
INDUSTRIAL NOTES.

GENERAL.

The General Office has received an order for ₱500 worth of silver for use in industrial classes in Bohol. This is the first case on record in this Office, of an order for silver as school industrial material.

Each seventh-grade girl in Bohol is trying to finish this year marketable articles to the value of at least ₱15.

The Bureau of Education is seeking to have the duty removed on linens imported into the Philippines. In this way it is hoped to make it more nearly possible for Filipino embroiderers to compete with those of other countries when the war is over.

The advisability of supplementing the present trades course in wood-working, i. e., cabinetmaking, with a modified building course and a course in bamboo-rattan furniture making, is being seriously considered by this Bureau, as evidenced in a recent circular.

Various trade schools have, from time to time, made inquiries from Manila hardware firms concerning sample cards showing styles and sizes of the different kinds of nails. One firm has concerned itself enough to secure twenty sets of such cards from the United States, and to forward them to the Bureau of Education for distribution. They have been sent to the various schools and will undoubtedly prove of considerable value when requisitions are made up for nails of different varieties.

Up to the end of October the value of the Tarlac garden harvest was

₱1,671.96 as compared with ₱497.01 for a similar period in 1915.

In Nueva Vizcaya 1,500 kapok trees and a number of fruit and shade trees, have been planted by pupils at their homes during this school year.

At Tigbauan, Iloilo, a lot of bamboo furniture was made and stored early in the school year. When examined on November 20, it was found that every piece but one had been attacked by weevils. This one piece had been varnished. While the single instance would not warrant a conclusion that the varnish served as a preventative against weevils, it furnishes strong evidence to that effect.

During the month of November, 1916, the Manila public schools received payment from the Bureau of Education for white embroidery, ₱611.65; linen lace, ₱49.82; abaca slippers, ₱7.25. Further orders from the Bureau were accepted for 120 coir doormats, ₱103.50; 14 coconut cups, ₱10.50; abaca slippers, ₱100.

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THE INDUSTRIAL EXHIBIT AT THE VACATION ASSEMBLY.

In accordance with a custom established in 1915, and as announced in General Circular No. 123, s. 1916, an industrial exhibit will be held at the coming vacation assembly in April and May. This exhibit will contain articles from all provinces of all representative industrial courses, excepting cooking. No bulky products will be shown. Each division may exhibit not to exceed five articles, the designs for which originated in the division.

The articles will be judged by representatives of the General Office for the purpose of determining what progress has been made during the year, what assistance is needed, and what can be done toward further improvement.

This exhibit will be valuable mainly for three reasons: As a collection of models made in school, it will be of much assistance to instructors; it will show the progress that has been made by each division; it will show in what respects the different divisions excel, and in what respects they are deficient.

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FINANCING NORMAL INSTITUTES.

The problem of financing normal institutes is not an easy one to solve. By close economy, the average cost for each teacher enrolled can be kept within ₱1.50 at large institutes. The average cost per capita is greater at small ones; the expenses for materials and equipments are less, but those for athletics and social events remain about the same. For the past two years the method of financing the normal institute in Cebu was as follows:

Each teacher paid a matriculation fee of ₱1 when his enrollment card was issued, and the card constituted a receipt. The money raised in this manner was used for social events, athletics, and for the purchase of industrial materials. It was accounted for in the same manner as any other special fund. The balance on hand at the close of the institute was carried over to the following year. Only a small appropriation was made by the provincial authorities. This was used solely for the purchase of materials. Provincial aid was not availed of before the normal institute special funds were exhausted. For the 1916 institute approximately ₱50 of provincial money was expended. Such equipment as could be utilized in the

schools throughout the year was purchased by the city of Cebu. One small contribution was made by the instructors of the institute, and the money secured was used for a reception and dance.

The payment by teachers of a matriculation fee sufficiently large to meet all expenses seems to be the most just means of financing an institute. There is no more reason for the province bearing a large share of the expenses than there is for its paying for the books of seventh-grade pupils. By their work in the institute, teachers fit themselves for better work, which eventually means promotion.

It is realized that all teachers will not share alike in the use of materials purchased from the fund secured from matriculation fees. It is not practicable to make an absolutely equal distribution; but as it costs considerably more to finance the plain-sewing classes than others, teachers enrolled in these, may well be required to purchase a part of the goods used. In this way, the value of materials furnished to each teacher may be made approximately the same.

The plan of having teachers supply materials from home cannot be depended upon, as there is always a large percentage who fail to bring materials. The success of the institute requires that materials for each teacher be at hand on the first day. The only way to make sure that they will be on hand is to purchase them several days prior to the opening of the institute. The furnishing of all materials by the institute through the matriculation fee, is considered the most satisfactory and the surest way of getting enough materials of the right kind into the hands of teachers. (B. F. B.)

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ALBAY.

The date of the provincial garden day has been set for March 21, 1917.

All the barrio and municipal garden days will be held previous to that date and will serve as "feeders" to the provincial exhibition. It is planned to give implements and tools as prizes instead of cash.

The value of fabricated articles sent to the division office by the various schools of the division on B. E. Form No. 154, Invoice of Industrial Articles, during the six months ending December 31, 1916, was as follows:

Albay District	₱522.60
Tabaco District	477.63
Guinobatan District	450.97
Ligao District	450.79
Catanduanes District	273.97
Provincial High School	194.95
Bacayay District	138.63
Sub-provincial School	88.74
Guinobatan Farm School	24.00
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	2,622.28

These figures represent only the value of articles actually sent to the division office. The value of the products sold from school gardens, farms and trade schools, is not included. During December alone, ₱1,350.27 worth of articles was sent in. January, February, and March will in all probability show equal or greater shipments.

About twenty of the school gardens of this division have been placed on a commercial basis. The success or failure of the garden teachers in these schools will be judged by a comparison of the monthly sales reports. Most of the teachers are enthusiastic over the plan and several have voluntarily placed their schools in the competition. The rating is made from actual sales and not from production figures. For the period ending December 31, 1916, Getulio Nebres of the Camalig Central School was leading the list with a total of ₱41.14. A special form has been devised for the monthly report of garden sales. This form shows the value of each kind of vegetable sold, as well as totals.

The sales of the division industrial department for the period ending

December 31, 1916, total ₱4,339.58. These figures include not only the local cash sales, but those to the general sales department and sales of articles on hand at the opening of school in June, 1916.

Mr. Felipe O. Cevallos, principal of the Guinobatan Farm School, has had a model poultry yard and house constructed on the school grounds. The pupils who are members of the poultry raising club have copied this model as nearly as possible for their home projects. The rice harvest of the Guinobatan Farm School was quite successful. Three hectares showed a yield of 240 cavans. Mr. Cevallos states that the average yield on the farms in that vicinity is below 60 cavans per hectare. The rice land has been replanted to corn and legumes.

Miss Juana Guerrero, traveling industrial teacher, has been assigned to this division for the remainder of the present school year.

Eight new household centers have been organized, one for bobbin lace, six for Irish crochet, and one for karagumoy baskets. As yet the output is not large, but the prospects for the future are bright. The Bureau has supplied ample orders to care for the entire output, and arrangements have been made for immediate payment. Most of the workers are contented and are desirous of continuing the work.

The value of orders received from the General Office and now being filled, amounts approximately to ₱10,000, divided as follows: Basketry, ₱6,500; lace, bobbin and Irish crochet, ₱2,100; embroidery, ₱1,400. (T. H. C.)

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BOHOL.

LOCATING NORMAL INSTITUTES.

In former years normal institutes were held in the capital towns and little help was received from the people or from the local merchants.

Before deciding about the location of the last normal institute in Bohol, the towns desiring it were asked for a certain amount of financial support, and the one offering the best inducements was given first consideration. As the greater share of the expenses was borne by the municipality of Loay, and the prominent men of the town, the matriculation fee was reduced to 50 centavos, and even then there was a surplus at the end of the session.

The average teacher spends at least ₱30 or ₱40 during the four weeks' session, and if this is multiplied by the number of teachers usually attending the institute, it is found that at least ₱10,000 is spent by them. A contribution of ₱200 or ₱300 by local merchants is but a small part of their profit. The people in the town where an institute is held should be made to feel that it is not only an honor to hold it in their municipality, but that the presence of several hundred teachers is of such financial benefit that they ought to be glad to bear a considerable part of the incidental expenses. There are some obvious advantages in holding an institute in the capital of the province, but when there are other towns that are eager to do more towards making the undertaking a success, it is often advisable to hold it elsewhere than in the capital. (G. S. P.)

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BULACAN.

Fifteen pupils in San Rafael have secured Cantonese cocks from the Bureau of Agriculture for their poultry raising projects.

During the rainy season, the garden pupils in Meycauyan have been busy at digging a ditch 60 meters long. It will carry away from the school garden, the overflow of the artesian well.

The provincial trade school has

turned out 1,300 standard model school desks, and these have been distributed to the various schools in the division. The San Miguel wood-working shop has produced 100 school desks during the past month.

Thirty-seven pupils in the export basketry class at the Obando Primary School have fabricated and sold ₱75 worth of baskets since the opening of school.

The intermediate school of Baliuag has received an American cook-stove for use in the domestic-science classes. (R. L. B.)

DABOO CLAMPS.

The sketch on page 537 shows three devices that have been used in school for several years. It cannot be definitely stated that they originated in the minds of either teachers or pupils. It is believed that they were copied from clamps found in use by commercial basket makers when the craft was started in the schools some ten years ago. Certain it is that they well serve the purpose for which they were devised, i. e., to hold the rim in place while fastening it to the basket. The one in which a wedge is used is also very convenient for holding the needle while driving it into the handle in making crochet hooks and lace pattern perforators.

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CAMARINES.

Plants grown from native seeds are doing well in the school gardens of Mambulao district. The school-boys of Basud Central have recently marketed their garden products. In Partido a large amount of land is being gardened. The provincial high school and Goa Intermediate School gardeners are using rain hats for protection against the weather. Work is thus made possible during the rainy season.

Arbor day was observed in every

town and barrio of the Partido. At San Jose special endeavor was made, as the celebration came on the day of the town fiesta.

Mothers' day has been celebrated at Naga by the domestic-science department of the provincial high school. Both the high school build-

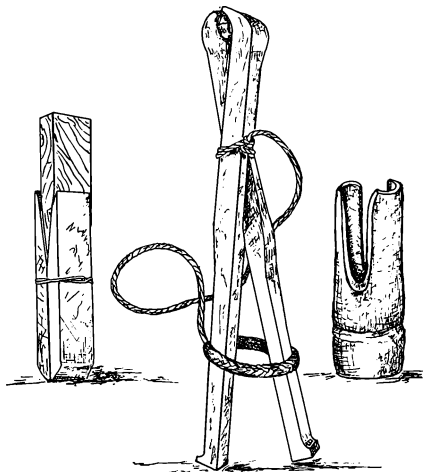
be congratulated on the success of the affair. (B. L.)

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CAVITE.

THE NAGDAMI VARIETY OF RICE.

The Indang Farm School boys have just harvested 35 cavans of rice.



Bamboo Clamps.

ing and the model house were decorated for the occasion. Many mothers came, and all were gratified to learn what their children were doing at school. The young housekeepers gave a musical program, after which they served tea. The teachers of domestic science, are to

The "nagdami" variety has once more turned out better than all other improved varieties introduced so far, and it has proved to be better than the best native variety, the "kinastila."

Under equally favorable conditions the former produced heavier

than the latter. This season both varieties contracted the prevailing rice disease, "rolled leaves," and in every instance where they were grown side by side, the nagdami recovered from the disease the sooner and gave the heavier yield. Besides, kinastila can not resist the weeds so well; because of this the local farmers see no reason why they should continue to raise the native hardy rice, "sanglay," when a better quality from an equally hardy variety, the nagdami, can be grown.

Ten of those to whom seed of the nagdami were supplied by the farm school last year have reported favorably on the results obtained, and it is largely through them that a great demand for the seed has arisen in this locality. Several land owners who planted nagdami on a large scale have said that they will make another trial of it side by side with the kinastila and sanglay next season, and, if it again proves to be better, they will stop planting the kinastila and sanglay altogether.

Four varieties of rice were planted on the school farm for comparison of yield. They were nagdami, kinastila, libod, and salig. An equal area was given to each, and when harvested during the latter part of November, the nagdami produced nearly 100 per cent heavier than any of the others. The Indang Farm School will continue to plant selected seeds of the nagdami. (M. M.)

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ILOCOS NORTE.

The looms in common use in Ilocos Norte are much the same as those of Ilocos Sur and of certain parts of Mountain Province. They are too short for a lifter or treadle attachment and the manner in which the warp is extended makes it break too easily. They are unsatisfactory for weaving hard fibers such as maguey, piña, and abacá.

While loom weaving is carried on in fourteen towns of Ilocos Norte, Paoay is the only place where the work is specialized to any extent. Bath towels and bed spreads are made there. The women do all the weaving, and they earn from 25 to 35 centavos per day.

Modern methods of weaving, and new designs are being introduced. There are now twenty or more women in Pasuquin alone, who can use the improved foot loom. The people of that town have shown their appreciation of the new loom by frequent visits to see it in operation. They wonder at the quick action of the batten attachment, and at the facility with which the designs are woven in.

The municipal council is planning to order from Manila an improved loom at a cost of ₱58. It will be used as a model. Due to the low price of lumber in this locality it should be possible to construct a complete loom for ₱18. (A. P.)

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ILOILO.

THE ORGANIZATION OF NORMAL INSTITUTES.

The success of a normal institute depends not only upon the character and efficiency of the instructors, but also upon the organization as planned before the opening day. The ideal system is reached when a pupil can come to school, go direct to his class and begin his work at once.

The organization of the Iloilo normal institute as perfected during the past three years, has proved successful. Work on institute plans begins early in January. At that time planotyped industrial schedule blanks are sent out. These are completed by the supervising teacher and returned to the division office where they are checked up and modified, if necessary, by the industrial supervisor and the division superintendent. An approved copy

of this completed or corrected form is then returned to the supervising teacher, together with a supply of blank recommendations for matriculation. This form requires a condensed report of the teacher's previous institute work, and a recommendation as to his assignment for the coming year.

Upon receipt of the accomplished forms, they are carefully checked with the industrial schedule by the industrial supervisor, and the names are entered on the rolls of the various classes and assignments to the rooms are made.

With the forms completed, the principal of the normal institute has on hand the data necessary to plan the organization to the last detail. The instructors for the various classes at the different periods have already been selected, and a summary of the assignment slips allows all rolls to be made up before the institute opens. These rolls are to be distributed to the teachers on Friday and Saturday preceding the opening day. At the same time the assignment slips are distributed to the student teachers through the supervising teachers, and on Monday morning everyone knows exactly where he is to go and what he is to do.

If the necessary patterns, models, material and equipment are on hand, the normal institute will be in full operation ten minutes after the opening bell rings. (C. E. W.)

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MAKING SCHOOL DESKS IN LEYTE.

The number of desks made for the municipal schools of the province by the Leyte Trade School has been increasing steadily; in 1914, there were less than five hundred; in 1915; nearly a thousand; for the first five months of this school year the number has exceeded fifteen hundred, and more than three thousand desks

will probably be turned out by the trade school before April.

The school charges ₱2.50 for making each desk and the pupils are paid 40 centavos for their labor. Most of the work in connection with the making is done by and is charged to machinery. The exposed parts are hand-planed and sand-prepared. A few have been given two or three coats of underlac.

The desks, except one completely assembled model, are shipped "knocked down." This saves freight. The braces are nailed to the sides before they leave the trade school and this eliminates the most difficult operation in assembling the parts. Enough nails are sent with the desks, and only a hammer is needed in putting them together. Mr. Fornillos, the teacher in charge of this work, has invented a most ingenious jig which is used in nailing the braces to the sides. This device obviates measuring and incident mistakes. The braces fit the grooves in the jig; the sides are placed in it, and there they are nailed in their proper positions.

The municipalities of Leyte are getting most satisfactory desks at a small cost, while the trade school is being supplied with orders which pay both pupils and school well. (J. W. R.)

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NUEVA VIZCAYA.

Mr. Emiliano Menzen, supervising teacher at Bayombong, submits this short account of the Bintawan Primary School:

Bintawan is a barrio having about seven hundred inhabitants, of whom 275 are of school age. During previous years the school was like those of other barrios in the division, having only Grades I and II, with low enrollment.

In March, 1916, it was planned to establish a complete primary course in this school and to build a

teacher's house, in order to provide a kitchen where the girls might cook, as well as to furnish quarters for the teacher.

The people of the barrio were much interested, and with their assistance, the house was completed before the school opened on July 10. There was a large enrollment, and many were refused admission, because of lack of accommodations, though most of those turned away were repeaters and pupils from neighboring barrios.

Gardening and farming are the only industrial courses for boys in this school. The garden covers about half a hectare. With the help of the people, the whole school ground was fenced, and by the end of October the garden was entirely under cultivation. The plots were distributed according to the age and size of the boys: small boys were given one each; larger boys, two or three.

The parents helped a great deal in the preparation of the garden. At the first turning of the soil, several native plows were broken. Later an American plow was provided and this proved more effective. During rice planting, it was very difficult to secure carabaos for plowing, as the rice planters needed their animals in the fields; but now the school is keeping a carabao which it rents at four pesos a month.

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OCCIDENTAL NEGROS.

According to a report received from Miss Marcela Abeto, teacher of embroidery, the girls of the Cadiz embroidery classes receive a grade of 95 per cent if they finish their work by the date agreed upon. A deduction of 5 per cent is made for each day the work is delayed. This plan has resulted in Manila orders being finished two weeks sooner than required. The production for the 40 girls in the intermediate industrial

classes up to the close of school in December amounted to ₱3.50 per girl. Local orders are accepted after finishing General Office orders. Materials for both embroidery and cooking classes are furnished from a domestic-science fund which has amounted to over ₱200.

The fastest workers at the Hinigaran Central School were able to turn out four coir doormats each, by the beginning of the Christmas vacation. All boys of the central school make these mats, even the larger boys of Grades I and II turning out satisfactory mats in sizes Nos. 1 and 2.

One energetic girl of the Kabanakan Central School, according to Mr. Esteban R. Abada, completed the following work up to the beginning of the short vacation: Two embroidered napkins, No. 15-1309 and 1 tray cloth, No. 15-1208; 1 dress, 1 chemise, 1 underskirt, 1 nightgown. She also cooked such recipes as malagquit, hot cakes, fried cakes, yellow cakes, griddle cakes, cookies, rice crullers and "upo" with chicken.

Miss Paz Ereño states that the girls of the domestic-science classes of the provincial school learn to set the table in three different ways: After the fashions of the rich, the middle class, and the poor.

The standard length of bobbins used in lace making in this province, is 12.7 centimeters, and the patterns being fabricated are 8A, 8B, 102A, and 102B.

It is believed that to determine accurately the annual garden production, vegetables consumed should be counted with vegetables sold. The cash entry in the industrial record book, Form No. 151B-C would show the value of vegetables disposed of by other means than sale, as having been apportioned to pupils. This is in harmony with the regulations covering plain sewing articles returned to pupils.

Plans are being laid to secure real

interest in, and permanent results from, the agricultural clubs. The work has been handicapped this year by the extremely severe rainy season that did not abate until well into December, and by the cold, windy weather which followed.

A sale of old noncurrent museum stock was held on December 10, the articles having been handled on the regular Government inventory and inspection report, and sold at public auction by the auditor. Very satisfactory prices were obtained. The museum will now be restocked with models and samplers of articles of current manufacture.

Recent experience with lace making shows that valenciennes lace, when once the art of making it is acquired, is produced almost as rapidly as similar patterns in other types; also, that second-grade pupils find delight in handling B. E. design 5511, 1A and 1B, and readily turn out a commercial product. A bobbin's length a day for them is easy; and the making of a twelve-yard piece of lace in any of these patterns might well be added to the industrial course for this grade, which now is confined to plain sewing.

In the provincial high school at Bacolod, 41 girls are working at embroidery. The division estimate for the output of elementary and advanced work totals ₱205, an average of ₱5 to each pupil, and this requirement will form the basis for the March rating. The work is to be produced in the regular industrial periods of school days, and not during extra hours at home. The girls all know by what considerations the March rating will be determined, since it has been definitely outlined to them as follows: Commercial work, minimum output, standard quality, 90 per cent. Elements to raise or lower this per cent: Deportment—report of teacher in cooking and housekeeping, attendance, punctuality; plain sewing—appearance as

to cleanliness and neatness, garment fastening (pins bring demerit marks, snappers bring demerit marks unless used where buttons would catch the hair when braided), quality of workmanship.

This schedule pertains to all classes where embroidery, lace or crochet is made. Naturally, there is little of a disciplinary nature needed; all are active upon the assigned work.

In elementary lace the school is making patterns of B. E. design 5511, 8A and B. The minimum requirement per month is set at 1.83 meters. This secures a fixed monthly rating, which has been announced. The longest piece over this receives 1 more per cent. In October, each of two girls had 3.96 meters of lace, both gaining the extra 1 per cent. Many had lengths little less than this. Once the lace is measured, which is done on the last day of each calendar month, it is not handled again. It is carefully rolled and covered, the edges of the cover being sewed. When the measurement as noted totals 22 meters the lace is taken off, wrapped on the standard card put-ups, and stored away for invoicing.

In advanced lace, of B. E. design 5511, 102-A and B, the monthly requirement is 1.37 meters. Experience shows that valenciennes lace of the patterns mentioned, makes up less rapidly than linen lace of patterns 8A and B. On the basis of the girls' work as here made account of, the latter should bring 10 per cent more than it does at present.

Girls in this school will complete the minimum quantity of embroidery required, ₱5 worth of standard work per pupil, and probably considerably more. In valenciennes lace, pupils working equal hours with those in embroidery will produce 11 meters of lace for the year, its value being ₱3.36 for work and thread. As records show, one ball of Alexander thread costing ₱0.17, will make 8

yards of valenciennes lace, design 102A. Twenty-two meters of elementary lace B. E. design 5511, 8A and B, at ₱0.26 per meter, when cost of thread is taken out will not yield any better returns. To be more exact, at present prices the difference in remuneration approximates 35 per cent in favor of embroidery. These conclusions would not apply in all primary schools because many of them do not have the equipment and space required for the production of commercial embroidery while it is possible for them to produce commercial lace. As to speed in this school, it is, if anything, in favor of the girls engaged in lace making. (W. J. R.)

ORIENTAL NEGROS.

According to Division Circular 67, s. 1916, for Oriental Negros, the effort which is being made in that province, to secure data on which accurate conclusions as to the comparative profits in the various industrial activities may be based, should go a long way toward laying a foundation for better results next year. At the close of the school year the teachers in charge of the work will render a report on the time spent in preparation of materials and in the construction of all articles, and they will in each case state the amount of experience the pupil has had.

FALAWAN.

The first order of desk baskets has been completed and shipped to the General Office sales department.

Mr. Manuel Bacosa, formerly division industrial supervisor, has been assigned as principal of the Aborlan Agricultural School, relieving Mr. Prentice Whitman, who is in poor health. No one is yet in Mr. Bacosa's place.

The Coron Primary School has a

complete outfit of new desks, all made by the shop pupils. (R. C.)

ROMBLON.

The following notes were furnished by Romblon teachers:

Girls of the cooking classes at the Romblon Intermediate School accepted the contract to furnish refreshments for the inaugural ball. The ₱30 which they received for their work went to the piano fund.

In the subprovince of Romblon there are ten schools that have bought foot-power sewing machines on the installment plan. Monthly payments of ₱4 are made in each case. The first payment is always made from the pupils' fund, but subsequent payments are often met by the girls, each paying a pro rata assessment.

Every candidate for graduation from the course in housekeeping and household arts must appear in a dress that she has made under her teacher's supervision, the dress not to have cost more than ₱5.

The Grade IV woodworking class in the Romblon Central School consists of 27 boys ranging from 12 to 18 years of age. Although inexperienced, up to the end of school in December, they had finished 30 standard desks valued at ₱1.50 each, and they had done considerable repair work on the domestic-science building.

The girls of the intermediate classes in the Romblon Provincial School serve such appetizing midday lunches that they are patronized not only by the pupils but by outsiders as well.

Twenty boys of Grades III and IV in the Cajidiocan Central School made 118 bagobago desk baskets valued at ₱30 up to the time of the December vacation. The girls in the sewing class produced articles to a total value of ₱160.

Up to the first of the year, the

Grade IV girls of Odiongan, Tablas, completed 408 articles, consisting of 260 handkerchiefs, 25 petticoats, 70 dresses, 15 envelope chemises, 6 nightgowns, 6 drawers, and 11 skirts. In addition they did considerable mending.

Romblon teachers claim that putting green papaya leaves at the bottom and over the top of the can while rolls of buri are being boiled, gives the material a lighter shade.

TAYABAS.

Torrijos reports progress on the part of the central school in the school-ground improvement competition. The paths leading to the street and those around the building have been gravelled, and flowering shrubs have been set out with good effect.

Eaves troughs for the standard school building were provided a few weeks ago, and connections were made with the cistern, the approximate dimensions of which are 2 by 2 by 4 meters. The gulch across the street near the school has been walled and covered with concrete. The former kitchen near the building is too small and a new 3 by 5 meter kitchen will be built. Forms have been made for concrete posts and as soon as the woven wire arrives, a permanent fence will be put up. All of these improvements are made at a slight expenditure of school funds, as pupils do most of the work. (V. B.)

ZAMBALES.

The great advance in basketry production in the San Narciso Central School is shown by the fact that during the school year 1914-15, the sales amounted to ₱15.69, as compared with ₱140.40 for 1915-16.

An agricultural club has just been organized in the Castillejos Central

School. Eight of the fourteen members are taking poultry raising; two, fruit raising; and four, vegetable growing. The members of the club have the support and coöperation of their parents, and they are enthusiastic in their work.

In conformity with General Circular No. 82, s. 1916, all regular and home gardeners in the Iba Central School have purchased daily record books for gardening, as required by General Instructions No. 22, s. 1916, paragraphs 26 to 28, inclusive.

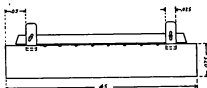
In connection with the garden day celebration, the agricultural club of Iba, and the literary society of the central school rendered a joint program in the hall of the Iba Central School on November 28, at 2 p. m. (W. S. F.)

A DEVICE FOR PREPARING BASKETRY MATERIALS.

Most of the time consumed in the preparation of basketry materials is taken up in scraping off thin layers



END VIEW



SIDE VIEW



TOP VIEW

from the splints until the desired dimensions are obtained and a uniform width or thickness is secured. Therefore, any contrivance which tends to shorten this process is ap-

preciated by basket makers who use hard materials.

A number of devices of this kind have been worked out. One originated by Mr. Juan Santos, formerly traveling industrial teacher, but now teaching in the central school at San Antonio, Zambales, should be of much assistance. As is shown in the accompanying illustration, it consists of a block of hardwood near each end of which is mounted an inverted u-shaped piece of iron. Through these irons is inserted a bolo-shaped knife with the sharp edge down and next to the block of wood. A set screw in each iron holds the knife at the desired elevation above the block. The device can be used for cleaning either round or flat materials of any size.

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PHILIPPINE SCHOOL OF ARTS AND TRADES.

On December 18, forty boys from the building course started work on a structure on Wallace Field. It is to be used by the Insular Government for the housing of the exhibits of various bureaus at the Carnival. The building is 38 by 80 meters in size and is in the form of a hollow rectangle with two smaller buildings inside. The work was completed in a little less than a month.

The machine shop is filling a ₱2,000 order from the Bureau of Supply, for a number of articles including bolts and parts for water meters.

A large room has been made ready for the manufacture of the new building material recently invented by the Bureau of Health.

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ONE PHASE OF PROGRESS IN DOMESTIC SCIENCE WORK.

The one advantage which a teacher of domestic science enjoys over a teacher of academic subjects lies in the fact that it is not necessary to wait so long for results.

This has been exemplified in the growing popularity of the sewing machines and the kitchen equipment of the model house. In retrospect, the progress made looms large; and in looking forward, it speaks well for a higher standard of living—that is, if the desire to have better things is prophetic of an effort to obtain them.

Pupils, and often women with families, come to the school on Saturdays and after school hours on week days in order to use the sewing machines. Advice in garment making is much sought and is usually followed. School patterns are borrowed with great frequency, especially those for making children's clothes. The little boy's suit is very popular, as is also the one-piece infant's garment which resembles a mother's envelope chemise.

In former years the demand for laces and edgings came almost entirely from Americans. Within the past year, however, many requests for these articles came from people living in the town and several girls asked permission to purchase the things which they had completed.

Pupils often stay after school to prepare special dishes to take home. The oil stove is often worked overtime in cooking cakes, cookies, and other delicacies made from recipes furnished by the teacher. The pupils always furnish their own materials: Jelly making was a pleasant surprise to most of the girls, who had not realized how easily and cheaply homemade jellies could be prepared. Since receiving instruction in this line, many girls have made jelly to take home, and have undoubtedly instructed others in its preparation. The two favorite recipes are given below:

PINEAPPLE HONEY.

- 0.5 l. pineapple juice.
- 0.5 l. pineapple pulp.
- 1.2 kilos sugar.

Heat the pineapple juice, then add sugar and boil for five minutes. Add pulp and boil twenty minutes. Pour into jar.

PILI MACARON.

- 2½ cups pulverized pili nuts.
- 4 eggs.
- 2 cups sugar.

The nuts should be pulverized in a mortar. Add sugar. Beat eggs slightly and mix. Bake in small, paper boxes in a moderate oven for fifteen minutes. Anise seed is sometimes added to the mixture.

The school has a large ice-cream freezer, and of late no party has been complete without cream. Pupils and neighbors have been permitted to make legitimate use of any of the kitchen equipment and they have taken advantage of the opportunity. Of course no one is allowed to keep any article for more than a single day, yet even a day's use is encouraging, both to the borrower and to the lender. (K. S. N.)

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NATIVE DYES.

The following notes on the preparation of several dyes from native plants were submitted by Miss Felisa Herras of Magarao, Camarines. They are offered with the caution that vegetable dyes should not be used where coal-tar dyes can be obtained. Vegetable dyes are generally unsatisfactory for two reasons: They do not give a standard shade for all dye baths, and either light or water will cause most of them to fade.

Lavender.—The bark of camanchili boiled for a short time with lime produces this color.

Yellow.—The small tubers found on the roots of the calawag, when

pounded in a mortar and boiled for a short time with alum, produce this color. Calawag is a small herb of the lily family. It grows in the woods; the leaves are about 60 centimeters long by 15 centimeters wide, arranged on the stem like banana leaves; the stem is from 40 to 60 centimeters high.

The roots of the nino, scraped and then squeezed in water, produce yellow. Use lemon juice or vinegar. With lime a pink dye is obtained. Nino is a small tree found growing along streams; the trunk is from 1 to 3 meters high; the leaves are about 12 centimeters long by 5 centimeters wide, growing near the ends of the twigs; the fruit is small and round and is covered with small projections like the fruit of the nanka.

Red and dark red.—The wood of naga boiled with vinegar or with lemon gives a good red dye. With alum, a darker shade is obtained. Naga is a forest tree from 3 to 20 meters tall. The heart wood of sibucacao boiled for one hour with alum also produces a good red dye. With lemon juice used as mordant, a pink dye is obtained. Sibucacao is a tree about 4 meters high; many small leaves grow along the stem; the trunk is covered with thorns 1 centimeter long.

Light brown.—Either the bark of santol or the bark of talisay boiled for one hour with alum, will produce this color. Talisay is a very large tree; the leaves are pointed, 30 centimeters long by 20 centimeters wide; the fruit is almond-shaped.

Green.—The leaves of the plant which produces the small red and green peppers sold in markets, squeezed in water produce a green dye. Use vinegar or lemon juice.