after on the edges and insides as on the outside that he breathes a sigh

of real satisfaction and thinks he has discovered something that has real value all the way through it and not merely a semblance of it on the outside. Therefore, these little things count often for a whole lot more than they cost. Attention to them will pay returns just as surely as the careful finishing of the more exposed parts of the fine furniture.

*Appropriate castors.*—Another little thing that is of more importance than the furniture manufacturers seem to think is the matter of appropriateness in castors. There is especially in mind right now a case of a massive parlor set, with perhaps more than twice the average amount of weight as well as body in the furniture, which is mounted on some very cheap castors. They are so small that they make dents in the hardwood floor and when a piece of this heavy furniture is moved over the floor the castors leave a mark. These castors would have done very well on cheap, light furniture, but for furniture of the size and cost represented in this case, it would not have taken more than a dollar more invested in appropriate castors to have made the set worth easily \$5 more in value, and perhaps \$10 more in satisfaction to the buyer. The best of castors are not very expensive when their cost is compared to the price of a finished piece of good furniture. It is certainly a penny-wise and pound-foolish policy to spoil the satisfaction of furniture by pinching out a few pennies in the first cost of castors. There are plenty of these castors made and offered at prices that make them one of the little things that count. A man who puts up a piece of furniture he is proud of and uses cheap castors he would be ashamed to use in his own house, is breeding dissatisfaction and preparing the way to trouble in getting the price he should for his product. A man who realizes fully the value of these things can, by

proper thought and attention, and expending of just a little more money in first cost, help put quite a lot more real value to his product. (*Furniture Maker and Artisan.*)

WILLIAMSON FREE SCHOOL OF MECHANICAL TRADES.

[Bulletin No. 14.]

BONUS SYSTEM.

*Trades bonus plan* applies to juniors and seniors.

The pupils of the school are working under a bonus plan, a brief outline of which is presented below:

About 50 per cent of their shop exercises, both abstract and concrete, are worked on an estimated time basis based on a journeyman's time. When the pupil is assigned a task, the estimated time allowance for the operation is stated.

During the first six months of his junior year he is allowed 20 per cent more than journeyman's rate.

During the second six months of his junior year he is allowed 10 per cent.

During the first six months of his senior year he is allowed but 5 per cent.

During the last six months of his senior year he must equal young journeyman's time.

When he falls within the estimated time he is given a bonus credit. If he works to the even estimate he stands even. If he exceeds the time he is given a deficit grade.

If he comes out even in the majority of his estimated time exercises, he is allowed the regular time for the holidays. If he makes a bonus credit in the majority of exercises, he is allowed an extra half day to each of the short holidays and a full day to the long ones. If he makes a deficit grade, he is detained a period corresponding to the one allowed for bonus.

*Academic bonus plan* applies to all classes.

If the pupil's daily recitation grades and all examination grades exceed that of "Good" (which is over 80), he earns a bonus academically. If his grade is "Fair," that is between 70 and 80, he stands even; if below 70 he has earned a deficit, and the same allowances are made for the work in this department as for that in the shop departments.

*Department bonus plan* applies to all classes.

If the pupil's department record is absolutely clear he is allowed an additional half day to each of the shorter holidays, and a full day to the longer ones.

It is possible for the pupils to earn one or all of the bonus credits. If they qualify for bonus in the three branches, shop work, academic work, and department, they are allowed an additional credit of a half day, whereby a pupil whose record is high grade in all respects may earn two additional days for his Thanksgiving, Easter, Decoration and Fourth of July leaves, and four full days for Christmas holidays and the August vacation.

The bonus period covers the time between stated holidays.

THE CLASS OF 1913.

The first class consisting of 58 members working for two full years under the bonus system, completed their apprenticeship on March 29, 1913. On November 1, a letter and a list of questions were sent to each of them and we had a direct reply within five weeks to each of the 58 letters sent out.

The class consisted of 12 bricklayers, 15 carpenters, 8 engineers, 19 machinists, 10 patternmakers.

Their average rate of compensation is \$18.03 per week. They are employed in nine States, in thirty-six different cities, towns, etc., with forty-six different employers—51

engaged in trade work, 6 in occupations for which their trade training fitted them, 1 not working at his trade. Prior to the introduction of the bonus plan the best average weekly rate of compensation of a class within six months after graduation was \$16.60.

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#### TAKING STOCK—GARDENING.

To obtain success in gardening plans must be made well in advance and the time to plan is now. Besides the vegetables which your garden produced this year, there should be an extremely valuable by-product of experience; and its value will deteriorate rapidly with the lapse of time. The memory of your failures and successes are now fresh in your mind but they will be largely forgotten by the opening of the next school year unless they are written out for consideration. The only way in which you can have this experience in most valuable form is to write out for yourself and your successors a complete report of your garden work. This should give all notes of interest, such as vegetables raised and the varieties which were the most successful, the manures used and where they may be secured for the next year.

You must keep in mind that you will need seeds, fertilizers, and other things at the opening of the next school year, and as you are taking stock now of last year's successes and experiences you should profit by last year's difficulties and secure a considerable supply early. Often such material is scarce at the time when it is needed.

In taking stock it will be well to look after the tools and make note if you have had sufficient tools during the year and if these tools are in good shape at the close of the school. Also the tools should be properly stored, cleaned, sharpened,

and oiled. If new tools are needed such a list should be sent to the supervising teacher in order that the tools may be available when wanted.

Seed boxes should be emptied of the soil which they contain, and pans, sprinklers, cans, and other utensils for the storage of water, soil, and other material should be cleaned and thoroughly dried in order that they will not deteriorate while stored. It will only require a day's work of the garden class to do this and it will be worth a good deal to you to have it done. It must also be noted that intelligent planning given to the garden work for the coming year not only interests you and the pupils but adds results.

These last days of the school year are days of construction and you have more time to think of next year's garden and to learn where to secure the seeds and other things you will need than you will have when everything seems to be needed at once. If you failed in making a success of any part of your garden work, either during the dry or rainy season, you may ask yourself these questions: Why is this a failure? Why is that a success? If the garden is improperly fenced, plan for fencing it now; if improperly drained, locate your drainage ditch now when you can remember where the water accumulated and how it can be drained off the garden. Review all your garden notes made during the year and from these notes make a summary of your successes and failures and give definite reasons for each.

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The principal of the Leyte Provincial High School at Tacloban has issued a most interesting circular showing in tabloid form some of the activities of his school during the first semester. The following extracts relating to industrial work are full of interest and suggestion.

## INDUSTRIAL INSTRUCTION.

(June to December.)

## HOUSEKEEPING AND HOUSEHOLD ARTS.

All the girls in the intermediate course, 128 in the sixth and seventh grades, take this course.

*Cooking and housekeeping.*—In addition to the food cooked in class as required by the course of study, the girls have cooked the following for sale:

Lunches .....	₱422.10
Jellies and jams .....	81.90
Total .....	504.00

The girls have earned ₱48.75 for themselves cooking and selling food on Saturdays.

*Needlework.*—The girls have made the following as part of their classroom work:

Athletic suits, pieces .....	201
Model lace books .....	342
Embroidery models, frames .....	114

The commercial work is embodied in the following list of articles:

17 embroidery pieces .....	₱92.50
12 bobbin lace pieces .....	34.60
2 plain sewing pieces .....	10.00
Total .....	137.15

*Drawing.*—In addition to following strictly the course of study, the drawing classes have made the following articles for commercial work:

500 post cards .....	₱50.00
250 correspondence cards .....	50.00
400 dance programs .....	10.50
400 lanterns .....	101.50
40 megaphones .....	2.00
50 masks .....	5.00
38 kodak albums .....	41.50
100 Christmas cards .....	20.00
50 calendars .....	10.00
20 calendars, large .....	15.00
20 candle shades .....	10.00
12 tally cards .....	.25
6 pairs stenciled curtains .....	15.00
15 stenciled pillow tops .....	11.25
10 table runners .....	15.00
12 desk blotters .....	3.00
9 water colors, large .....	9.00
Total .....	369.00

*Ethics and sanitation.*—In addition to following the course of study, the teacher and girls have treated daily

on an average of three to four cases of cuts, bruises, illness, and the like. Before a pupil is excused on account of indisposition he is sent to the teacher of sanitation who treats him and tells him what to do after he reaches home in order to get well.

## FARMING COURSE.

There are 227 boys in the farming course, and two teachers are assigned to the Tacloban School Farm.

About 6½ hectares are under cultivation. Over 2 of these were cleaned by the boys this year. In addition to this the boys have a good deal of other work to perform. The crops planted in August and September are not yet all harvested. The regular time to plant here is in January and February so the main crops will be planted then.

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## KING'S SERIES IN WOODWORK AND CARPENTRY.

[By Charles A. King. Illustrated. Published by American Book Company.]

Elements of Woodwork.

Elements of Construction.

Elements of Woodwork and Construction.

Constructive Carpentry.

Inside Finishing.

Hand Book for Teachers.

This series consists of six volumes, five of them being intended as textbooks for pupils in manual-training, industrial, trade, or normal schools.

*Elements of Woodwork* contains chapters on the following subjects: Growth of Wood; Lumbering and Varieties of Wood; Care of Lumber; Tools; Glue and Sandpaper; and Wood Finishing. This volume presents in complete and concise form knowledge which every woodworker ought to know concerning the care and use of tools and the materials upon which he works.

*Elements of Construction* is adapted to the needs of students in

manual-training schools. Chapters are given on the following: Tools; Working Drawings; Constructive Exercises; Supplementary Models; and, Arithmetic Questions.

*Elements of Woodwork and Construction* is a combination of Elements of Woodwork and Elements of Construction, and is intended for students in manual-training schools or other institutions in which elementary woodwork is taught.

*Constructive Carpentry and Inside Finishing* have been prepared for the use of students in technical, industrial, or trade schools, the instruction immediately following that given in the first two volumes of the series. In *Constructive Carpentry* the following subjects are covered by chapters: Masonry and Foundations; Forms of Construction; Mill Construction; Carpenters' Steel Square, Carpenters' Geometry; Roof Construction; Boarding in; Outside Finish; Roof Covering; and, Plastering. A glossary of terms used in architecture and carpentry is also given.

The volume on *Inside Finishing* treats of the following subjects: Heating, Ventilation, Sanitation, Refrigerators; Floor Laying, Inside Finish; Doors; Window Frames and Sash; Stair Railing; Painting, Hardware; Estimating; Arithmetic; and, Tables.

The last book in the series, a *Hand Book for Teachers*, is intended for the use of teachers and those students who expect to teach Woodwork and Carpentry as given in the other volumes.

The entire series has been prepared for use in American schools and the work as given in the various volumes is excellent. Philippine conditions, however, warrant a different treatment of many of the subjects; even so, it is believed that this series for purposes of general reference would make a worthy asset to the libraries of our local trade schools.

#### RESOLUTIONS OF INDUSTRIAL CONFERENCES.

The committee on resolutions submitted a report based upon the discussions held in the industrial conferences, February 3, 4, and 5, 1914. Among other things, the committee recommended the following:

1. That the Bureau endeavor to supply the field with a large variety of suitable designs and patterns covering all lines of industrial work.

2. That the making of articles of utility and profit be given more encouragement regardless of whether they look showy for exhibition purposes or not. The committee believes that too much emphasis is often placed on the making of articles for exhibition purposes regardless of their practicability.

3. That definite lines of industrial work be prescribed by the Bureau for each division, such lines to be assigned which either satisfy a local demand and improve the standard of living in the average Filipino household or cater to a stable foreign market and assure adequate returns for labor and material.

4. That, for obvious reasons, agriculture is of more importance for boys' training than any other line of industrial work, and that the course as outlined at present should be continued.

5. That a number of pottery schools be established wherever suitable deposits of clay are available and where pottery is not already being made. That more attention be given to the ordinary types of pottery used in the Filipino home and that the making of ornamental pottery be restricted.

6. That THE PHILIPPINE CRAFTSMAN has done a great amount of good, and that it be continued along present lines.

7. That the practice followed in certain divisions of giving to the pupils all of the money received from the sale of school-made articles,



above the cost of materials, be discontinued. That the amount to be given to the pupil be based upon the cost of labor in the locality. And that the amount over and above the cost of materials plus the amount paid to the pupil, be turned in to a pupil's fund, the amount to be paid to be determined by the division superintendent.

8. That the yearly carnival industrial exhibition should be held just after the close of the school year.

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#### THE NEW ASBURY'S DRAWING BOOKS.

[By D. R. Asbury.]

This set of drawing books consists of eight small texts in which the work is graded for the respective grades in American schools, and an additional volume on drawing with colored crayons.

There is also an additional set of eight Graded Practical Tablets for short courses. The price of each tablet is 15 cents. Asbury's books are well illustrated and are published by the Educational Publishing Co., Boston, New York, or San Francisco.

Throughout the texts the work is so divided that object drawing comes in the autumn when fruit objects are plentiful; formal drawing, in the winter when the most time can be placed on the teaching of method, principle and technical elements; and color drawing, in the spring which is perhaps most convenient as the colors of objects in nature such as trees and flowers are best.

Each textbook is carefully graded and it is intended that they should be used by the pupils themselves as texts. The text on Drawing With Colored Crayons, may be used in the different grades and the work correlated with that of the eight grades. In the Graded Practice Tablets illustrations are given followed by blank sheets for practice

work and the courses are shorter than those given in the regular texts.

It is believed by some teachers that where the pupil draws with a drawing placed directly before him as in the practice tablet, there is danger of the pupil developing into a copyist but provision is made for avoiding this by the use of models. It is believed that the texts 1, 2, and 3 would make excellent books of reference for Philippine teachers in drawing and that some actual class work might be done from them provided that Philippine models and ideas are substituted for the American models given in the texts.

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#### HOW TO UNDERSTAND ELECTRICAL WORK.

[By William H. Onken, jr., and Joseph B. Baker. Harper Brothers, publishers, New York. 359 pages. Illustrated. Price \$3.50 (\$1.75).]

One of a series of Harper's "Handy Books for Boys." The boy is told how electricity is made. Dynamos and generators are described; he is told how these machines are driven and how electricity is distributed by the various systems. The use of motors and transformers is discussed. A chapter is devoted to the electric light and the kinds of lamps, another to electric heat and its commercial use. Under electric power are given its advantages and uses, such as in the making of shoes, printing, or in the machine shop. In electric traction it is shown that more money is invested than in any other branch of electrical engineering. The trolley, street car, locomotive, and automobile are illustrated and described. A chapter treats of the use of electricity in the home, showing its use for heating, laundering, cooking, sewing, and ventilation.

Electricity on the farm is used to operate milking machines, to drive grinders, saws, harvesters and thrashers. Considerable space is given to

electricity in the hospital, on board ship, for mining and in the manufacturing industry. For protection there are burglar alarms, fire alarms, and fire engines or pumps. Electricity is described as a destroyer for blasting and in war.

For the transmission of intelligence are given the telephone, telegraph, wireless telegraph, and telephotograph.

This book is intended primarily for young readers and all descriptive matter and explanations in the text are simply and clearly set forth. This will be a valuable reference volume for our schools in which physics is taught or for beginning pupils in engineering.

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#### HARPER'S ELECTRICITY BOOK FOR BOYS.

[By Joseph H. Adams. 407 pages. Illustrated. Price \$3.50 (\$1.75). Harper Brothers, publishers, New York.]

This large volume written in simple English presents to the boy a vast field of information on electricity and electrical apparatus.

The first chapters are devoted to such subjects as cells and batteries, push buttons and switches, magnets, bells and galvanometers, each of which is illustrated and well described in detail.

Following is a chapter on resistance showing different forms of rheostats and wiring diagrams.

In the chapter on the telephone a boy should be especially interested for instructions are given for making the most simple types. Considerable space is given to both the line and the wireless telegraph. Instructions and details are given for the building of simple dynamos.

From Galvanism and Electroplating a boy will learn how to plate rings and ornaments.

Space is given to miscellaneous apparatus and to the preparation of materials for use in electrical ap-

paratus. Formulæ are given for cements, battery fluids, glues, and varnishes. Electric light, heat, and power are discussed and the apparatus used for each described.

The appendix consists of a dictionary of electrical terms and phrases.

It is believed that this volume will show the boys what they can do for themselves in the construction of electrical apparatus, and that the text would be a valuable addition to trade-school or high-school libraries.

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#### CIVICO-EDUCATIONAL LECTURE NO. 8—CORN.

A new plan for giving this lecture was adopted for the present year. This plan provided for the lecture being given as one of the regular features of The 1913 Corn Campaign. The month of September was designated as the most suitable time for giving the lecture. A form was also provided for reporting the facts of interest in connection with each lecture.

The report from the Province of Batangas shows that undoubtedly the present plan for giving this lecture is securing desirable results. It is stated that this lecture was given in 82 different barrios with an aggregate attendance of 18,988 people. Of this number 7,215 were male adults and 4,324 were female. In this manner more than 11,000 adult Filipinos were instructed in points pertaining to the production and use of corn. Another desirable feature of the lecture was the fact that each lecture was illustrated with actual objects. These statements are for the Province of Batangas, but they form an idea of the actual good being accomplished by the civico-educational lectures. Taking these figures as a basis and making allowances for provinces which are smaller, it is believed that fully 400,000 people will be reached.

## HARPER'S BOATING BOOK FOR BOYS.

[By Charles G. Davis. Harper Brothers, publishers, New York. 407 pages. Illustrated. Price \$2.50 (\$1.75).]

This large volume is written in simple English; it presents to the boy a vast store of information on boating. "The first step is to be at home in the water as well as on it." "Learn to swim." Although it is admitted that swimming must be learned by practice, valuable instruction is given on this step.

The main part of the text is introduced by instructions on the making of boat models. Following this comes the making of boats for actual use. The reader then is advanced into boat sailing. Lessons are given with tiller and sheet and with diagrams showing tacking and jibbing. An important part of the book is devoted to motor boats in which the "aim has been to afford a working ABC of motor boating." Attention is given to the installation of the engine and to engine mechanism and accessories. Advice is given on canoeing. "How to row" is explained by a former 'varsity oarsman'. The appendix consists of a valuable dictionary of technical terms as used in boating.

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## FORGE WORK.

[By William L. Ilgen with editorial mention by Charles F. Moore. 210 pages, including illustrations and index. Published by The American Book Company.]

This volume was prepared by the author for the purpose of putting instructions on forge work into permanent form for the use of students. Chapter I deals with tools and appliances each subject being taken up in detail and well discussed. Chapter II treats on forging operations, commonly used. Chapter III gives a list of practical exercises, for the student, with instructions

for making them. Chapter IV is on the treatment of tool steel, and Chapter V, on tool making and stock calculation.

One chapter is given to the steam hammer, tools and exercises, another to art smithing and scroll work.

Very interesting data tell of iron ore; preparation and smelting and the manufacture of iron and steel. Ten pages of formulae and tables valuable to a metal worker are to be found in this volume.

The book is written in simple English and it is believed that the volume would be of great value to every student in forge work.

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## EXAMPLES OF INDUSTRIAL EDUCATION.

[By Frank Mitchell Leavitt, Associate Professor of Industrial Education in the University of Chicago. 330 pages. Published by Ginn and Company, Chicago.]

In this volume the author has clearly defined manual training, industrial education, and vocational education, and their differences are shown. The demand upon industrial education by organized labor, education, and social workers; and the movements for reorganization are set forth. A chapter is devoted to each of the following: The Intermediate or Separate Industrial School, Vocational High Schools, The Trade School, Part Time Coöperative Schools, The Continuation School, and Vocational Guidance. Notes are given concerning legislation, in sixteen different states, as affecting industrial education.

The text as the title implies consists largely of "Examples of Industrial Education," most of which are American, and it is believed that most principals of vocational, especially of trade, schools, will find much valuable information in the volume.

## HANDY-BOOK FOR GIRLS.

[By Anna Parmly Paret. 348 pages. Illustrated. Published by Harper Brothers.]

"Harper's Handy-Book for Girls," by Anna Parmly Paret, deals with home arts and industries. Part I treats of home furnishings. The second part offers instruction in simple carpentering, wood-carving and metal-work, leather-work, tapestry, bead-work and other crafts including chapters on enamelling, jewelry-making and block-printing. The third part deals with fancy work and embroidery. The fourth part gives directions for making various Christmas and Easter gifts. The last part deals, in general, with outdoor possibilities, herbariums, aquariums, and the collection of butterflies. The chapters on simple dressmaking and millinery are not practical.

A few suggestions might be obtained from the chapters on stenciling, clay-modeling, basketry and weaving, but aside from those chapters, there is very little in the book that can be adapted to our work here.

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## HARPER'S MACHINERY BOOK FOR BOYS.

[By Joseph N. Adams. Harper Brothers, publishers, New York. 372 pages. Illustrated. Price \$3.50 (\$1.75).]

A single volume of three parts. Part I covers the principles of simple mechanics, tools, power and hydraulics. Part II deals with machinery for wood, stone, concrete, and miscellaneous purposes. In Part III the automobile, motor boat, and gas engine are described in detail. A chapter is given on valuable shop hints; another on formulas, and one on tables, gauges, and measures. The appendix consists of a dictionary of mechanical terms. The book is written in easy language which places it among those most desired

in trade and high schools. Many of the machines shown are so simple and well illustrated that it is believed a boy with a little ingenuity could make them with but a few ordinary tools. This book "shows the boy how he can make the modern world of machinery his own"; it is practical and would make a valuable asset to our trade and high school libraries.

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## HOUSEHOLD SCIENCE AND ARTS.

[By Josephine Morris. Illustrated. 256 pages. Published by American Book Co.]

"Household Science and Arts" contains suggestions concerning the best ways of keeping a house clean. It gives advice in regard to the care and preparation of wholesome foods, valuable information on table-setting and washing, definite rules for measuring ingredients, and experiments showing the composition of different foods.

The methods of cooking are clearly defined and the composition of foods and their food values are discussed. In addition to valuable hints on laundering and the keeping of household accounts, there are three hundred and fifty recipes and twenty sample menus.

All directions are expressed in simple language which make the work easily understood. It might well be used either as a library book for intermediate schools or as a reference book for cooking teachers, either in primary or intermediate grades.

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## SCHOLARS' ABC OF ELECTRICITY.

[By William H. Meadowcroft, with favorable comments from Edison. 143 pages. Illustrated. Published by Hinds, Noble and Eldridge, 31-33-35 West 15th Street, New York City.]

In this text no attempt is made to teach the more advanced and technical sciences of electricity, but

to offer such information, on the elementary principles, from a popular standpoint as will be readily understood by the pupils of the American grammar schools. The volume contains eighteen chapters on the volt, the ohm, the ampere, magnetism, the telegraph, electric lighting, batteries, and other subjects. Each of these subjects is described in detail in elementary English. Numerous illustrated experiments are given with instructions for working them out. It is believed that Philippine pupils of the secondary grades could obtain valuable information from this volume.

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#### ELEMENTARY WOODWORK—CARPENTRY FOR BOYS.

[By George B. Kilbon. 99 pages. Illustrated. Published by Lathrop, Lee & Shepard Co., Boston, Mass.]

This text has evidently been prepared for the purpose of giving to American boys instruction on the use of the principal woodworking tools.

Sixteen lessons minutely detailed are provided for, and it is stated that they were given to the ninth grade of the public schools at Springfield, Mass. It appears that throughout the text there are numerous diversions from the more usual methods of teaching woodwork.

Although the work as laid out may have brought good results where used, it is believed that the volume would not be of much value in Philippine schools where an effort is being made to acquire more extensive training.

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#### SEWING ILLUSTRATED.

[By Louise J. Kirkwood. 88 pages. Published by American Book Company.]

"Illustrated Sewing Primer with Songs and Music," by Louise J. Kirkwood, is a small volume of 88 pages only, the first 26 being given to

questions and answers on the preparation for sewing, kinds of stitches, their uses and how to make them. It contains very good illustrations of the different kinds of stitches. This part of the book might profitably be used by sewing teachers of primary grades.

The greater part of the book is given to sewing songs with music. The volume also contains ten lessons on dress-making and learning to fit. These lessons would be of no use to the Filipino girl as the waist taken as a model is such as would never be used by her.

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#### A REVIVAL OF IRISH LACE.

A representative of one of the biggest Irish lace houses reports that advices from his house and also advices from Paris indicate a distinct revival in the demand for Irish, especially in the continental and South American markets. The call is especially, however, for real Irish and several orders from French houses running up into the thousands of pounds are reported as evidence of the fact that Irish is definitely taking hold again. It is said that a large amount of the real goods is being used in the underwear trade but that also a very strong demand is found for Irish collars of up-to-date types. If this demand has not made itself felt in America it is expected in the near future it will do so. (*Lace and Embroidery Review*.)

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#### PAPER AND CARDBOARD CONSTRUCTION.

[By George Fred Buxton and Fred L. Curran. Published by The Manual Arts Press. Peoria, Ill. 191 pages. Illustrated.]

This volume has been prepared for the use of teachers in primary handwork in public schools. Definite instructions are given for handling paper and cardboard construction in primary grades. The work as

planned covers book, box card and envelope problems. These subjects are taken up in detail and the instructions cover the laying out, cutting, folding, sewing, and gluing.

It is believed that the ground covered in this volume is too extensive for general use in Philippine schools, but that it may serve as excellent reference data for a teacher in charge of primary industrial training.

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#### NUTRITION AND DIET.

[By Emma Conley. 208 pages. Illustrated. Published by The American Book Company.]

"Nutrition and Diet" deals with the composition of the body and of foods, classification of foods, digestion, nutritive and fuel value of foods and their digestibility, the balanced meal, planning of meals, menus, and classification of foods for detailed study.

It is intended for classes that have had at least one-half year's work in practical cooking and some knowledge of foods. This book is supposed to be used to complement the work in cooking if it is taught as a high-school subject. The book might be of some value to teachers as a reference book but would be of little use in the hands of the pupils.

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#### GOOD BOOKS FOR BOYS AND GIRLS.

Hawk: The Young Osage. By C. H. Robinson.

Ralph Somerby at Panama. By Francis Raleigh.

Our Little Athenian Cousin of Long Ago. By Julia Darrow Cowles.

Polly-Anna. By Eleanor A. Porter.

The above story books published by L. C. Page and Co., Boston, will be found of value to any school library that desires to place wholesome stories in the hands of its boy and girl readers.

Sharp sandpaper is one good thing, but sharp planer knives are another and they should come first to make the best combination of the two for finishing wood. (*The Furniture Manufacturer and Artisan.*)

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To take lumber out of the dry kiln ahead of time to accommodate a rush order is a poor way to make ends meet, for there is trouble enough with joinery even when the drying is made thorough.

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#### EARNING AND LEARNING.

The criticism that the public school unfits boys for wage earning will soon be a memory if high schools can point to figures such as have been given out by the Lane Technical High School, Chicago.

Statistics compiled by Principal W. J. Bogan show that 800 boy students of the school earned the sum of \$31,583.12 during their vacations, while 125 extension students, working as plumbers' apprentices, earned an additional \$9,275, making the grand total earned \$40,858.12.

A list of the jobs held by some of the 800 regular students includes a wide range of occupations: Clerks, 150; office boys, 95; messengers, 50; bell boys, 10; farmers' assistants, 50; machine-shop helpers, 35; pattern-shop helpers, 10; engineers' helpers, 15; elevated railroad guards, 8; chauffeurs, 20; electric-shop helpers, 35; newspaper carriers, 40; moving-picture operators, 15; express-wagon boys, 10; drafting offices, 20; florists' helpers, 10; carpenters' helpers, 18; collectors, 20; teachers, 2; forest service, 1; tree surgeon, 1.

If these figures indicate anything they show clearly that the vocational high school is not only fitting boys to hold jobs successfully but also that it is instilling in them a spirit of independence and manliness. But

what is more important, the school is giving them the true conception of the dignity of honest work which makes them take any respectable temporary job. (*School Board Journal.*)

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#### TWO FAMOUS AGRICULTURAL EDUCATORS.

There are many men who have greatly aided in the development of a better farm life in the United States of America, but from those who are our contemporaries two stand out as having been interested in lines of work which must ultimately be responsible for a similar outcome in the Philippines. These men are the late Seaman A. Knapp, the organizer of practical farm demonstration work, and Luther Burbank, the most wonderful developer of plants. It is believed that the readers of this number of THE PHILIPPINE CRAFTSMAN will find certain incidents of their lives to be interesting.

SEAMAN A. KNAPP.

This man who sought freedom and independence of the soil was born in Essex County, New York, in December, 1833. As a boy he attended the public schools and later graduated from the Union College, Schenectady, New York. He taught school for several years and at the age of 32 moved to Iowa and settled on a farm. He edited a farm paper and was the first professor of agriculture in Iowa College. Later he organized a development company which purchased a million acres of land in the State of Louisiana and established a prosperous agricultural community.

He conducted rice demonstrations and diversified farming. His work attracted the attention of the Government authorities and in 1898, at the age of 65, he was sent to visit China, Japan, and the Philippines to make rice investigations. In 1901

he made a second trip and in the same year went to Europe and later to Porto Rico. Thus in 1903, at the age of 70, he had not yet begun the great work which made him famous, although much time and study had been devoted to it.

In 1903 the Mexican boll weevil began to cause such destruction in the Texas cotton fields as to bring about the sending of Dr. Knapp to fight its ravages. He took a piece of land on a farm and demonstrated that cotton could be grown in spite of the weevil. The next year the entire state was organized. In a few years his work had covered the entire South. At the time of his death in 1911 this great work extended over many States, and under a force of 1,000 assistants an enrollment of 100,000 farmers, 75,000 boys in corn clubs, and 25,000 girls in tomato and canning clubs was secured. It is interesting to know that throughout his work great emphasis was given the practical demonstration work by school pupils at their homes. A comparison of the results he secured with what the public schools in the Philippines are doing, as given in other articles in this number, reflect credit upon our work.

LUTHER BURBANK.

The man who is known all over the world as a man who has achieved distinction in working with plants was born in Lancaster, Massachusetts, in March, 1849. His parents were so poor that Luther attended only the public elementary school and early in life went to work in a factory. He cared little for tools and machinery and grew vegetables for the market during his spare time. He noticed that the seed balls on the tops of some potato vines were better than others and by selecting the best ones and planting them, he developed the famous "Burbank" variety of potato. It is said that this potato

has been worth millions of dollars to the world.

He received a partial sunstroke while working in the garden and was forced to give up this kind of work. Having sold his rights in the new potato for \$150, he went to California, but not being very strong and as work was scarce, he was compelled to work very hard. At one time it is said that he was employed to clean out poultry houses and many times had to sleep in them. At this time he contracted a fever, but a kind lady in the neighborhood helped him and he slowly recovered his health. Having later secured employment in a nursery and saved a small sum of money he started a nursery of his own. At this time there came an order for 20,000 prune trees. He accepted the order but did not have that many trees old enough. As it takes three years to grow prune trees he thought out a plan of making the almond tree bear prunes as that tree could be planted at once. He placed prune buds in young almond trees and startled the world with his success.

For many years his great talent has been devoted to plant breeding. He has improved trees, flowers, vines, shrubs, vegetables, fruits, and nuts. Constant improvement upon nature has been Mr. Burbank's life work. He has improved the potato, the plum, chestnut, many berries, and a large number of flowers. He is now one of the famous men of the world, and lives and works at his place near Santa Rosa, California, a part of which is his original nursery.

Last year his brother who is associated with him in this work spent some time in the Philippines. Burbank's success is more than interesting to those who are cognizant of the great need for more attention to plant breeding in the Philippines.

[NOTE.—Data for these sketches were taken freely from Bulletin No. 43, United States Bureau of Education.—EDITOR.]

#### ARTS AND CRAFTS IN THE DUTCH EAST INDIES.

The Bureau of Education has recently received a number of volumes of the "De Inlandsche Kunstnijverheid in Nederlandsch-Indie." These are written by Mr. J. E. Jasper, government official for the matters of native arts and crafts. The publications are richly illustrated and describe the household crafts of the Dutch East Indies.

The work of investigating the crafts of these islands is similar to that now being accomplished by the Bureau of Education but it has no close connection with schools and instruction as the work in the Philippines has. The following is an extract from the letter written by Mr. Jasper to the Director of Education in transmitting the publications.

"The encouragement of native applied art, that is practiced over the Archipelago as domestic work, has been left to private initiative. Many people, Europeans as well as natives, are dealing in home-art products, but most of them, being no artists in the real sense and aiming only toward commercial ends, cause a degeneration in original technic and ornament. So, the Government has ordered a technical, artistic investigation, in consequence of which the principal technics and ornaments of home art are to be fixed in a series of well-illustrated descriptions of the following subjects: I. The art of making mats and basketry. II. The art of weaving and lace making. III. The art of batik. IV. The art of making metal-work (gold, silver, copper, and brass ware) and damaskeened arms. V. Other branches of home art.

"Charged with the above-mentioned investigation, I have already written the first two of the related books, the complete titles of which are: 'De Inlandsche Kunstnijverheid in Nederlandsch-Indie, Door J. E.



Jasper En Mas Pirngadie.' 'I Het Vlechtwerk, II De Weefkunst. Van Regeeringswege Gedrukt En Uitgegeven Te 'S-Gravenhage Door De Boek- & Kunstdrukkerij V/H Mouton & Co.-'S-Gravenkage, 1912.'

"The whole series of descriptions will be finished after some years. This means, in my opinion, the conservation of the craft's originality and it should precede the real development in the industries.

"With regard to the manual instruction, I might say that there is but one Government school (established about six years ago) in Ngawi (Java), where the branches of making basketry and earthenware, horn-turning, wood-carving and designing are taught to native pupils who have graduated from elementary schools. The modest purpose of the so-called native home-art school of Ngawi is to give those pupils such practical instruction, that they will be able to make a little money by doing hand-work at leisure.

"Supposing you desire to obtain information only on artistic instruction, I leave the three trade schools of Batavia, Samarang, and Sourabaya out of consideration, these establishments being destined for the training of blacksmiths, carpenters, and the like. There exist also some private home-art schools with or without grants from the Government, and so are to be mentioned: The school for weaving at Lagoeboti (Sumatra), founded for Batak women and girls by a missionary society, a school for weaving at Koepang (Timor) founded by the Franciscan nuns, some schools for weaving in Padang (Sumatra), some schools for lace making in Palembang and Atjeh, and the schools for making silver and brass ware and wood-carving, lately opened in Kloengkoeng (Bali), all for native pupils.

"Moreover there are some societies that manage a business in native

arts and crafts, and of which are to be mentioned: 'Boeatan' in the Hague, 'Oost en West' in Batavia, 'Jogjasche Kunstarbeid' in Jagjakarta, 'Toko Tontonnann' in Sourabaya (especially for brass ware).

"In order to increase the sale of home-art products, several fairs have been organized at intervals in Sourabaya, Samarang, Batavia, Makasser, Padang Pandjang, Fort de Kock, Koetaradja, for which enterprises the Government usually advances the capital stock, yielding no interest.

"A definite organization or a real public service for the development of native handwork does not yet exist, but will probably soon be taken into consideration by the Government.

"In my opinion and so far as I know the native people and their home art, such an organization ought to be made by a government central institution with a view to encourage private workshops under good native technical and artistic managements and to the founding of special societies or coöperations.

"After practical skill is formed in that way and the natives themselves entirely recognize the necessity of the art's development, the special task of the government comes more to the front. For, every special school of art or industry ought to be in relation with existing workshops. Such has already been declared in 'The Art and Art Industrial System in Austria,' published in consequence of the third international congress for the teaching of art and drawing, that took place in London, 1908.

"Finally, I will give here below the following short quotation from the above-mentioned book: 'One of the most important principles in the administration of all the schools (schools of art and industry) is that the entire industrial education is based on the close relation and mutual assistance of school and workshop and, as far as possible, on the practical demands of industrial life.'