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The Philippine Craftsman

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We are coming to believe that it is one of the duties of the school to hasten the day when no man will be considered cultured who cannot work efficiently with his hands.

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The Philippine Craftsman

VOL. II. JANUARY, 1914. No. 7.

RESULTS FROM DOMESTIC SCIENCE.[1]

OPPORTUNITIES.

WHAT can be more important to a home-loving people, as are the Filipinos, than improvement in home conditions!

We put this idea in the form of an exclamation and reserve the question mark for "How is domestic science now taught in the schools affecting the home and life of the pupils?"

The opportunities for results in domestic science are large and varied. Sanitation, health, personal habits, cleanliness, clothing, medicines, cooking, the care of infants, household arts—what an immense amount of work and change each one of these subjects means!

"Take the matter of milk. It is used in most towns for infants and for people who are sick. It is brought in from the barrios in beer bottles packed into a basket with a conglomerate lot of other things. It is delivered; but perhaps it has first been liberally diluted with river water. The empty bottles are taken on to the market, where they sour in the sun and where animals pass by and nibble and lick at them at will. When, finally, the other wares brought in have been disposed of and a return load packed in with the bottles, the morning is well advanced; perhaps it is 10 or 11 o'clock. At the river the bottles are rinsed with water and gravel; and this is all the cleansing they receive. Next morning they are filled again and passed on to infants and sick people.

[1] This article has been prepared by Hugo H. Miller from reports on domestic science submitted to the General Office by request of the Director of Education. These reports were written in a rather personal style and tell of the aims and results of domestic science. The various parts of this article which have been taken directly from these reports are, therefore, placed in quotations. Acknowledgement is due to the following domestic science teachers: Mrs. Dollie McKay Robb, Mrs. Agnes M. Derkum, Mrs. Maudie L. Pruitt, Miss Nelle J. Sutter, Mrs. Katherine S. Netzorg, Miss Bessie Taylor, Mrs. L. P. Willis, Mrs. Pearl F. Spencer.

"Such things demand a remedy. What agency, in the provinces, is to get at them by reason instead of command? There seems only one, and that the domestic science department of the schools, before which lies a broad field of direct and increasing usefulness."

HOUSEKEEPING.

"We find the Filipino kitchen not sufficiently planned for in the mind of the house builders, that it is cramped and ill-equipped and impossible to keep clean. Using the same materials found in the houses of the middle classes generally—wood, sawali, and nipa—we have a model house constructed, with attention paid to the back as well as to the front. In this kitchen we do not have a great number of utensils, especially patent ones; such a movement would be away from practical things. But we have what is essential for good housekeeping. Vessels do not have to be duplicated in services concerned with the same meal, nor drafted for other uses after the meal is over; and the girls are taught the *why* for this rule under hygiene and sanitation.

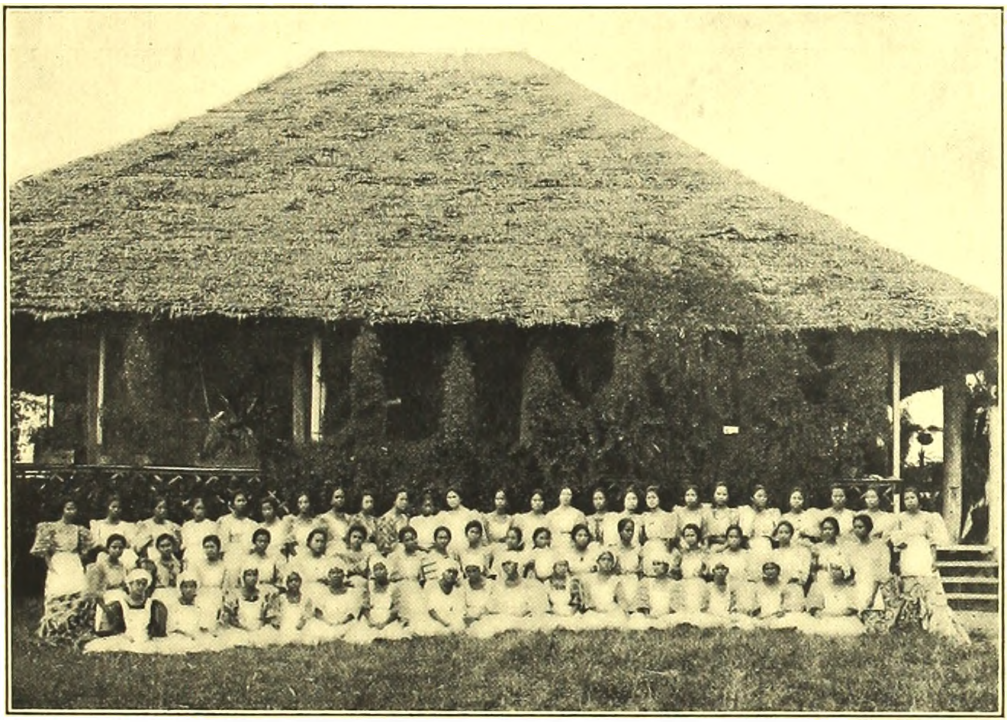
"The Filipino stove question, as to dirt, smoke, and the like, we have solved by having shelves for them built out from the kitchen windows. Thus all the smoke stays outside; and the height is just right to require an erect position while one is at work over them. The discomfort from the heat is also greatly reduced.

"Having disposed of the question of stoves by adopting the Filipino stove and introducing the Dutch oven and fireless cooker, the matter of what to cook follows naturally.

"Believing simplicity should be the basis of things in well regulated homes, we devote the minimum time to fancy cooking, and the maximum time to staples such as are cooked in Filipino homes.

"We have in all classes little kitchen lovers who develop their cooking into an art; but these must have individual training. Our classes as a whole are concerned with *ulam* (vegetables, meats, etc., to eat with rice). We have learned that the dishes to which the girls are accustomed are cheap, and that a balanced diet may easily be evolved from them. Our work lies mainly in lessons of cleanliness, to have the girls form habits of preparing their dishes in a cleanly and wholesome way, basing their procedure on what they have learned concerning personal and household hygiene and sanitation. When the girls report that they prepared at home some recipe we have worked out at

school, we are pleased; because we know that this has meant a wholesome menu, well served. And these reports increase in number all the time as we specialize more and more on Filipino foods. Speaking of the necessity (or at least the great good sense) of adaptation, brings up the matter of boiled rice. We have found that our instruction had to stop with lessons as to washing the rice, cleaning the pots, and serving. As to cooking, the lesson was for us, not for the girls. Filipinos know how to cook rice just a little better than when cooked in any other way. Naturally this is so. They have been cooking and using it as we have bread for centuries; and if we



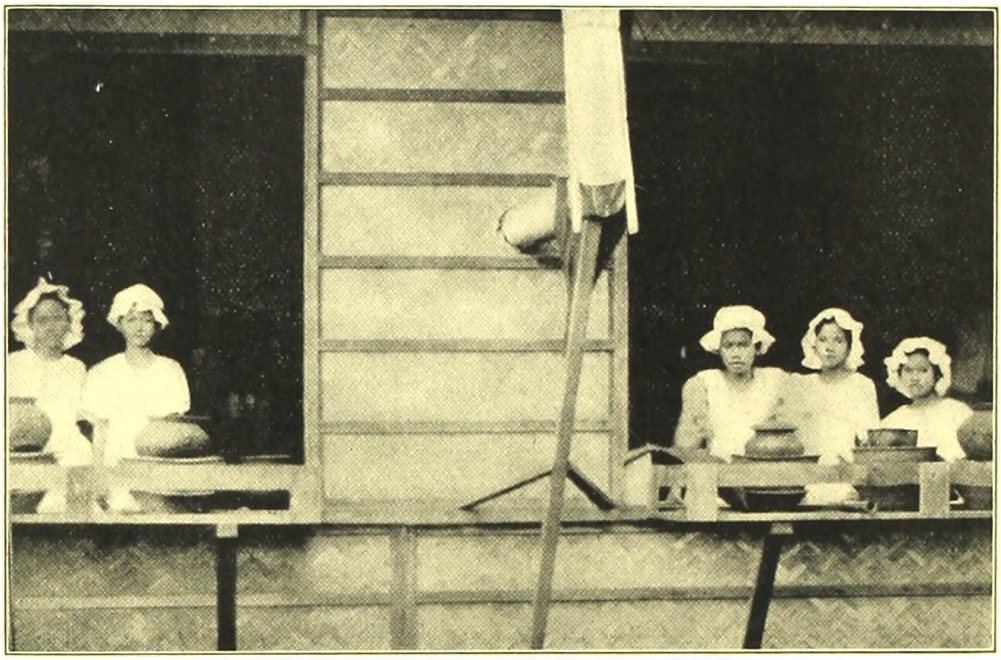
A domestic-science house and pupils, Cebu.

assume that we know about bread, we can but admit that they know about rice.

"The objection may be raised that our instruction is on too simple a basis, that merely a refinement of the present diet of the people is not enough. But the answer is that simplicity is the true basis of all dietetics; that there is nothing gained (and a great deal lost) in training the stomach to crave elaboration in cooking. We do not find all things as we should like to have them. We find too much grease, far too much, and none of the right quality. We minimize the recipes requiring lard, and render our own or buy that guaranteed 'under the pure food and drugs act.'

"The proof of the pudding is in the eating thereof. If one of our girls suggests a recipe (and there is quite a rivalry in this) she is given the opportunity of preparing it for the class; and when it is served, judgment is passed. The recipe may be rejected as not conforming to the best rules for diet, or may be accepted as presented, or altered to suit the class criticisms.

"The girls in the cooking classes are divided into groups. Each group, for the day, has entire responsibility as to marketing, cooking, and serving and for every detail involved in getting up and serving the meal, and cleaning and putting things in order afterwards. The other members of the class, together with the



A domestic-science kitchen. Smoke and heat outside.

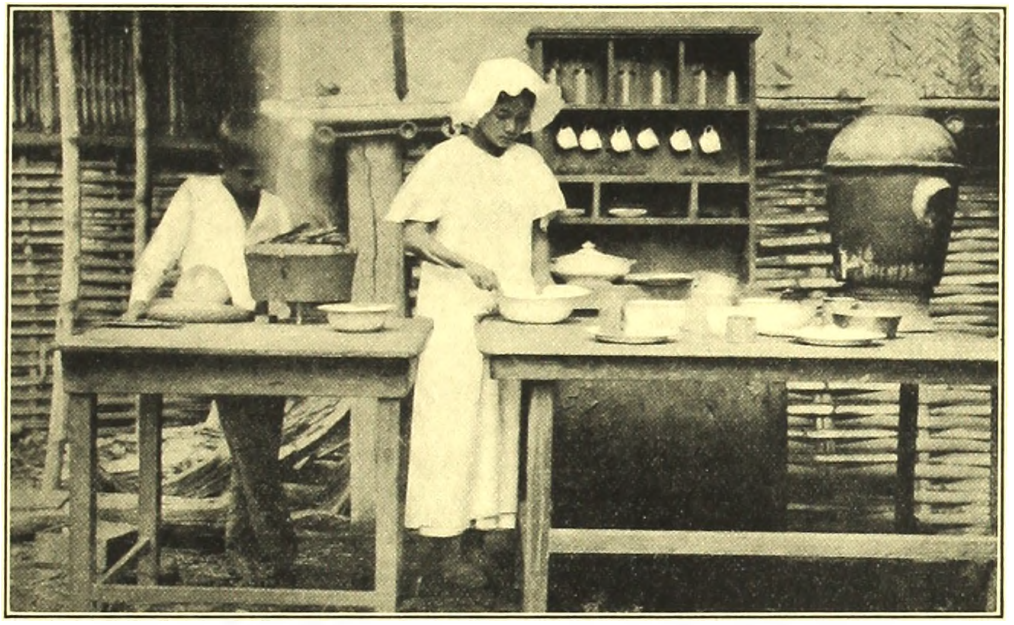
instructors, are the guests. Rice, of which each girl brings a small amount from home, is served with each meal except in the seasons for corn, when that cereal takes its place.

"As for the utensils, they are cleaned in the ordinary way; the way all kitchen utensils must be cleaned—by means of hot water, soap, and scouring.

"Two kinds of rice are brought in by the girls: some bring the white, polished rice and some bring the red, unpolished rice advocated by the Bureau of Health as a cure for beriberi. Lessons have been given about these two kinds of rice and there exists an opportunity for practical demonstration of the preparation of each.

"Then the school gardens, from which the native commercial gardeners are constantly copying, offer opportunity which is not neglected to develop taste for the vegetable part of a meal; for everything we cook, we eat.

"The corn campaign now being conducted by the Bureau is another opportunity. We know that Filipinos could, with excellent results, add more corn to their regular diet instead of getting corn in more or less indifferent form as lunches from the tiendas. In our town the corn months are the months when the death rate often far exceeds the birth rate, and we lay much of this to corn. Why? Because of the way it is eaten, and exposed to the flies before being eaten. The cobs,



A modern Filipino kitchen, Bayambang, Pangasinan.

after being nibbled, are thrown carelessly about and allowed to feed and breed the filth-loving insects that are the harbingers of so many diseases. Instead of forming a regular part of home diet, corn in our locality has been cooked up in dubious vessels by dubious old women with dubious ideas of what constitutes being even measurably clean, and with no idea at all of methods to keep their wares clean! Then it is served up to the public (and especially children) mostly on the cob and often, in fact generally, after it has become so hard that it is utterly unfit for the stomach of a grown-up, let alone a child. Here we find a great opportunity in cautioning and training against the way in which corn is used with so deadly results, and in urging and teaching its proper use and place in the diet of

the people. The corn demonstrations offer opportunity to reach the public in general, but all through the season for corn we use it in our class work, letting rice take second place.

"The market throughout the year affords a plenteous supply of cheap vegetables, the variety of which, as well as the quality, is increasingly satisfactory since the successful introduction of school gardens. But, as may be seen, the facilities for exposing things to sale are extremely primitive; of an age that has passed. To avoid as much of this evil as possible, our girls go to market early, before things have been picked over. Fifteen centavos buys a sufficient supply for a class, and often

A domestic-science class.

it is not more than 10 centavos. It averages just a little bit higher this year than last.

"The course in plain sewing fits a girl to do the household sewing, as that in cooking does for the household cooking. The art of needlework is so old, and so generally recognized as fitting in with the proper training for girls, that little comment is necessary. The Filipino girl can be taught to do just as beautiful plain sewing as she does fancy stitching; and the world is coming to know what she can do in that.

"In plain sewing, the idea of adaptation is again paramount in the course prescribed by the Bureau; namely, to produce a set of children's clothes, first of doll and then regular size pat-

terns generally in vogue over the Archipelago, carefully cut and exquisitely stitched. The good sense of light garments has been recognized, and the lack of adequate training in the cutting and fitting of house garments has been supplied. To this are added kitchen and sewing aprons, caps, holders, dish towels, and the like. This is the course as laid out and we have found nothing to add to it but an outfit for a baby's bed—a mattress made from shredded corn husks, four muslin sheets, two flannel covers (spreads), and two pillowcases for a little pillow made from duck feathers.

"The Director of Health has always furnished us with pack-

Sterilizing jars and boiling preserves, Cebu, Cebu.

ages of simple remedies with which we supplement our teaching in hygiene and sanitation. A book of instructions comes with the remedies. Their use in and out of the classroom has practically eliminated from this community the usual cases of skin diseases and has broken down prevailing superstition that if *galis* (itch) were cured on the skin, it would 'go in,' causing all sorts of dire calamities. We require our girls to bathe their eyes with a boric acid solution daily; and we issue such necessities to the poor as quinine, calomel, and household disinfectants. We have treated innumerable cases of malignant sores, relieving a great deal of acute and useless pain and suffering.

"The soap which we have made is considerably more expensive than the 'chino' laundry soap. Some of the girls use it at home for toilet soap, while others buy the commercial soaps for this purpose. Chinese soap is no longer used to any considerable extent in this community for toilet soap since it is now recognized as a dirty product. We use home-made soap at the school for both kitchen and toilet purposes, and find it soothing to the skin. Its use last year helped materially in healing several rather obstinate cases of *galis* among girls.

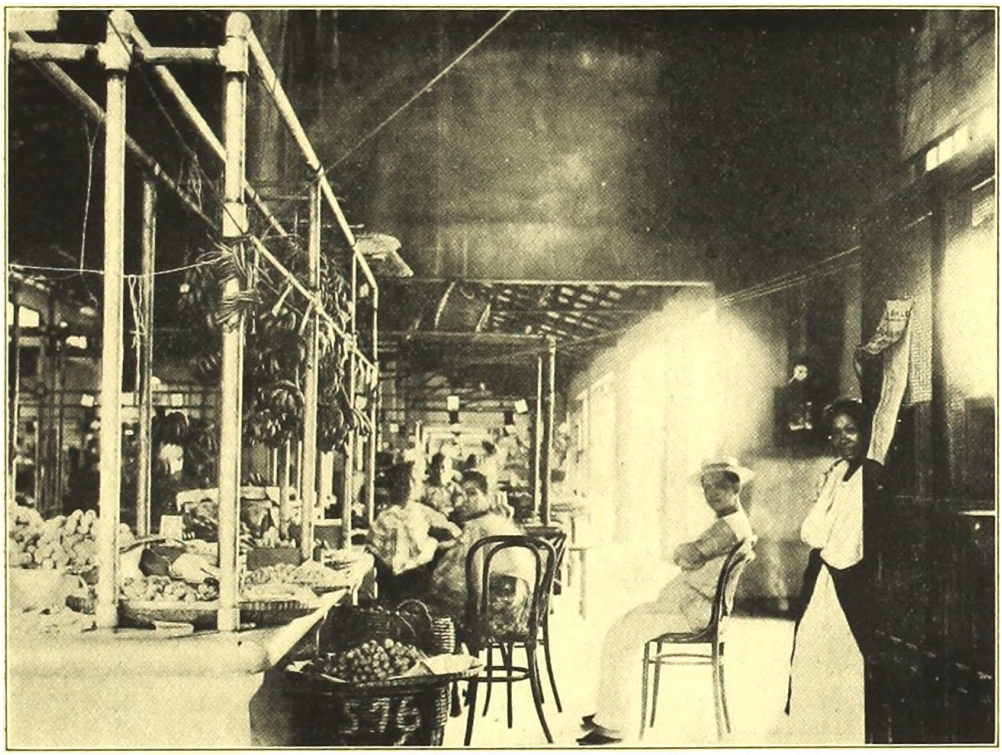
"Reverting for the moment to athletics, we find that it helps rather than hinders the domestic science work. It is only through the corrective agency of athletics that we are able to get any amount of work done; our best athletes are our best

Market, San Isidro, Nueva Ecija.

workers. We do not advise basket ball for all girls, nor allow all to play it. Only those of spirit and strength, who love its scrimmages, are permitted to indulge. Some form of game, at the close of the day, is however, insisted upon. This is very essential to the health of growing girls in school; and the time for it must not be encroached upon.

"In our classroom needlework, of course, we follow a systematic course, based on the bulletin, which covers everything from baby's wardrobe on. Former pupils who have married and become mothers follow what they have learned from us, and consult with us from time to time. We have studied the community closely enough to know of the almost holy love with which the babies are expected and the quick misery and anguish and need-

less suffering in which many—and so often the mother, too!—are laid away, and just a little knowledge would avoid it all. My own child entered into the training for these girls; for when it came to 'baby's bath' he had to go to the schoolhouse, where a practical demonstration was given. His nurse is constantly importuned by old and young alike for specific information about his care and when women call it is not us at all they wish to see, but the *bata*. I am always glad to show him because I feel he is a fine child (being mine), and because he is a better lesson than we can give on paper. We are always proud of our girl students who, marrying and becoming mothers, care for



Interior, Pace public market, Manila.

their children as children are cared for in the best of homes. And there is something significant in the fact that their mothers permit them to do so.

"We encourage the use of imported milk in tins. However, the use of carabao milk is often necessary when it is the only thing available, and we do not neglect to give full hygienic and sanitary instructions about it. Carabao milk is considerably stronger in fat than canned milk.

"In this article is shown a picture of a group of midwives who have just been attending a lecture on midwifery delivered by my assistant, Miss Francisca Trinidad. These meetings are held bi-

monthly and we are assisted in this work by the district health officer, Dr. Mariano Felizardo. The next is to be a meeting of mothers whom we hope to teach through the young mothers just spoken of."

HOUSEHOLD ARTS.

A higher standard of living requires more funds—the consumption of more wealth. This wealth may be produced directly or it may be obtained in exchange for products made but not used in the home.

The addition of more vegetables, corn, chickens, and eggs to the standard of living among Filipinos can often be accomplished

A sewing class on a veranda.

by producing these around the house. The family garments and even certain forms of bamboo and rattan furniture can be made at home. But flour, utensils, cloth, canned milk, kerosene, medicines, shoes, and other ready-made articles of clothing and heavy furniture, these and many other products must always be bought. And where will the money come from? From increased production of the soil and from the hands of better trained artisans, yes; but as far as the girls and women are directly concerned, from the products of household arts. In every town there are women of the older generation, sometimes hundreds of them, who are adding to the family income

by embroidering, textile weaving, hat making, and other household arts. The schools have aimed to foster and extend these and to add new arts.

"The desire for more is the keynote of the second aim of domestic science. When we want something very much we usually figure out how to get it. Formerly in our town a girl with shoes and stockings was very rare and girls cared little for such things. Now they long for pretty shoes and stockings, a scarf, or some other pretty article. The parents are often too poor to get it. So the girl decides she must do without or find some way of earning money to buy it. She has been taught in her domestic science class to crochet, embroider, or sew. She makes a pretty article and offers it for sale. With

Basket ball, old campus, Normal School.

the money received she learns that she has earning power. She need no longer sit apathetically and long for pretty things that others wear. By her own efforts in applying the knowledge she has gained in the domestic science classes, she can get many things which otherwise she would be compelled to do without."

In what are the habits of the individual, the customs of a people more firmly rooted than in these unchangeable, intangible social phenomena? We may come to recognize the reasons for habits and customs in others and to tolerate or even approve them. But only the plastic mind of the youth can adopt them.

It is the men and women of to-morrow who are to prove the right or wrong of our instruction in housekeeping and household arts. Therefore let us look about us at results that have

been accomplished not as tokens that our work has been successful or unsuccessful, but as indications of what may be

An athlete.[1]

expected of future generations; not in the conviction that our theories and methods are absolutely right, but with open minds

[1] This girl, captain of the basket-ball team that won the Central Luzon Meet last year, is a graduate of the domestic-science department of the San Isidro Provincial School. Although now in high school, she keeps up her sewing work for the carnival, and will have several pieces to exhibit.

and watchful eyes to note mistakes, to observe the lines of least resistance, to follow up advantages already gained and to devise new methods of accomplishing what seems hardest to demonstrate or to bring to pass.

There are several reasons why the application of the lessons in domestic science meet with opposition from some parents. Mrs. Pruitt states that "the lessons both practical and theoretical meet with appreciation on the part of the girls, but when it comes to applying these lessons in the home life they meet with considerable opposition on the part of parents on account of the fact that their parents are wedded to their old ways and are loath to adopt innovations."

Midwives.[1]

Parental authority and dignity often prevent the introduction of new ideas into the home.

Miss Sutter states: "A girl who is very responsible, says that when she attempts any changes in her home, her parents pay no attention to her because she is so young.

"In a fifth grade, when it was requested that each member of the class report on having taken a hot bath before the end of the week, the parents of three of the girls refused them permission to do so on account of fear of illness and blindness resulting from bathing before retiring. One girl of this same class was told the same thing by her father, but when he left the house she bravely experimented to see if it were true."

Even though convinced, the old people often refuse to adopt

[1] A group of midwives and instructors of San Isidro, Nueva Ecija, who have been attending a lecture on midwifery given in the dialect.

the suggestions of the younger generation. Miss Sutter cites a case: "A native teacher of our school invited her husband's aunt, an old lady of 60, to spend a week with her, hoping she might adopt the custom of sleeping with open windows during that time. Each morning on entering the old lady's room, they found the windows closed tight. She would close them after the household was asleep. When she left this home at the end of the week, she felt it might be a good thing for others but wasn't willing to accept it for herself."

Domestic-science class.

Miss Sutter voices one care we must exercise in looking over our data.

"I cannot inspect the home life of pupils with sufficient immunity from resentment to enable me to know definitely just what changes have been or are being made. The only information that I have available is that given me by native teachers and girls.

"I make an allowance of from 10 to 90 per cent for the reliability of these statements from the girls because it is manifest that while they do not maliciously misrepresent things, still they want to please the teacher by making the most favorable report possible. After all is said and done, after making due allowance,

I am certain that some of what the girls tell me is reliable—a fact which indicates improvement."

Due allowance for the effort to please should therefore be made in the following school girl's composition.

A STORY ABOUT WHAT I HAVE LEARNED AT SCHOOL AND USED AT HOME.

Since I have studied here in the provincial school of San Isidro, Nueva Ecija, I have learned many things that I use at home and show my parents.

First of all I was taught by my teacher how to clean the house and treat it as my own. And I have learned my lesson so well that I do the same things in my house.

Cooking, Bayambang Intermediate School, Pangasinan.

I have learned many different kinds of stitches in sewing. I have learned how to darn so finely that I have mended my own petticoat.

My first linen waist was very fine. My parents saw it. It was sold and received the prize. I have made many kinds of embroidered articles such as doilies, towels, caps, waists, and corset covers. I have made a corset cover for myself and decorated it with some lace made by me also. At present I am wearing it to school.

I learned how to knit, and by trying over and over again I made twelve ties that were sold in the carnival. I made some crochet lace and sewed it on to my chemise.

I have learned tatting and made many samples. I made a macramé bag and brought it home.

I have learned how to make laces and have made some for my sisters and for myself. Some were used to beautify petticoats, chemises, corset covers, and handkerchiefs.

I have learned how to cook cakes and other things. I tried making some at home. They were so fine that my people said that they had never tasted such as I made. I learned to clean utensils by using three pans. I have to wipe them with dish towels and arrange them orderly. This I often do at home. I learned to use an apron at work when at home as well as at school. I learned, also, that whenever I have to sweep the house the commissary box and the aparador should be kept closed. This is also being done at home.

I also learned to draw some flowers, made small albums, and post cards. I learned how to copy real objects such as leaves, chairs, tables, post cards, pitchers, and fruits. I use water colors to make them pretty. I do this at home also, sometimes without any color.

I learned ethics and use it daily. I have learned how to receive visitors, how to respect others, how to be kind to the old. I have learned how to introduce formally my acquantainces to each other. I help relatives and friends send out wedding invitations. I have learned how to take care of myself in time of danger.

I have learned hygiene, the way sickness is caused, how to take care of it, and what is needed to have pure, red blood. I know that wholesome foods are needed; that fresh air and cleanliness are most important just as well as food; that a nightgown and mosquito net should be used at night; the way a baby is to be cared for—how to give him the right kind of food and the right time for it and I know that he needs to be clean and warm always. I have learned that the sick room should be fresh, cool, clean, and far away from smoke. These ideas are all used in my home.

Of course, we can expect the very best results from the native teachers of domestic science. Mrs. Robb is here again quoted.

"Miss Francisca Trinidad is our assistant at the provincial school, through the influence of which—already a teacher—she developed herself into this special work. She has managed the school lunch system at the central school, has taught domestic science there, and has had charge of a mess for more than 130 with conspicuous success for a period of several months. She taught plain sewing in the provincial normal at Cabanatuan in June of this year. Three years ago she did not even know plain sewing; now she is a thorough mistress not only of plain sewing, but also of the fine needle arts. She has full charge of the sixth grade and helps with all the sewing, taking full charge of all the work when I am called away on inspection of other schools. She always has a piece of embroidery in the frame for herself and during the year will make several pieces. It goes without saying that her knowledge is carried into her home."

Probably more noticeable advance has been made in clothing than in any other factor in the standard of living, as Mrs. Netzorg here states.

"That which is acting most forcibly in altering conditions and

giving the schools a wedge for entering the homes, is the instruction in sewing. Even the most persistent conservative is impressed by the practical benefits and is not harassed by the "new-fangled" ideas spread in the cooking and sanitation lessons. He will retreat very gradually, if at all, in the fight for open bedroom windows, enamel kitchen utensils, and unheard of articles of diet. But the daughter who makes and mends her own clothes and those of the household shall be called blessed. The sewing is too distinct and obvious to be overlooked.

"Practically every girl in the sixth and seventh grades makes all of her own clothing, and, moreover, makes it correctly. Several of them spend their Saturdays working for others thus earning something toward their own support. Last year one girl maintained herself entirely by her sewing and in securing a position as a teacher this year, her dexterity with a needle was not her smallest recommendation. Of those who have left school, two spend practically all of their time as seamstresses and make a fairly comfortable living, proving that their sewing was of as much value to them as verb conjugation and bank discount.

"In making their own clothes the girls almost always show good taste. The school skirts are invariably short and well cut. The constancy with which school patterns of nightgowns and underdrawers are in demand indicates a wide-spread introduction of these articles of apparel. Almost every girl has a hand-embroidered corset cover with a yoke of real lace for festal occasions. Several subscribe to needlework and fashion magazines and talk with superior airs of 'sending to Manila for patterns.' It is both amusing and encouraging to note the good sense shown in cutting the short skirts from these patterns. The ridiculous hobble and tube effects are discarded while the graceful overskirt and plain back are universally adopted. The girls love to supply their small brothers and sisters with clothing and hence the garments of the plain sewing courses are becoming a common sight. Small boys are beginning to appear in rompers, a decided advance over the solitary camisa of the poor and the overtrimmed garments of the well-to-do."

Miss Taylor is quoted on the same subject.

"As to needlework, six years ago it was a very difficult matter to persuade pupils to bring to school materials for plain sewing. Their parents did not wish to supply the material. But now in most cases pupils are ready with their few meters of muslin at the minute appointed for cutting some new garment such as a night dress or princess slip, as the case may be. Copies

are made of the patterns for sisters, cousins, and friends, showing that the homes are influenced by the school. All needlework is now done with much more accuracy and neatness; and where one garment was made in the home a few years ago, ten are now made. Better materials are being used in the homes. Girls often ask for advice as to linens, how and where to buy them, and are eager to copy designs for articles of lace and embroidery to be used in their own homes."

The effect of the cooking lessons is not always so evident as that from instruction in sewing. This may be seen from Mrs. Netzorg's statement for Camarines.

"The work in cooking seems to have made little or no impression in the line of adoption of new dishes. Anything that has been made in the cooking classes has been eaten with relish but the results have evidently failed to penetrate the home. It is a matter of difficulty for one member of a family to cause a foreign food to become a part of the family's diet. Moreover we have had to cook until now with Swedish pump stoves, which may have caused the girls to doubt their ability to secure similar results at home.

"To all the above there are two exceptions—hot cakes and doughnuts. These, for some mysterious reason, have achieved an almost complete invasion. No home is without them. When I took up my work here two years ago, I began by making inquiries as to what American dishes each girl could make. Although they came from all parts of the province, the answer in every case was, 'Hot cakes and doughnuts.' In the local market you may purchase doughnuts 'a la Americana' from a woman who learned the art from her schoolgirl daughter.

"This year it is proposed to teach a series of recipes obtained from natives of Nueva Caceres, emphasizing to the girls the cost, food value, and the fact that these dishes have been made within this very town. This is in addition to the regular dishes prescribed by the course of study."

Miss Taylor's observations in Cebu are more encouraging.

"In the lunches brought to school it is observed that more substantial home food is now prepared, such as eggs, meat, and preserve sandwiches. These have taken the place of tienda dulces and fish, dust covered and otherwise unfit. The girls often say that they use more bread than formerly because they know how to make preserves and jellies to be used as butter. They eat more substantial breakfasts than formerly even using toast and eggs instead of bananas and a little sweet bread.

Mrs. Willis notes the advent of a new custom.

"The serving of tea with sandwiches and biscuits has become quite common and invitations to five o'clock tea parties to celebrate birthdays among both girls and boys are to be expected at almost any time."

Mrs. Spencer also notes that meals are often served very well.

"One day while out on an inspection trip it became necessary to stay for dinner with a Grade VII girl who was married. It was really a surprise all around, for the girl and her husband were poor. There were a tablecloth and napkins—to be sure they were made of ₱0.25 muslin, but they were neatly hemmed and

Three caterers.[1]

beautifully ironed—plates, knives, forks, spoons, glasses, and they didn't have to go from house to house to borrow them either."

Mrs. Robb has some interesting things to say about the results of cooking lessons in Nueva Ecija.

"Our girls like their work in cooking very much and all use at home what they learn in school. We have numerous statements to verify this and there is no exception.

"Three girls appearing in an illustration in this article, Rita,

[1] Rita, aged 19; Carmen, aged 17; and Maria, aged 20—all graduates of the domestic-science course at San Isidro last year and now in the first year of high school.

These young ladies have practically taken over the matter of refreshments at all public functions in San Isidro. At the March commencement exercises they served to more than 160 people. The cooking is strictly American. They are fine cake makers, an art which they have learned outside of school hours.

Carmen, and Maria (the eldest being just 20 years of age), have practically taken over the matter of refreshments at all local social functions. They prepare things as would be served by Americans on such occasions in pleasant contrast to the heavily larded *banquetes* formerly deemed indispensable. Their own words were, when questioned about this, 'Oh, yes; we cook many times—very often.' They are now in the high school but are keeping up their work."

While pupils understand and believe in the rules of sanitation they are taught, they often fail to carry them out. Mrs. Spencer's statement indicates this.

"When there is no sickness in the town very few pupils will boil all the water they drink; but let a few cases of cholera break out, then they begin to boil their water and to apply the rules of hygiene they have learned at school."

On the other hand, there are some pupils, as Mrs. Willis notes, who have not only faith in what they have been taught but tact enough to apply the teachings.

"Often the introduction into the homes of the domestic science and sanitary rules requires considerable diplomacy on the girl's part, owing to the old customs and prejudices on the part of parents and friends, as is illustrated by the experience of one girl in securing her mother's permission to sleep with open windows. Upon submitting the request, she was denied because her mother believed that the night air would make her ill. The girl, however, insisted, asking that the window be left only a little way open and stating that if she became ill she would not again ask this. Permission finally secured, the experiment was tried, and nothing fatal resulting therefrom, she insisted upon opening the window a little wider each night. Then another and another window was opened until the whole family was converted into sleeping with open windows."

A general review of results in Cebu is given by Miss Taylor.

"In hygiene and sanitation the general improvement cannot be overestimated. To begin with, one has only to inspect the books, handkerchiefs, and other personal belongings of the girls, and their home needlework as it is brought to school, to note the manner in which they partake of their lunches, to note the care with which they voluntarily keep their skirts from the floor, and be convinced that they are at least trying to make practical use of what the domestic science schools are teaching. The greatest encouragement to the writer in her work is to look back six years when most of the girls of her classes were dull-eyed, blotchy skinned, even hungry-looking, wearing soiled cloth-

ing, and moving, speaking, and listening with the greatest indifference, and compare them with the girls of her present classes in the same school—girls who, on the other hand, are clean, wide-awake, of good physical strength, and ready for any work assigned them, girls who are very seldom sick and consequently a much happier lot. The change seems almost indescribable, brought about mostly, the girls say, by the use of better food and drinking water, of mosquito nets and beds, open windows at night, and by their athletics followed by baths. Everything would indicate that the girls are truthful when they say that most of them take daily baths now and sleep with open windows—two new habits last to be dispensed with, not only by themselves but by the other members of the family."

Mrs. Pruitt emphasizes the influence of small beginnings.

"In a few cases girls have succeeded in buying some equipment for the kitchen, such as Dutch ovens, frying pans, knives and forks, mixing bowls, sifters, measuring cups, pudding pans, tables, and aparadors. These successful cases are in the better class of homes and it is believed that they will, in time, prove to be centers of influence for the housekeeping and household arts course."

There are reported many individual cases of better care of infants as the result of training in domestic science. What Mrs. Robb has to say is typical.

"The phase of the work which is most important is that relating to the community at large, for here we reach present conditions on a broader scale than is possible in the classroom. In an illustration are shown three women who together have given birth to 36 children, out of which number there are now alive a total of 10, about half of whom are small enough to be still in the period of comparative danger.

"In contrast to these mothers, who never had the chance to learn how to care for infants, there is shown in another illustration a young mother who came under school influence. Her baby has an individual bed and regular hours and is the picture of health. It will be through accident, and not through not knowing what to do, if she loses it."

The extent to which household arts have already provided additional income and have thus indirectly effected an increase in the standard of living, is brought out in the following quotations.

"The industries taught in the schools, such as embroidery, crochet, and pillow lace, have already become a source of revenue

to the female inmates of the home. Some girls even work during the long vacation, making articles ordered by the Americans of Camp Gregg. This revenue has so far been spent in the purchase of cloth for better clothing, and it is hoped that in the future many of the girls may be influenced to spend a part of this revenue in the purchase of cooking utensils and furniture for their homes."

"During the last two and one-half years more than ₱5,000 has thus come into the various homes over the Province of Albay

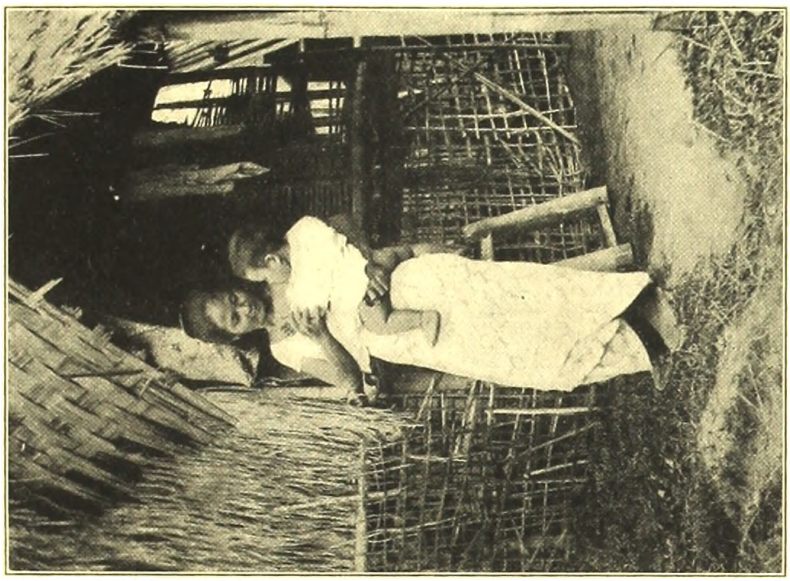
Filipino matrons.[1]

through the work done by the girls during the industrial period of the regular school program. Most of the articles thus sold were of Irish crochet. The girls work better and put much more spirit into the work when they know that for a well-made article they are going to receive some recompense.

"The girls not only like the crochet work because it brings them in a little pin money but they are using it more and more to ornament their clothes instead of buying lace and braid from the Chinese stores. The Irish crochet baby caps are greatly

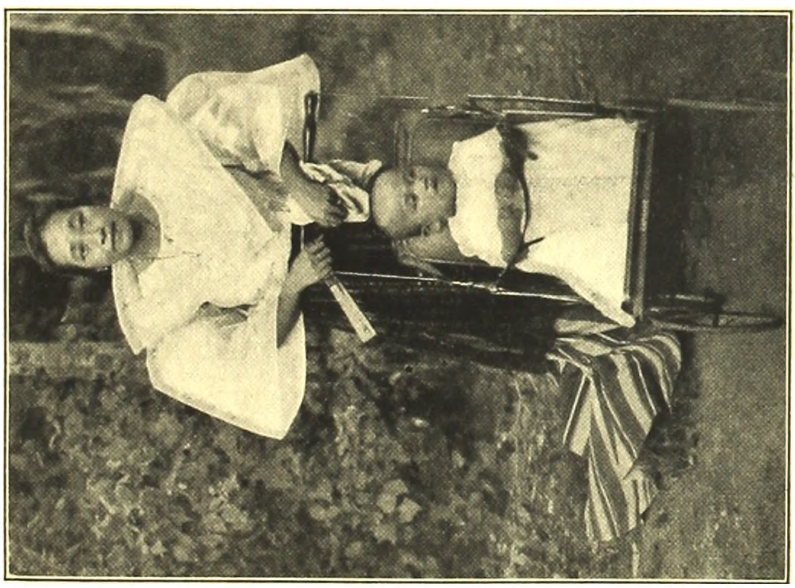
[1] These three are middle-class women of San Isidro, Nueva Ecija. They are merchants in a small way and their efforts contribute chiefly to the support of their families. It was a distinct sacrifice for them to close up shop and sit for this picture.

They have had a total of 36 children, out of which number 10 remain alive, not all, however, old enough to be out of the period of gravest danger—from birth to 5 years of age.



By permission of Squire, Bloehm Co.

Filling mattress.



admired by the Filipinos. Many of the girls use the Irish crochet edging and insertion as trimming for camisas, pañuelos, chemises, corset covers, skirts, and petticoats.

"The girls who have received money for articles made in school have almost without exception used all or part of it to buy clothes for themselves or other members of the family. Victorina, a very bright Grade VII girl, told me that for the past two years she has bought all of her own clothes with money received from articles she made in school.

"Maria bought herself a silk dress and some earrings. Paciencia, more thrifty, deposited part of her earnings in the postal savings bank, and used the rest in the purchase of books, clothes, and candy. Francisca and her two little twin sisters with the ₱120 which they have earned have bought clothes for themselves and brother, paid the rent on the house, liquidated an old debt, and paid the doctor's bill. Flavia gave all of her money to her mother to be used for the family.

"Several of the girls whose parents were not so pressed for money with which to buy clothes indulged their love for jewelry by the purchase of necklaces and earrings. Margarita, Clotilde, Camato, Flora, Teodora, and many others are the proud purchasers of American-made shoes.

"Emerenciana, a hard-working and frugal girl, says that she has bought her clothes for two years, has helped to pay rent and board, and has a ₱50 deposit in the postal savings bank.

"Candida and her sister are very superior workers and the two have received about ₱215. With this they bought a machine and helped their father buy some abaca land that he had been wanting for some time.

"Librada, a little 13-year-old girl and a student in Grade VI, is as nimble with her fingers as she is capable in her studies; ₱100 to such a small girl in the course of two and one-half years seems a small fortune. One-half of this, she says, was given to her mother to help in the support of the family and with the remainder she bought clothes and earrings and made a ₱10 deposit in the postal savings bank.

"Alberta has made more salable articles than any other one girl. With the ₱200 which she has received altogether, but at various times, she has paid a doctor's bill, bought her own clothes, and helped her father buy furniture for the home.

"Aurea used her money in helping to pay for a home and in buying furniture for it.

"Magdalena has received in all about ₱70. Of this she spent about ₱9, then gave the rest to her grandmother for safe keeping. She is proving even a better depository, Magdalena says, than the postal savings bank for if she asks her for even one centavo the grandmother becomes angry and says that she will not give it to her.

"The parents are very proud of the articles that the girls make in school and encourage them to put in a little extra time at home. They are as zealous over keeping the work clean as the girls themselves. One old grandmother laughingly, and also proudly, said, in speaking of her granddaughter's work,

Embroidery class.

that Bacelisa would not allow her to touch her work for fear she would get it dirty.

"Thus it is that several hundred girls have helped to increase the revenues of their respective homes while doing their regular school work at the same time."

"As a source of revenue to the female inmates of the home it may be said that of all the industries that are taught in household arts, crochet lace seems to have taken first place, followed immediately by embroidery. Even plain hand sewing has become a source of revenue in the homes. One girl tells me that through what she herself learned at school her mother

is now earning a good living by doing hand sewing for well-to-do Filipinos of her town. As crochet is quickly done in comparison with other handmade laces it is used in great quantities by the Filipinos themselves, and, as the girls say in their own way, the making of it is money saved and thus money earned. The making of crochet laces is the one thing that has kept from the homes hundreds of embroidery machines which it seems are a fad and a drain directly and indirectly upon the purses of the ignorant who often spend their last cent for a little machine embroidery when they could industrially make their own by hand. Testimonies from the field would indicate

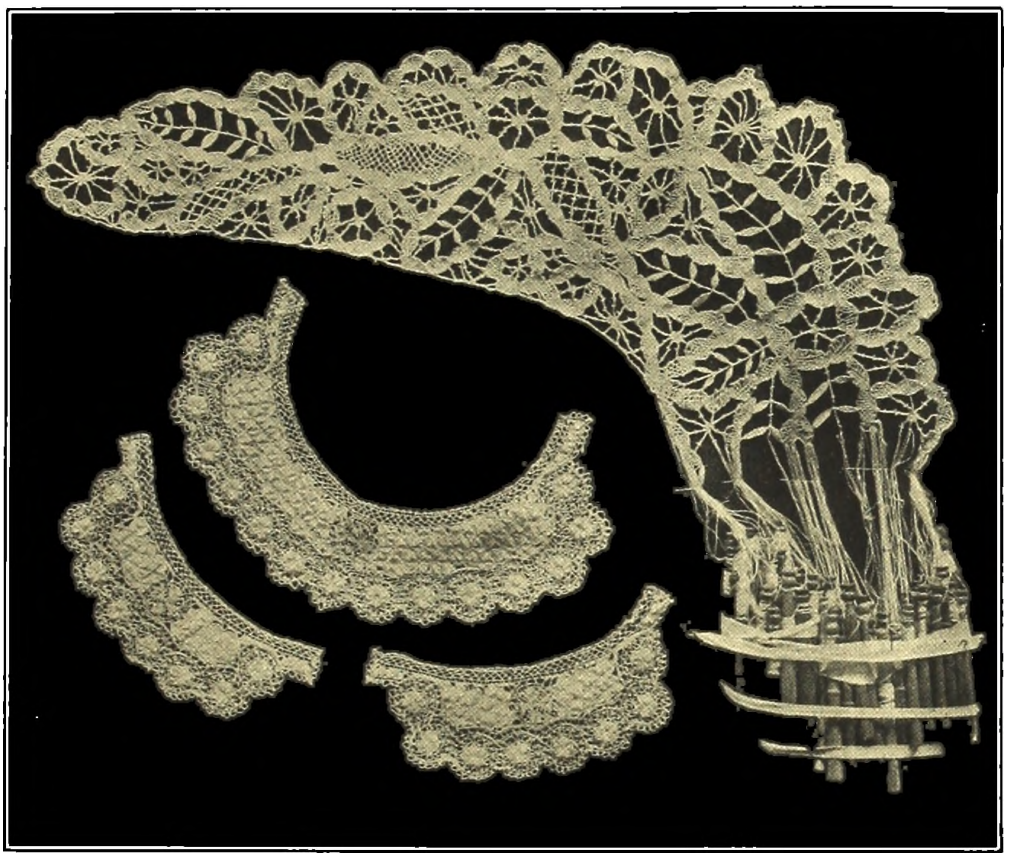
Renaissance lace pillow and Renaissance lace hand bag.

that at least one-half of the school girls earn clothes and books each year at the point of the needle.

"The work in Irish crochet and embroidery offers another means of popularizing the schools with the parents, for again the gain is in visible pesos and does not involve any change in mode of living. In a school of 50 girls we had an income of about ₱1,000 last year. Some girls earned well over ₱50 on their school work alone. Anyone familiar with the famine conditions in Camarines last year will appreciate just how enormous every one of those pesos appeared. Moreover, many girls continued to work during the long vacation. Only this morning I sent ₱35 to Libmanan to a girl (now teaching, but

last year in the seventh grade) for two opera bags crocheted during the summer. Another girl, who has married, is engaged in filling an order for ₱50 worth of crochet."

"In Orani a student in the intermediate school wanted a dress. Her mother could not afford it. The girl had learned to make an Irish crochet bag in school so she asked her mother for enough money to buy thread and she made a pretty bag. She took it to the home of an American who gave her ₱20 for it. In a month's time she earned ₱20 and had learned



Bobbin lace collar and cuffs, Intramuros Primary School. Bobbin lace unfinished collar, Ermita Primary School.

that the knowledge gained in school had helped. The present system of paying the girl all or part of the gain on school-made articles has taught her that she has the power to help financially in the family.

"One girl in Orani uses her ability to sew to make neckties which she sells to the young men of the town.

"In one of the tiendas here a school girl has made children's hats and sells them at 50 to 80 centavos a piece. She learned to make them at school.

"I have found the girls very fond of doughnuts. They are easy to make and exactly suit their taste. During the fiesta in Bataan scarcely a table was found without its doughnuts and one enterprising girl made and sold them to order during the fiesta."

"As for cooking as a source of revenue it seems that not a little might be said for the work of the Bureau of Education in its efforts to bring about the use of corn in a more general way. Here again has been effected another case of money saved and money earned, by the poor especially. The tienda keepers have taken advantage of the new corn recipes and add to their cash receipts each day by the use of them.

"Inquiries regarding the expenditure of the money earned in school proves that in no case is it squandered. Almost all was spent for clothes and books; some was given to aid the families; one girl paid for a sewing machine. But in no case was there indication of careless investment.

"It is the visible peso which makes for popularity and which is gaining us a foothold. The girls can dispose of everything they make as soon as it is completed. In fact the demand is far beyond the possible supply at the present. The only difficulty from our point of view is a tendency on the part of the girls to neglect that part of their work which is not renumerative."

SUMMARY.

These quotations from reports of domestic science teachers are straws from the wind.

The small percentage of girls under school influence is like a minute leaven destined to lighten a mighty mass.

We are looking to the future, with every confidence that we are right in theory and method and that with patient labor and waiting, the years will bring complete results.

Knowing as educators do that thousands of the city youth will enter the factory life at an age as early as the State law will permit; instructed as the modern teacher is as to youth's requirements for a normal, mental, and muscular development, it is hard to understand the apathy in regard to youth's inevitable experience in modern industry. Are the educators, like the rest of us, so caught in admiration of the astonishing achievements of modern industry that they forget the children themselves? (Jane Addams.)

SCHOOL-GROUND IMPROVEMENTS.

By KILMER O. MOE, Superintendent, Central Luzon Agricultural School.

ANY constructive work which is to insure the best results requires a clear conception of what is to be done. As regards school-ground improvements, it is necessary that before actual construction is begun, a permanent plan embodying the structural features of the entire premises should be clearly laid out. The formulation and adoption of such a plan may be said to be the most important steps toward the building up of an adequate school plant. Sites for buildings, lawns, gardens, and athletic fields should be indicated, and the planting of trees, shrubs, and hedges, the construction of walks, and other matters which are factors in the problem of permanent improvement should receive consideration. After being accomplished, the plan should be made a matter of record in the office of the division superintendent of schools and should be followed implicitly. Any contemplated alteration in the arrangement of the structural features should receive the approval of the Director of Education before the change is effected. The following discussion may prove of aid to local representatives both in the preparation and carrying out of permanent plans for the improvement of school grounds.

LOCATION OF BUILDINGS.

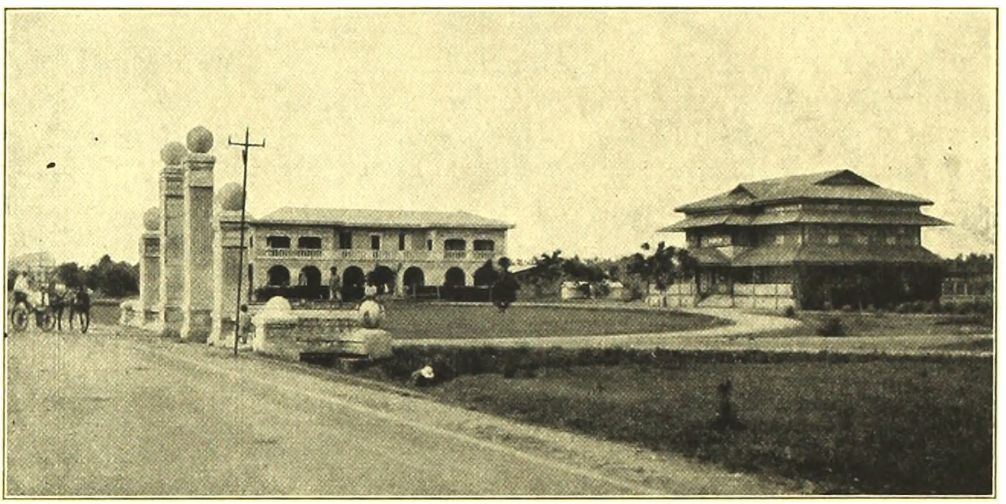
The location of the various permanent buildings is of the greatest importance, and is generally the first question to receive attention in carrying out the provisions of the permanent plan. A mistake in location is especially serious for the reason that a permanent building cannot be moved, and the interests of the schools will therefore be prejudiced for all time unless a proper solution of the problem is worked out beforehand. The factors which enter into this problem may be enumerated as follows:

1. The location of the main building.
2. The surface and drainage of the school lot.
3. The grouping of buildings for convenience and pictorial effect.
4. The number and class of buildings to be constructed.

On school grounds, the central structure around which all the other features must be grouped is the main school building. It should be located some distance from the road or street, so that

the school will not be troubled with noise and dust, and should present an attractive appearance. A central location upon the site is generally conceded to be the most desirable, because of the fact that a complete and symmetrical prospect may thus be secured. If, however, the site is uneven in surface, or irregular in shape, every case will present a problem of its own. The main building under these circumstances should be given as prominent a location as possible, in order that it may retain its position as the dominant feature of the premises.

The location of buildings with respect to health conditions is also of great importance. Low, swampy, or malarial land should be avoided. The spot occupied by the building should have good surface and subdrainage, and should be situated where there is an abundance of moving air and sunlight. Where these condi-



Iloilo provincial school and dormitory, showing well-grouped buildings.

tions are lacking, it would be advisable to abandon a school site rather than to endanger the health of the pupils by erecting thereon buildings of a permanent nature. The defect may oftentimes be remedied by filling in the low places and by providing a system of drainage.

The structural features of the school should not be loosely scattered over the area, but should be grouped in such a manner that the idea of unity or mutual relationship may be preserved. The scattered effect produced when every building, tree, and shrub represents a separate unit is utterly meaningless.

The various school groups may be classified as follows:

1. The barrio school group, consisting of (*a*) the main building; (*b*) the outhouses.

2. The central school group, consisting of (*a*) the main building; (*b*) the shop buildings; (*c*) the domestic-science building; (*d*) the outhouses.

3. The intermediate school group, consisting of (*a*) the main building; (*b*) the manual-training shop; (*c*) the domestic-science building; and (*d*) the outhouses.

[NOTE.—It is often advisable to combine the central primary school group with the intermediate school group to form one school center for the municipality.]

4. The provincial school center, consisting of (*a*) the various academic buildings; (*b*) the shop buildings; (*c*) the dormitories; and (*d*) the outhouses.

While this article deals only with the first three groups, the principles involved are general in their application, and may be used in connection with the development of provincial school grounds and home grounds as well as with municipal school grounds.

LAYING OUT THE GROUNDS.

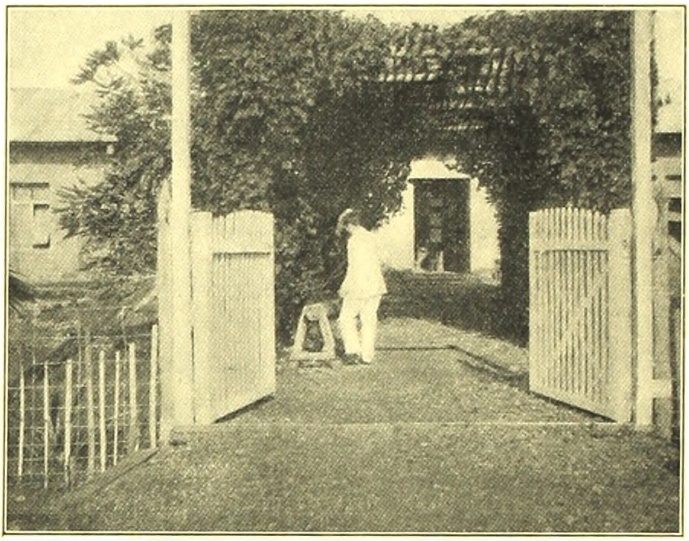
Well-kept school grounds are a recognized factor in education and as such their importance must not be lost sight of. A building standing alone, however well adapted to its purpose, does not in itself constitute an adequate school plant. Provisions must also be made for outdoor work and for recreative sports.

The problem of laying out the grounds has to do with the proper arrangement of the structural features comprising the school plant. These include the lawn, the playground, the garden, the walks, and the fence, as well as the buildings in which the classroom instruction is given. Every one of these features should be carefully considered when the permanent plan of improvement is made. A careful study of the entire site submitted for school grounds should be made and the several areas carefully laid out. Actual measurements on the ground should be made, and the results indicated on the permanent plan.

It is important that the general effect of the arrangement be natural. An artificial system of landscape gardening is out of place. On school grounds, freedom of thought and action should be permitted and since artificiality tends to prevent this, it must be guarded against. An artificial system is formal, and lays out the areas in squares, circles, triangles, stars, crescents, or other regular forms; changes in grade are usually brought about by steep terraces; walks and drives are made to take unnatural curves; and trees, shrubs, and hedges are trimmed in regular and often grotesque forms. Such a system results in an effect which may be striking in appearance, but which contributes nothing toward the main idea or purpose. Furthermore, the results desired, or sought for, in an artificial system are hard to bring about and extremely difficult to maintain when once obtained.

On the other hand, the natural system brings out the highest degree of natural beauty possible to a given place. Changes in grade are obtained by means of rounded surfaces or graceful slopes; open spaces are not broken by unrelated bushes, hedges, and flower beds, but have the appearance of being the foundation upon which the whole is constructed; trees and shrubs are the most natural forms possible. There can be no doubt that the latter system is the more suitable for school grounds.

Such features as houses, walks, and fences, must of necessity be artificial, but even these may be made to harmonize with their natural surroundings if proper care be taken in the blending of form and color. Every one of the structural features,



Leon Central School, Leon, Iloilo, showing near view of gate and arbor.

both natural and artificial, will be taken up separately and more in detail in this article.

FENCES.

The need of fences and the manner of constructing them has been discussed in other publications of the Bureau of Education. In this article they will be considered only from the standpoint of their general appearance. Aside from its being unserviceable, a broken-down, dilapidated fence on the school premises gives the impression that those whose duty it is to look out for the interests of the school are careless and indifferent. A good fence, on the other hand, gives an assurance that the improvements made on the grounds are properly safeguarded. While a fence is not a part of the landscape proper, it should be neat and serviceable in order not to mar the effect. It should not be a prominent feature. The less noticeable it is,

the better, provided it serves its purpose. For this reason a woven wire fence with concrete posts is strongly recommended as the best permanent fence which may be constructed. Wooden posts of first group timber may be used, but they should be painted olive green to make them blend properly with the natural surroundings.

A temporary fence should be neatly made without frills of any kind. No time should be wasted in trying to make an ornamental feature out of a temporary fence. It should be given a neat and finished appearance. It is advisable to cover this class of fence with trailing vines in order that it may appear to be a part of the natural surroundings.

While gate posts must be more substantial than fence posts in order to withstand the extra strain, it is neither necessary nor desirable that they be highly ornamental. A substantial effect consistent with the purpose which gate posts serve is all that should be aimed at. Ornamentation of gate posts coupled with neglect of the other features is cheap and ridiculous, and gives evidence that the inmates are concerned not so much with the problem of improvement as with making an outward showing.

WALKS.

A very common mistake is made in considering the construction of walks essential to the landscape effect. The open foreground which ought to present an even surface is often broken into by curved walks or zigzag paths, cutting up the foreground and winding in and out among unrelated bushes, flower beds, trees, and useless artificialities. Such an effect serves only to distract the attention and to disturb the repose of the picture.

As a matter of fact, a path is an artificial feature and would be left out entirely if the landscape effect were the only consideration. Paths are necessary, however, to get about from place to place on the grounds. They are for convenience and not for effect. The object, therefore, in constructing them is not to make prominent features of them but to blend the natural with the artificial in such a manner as to make them less noticeable.

The approach from the street should be as direct as possible—that is to say, the distance from the street to the building should not be increased through unnatural curves or angles in the path. To shorten the distance from the sides, it may be advisable to have two approaches, one from each side, meeting at the door of the building. Such a path would take a natural curve, the two approaches joining to form a semicircle. This

form of main path is very satisfactory, the only objection being that it calls for two entrances to the grounds instead of one, and this means an additional expense in providing the extra gate.

As a rule, the smaller buildings, such as standard plan buildings Nos. 1, 2, and 3, should have but one approach meeting the street or road at right angles.

Paths are prominent features in a plan of landscape gardening, and their direction and form offer a delicate problem for consideration. They should be as direct as possible. There is no reason why the pupils should be made to walk around an obstruction or to follow a winding path in order to reach the schoolhouse from the street or in going from one building to another. As far as landscape effect is concerned the more direct and natural the approach, the better.

Aside from the problem of laying out the direction of the path, its construction is also an important consideration. The materials to be used and the drainage must not be disregarded if the path is to serve its purpose in an effective manner. The

Cross section of path.

materials usually considered best as surfacing for paths are crushed rock, concrete, shell, and coral.

But no matter what the surfacing is, the path will be of little value unless the foundation has been well laid. To begin a path, the first thing to do is to stake it out and then excavate within the lines to a depth of at least 6 inches for the bed. The stakes should be set outside of the curb. Into this trench coarse broken stone, bricks, blocks of adobe stone, or other porous substance should be thrown and tamped in firmly, to form a solid bed on which to place the surfacing. The surfacing should consist of fine broken stone arranged in such a manner that the finished path will present a rounded surface, high in the middle and evenly sloped on both sides. Such a path, even if surfaced with clay or sand, will be much more serviceable than if a better class of surfacing had been applied on a poor path bed. To make a driveway, a good quality of fine broken stone should be rolled in with a heavy road roller. If this cannot be done for lack of a roller it should be packed as well as possible under the circumstances, wetted down, and covered with a mixture of clay and sand.

The curb is made to provide a drain on either side of the walk and to prevent the surfacing from washing off and spreading over the lawn. It may be made of stone firmly set in end to end, or better still, of concrete poured into a form specially made for that purpose.

Cross section of stone curb.

If the foundation and curb are properly made, the drainage will take care of itself, provided there is an outlet for the water. Care should be taken that the flow is not checked by surface obstructions, but that the water may drain off readily. A system of surface drainage must be provided for the entire school grounds, so that at no time will water on the premises be allowed to stagnate or soak in and destroy the lawn, walks, and drives.

THE LAWN.

The work of laying out and improving the grounds is like painting a picture, except that, instead of colors on canvas, real trees, shrubs, hedges, and buildings are used to produce the effect. In this landscape picture the lawn is the groundwork. Upon it are placed all the structural features, arranged in such a manner as to produce the desired effect. An attempt to get a proper landscape effect without a suitable lawn is like trying to build the superstructure without the foundation.

The part of the ground directly in front of the building and extending for several meters on either side is commonly reserved for the lawn. However, any open space on the grounds may be made into a lawn if it seems desirable to do so. A lawn is a soft, green, even surface closely covered with a mat of grass of a fine texture. It is by far the most attractive surface that can be given to an open space. The velvety appearance of a well-kept lawn makes it the best possible setting for a building.

Every building should have an open foreground. Trees and shrubs may be grouped or massed on the sides or close to the building, but should not be planted as separate individuals on the lawn so as to break up the effect of the open foreground. The even surface of the lawn should not be broken by unrelated flower beds. If flowers are planted at all they should be placed in borders along the hedges, or in groups of foliage so that they may become a part of the general mass. The pernicious use of variegated plants, bottles, bricks, and other expedients

with which to produce striking effects on the space which should properly be occupied by the lawn cannot be too severely condemned. Such a practice reveals the fact that the man in charge has no proper conception of landscape effect.

A gentle slope away from the building is better than a perfectly level surface, both from the standpoint of appearance and for the better drainage that it affords. This condition should be looked for in the location of the building. Where the site is too level to afford good drainage, it should be graded by having a fill made on and around the place where the building is to be located. The fill should slope in all directions away from the building. A gentle slope from the building to the street, in

Tacloban Farm School (Leyte); pupils constructing a dam to reclaim swamp lands.

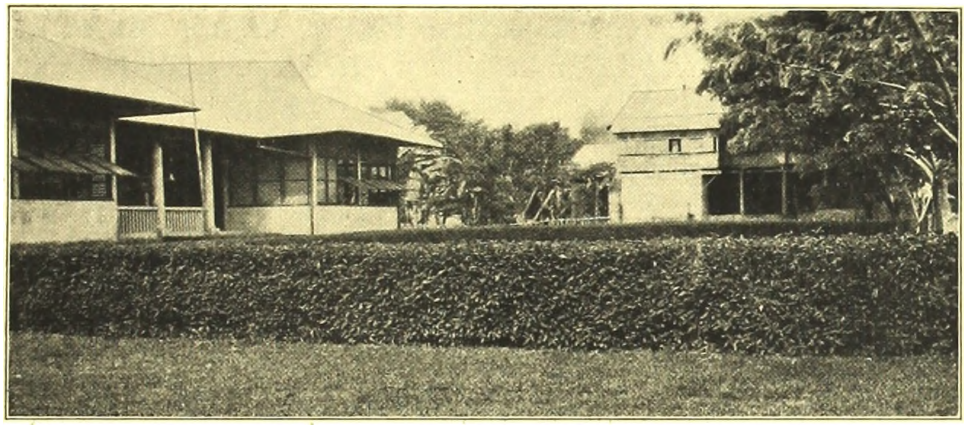
order that the surface water on the lawn may escape into the street drains is usually the end sought for in grading the front lawn.

The best grass to plant on lawns is the Bermuda grass. While a few other grasses have a finer texture, this one has a better growth, spreads well, and is not easily crowded out by weeds or killed by drought. It grows everywhere in the Philippines, and the pupils may gather it in sacks from the fields and plant in the manner described on pages 44 and 45, Bulletin No. 37.

Results in the way of a good lawn should not be looked for unless a suitable top soil has been provided. Too often this important requisite is overlooked in the preparation. The work

of grading is generally done with the sterile subsoil, and the good soil is usually covered up or taken away. Under such circumstances the area to be occupied by the lawn should be covered with at least 6 inches of good rich loam before any steps are taken to plant the grass.

The cultivation of the soil is also an important consideration. The area should be plowed and harrowed several times, and afterwards gone over with hoe, rake, and hand roller until every depression has been filled in and every high place leveled off, the whole presenting an even surface with a uniform slope. After the grass has been planted the area should be gone over again with the roller. If properly watered, the grass will take root and spread very quickly, and the lawn will take on a finished appearance in a short time.



A well-kept hedge, Moncada Central School, Tarlac.

HEDGES AND HEDGE PLANTS.

Hedges are banks of closely growing foliage plants set out so as to form a more or less continuous line. If used properly, a hedge may be made a very effective feature on the school premises. It has an important use on property lines and whereever a division of areas on the grounds seems necessary. A hedge is a permanent feature on the premises and its location should be indicated on the permanent plan of improvement.

It is usually better to select one or two hedge plants for the entire school grounds than to use a variety. The plants which have proved to be the most satisfactory for this purpose are (*a*) the hibiscus (single flower, gomamela) and (*b*) the violetas (laurel shrub, called in the Philippines violets). The first is a woody shrub, grows large, and requires considerable trimming. On account of its abundant foliage, it is excellent for planting

on property lines or wherever a hedge is essential. The second is not so woody and it is better suited for planting where a low hedge is needed. The laurel plant is easily propagated by means of cuttings.

A hedge should not be overtrimmed. With pruning shears, it is easy to convert a beautiful hedge into an artificiality as stiff and formal as a stone fence. There are no square corners in nature and for that reason the hedges should present rounded surfaces in accordance with the form which nature takes on.

Hedges should not be used for the purpose of cutting up the areas which ought to be open spaces. The aim is to frame these areas. Hedges may therefore be effectively used as borders where they will appear to be a part of the main foliage mass, instead of separate features. Low hedges may be planted against the buildings but not so close as to stain the wall or cause the hedge to decay on the inside. The accompanying photograph will tend to make this point clear.

THE WELL.

Every school should be provided with a deep well from which an adequate supply of wholesome drinking water may always be available. Whether this is done or not, a good surface well should be sunk on the school premises for use in connection with the garden and the lawn. Pumps are cheap these days, and every school can well afford to have one. A well curb should be constructed of stone or concrete, preferably of concrete, high enough to prevent surface water from draining into the well. The top should be provided with a tight cover so that no foreign substance may find its way within. Proper grading should be made around the curb so that the overflow water will drain off and not form puddles. The location of the well should be shown on the permanent plan of improvement.

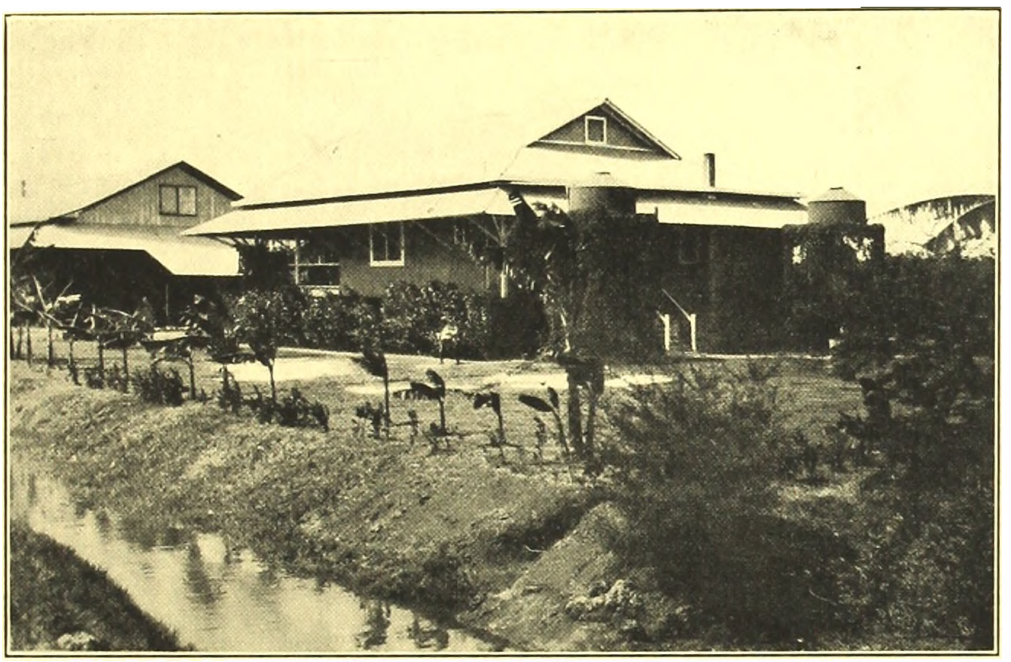
ORNAMENTAL PLANTS.

Behind every effort to ornament the grounds there should be a definite purpose. A clear conception of the effect which is to be brought about should be formed before the planting is done. The purposes underlying ornamentation of school grounds may be stated as follows:

1. To give a pleasing variety to the general effect.
2. To fill useless corners or sharp angles with masses of foliage.
3. To break the formality of sharp lines.
4. To screen off undesirable features.
5. To bring out the individual beauty of ornamental plants.

To many, the last-named purpose is the only consideration, and the result is a looseness of arrangement which is detrimental to the general effect. Here again, the instructions which apply to the laying out of the grounds should be closely followed.

Many act on the supposition that the beauty of ornamental plants is secured only through the use of the pruning knife and shears. While it is often necessary to use both in order to preserve the most perfect natural form, these implements usually prove to be the greatest menace to the natural beauty of ornamental plants. The results of overpruning are seen in the sharp angles and stiff formality of hedges, the grotesque forms of indi-



Houses constructed partly by pupils from Iloilo Trade School, showing proper use of foliage for screening purposes.

vidual shrubs, and the foolish attempts to convert a naturally low-spreading and graceful tree to an upright one with high branches. To use the pruning knife and shears properly, one must be familiar with the various types of plants and should know how to extract from each the greatest degree of natural beauty.

The following plants are recommended for the various purposes indicated:

1. To give a tropical effect:
   Palms: Coconut, buri, betel nut (bonga), royal palm.
   Cycas (pitogo).
   Travelers' tree.
   Pandan, several varieties.

2. To fill useless corners:
   Croton or San Francisco.
   Canna, several varieties.
   Morado, several varieties.
3. For screening purposes:
   Bougainvillea.
   Aurora (morning glory).
   Speclosa, a quick-growing plant with heart-shaped, grayish leaves.
   Japanese ivy.
   Nasturtiums.
4. To break the formality of sharp lines:
   Cadena de amor.
   Cypress vine.
   Passiflora.
5. For individual beauty:
   Hybiscus, several varieties.
   Cycas, several varieties.
   Santan.
   Pascuas or poinsetta.
   Rosal or cape jasmine.

FLOWERS.

An appreciation of foliage effect is considered a higher type of good taste than a desire for mere color. Foliage effects are lasting; color effects, though striking, are transitory, and usually leave the place in a worse condition than before. The growing of flowers for color effect, however, should not be discouraged, but the gardener should know their relative value as compared with the permanent features and act accordingly.

Flowers should not be grown in beds set into the lawn, but in borders along hedges or directly in front of the various masses of foliage. In this way, they will be given a good background and the somber mass of foliage made to take on a touch of color which will give the general effect a brighter tone. The buildings may also be used as backgrounds for flowers, in which case border planting should again be resorted to. Flowering shrubs are often more effective than annuals. These should form a part of the foliage masses.

The following is a list of flowers suitable for planting on school grounds:

Perennials:
   Roses, several varieties.
   Pandacaqui.
   Hibiscus (gomamela), several varieties.
Flowering annuals:
   Verbena.
   Phlox.
   Cosmos.

Flowering annuals—Continued.
Nasturtiums.
California poppies.
Canna.
Marigolds.
Balsam.
Pinks.
Violets.

TREES.

Trees are planted for their shade, for the effect of their foliage, and for screening purposes. They should not be set out in straight lines as in a nursery, but in natural clumps or masses. Used in combination with shrubs and hedges, they form the main foliage masses on the grounds.

The most satisfactory tree to plant on school grounds is the rain tree, commonly known as the acacia. This has a quick growth and a low-spreading crown. To give variety of effect a number of other trees should be planted, such as the coconut, the betel nut, the mango, and the cassia. These all have different shapes and their combined use gives a pleasing variety to the mass. Palms are used to give a tropical effect to the scene.

Trees form a most effective background for buildings. It is suggested that a suitable background with a variety of trees be provided for every standard building. The trees on the grounds should be pruned only for the purpose of bringing out the form which is natural to each individual type. Instructions relative to the planting of trees are found in Chapter IX of Bulletin No. 31, revised.

THE PLAYGROUND.

The playground is the largest open space on the school premises. It is essential that it be kept in good condition both from the standpoint of utility and of general appearance. The surface should be kept smooth and uniform with just enough slope to drain off the surface water. All low places should be filled in and rolled as soon as possible to prevent puddling. If the surface is sticky in wet weather, it should be covered with a thin layer of coarse sand, deep enough to serve the purpose without causing the surface to become loose and heavy. A good catch of Bermuda grass will tend to keep the surface in good condition.

Care should be taken that the playground is kept clean. The children should be made to pick up scraps of paper and other

rubbish. Weeds should not be permitted to grow anywhere on the grounds. Unused corners should be planted with a mass of foliage so that weeds may not go to seed and spread over the premises.

ACCESSORY BUILDINGS.

Every school plant will eventually consist of a group of buildings. In the outlying barrios, this group will be the main building with the outhouses. For central and intermediate schools, the number of accessory buildings will be increased by two, the shop building and the domestic science building. The outhouses in every case should be set well to the rear of the

Leyte dormitory and high school, showing boys at work, each one on his own section.

main building and should be screened by a liberal use of trees and vines. The most satisfactory arrangement of the other buildings is to have the main buildings set back from the street a considerable distance, and the other two located one on each side facing each other in such a manner that the final result may have the appearance of a hollow square with an open foreground, or lawn, between the street and the main building. In this arrangement, the buildings themselves help to bring out the idea of unity. This scheme can readily be carried out on all grounds where there is but a slight variation of contour. When the surface is uneven, every case will present a problem of its own. The location of all the accessory buildings should be indicated on the permanent plan of improvement.

CLEANLINESS.

Cleanliness is by far the most important requisite of school grounds. Even though the school accommodations are nothing more than makeshifts, they should be kept scrupulously neat and clean. Rubbish should not be left to litter up the grounds and floors of buildings, and desks and other furniture should be frequently scrubbed. A ceaseless warfare in which the pupils should be given an active part should be waged on filth. If the work of the school is such that paper, shavings, or other rubbish accumulate, it should be burned daily and not be permitted to be strewn about by the wind. The coöperation of the neighbors should be secured, if possible, so that the premises may at all times be kept neat and sanitary. Chalk and pencil marks, frescoes, or figures carved with the knife on walls, steps, and fences must be prohibited. Pupils failing in this respect should be severely dealt with and, if necessary, suspended. Teachers who fail in this connection give clear demonstration of their unfitness, and should be separated from the service at the earliest possible date.

CARE OF SCHOOL YARD.

School grounds should be cared for by continuous effort, and not spasmodic attempts. The planting of a few trees and a literary program on Arbor Day is useful only in arousing enthusiasm. This event should not be depended upon either for planting or for caring for the school premises. The secret of success lies largely in planting at the right time and in doing at all times what is necessary for the best development of the things planted.

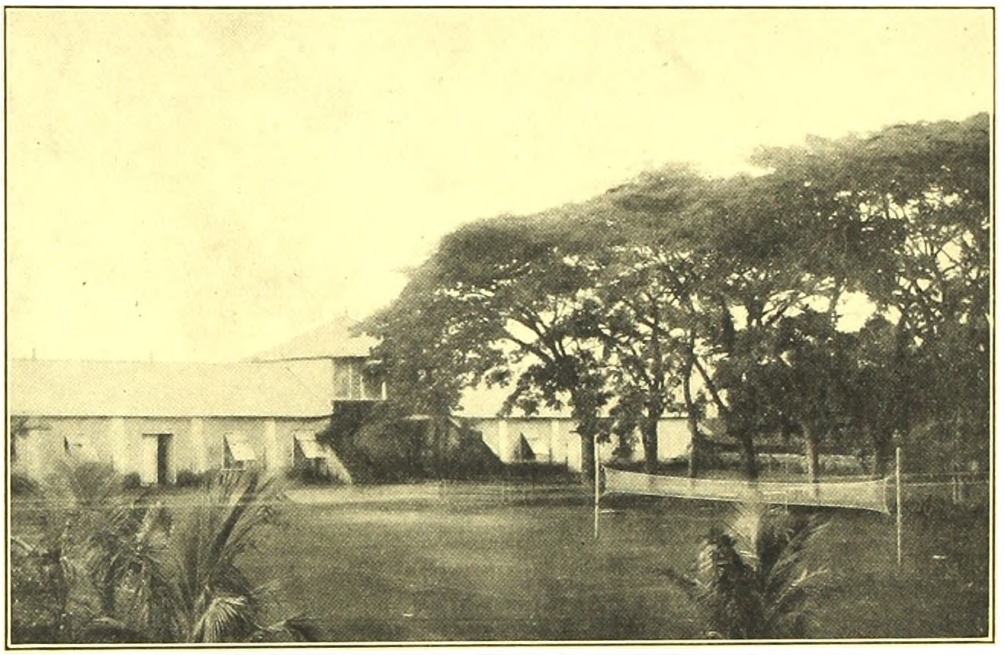
Active participation on the part of each pupil in caring for the plants and grounds is very desirable. Every child should be made to feel that the school yard, the playground, the garden, etc., are partly his, for the reason that he helped to make them. An injury to any one of these features then becomes a personal matter. This feeling tends to bring out a regard for public property, consideration for others, and responsibility toward the public good.

The pupils should be organized into an improvement society under a teacher who should be held directly responsible for the improvements and upkeep of school grounds. The object of such a society should be actual work on the school grounds rather than an academic discussion of something with which the pupils have no business to meddle. It will be the duty of the teacher in charge to see that the provisions of the permanent plan of

improvement are carried out in detail, for which purpose he should have the entire student body back of him. Such matters as care of the grounds, watering of plants, construction of fences, and providing proper drainage facilities should come under his direct supervision. If a janitor is provided, he should be placed under this teacher, who will supervise his services also.

CARE DURING VACATION PERIODS.

There is no good reason why the improvement society should not remain active during vacation periods, especially if the teacher in charge lives in the town or barrio. He should take



Intermediate school ground, Lipa, Batangas, P. I.

steps at once to organize the boys, and to train members of the society so that he may not lack trusty lieutenants in case it is necessary for him to be absent for a few days or even weeks. In the absence of the teacher in charge, nothing new should be done toward carrying out the provisions of the plan, but the work already accomplished should be given the same care as when school is in session. A vacation, if properly made use of, offers the best opportunity to do constructive work on the lawn and playground, because of the fact that there is less interference on the part of the pupils. Without proper supervision, most janitors are practically useless for vacation work.

SOME COMMERCIAL NOTES ON BASKETS.

By Hugo H. Miller.

UTILITY.

OUR export basket industry must be built on the basis of utility and not from the viewpoint of a basket collector. Baskets should be turned out that are salable, and the essential qualities of such baskets are usefulness and beauty. They must be planned for a purpose. Utility, workmanship, design, and color are the factors which must be considered in all our baskets and the lack of any one will probably destroy the commercial value of the article.

There was a time when people bought Indian baskets for their workmanship and design. Now, baskets are bought on account of their utility, durability, and general effect of color and form. Fineness of workmanship plays a rather unimportant part in most commercial baskets.

STANDARDIZATION.

Generally speaking, commercial baskets should be standardized in order to facilitate ordering and nesting.

Standardization should take place in the following respects: Shape, size, design, color, and weave.

Standardization in the last three points is not always necessary, as for instance in wastebaskets.

THE NESTING AND TELESCOPING OF BASKETS.

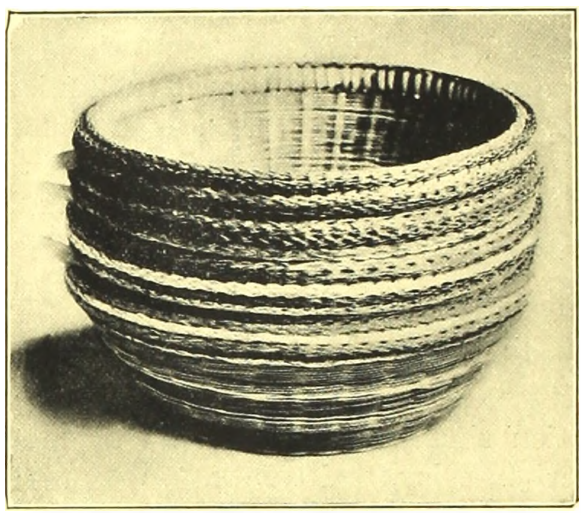
The nesting and telescoping of standard baskets are also necessary.

It is true that through freight rates to the interior and eastern cities of the United States are based on weight. To the western coast of the United States, however, the usual space rates apply. Moreover, jobbers prefer baskets in nests, since nests are easy to handle and to order. Retail dealers in the United States demand baskets in nests because in this form they occupy less space in stores and because retailers automatically receive a great enough variety in shapes and sizes to suit public taste. Thus, for example, some women like small workbaskets and others large ones. Moreover, smaller baskets can be used for different purposes; e. g., the smaller open workbaskets for nuts and raisins

on the table and the smaller desk baskets for the bottoms of sewing bags and for cards.

All the units of a nest may be of the same texture or the smaller units may be made of finer material. The method to be followed in each case depends upon the demand for and use of the smaller units. In wastebaskets, for instance, it is advisable to have all the units made from material of the same size. In nests of pandan pocketbooks it is usually best to have the smallest units of finer material. In nests of several units of different sizes, care should be taken that the largest is not too big, since large units are sold with difficulty. Baskets with covers or handles can be made in nests as well as those without them.

Workbaskets, wastebaskets, and other baskets without covers



Normal workbaskets that telescope perfectly.

can usually be made of such shape that they will telescope. Baskets with double collapsible handles can be made to telescope.

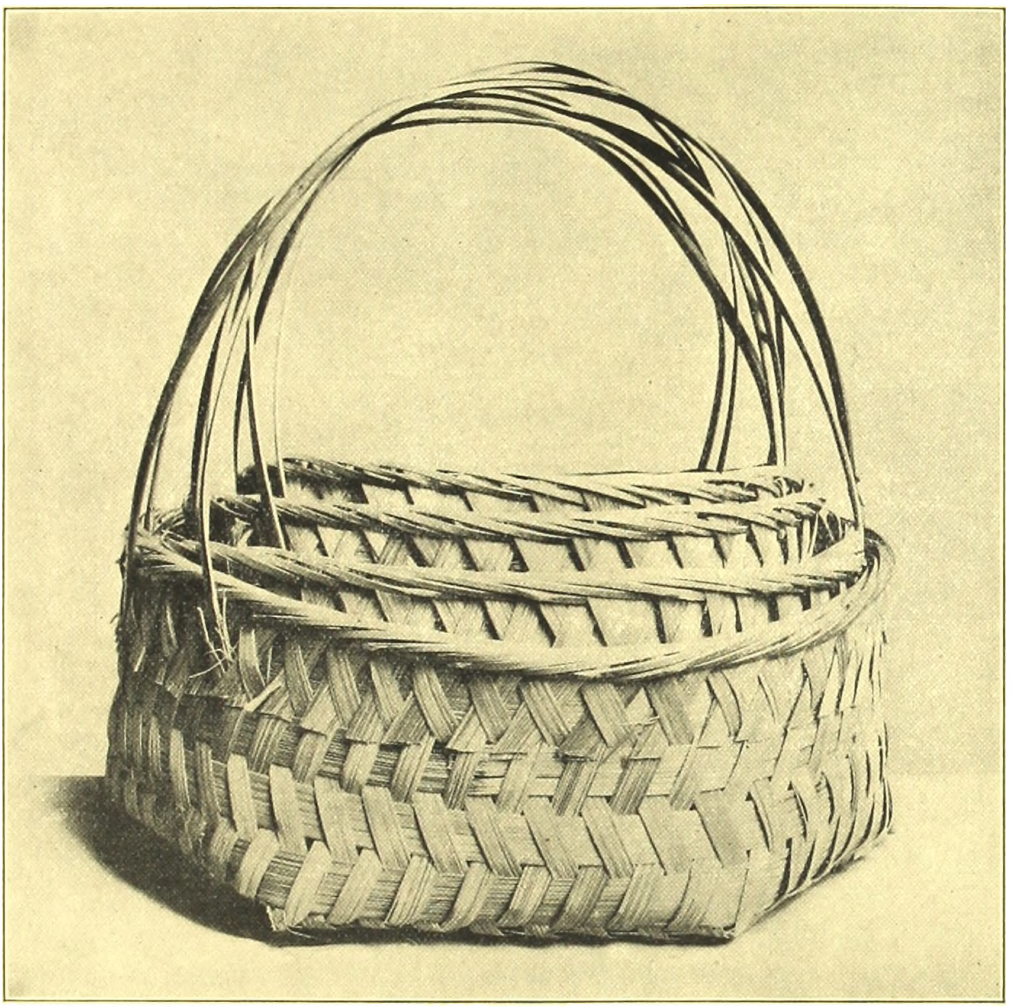
The nesting and the telescoping of baskets are facilitated by using half-round rims, flush with the inside of the basket.

It is quite impossible to make certain shapes of baskets nest or telescope. It is not intended to discourage the production of such baskets, yet, wherever possible, baskets should be made to telescope into each other or in nests of several units.

COLOR.

In this day and age people furnish their rooms from the viewpoint of a color scheme. Hence, baskets are often dyed to order in dull shades so that they can become part of a color scheme. These colors are not necessarily dark and should not be too dense. A light color can be dull. Thus many of our bamboo, midrib,

and air-root baskets can be dyed. If the material be colored before the basket is made the colors can be graduated from top to bottom and from a lighter to a darker shade. To-day, throughout the United States, one sees in every department, art, and gift store, the brown Japanese baskets. These are made very roughly from bamboo, but in unique and pleasing shapes, and are stained after they are woven. Many people object to them because the stain comes off with moisture and they break easily.



A nest of baskets from Rizal Province showing nesting of handles.

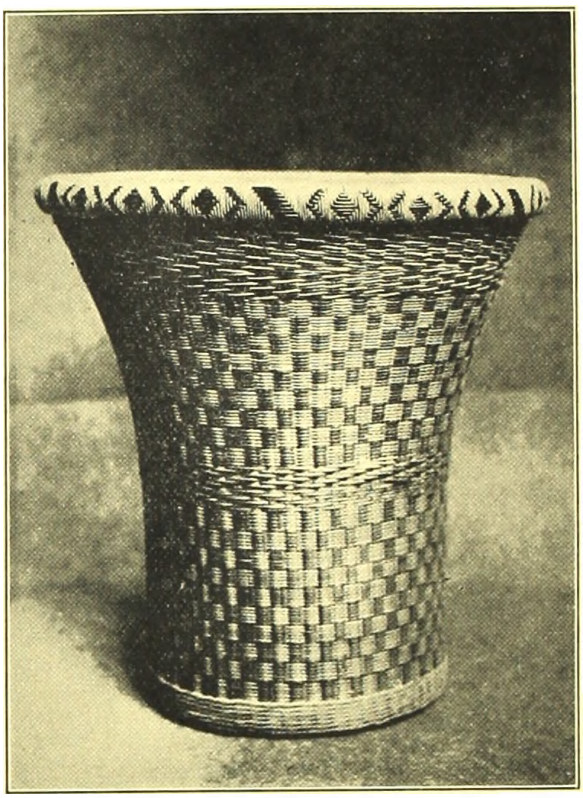
The United States has been so flooded with these baskets of inferior workmanship that a reaction is apparently setting in and now a great many strong German coiled baskets made from a creamy white material resembling buri strips are seen throughout the country.

Baskets dyed in shades of brown, green, and mahogany, in particular, are always good sellers in the United States and white baskets are in good demand for the desk and dining table.

In general, bold stripes and checkered effects should be avoided in baskets. Black and white should also generally be avoided.

Black should be used everywhere with care. Browns in nito and other materials give a much richer effect than do blacks.

For instance, the contrast between the white and brown-black sometimes employed in Zambales baskets is great and the effect is better when a dark écru is used and the spokes are not too dense in color. Moreover, the Zambales basket is a much richer basket when the spokes are colored a rich red brown, as with



A wastebasket that will not telescope.

sappan, and the nito decoration on the rim is a darker shade of brown. Green could be used in the same way. Zambales baskets of the better types will probably be good sellers in the United States, since the few that have been seen there have been much admired.

In general, the weathered écru of bamboo is more appreciated than is the white effect of newly stripped bamboo, particularly that from the interior of the stalk. This also applies to rattan.

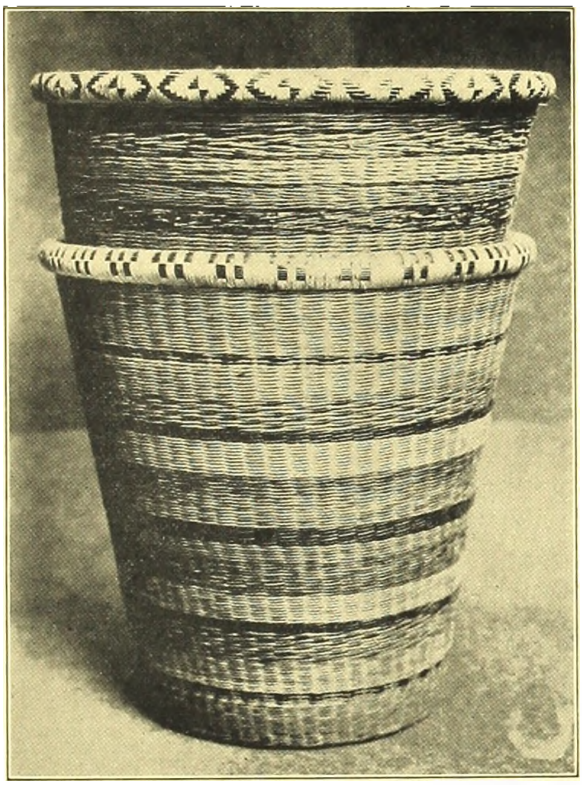
The natural green color on the outside of bamboo is appreciated by many people.

BOTTOMS OF BASKETS.

The bottoms of our baskets should be made as flat as possible in order that a glass or other container for water can be placed on them.

RIMS OF BASKETS.

The winder and decorative material on the rims of our baskets is often too weak to be practical. The strips should be cut wide enough and thick enough to withstand wear. Also strips of nito



Wastebaskets that would telescope better with half-round rims.

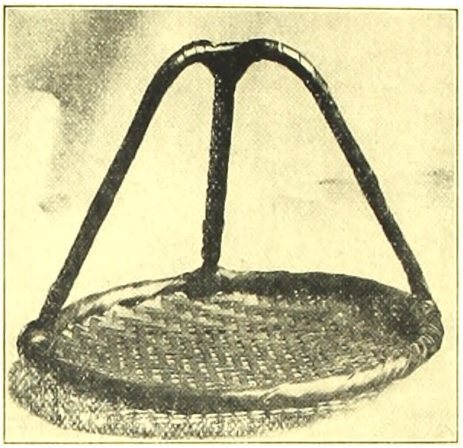
blackened in mud should not be used, as the material is weakened in the process.

The decoration on rims is open to criticism. Too often it consists of a narrow band poorly placed, or of spots of color. The rim should present the appearance of being covered by the design. This can be accomplished by repeating the design or making the units larger.

USES OF BASKETS IN THE UNITED STATES.

Workbaskets.—Workbaskets of all kinds are used in the United States. In general, workbaskets with covers are preferred, since the covers hide the often mussy appearance of the interior.

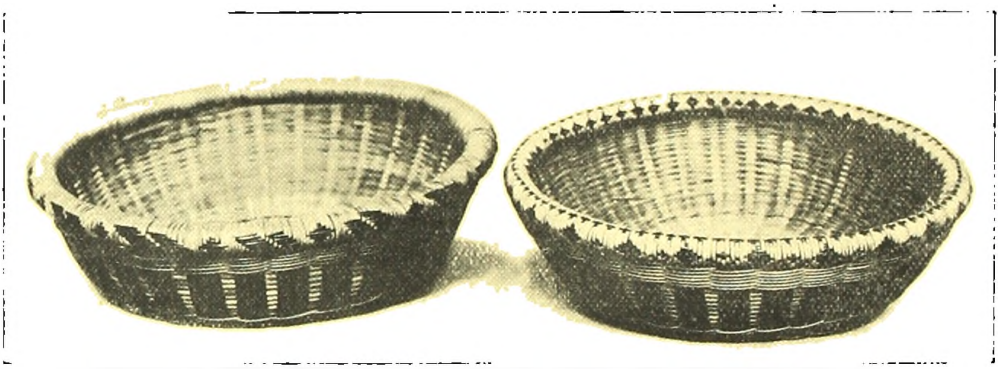
Philippine workbaskets should be made either in nests or so that they will telescope. Some women prefer small sewing baskets and others large ones, and so all sizes in a nest can be sold. Also the open workbaskets not over 23 cm. in rim diameter can be used for nuts and the diminutive ones for many purposes. Nut baskets should usually be brown in color.



Japanese sandwich basket made of bamboo stained brown.

The variety of workbaskets that seems to sell best is the Batac basket from Ilocos Norte which is quite a large, deep basket, about 30 cm. in diameter at rim and 11 cm. deep, outside measurements.

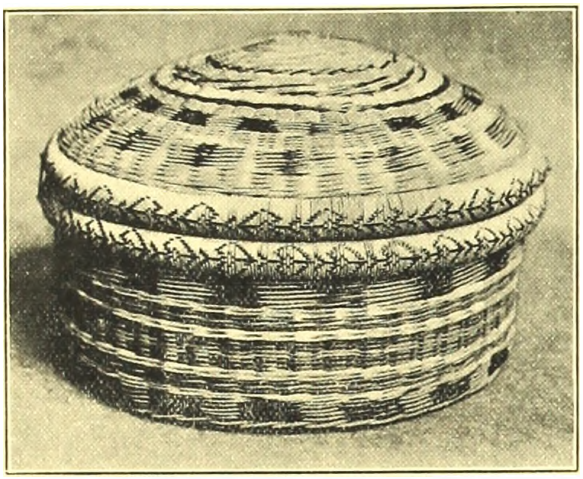
More attention should certainly be devoted to making workbaskets with covers. Samar has a good one of the Polangui



Unfinished effect in rim, and rim well covered by the decoration.

type. These should be made in nests, the largest one about 33 cm. in rim diameter by 19 cm. high, outside measurements. The smallest one in the nest can be as diminutive as desired. The cover should be attached with rattan or other strong fiber. The catch, if one is provided, should also be of fiber. Wire hinges and catches are very unsatisfactory. Heavy metal hinges

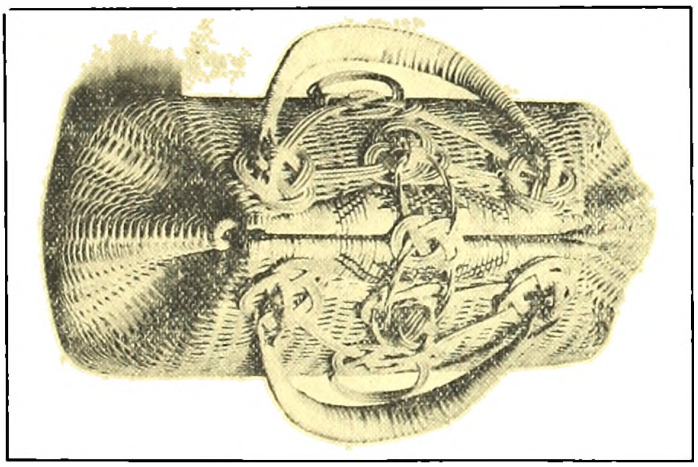
and catches (perhaps of brass) would probably be better on large closely woven baskets. Small handles might be provided on the side of the basket or, if the basket is equipped with a catch, a small loop might be inserted on top of the cover. Such loops however, should not be stiff or nesting will be hindered.



The covers of sewing baskets should have less vertical height.

The so-called lunch baskets will probably be used as sewing baskets, since women like not only covers but handles on baskets.

Wastebaskets.—Wastebaskets are very good sellers in the United States. They should be made in nests or of such shape that they will telescope.



A rather useless satchel with a good fiber catch.

Desk baskets.—Desk baskets are good sellers in the United States and the production of some good shapes and types here should be encouraged. These should come in nests, the smaller ones to be used for cards and the bottoms of sewing bags. Browns, oaks, and white are the proper colors.

Baskets for the dining table.—(1) Fruit baskets; (2) sandwich baskets for sandwiches and bread; (3) bread baskets for bread and rolls; (4) small baskets for candy and salted nuts.

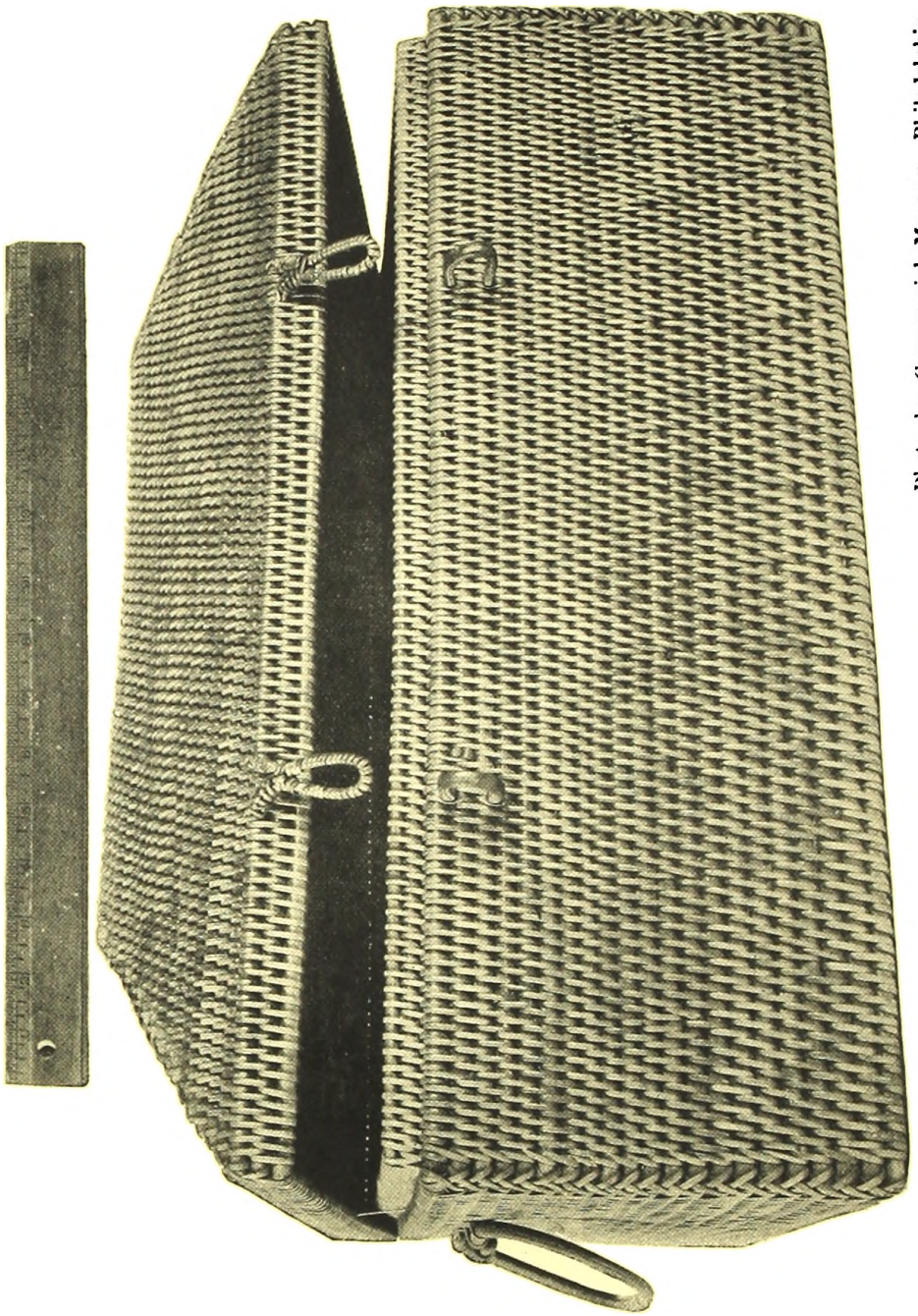


Photo by Commercial Museum, Philadelphia.

Large coiled rattan basket from French India.

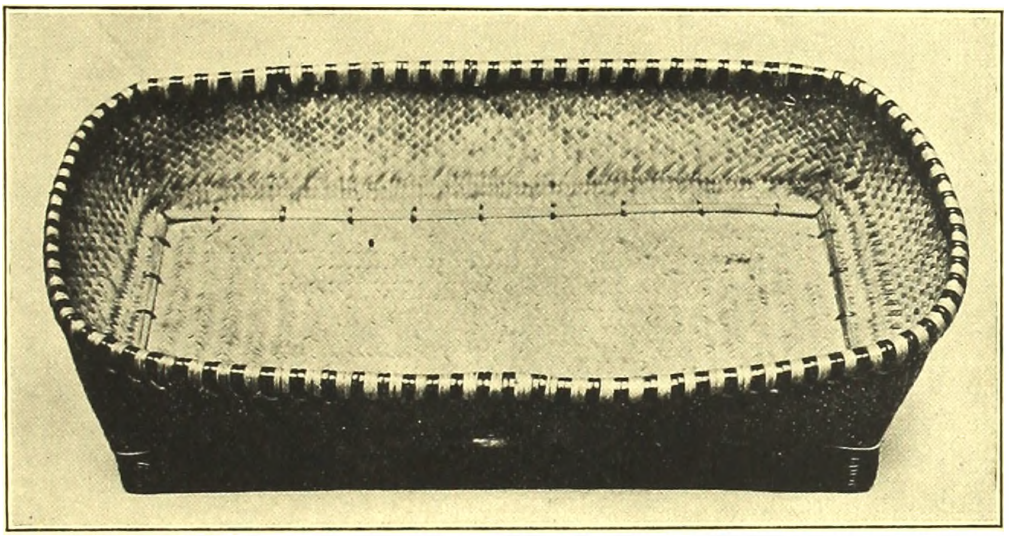
Plaques.—Plaques are used for the bottoms of sewing bags and dishes are placed on them at the table.

Jardinières and flower baskets.—Many baskets are used for holding flowers and greens. The kind of basket depends on the place where it is used and the contents. Sometimes a small basket is desired for a single flower, sometimes a very large

one is desired for large masses of greens. Hence, all shapes, sizes, and kinds can be used for this purpose, from the smallest and most finely made coiled basket to the largest wastebasket.

Catchalls.—Almost any kind of basket can be used as a general container, its quality and shape depending upon its location and use. Capacious baskets with large openings and with or without covers, from the finest to the coarsest, may be used. On porches of summer houses our coarsest rice baskets can be employed for catchalls, for magazines, and the like. On the dressing table, the finest trays and diminutive baskets and the smallest coiled baskets with covers find place as pin trays, jewelry boxes, and the like.

Trays.—Serving trays are often made of basketry materials,



A long bamboo basket from Ilocos Norte which has possibilities of development.

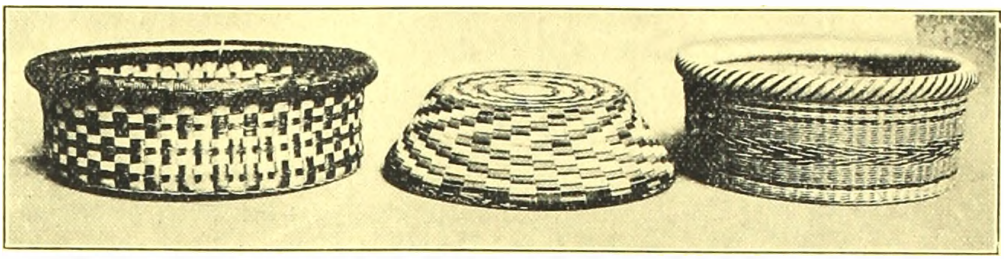
for instance, of rattan. Our lupis undoubtedly could be made into good trays. Our large winnowing baskets are placed on wooden supports in a sort of combined porch table and tea tray.

Gift baskets.—At all times of the year, but especially at Christmas when inexpensive, small gift articles are required, small baskets, good in color and shape are very suitable for remembrances.

Art baskets.—Baskets that have art and decorative value are always salable but only a limited number of expensive ones can be disposed of.

Market baskets.—In certain towns, for instance Baltimore, Maryland, market baskets are used extensively, since housewives do their own marketing.

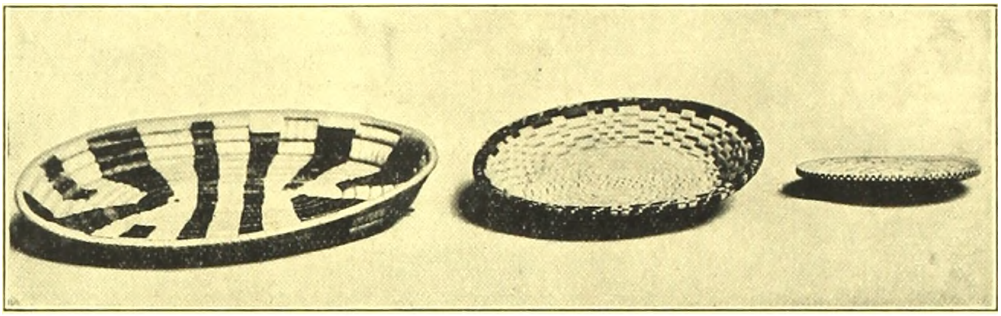
In all places there is a demand for cheap, light-weight baskets



Uninteresting black and white checks compared with an interesting colored striping.

with handles, of as good an appearance as possible. They are used for general purposes.

For marketing, a basket should have the handles placed across from side to side rather than from end to end. In its present



A meaningless design in black stripes and a simple, effective edge in black.

shape, however, the market basket made in the schools does very well as a fruit basket. It should come in nests. The larger units should not be too big. The greatest length at the bottom should be 30 cm. (outside measurement).

Coiled nito and rattan baskets in General Office designs.

Storage baskets.—Fairly large baskets with covers are often used as clothes hampers and to store articles, particularly in apartments in large cities where space is limited.

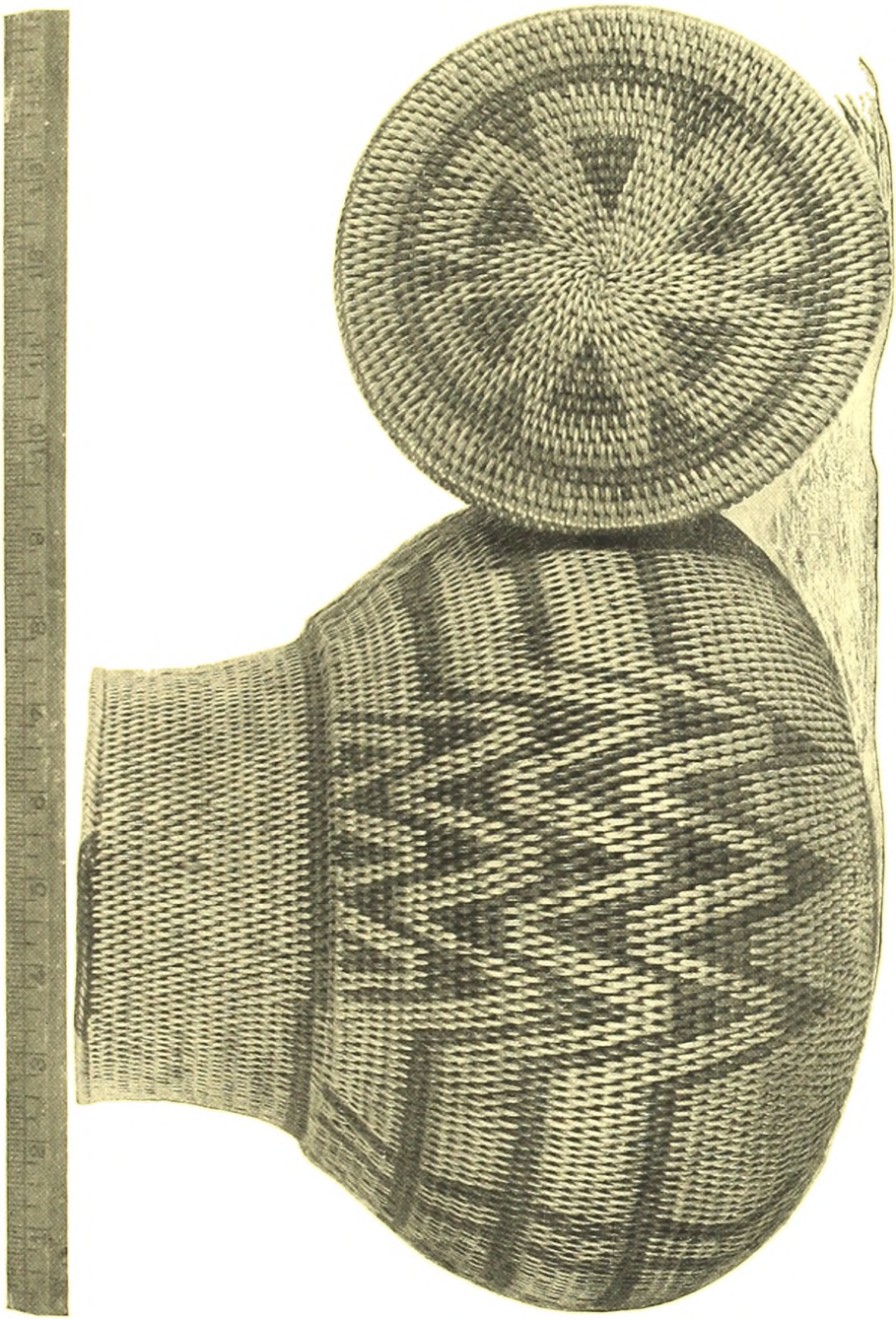


Photo by Commercial Museum, Philadelphia.

Basket of coiled stem from Congo, Africa.

NOTES ON TYPES OF PHILIPPINE BASKETS.

Polangui baskets.—Polangui baskets resemble Indian baskets somewhat and as the demand for these is not as great as it used to be, this resemblance affects adversely the salability of Polangui baskets, especially in the West. The best markets for these baskets are east of the Mississippi.

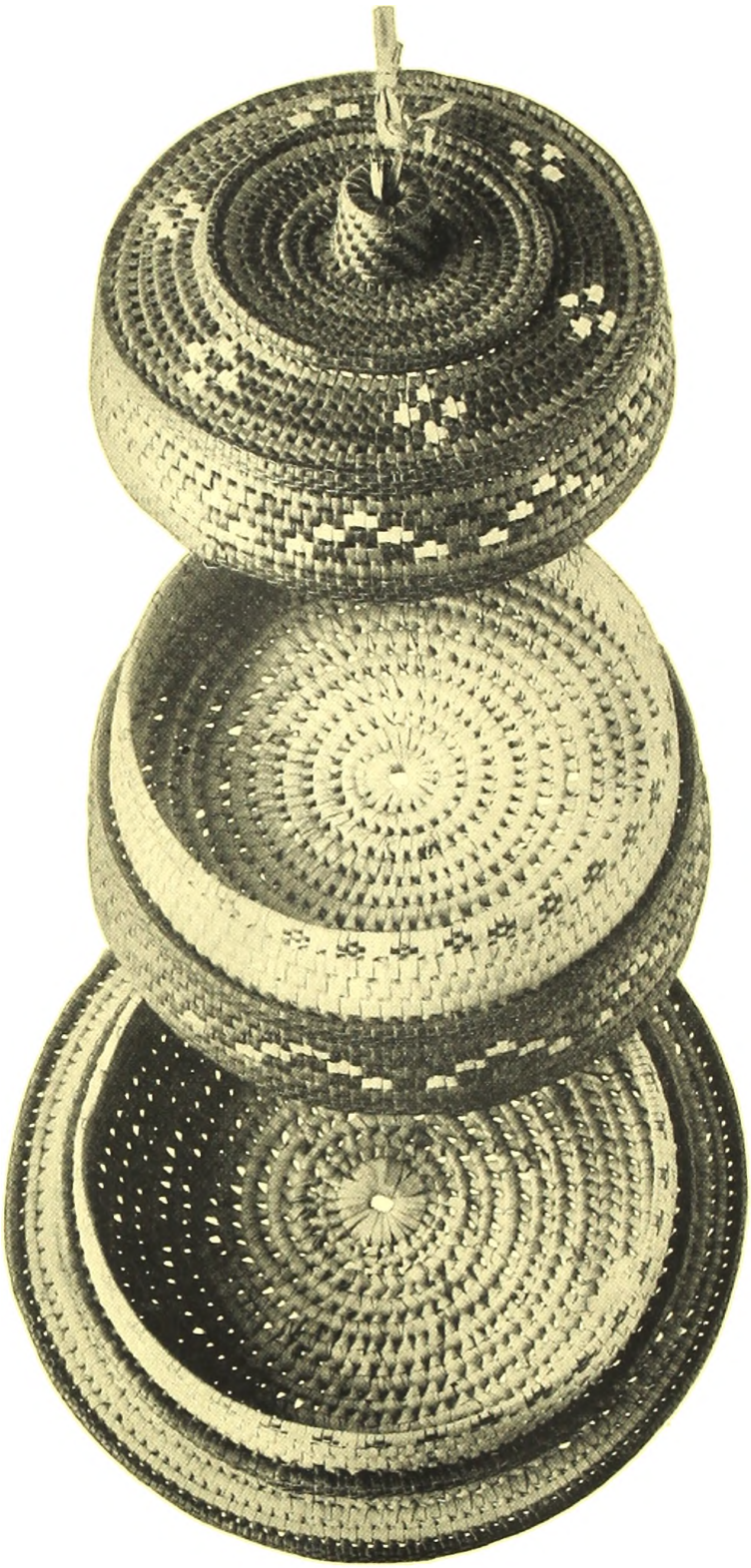


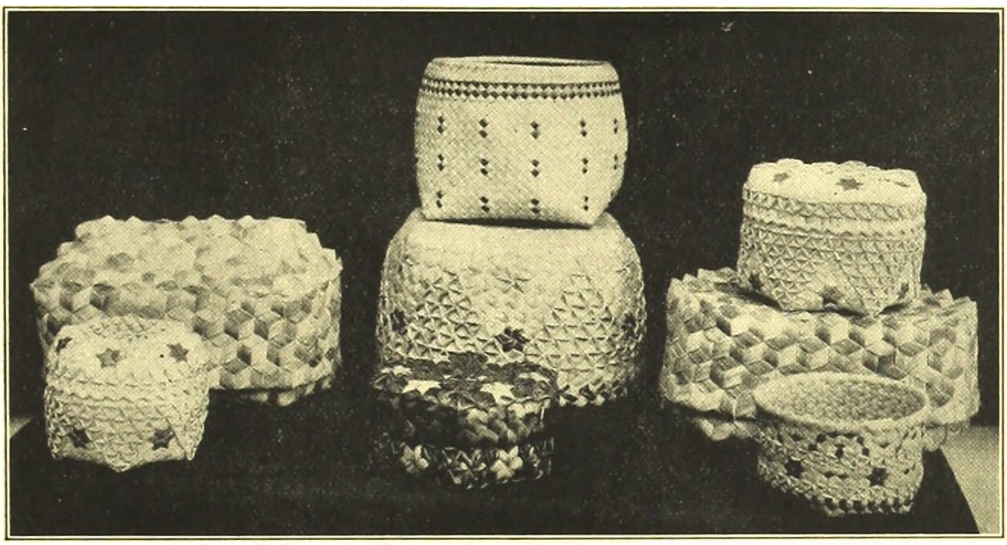
Photo from the National Museum, Washington, D. C.

Baskets of palm-leaf strips.

Native bamboo baskets.—There will be a demand for native bamboo baskets in the United States, some as they exist and others altered to be more directly useful. They need, however, to be made in different sizes so as to nest and in slightly different shapes so as to telescope. These native baskets include: Rice baskets (which could be used for catchalls, sewing baskets, jardinières, and the like); market baskets (which could be used for fruit and light carrying baskets); trays (smaller ones for cards and larger ones for porch tables); sieves (used in a limited way, particularly if four loops are placed on them).

In the United States most of the native baskets would be dyed a flat color before being used.

Porch trays should have an outside measurement of 68 cm. and 38 cm. diameter, respectively.



Of karagumay baskets, the bait basket in the upper center is the best.

Coiled fiber baskets.—Our abaca coiled baskets are usually made of two materials, abaca cord and loose strands. The latter gives a glossy effect to the basket which is much admired in the United States.

Indian baskets are often utilized in the States as jardinières and the moisture gathered by or sweated from the container rots them. Abaca baskets coiled on a foundation of rattan or air roots would not rot if so used.

The maguey baskets of Ilocos Norte are very unlike any ever seen in the United States.

Quite a few coiled baskets in General Office designs would undoubtedly sell in the United States. In general, the small, well-made coiled baskets seem to sell better than the larger ones.

An uncolored nest of Malacca baskets woven from a material resembling sabutan.

Lupis baskets.—In their present shape, lupis baskets were not well received in the United States but they can undoubtedly be made so that they will be good sellers. The types of trays

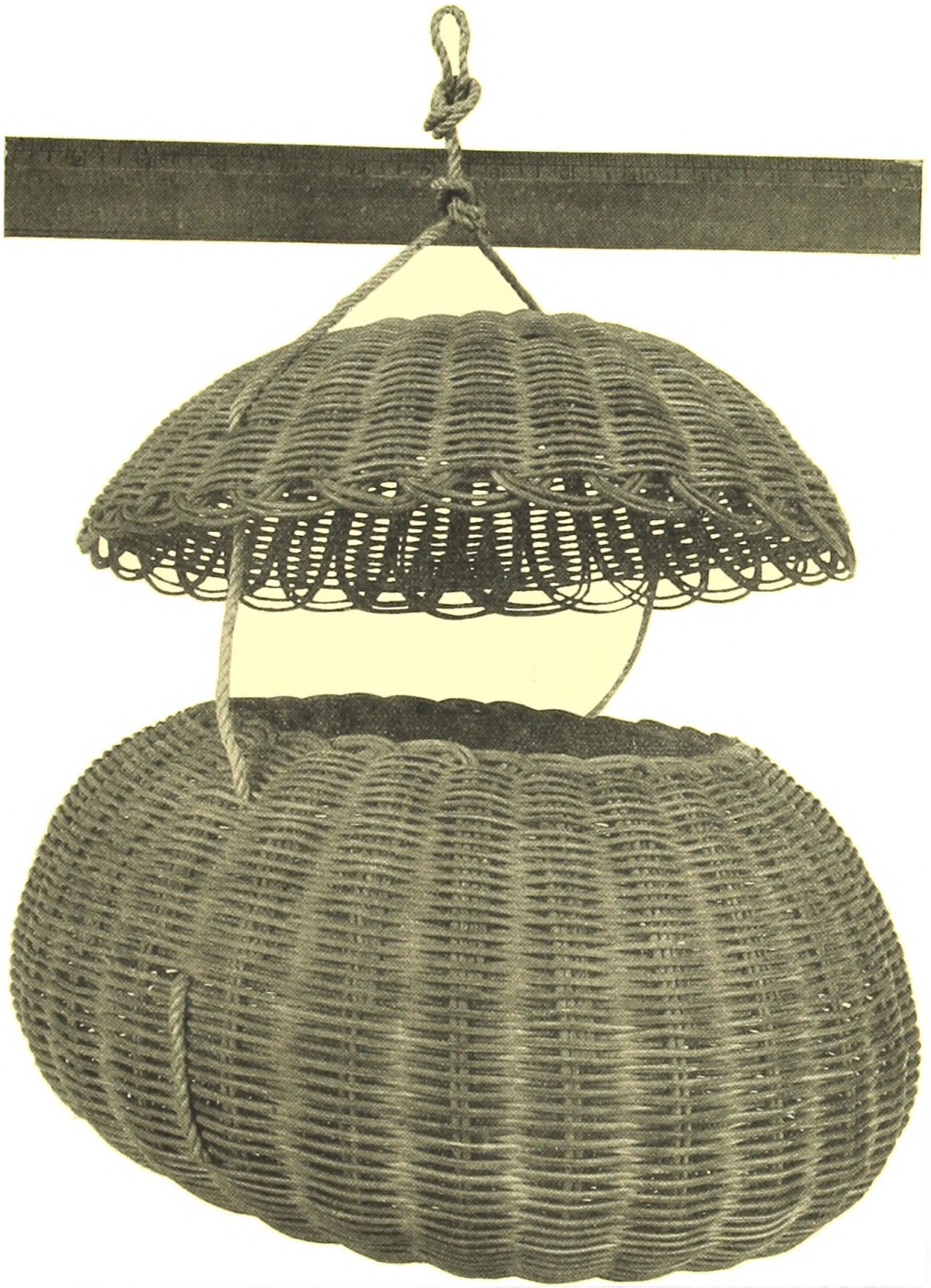


Photo by Commercial Museum, Philadelphia.

Basket with cover from Guadeloupe, French West Indies.

now turned out (and this statement also applies to palm-midrib trays) should be made rather flat with flaring edges. These can be used for serving sandwiches and the like.

Perfectly flat plaques will also be serviceable for use on the table to protect the cloth from hot dishes. These should be made oval or round, in diameter from 10 to 30 cm., most of them in the smaller sizes. It might be well to get up sets of six for various sizes of dishes usually employed on the table. It also might be possible to make small serving trays of lupis

Photo by Commercial Museum, Philadelphia.

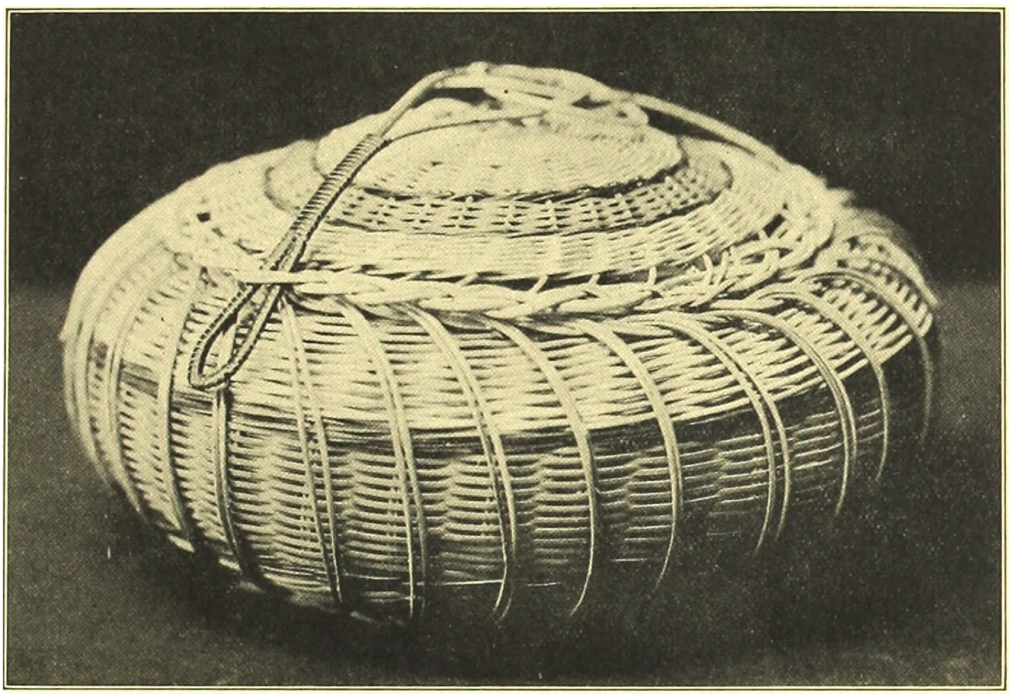
A basket with cover from Martinique, French West Indies, gives an idea for a nest.

(some round, some square, some oval) with small solid handles and slightly raised edges. They could be reenforced if necessary. The advantage of these would be their lightness. They of course should be perfectly flat except for the slightly raised edge. In size, they should vary from 200 square centimeters to 2,000 or 3,000 square centimeters.

Lupis baskets should be all of one color until good designs

are obtained for them. The checkerboard effect and meaningless stripes now so often seen are very bad. Either cream colored lupis or brown colored lupis should be used alone. Dull black (brown-black) lupis is very bad. A narrow band of brown lupis is effective around the edge of a basket or cream colored tray.

Coiled rattan, nito, and other stems.—These baskets sell very well in the United States. Trays and plaques similar to the lupis trays and plaques described above will be good and covered baskets of every description and size will be salable. The most diminutive ones can be used on the bureau. The very largest Igorot round or square hampers can be employed as general



The Tayabas workbasket in flatter, "squatty" shapes is very good.

containers. The present shapes are good and more can be evolved. These baskets easily lend themselves to nesting.

Buri strips and raffia.—At present smaller white baskets, particularly for the table and desk, are good sellers in the United States. It would seem that very beautiful small white utility baskets could be made from buri raffia and from buri strips themselves. The white German baskets now seen throughout the United States are woven from palm leaf strips similar to buri.

As between buri raffia and abaca, abaca fiber makes a more salable coiled basket, probably because Madagascar raffia is now so common in the United States.

Platted baskets.—There will be some sale for the buri hexagonal baskets from Romblon.

The karagumoy hexagonal baskets from Albay will also be good in the present shape particularly if they come in nests. However, they should also be made with greater proportionate height as in this form they can be used for wastebaskets and jardinières.

The bait basket from Catanduanes will be even a better seller than the hexagonal basket and it should be made in nests of

The Sorsogon air-root basket should be made in nests.

three or four. Four loops should be placed on this basket so that it can be hung if desirable.

SOME SUGGESTED TYPES AND FORMS OF BASKETS.

Vetiver baskets.—Vetiver fans sell very well in the United States and a sweet grass basket is in great demand there on account of its pleasant odor. More articles of vetiver roots should be made.

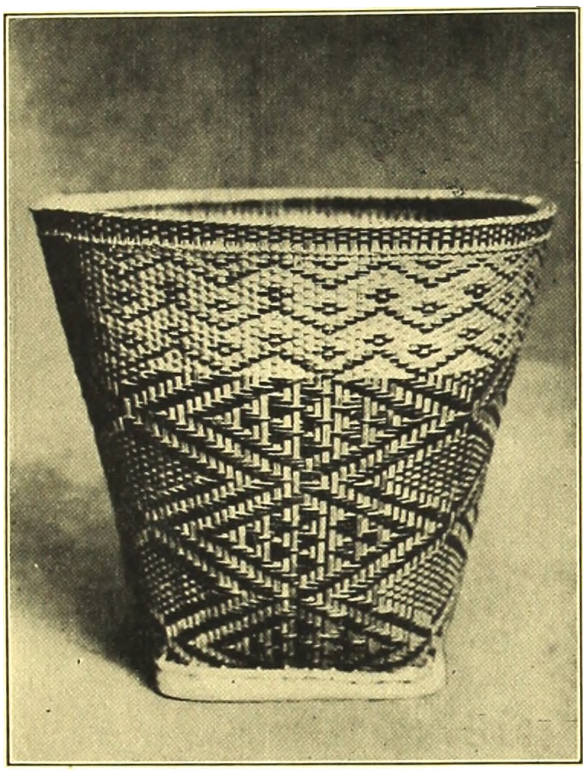
For workbaskets with covers there is suggested a largest unit 30 cm. in diameter and 10 cm. deep (inside measurements) with

the cover rather flat and having a loop on the top. The smallest unit of the nest can be made very small indeed for thimbles.

Vetiver plaques, 7, 12, 17, and 23 cm. in diameter, would be very good for the bottoms of sewing bags. Darning baskets in the shape of a dirigible balloon opening in the middle and with a hole at one end are also good. The ball of darning yarn is placed inside and unwound through the hole in the end.

Small baskets with handles for candy and nuts at the table could be made from vetiver.

Rectangular and round baskets in very open weave could be made for candy. Probably the roots could be laced together with



The Palawan basket is capable of great development.

nito or some material of that kind. Such baskets of course should be made of standard candy sizes. Probably the bottom could be made of cardboard or wood.

Handkerchief cases and smaller articles could also be made of vetiver roots, in the same way.

Scissors protectors for sewing baskets could be made from vetiver roots platted as are the fans from Ilocos Norte. Vetiver might be hidden in baskets in order to give a characteristic odor to them.

New baskets from air roots, rattan, and other stems.—Air roots dye very well. Consequently green, brown, and mahogany

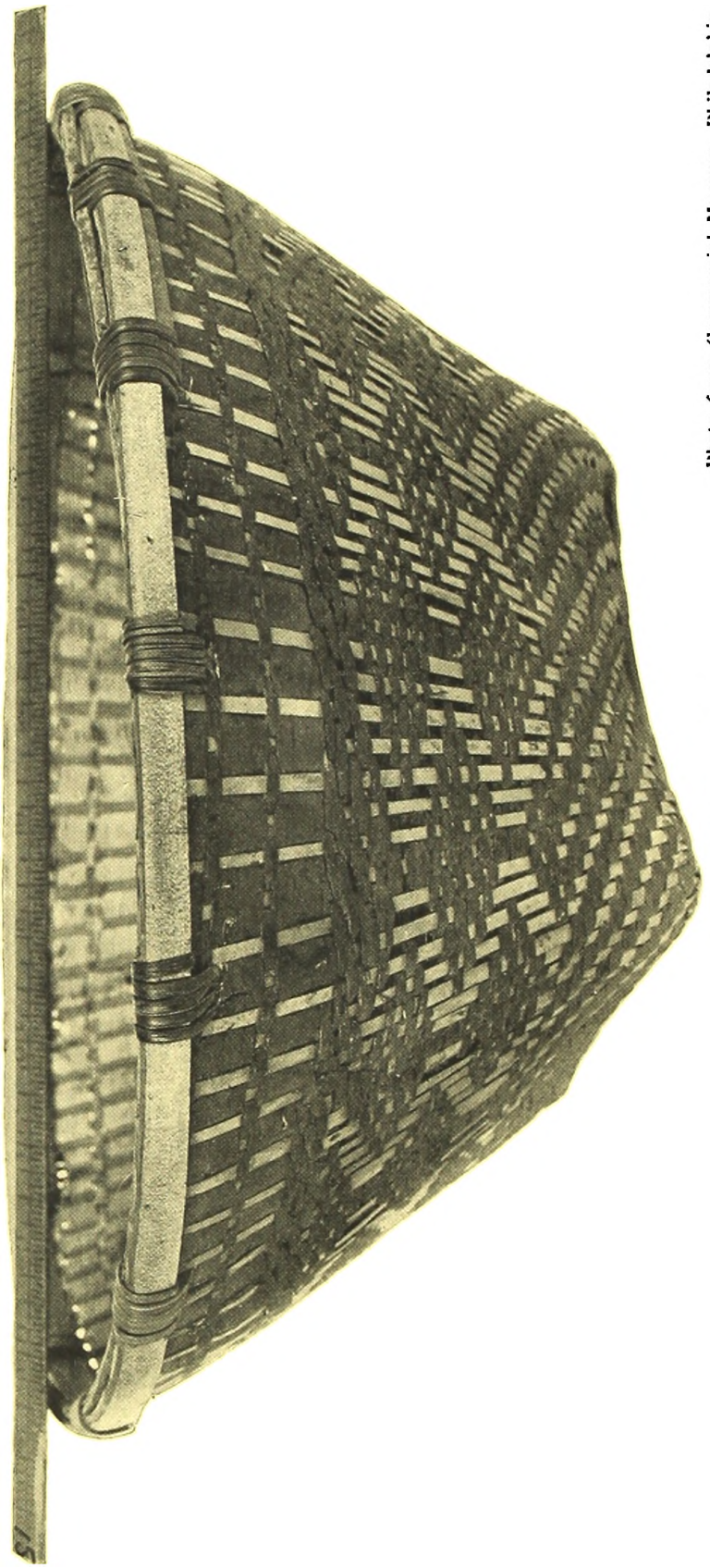


Photo from Commercial Museum, Philadelphia.

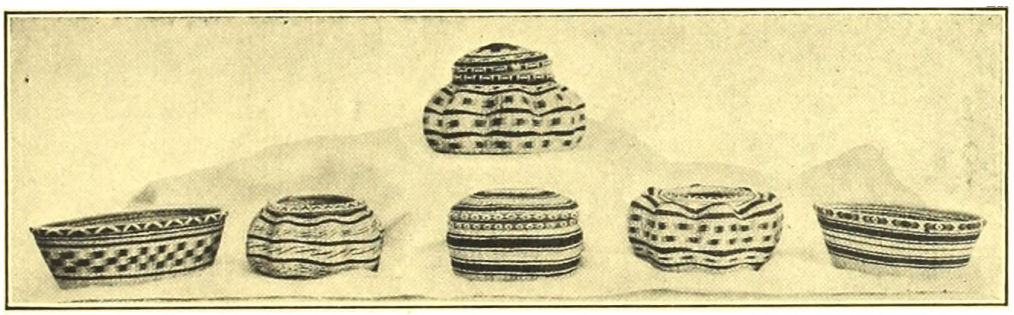
Fish basket from Indo-China.

baskets might well be made of them. Rattan, nito, midribs, and other similar materials may be used in the same way. Certainly a great many commercial baskets should be evolved from air roots, since they are so easily and effectively manipulated.

Palawan baskets.—Baskets similar to the bamboo basket from Palawan would be excellent and could be made in the same designs for wastebaskets, workbaskets and the like. They could be woven in browns, rich reds or greens, the pattern being brought out in darker shades of the same color.

Sandwich baskets.—Very popular baskets in the States at the present time are the sandwich baskets which might well be made of buri raffia or buri strips.

Small cheap baskets.—Cheap baskets of bamboo, vetiver, and other materials in natural and various dyed colors should be made. These should be woven in effective shapes and many



Diminutive baskets.

should have handles. They should not cost more than a few centavos each.

Larger baskets than these but also in unique shapes and not very expensive should be made as they are quite salable as gift baskets.[1]

Few of the baskets shown in the illustrations are perfect in themselves but it is hoped to evolve from them artistic, useful, commercial baskets that can be made in the schools.

"The school-garden movement has shown us one way of solving the child-labor problem," says Dr. P. P. Claxton, United States Commissioner of Education. "It has proved that children, can make things grow, and grow abundantly. A tiny plot, 4 by 8 feet, such as a child has in the city farm, grows vegetables enough to supply a family of five with a different vegetable every day for five days in the week."

[1] These notes were written as the result of "talking," displaying, and selling Philippine baskets in the United States.

SCHOOL FURNITURE.

By GEORGE HOFSTETTER, Instructor in Drawing, Philippine School of Arts and Trades.

IT is the purpose of this article to point out the chief defects in school desks and seats, to set forth their fundamental hygienic requirements, and to correlate these requirements as far as is practicable with the design and construction of desks and seats suitable for use in Philippine schools. The most important defects in school desks are that they are too high, too low, or the tops are too flat. The most important defects in seats are that they are too high, too low, improperly shaped, or without proper support at the back. Among other defects may be mentioned seats and desks too far apart or too close

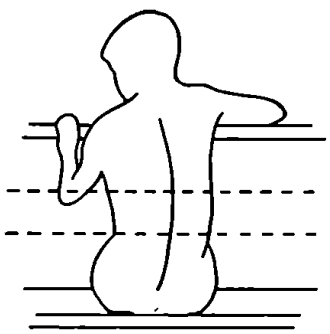


Fig. 1.

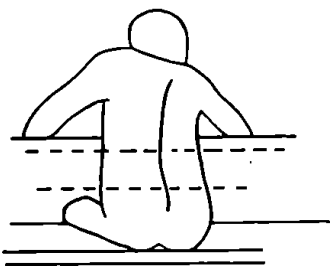


Fig. 2.

together. Oftentimes desks and seats, although well constructed, are not of the correct size for the pupils using them.

During the time that the average boy or girl is attending school the body is growing and is passing through its formative period. Many of the bones of the younger pupils are imperfect in development, for at this time portions of the bones are composed of cartilage which yields to the molding processes. Later these parts are displaced by bone which is normal and correct or abnormal and unnatural in growth, according as the physical habits of the child during the formative period have been good or bad. The importance, then, of good physical habits may be readily understood. Sitting with the arm and the shoulder raised, as shown in figure 1, at a desk which is too high or, as shown in figure 2, at a desk which is too low, soon develops into a habit. European records show that such habits if long continued will often cause permanent lateral curvature of the spine. Curvature of the spine is sometimes due to improper support at

the back of the seat. If the seat back is too low or if it is too near the vertical, the trunk is kept erect by the various muscles; as soon as these muscles become fatigued they yield and the trunk tips toward the right or left, more frequently in one direction as the habit is formed, curving the spine.

When reading at a low desk, the pupil usually leans forward and over his book; especially is this true when the top of the desk is horizontal, or nearly so. The reason for this is that the pupil, in order to obtain the proper angle of vision, holds the book up at an angle to the top of the desk; his arms soon become tired and the book is dropped flat upon the desk; then, in order to keep the proper focus he leans forward as shown in figure 3.

When the head is thrown forward the center of gravity of the body is removed from its natural point of support. The head then must be balanced or supported by the muscles of the

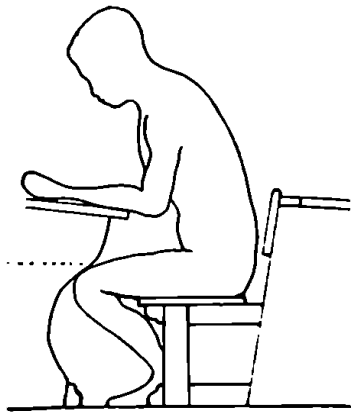


Fig. 3.

back and neck; as soon as these muscles become tired they yield and the shoulders become stooped. This position if long continued may result in permanent forward curvature of the spine at the shoulders. Such a position cramps the chest, interfering with the normal functions of the lungs, and compresses the abdomen and stomach, frequently impairing digestion. Such a position is shown in figure 4.

When the desk is too low other undesirable features result. If a pupil sits properly with his body resting against the back of the seat the distance from the eyes to the work is usually so great that when reading the eyes are strained. Continual straining of the eyes will produce defective vision.

When the seat is too high it is frequently found that the pupil's feet do not touch the floor. The weight of the lower part of the limbs causes the thighs to press on the edge of the seat and prevents proper circulation; the muscles tire and the child soon

becomes restless. In order to rest the lower limbs the pupil will slide forward, sit on the front edge of the seat, allowing his toes to touch the floor and lean forward, resting his arms on the front edge of the desk as shown in figure 5. This position fatigues the muscles of the back; he then leans farther forward and presses the breast against the front edge of the desk as shown in figure 6. The head is thrown forward bringing the eyes entirely too close to the book. If one would only for a few

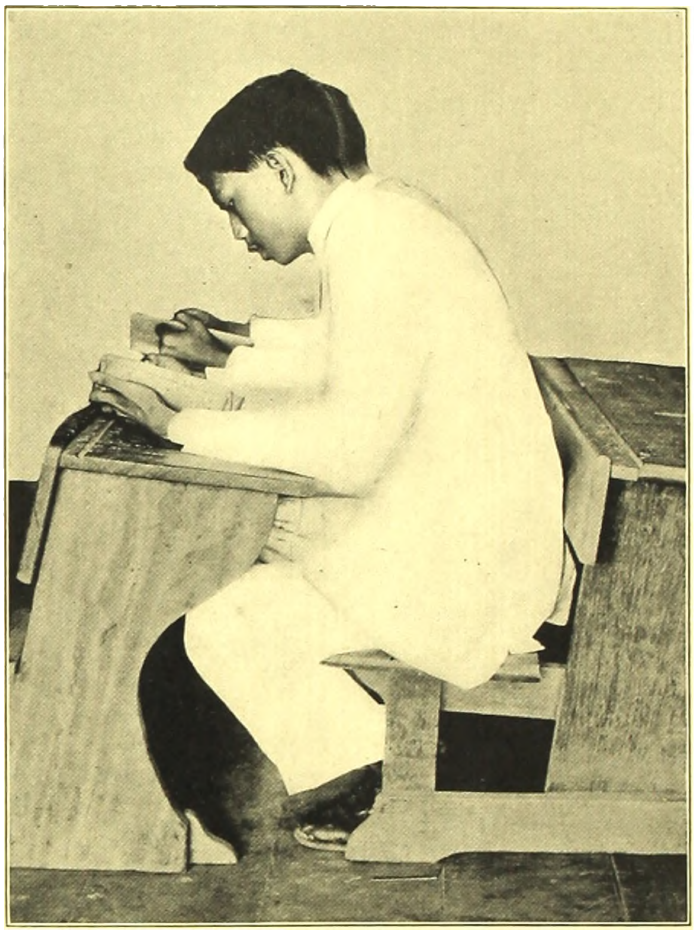


Fig. 4. Pupils using desks and seats entirely too low.

moments try such a position one would quickly realize how uncomfortable it is.

Not long ago a classroom was visited in which were seated at least 40 pupils; only 6 of these pupils, with reference to the sizes of the desks and seats, were properly fitted; for all of the remaining pupils, the desks and seats were entirely too high. It was observed in several instances that when the pupils were sitting erect their chins were not over 15 centimeters from the edges of the desks. In another room containing older pupils in an

advanced grade, smaller desks and seats than those just mentioned were in use. Many entire classes of pupils were not properly fitted to the desks and seats in use. In another school pupils were found in the same grade ranging in height from 1.373 to 1.620 meters and in age from 13 to 20 years all using seats and desks of the same height. By this total disregard of the proper hygienic requirements, the physical well-being of the pupils was endangered and their mental ability impaired.

It seems evident that hygienic requirements should be given careful consideration. Fundamentally there are three requirements:

First. The desk should be of the proper height, neither too high nor too low, and the top should have the proper slope.

Second. The seat should be of the correct height, or proper shape, and have good support at the back.

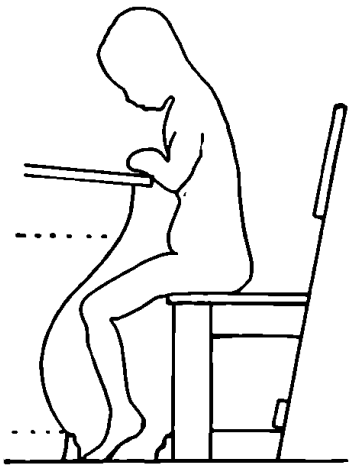


Fig. 5.

Third. The pupils should be properly fitted to the desks and seats or vice versa.

In figure 7, a pupil is shown properly seated. The height of the desk, AB, should be such that the pupil when resting with his back against the rear support can see to read without effort. The distance from the pupil's eyes to the book should be from 0.35 to 0.38 meter (14 to 15 inches). The height AB will depend upon two conditions, namely, the stature of the pupil and the support for the pupil's feet.

In the Philippine schools the feet of the pupils usually rest upon the floor and this may be taken as a basis for measurements. For American children the height AB as given by some authorities may be taken as three-sevenths of the height of the child plus 0.0254 meter (1 inch). Upon the basis of numerous measurements one is led to believe that the above standard gives

a value too great for local use. Under no circumstances should the shelf beneath the desk top be so low as to press upon the thighs of the pupils. For a desk top the proper angle with the horizontal would be about 45° or more when a pupil is reading; especially is this true when engaged in free-hand drawing. But here a certain difficulty arises, for the pupil's books and papers will slide off the desk and, moreover, when writing, the ink will not flow well from the pen. There is not much room for im-

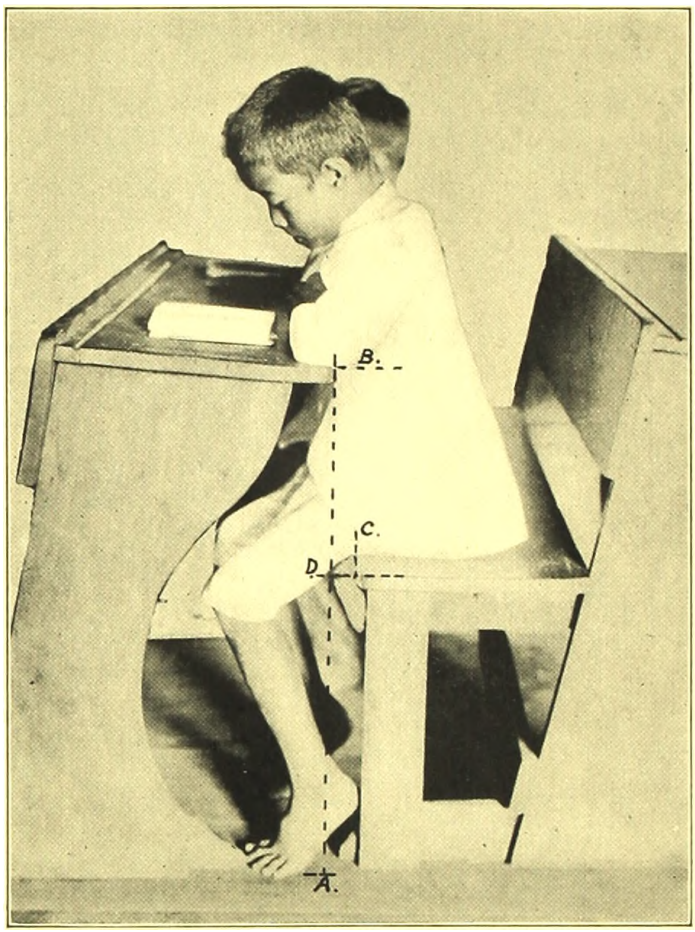


Fig. 6. Desks and seats too high.

provement in the slope of desk tops except possibly in special cases such as for pupils in free-hand drawing or in cases where an adjustable top may be used. Some builders of school desks give a slope of 15° to the top. Probably 12° is better for ordinary school use.

As previously mentioned, the top of the desk should not be too far from the pupil. The front edge should lap over the front edge of the seat. This overlap is frequently referred to as "distance" and as shown at *CD*, figure 7, is a "minus distance."

In figure 6, there is no overlap, as the seat edge does not reach the vertical line dropped from the edge of the desk. In this case the "distance" is a "plus" quantity. When the pupil is reading or writing, the "distance" should be a "minus" quantity, but a "plus" quantity when the pupil is standing. The height of the seat, *AC*, figure 7, should be such that a pupil may sit comfortably with the thighs horizontal, or nearly so, and with the feet squarely upon the floor. *AC* then is measured from the

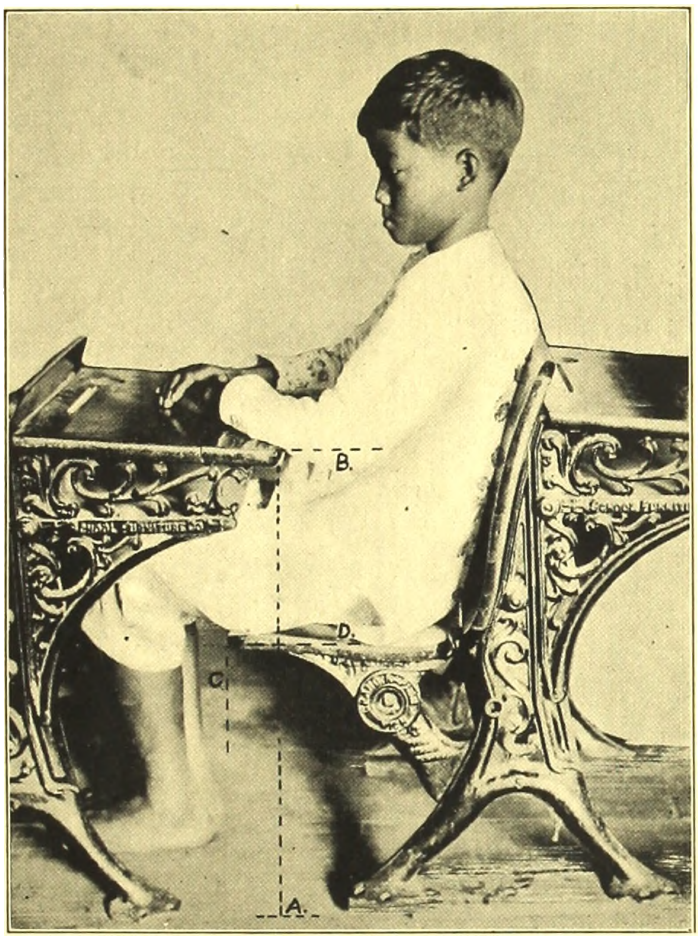


Fig. 7. Pupil properly seated.

floor to the knee. *BD* should measure approximately the same in length as from the elbow to the wrist. Some authorities give the height *AC* as approximately two-sevenths of the height of the child.

The seat board should not be too wide for in case of too great width, pressure will be produced upon the calves of the legs and the pupils cannot rest against the back support. The seat board should be hollowed out near the back support in order to prevent the body from sliding forward. The support at the back of the

pupil should be so shaped as to fit the natural curvature of the pupil's back when the proper posture is taken. The proper shape for seat and back rest is shown in figure 8. In this type of seat the curves as shown are usually made of slats, the openings between the slats allowing for the ventilation which is needed in a tropical climate. Unquestionably the best school desk is of the adjustable type; not only can the desk top be adjusted to suit the needs of the pupil but the accompanying seat can be raised or lowered as required. These desks, however, are expensive and owing to economy the bench type is in general use throughout the Philippine schools.

In the fitting of pupils to desks and seats or in the fitting of desks and seats to pupils, considerable difficulty is encountered. Where the desks and seats in a school are of different sizes care should be taken so to arrange the classes that the pupils will be

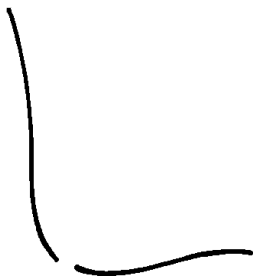


Fig. 8.

assigned to the seats best suited to them. Where the furniture in a school is not of the size needed for the pupils, it should be transferred to some other school where it may be used to better advantage. Where the adjustable seats and desks are in use teachers should require that the desk and seat be adjusted to the needs of the pupils. In some schools recently visited in which there were a large number of desks and seats of the adjustable type, it was found that many of the teachers did not know that any of the furniture was adjustable. The principal should impart such information to his teachers.

The Bureau of Education has in Bulletins Nos. 32 and 37 suggested several designs of desks and benches for use in the schools. That given in Bulletin No. 32 seems to be the cheapest to construct. However, an improvement can be made in this desk by setting the top back 0.008 meter and then fitting the uprights into the back rest to an equal depth. This will give

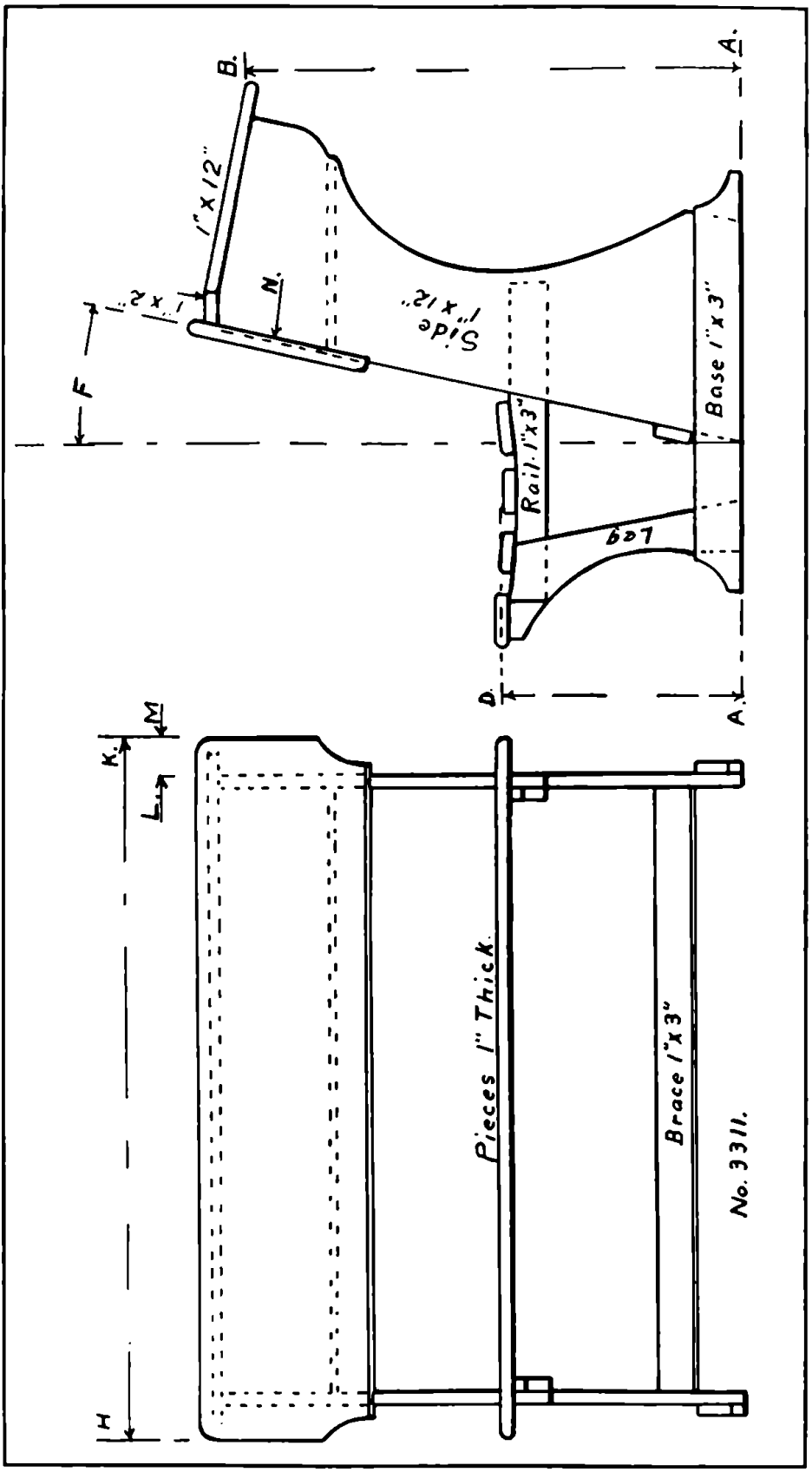


Fig. 9. Desk and seat.

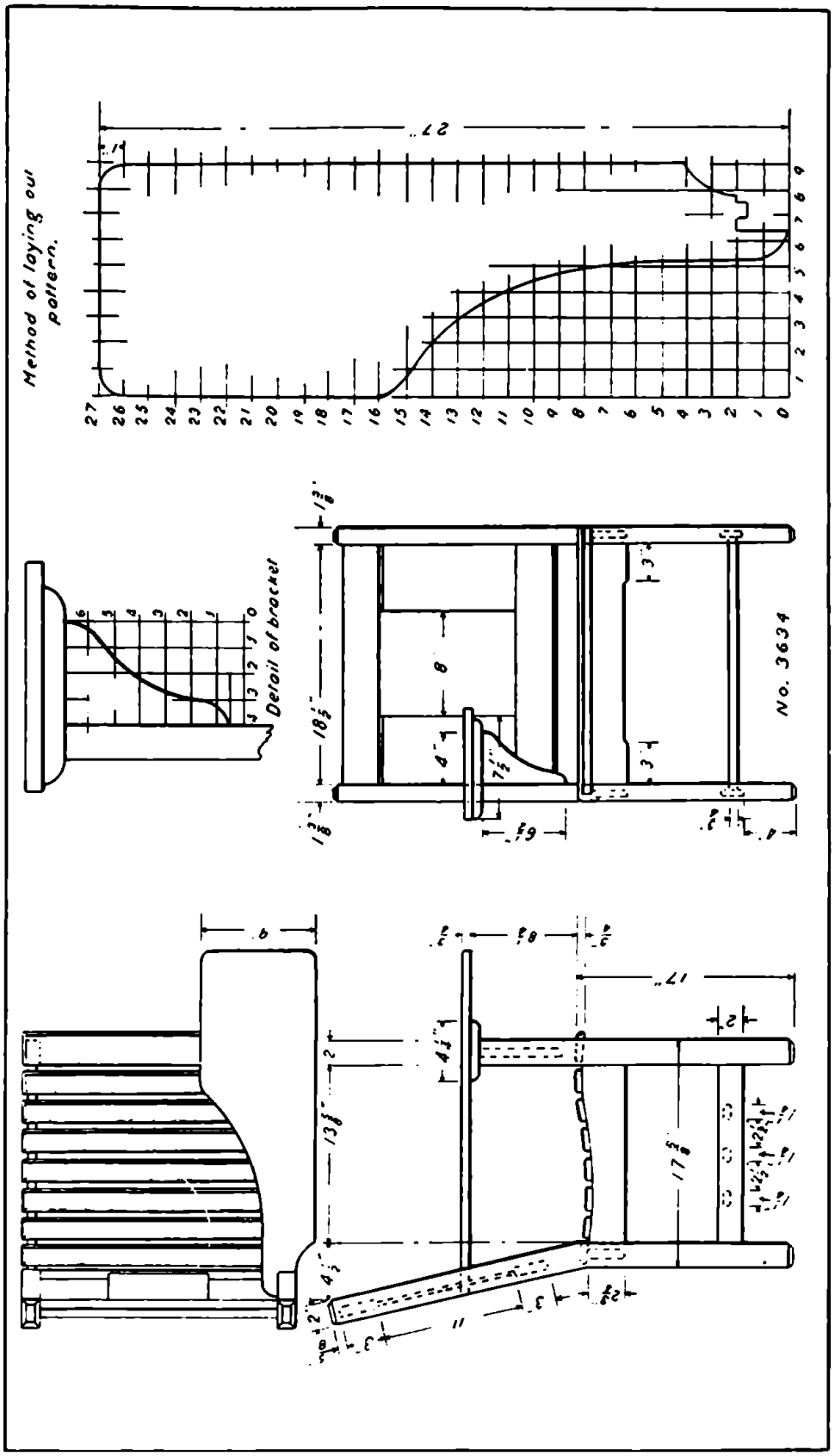


Fig. 10. Chair for lecture room.

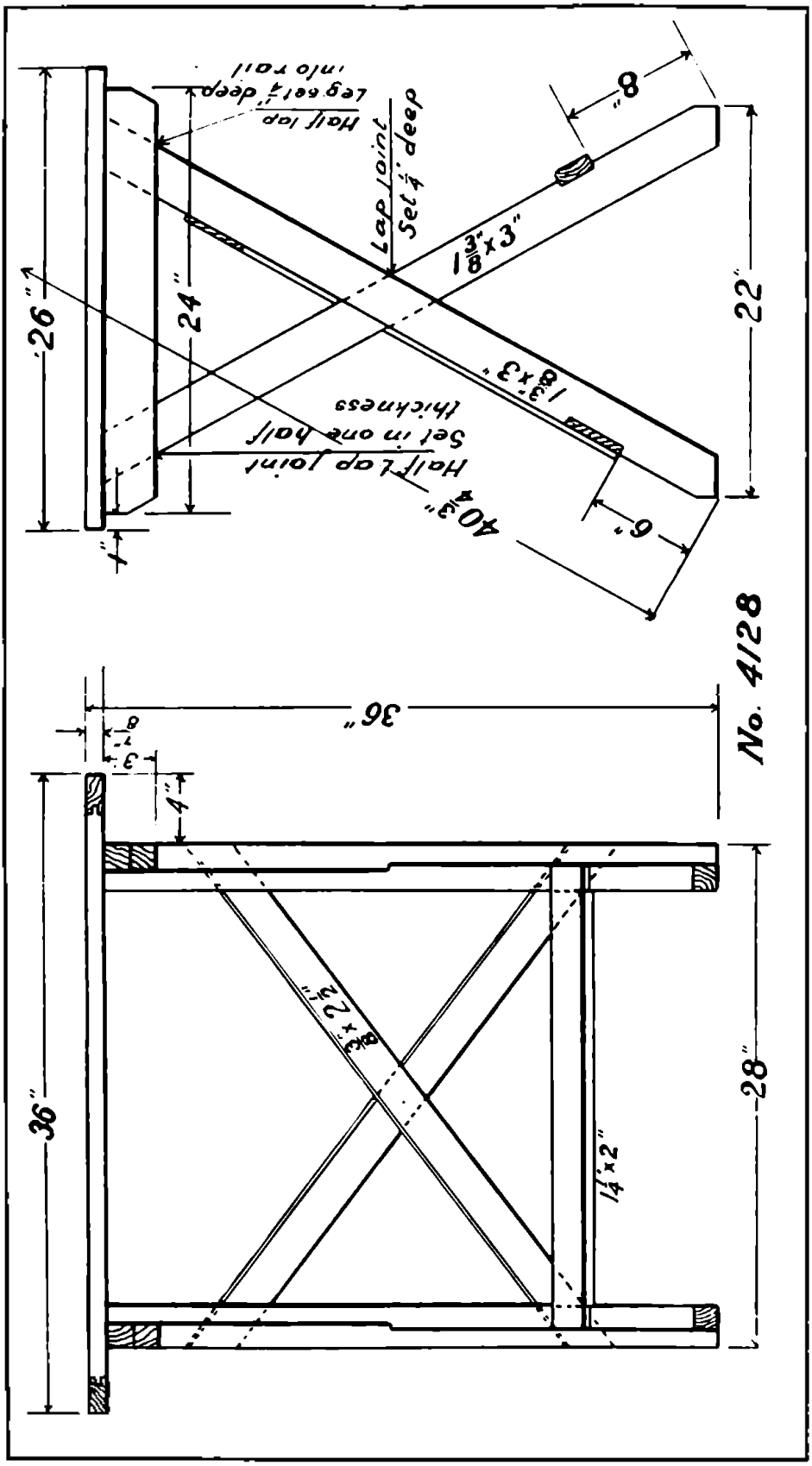


Fig. 11. Drawing table.

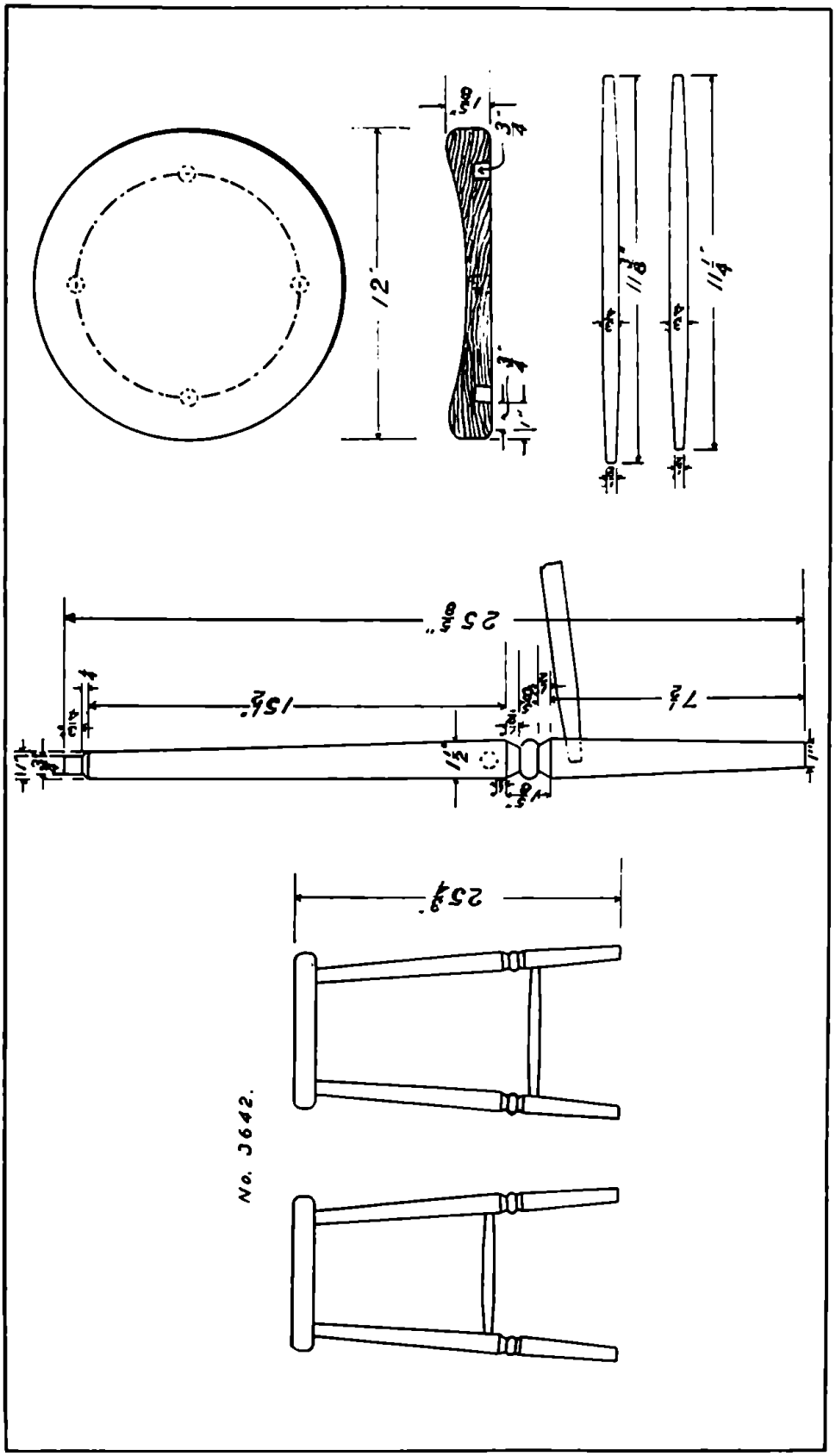


Fig. 12. Stool for drawing table.

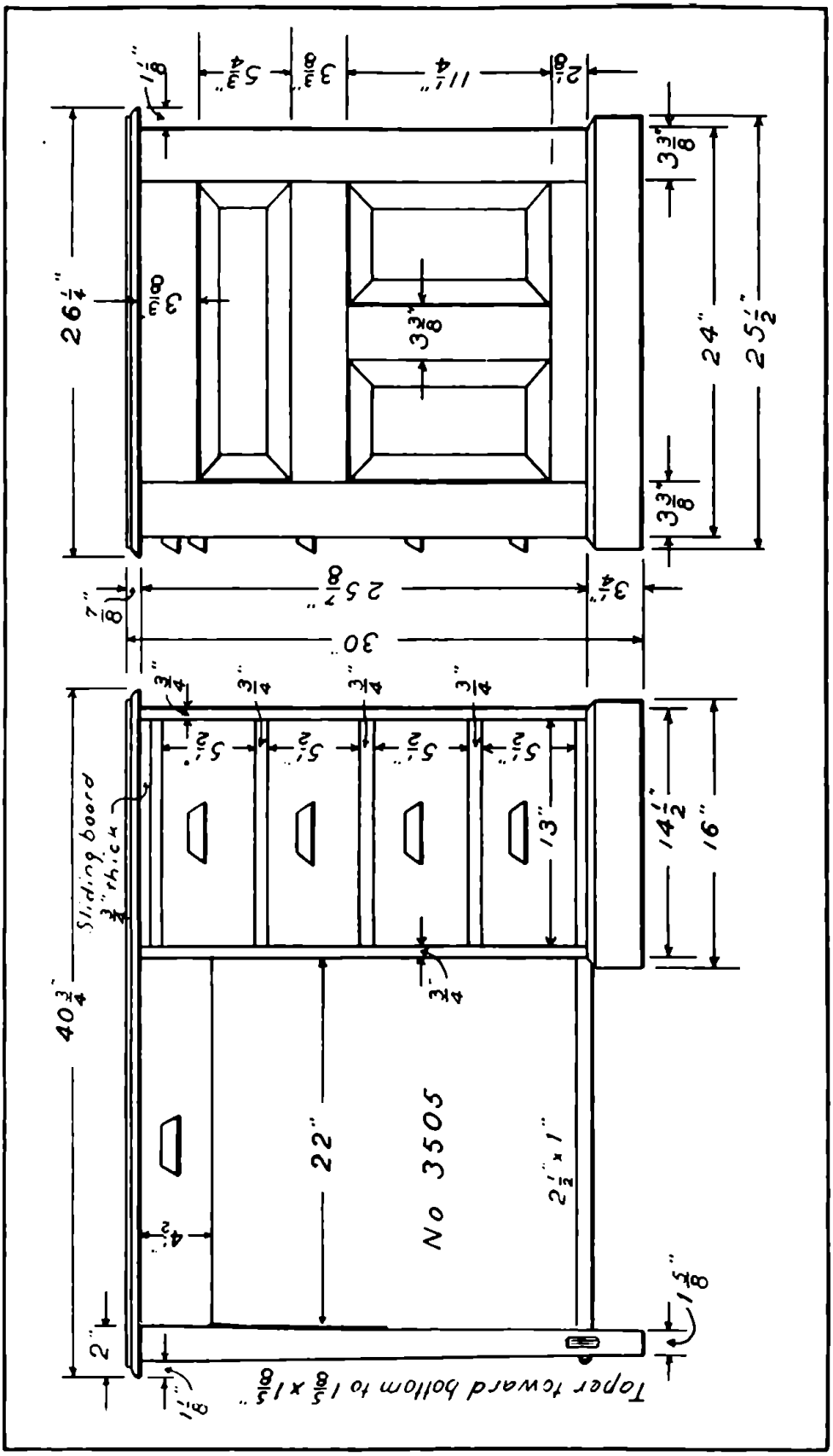


Fig. 13. Teacher's desk.

more rigidity to the desk when completed. If this is done the distance between the uprights and the ends of the back rest should be increased to 0.065 or 0.075 meter to avoid splitting out of the pieces at the ends as shown at *LM*, figure 9. One objection to the desks as shown in Bulletin 32 is that they must be set too far apart—that is, the distance from the front edge of the top to the back of the next is too great; this becomes necessary because of the difficulty of getting into the seats, due to the wide upright sides.

Another very good desk and seat combined is shown in figure 9.[1] The main uprights or sides are fitted into the back support which adds to the rigidity of the desk. The top has a slope of 12°. The angle at *F* is 12½°. The length *HK* will measure 36, 38, and 40 inches, respectively, for the three primary grades. The important dimensions of the seat have not been shown as the method of determining them will be mentioned later. This desk seems to be much better than the one just referred to, as the upright leg of the seat slopes backward toward the floor, allowing the pupil more room for getting in and out.

No less than three different sizes of desks with seats to correspond should be provided for each primary and each intermediate school. Careful measurements should be taken on pupils of the average size for each grade in the school so as to determine accurately the heights desired at *AB* and *AD*, figures 7 and 9. These measurements might be taken by the principal of the school along the lines suggested in this article. When more accurate data on the average sizes of Philippine children become available, figures may be prepared showing the sizes of desks and seats for pupils of the different grades.

For advanced classes, especially for classes in the lecture room the chair shown in figure 10 has been found to be very convenient and serviceable. The seat is well shaped and ventilated and the arm is well adapted for writing.

For classes in mechanical drawing, the table shown in figure 11 is one of the best. A large number of such tables have been used in American schools and they have been found to be highly satisfactory. The top is fastened to the rails with screws. The diagonal braces give rigidity to the table; this is of great importance in instrumental drawing. A foot rest serves as a support to the pupil's feet while using a stool.

[1] The dimensions of this desk as well as the dimensions on the following figures are given in English measure in accordance with Act No. 1843 of the Philippine Legislature.

A stool suitable for use with the above drawing table is shown in figure 12. The stools and tables for use in a drawing room may be made of several different heights to suit pupils of proportional heights. In schools where machine facilities are not available for turning the stool, it may be made square.

Figure 13 represents a good form of teacher's desk; the rail at the bottom adds to the rigidity of the desk.

Accompanying several of the figures are numbers which refer to the file numbers of drawings in the Philippine School of Arts and Trades. Blue prints may be obtained by referring to these numbers and applying through the proper channels.

Hawaiian youths are receiving industrial training of a very practical kind at the Hilo Boarding School, according to an article in the Hawaiian Educational Review. Farming by means of advanced methods and machinery, dairying, blacksmithing, carpentry, roadmaking, cement and concrete construction, and printing are included in the curriculum. Many other lessons in industrial life are acquired in an informal way in the work of repair and upkeep of the school. The boys are shown how to make simple machinery and implements to replace the time-consuming primitive tools. The general plan is to give each youth some experience in all departments, to teach him to be an all-round useful citizen, with skill in home crafts. Toward the end of the course he is allowed to specialize in some one trade which he expects to follow as life work.

o o o

I respect the peanut vender who sells honest measures at fair prices provided he is unprepared to render a more useful service to the community; but I think we agree that a man who has received sixteen years of schooling at public expense should make a greater return to society than is possible as a street vender. He is not a citizen but a parasite if he make inadequate return to the people for their generosity in providing for his preparation for useful service. (John W. Curtis.)

o o o

When an epidemic of cholera is raging in the Philippines, the authorities do not close the schools to avoid contagion. They keep them open as centers of hygienic information for preventing the spread of the disease.

PHOTOGRAPHS FOR PUBLICATION PURPOSES.

THE following information is submitted for the guidance of those who may be required to take photographs for publication purposes. This matter is taken from a pamphlet entitled "Photo-Engraving in the Bureau of Printing," recently issued by the Bureau of Printing, Manila.

THE ORIGINAL COPY.

The essential requisite in producing a half-tone or line engraving is good copy. The original must have at least the degree of perfection which is desired in the reproduction.

Before giving instructions to an artist to proceed with a drawing which is to be produced in colors by the photo-engraving process, do not fail to consult some person who has expert knowledge of the photo-engraving trade. His advice will usually save considerable time and expense.

Photographs.—If the copy to be reproduced is a photograph, it should be preferably a solio print with a violet or soft chocolate-brown tone—not a harsh, reddish-brown finish. Regulation printing-out paper may be used if solio is not obtainable. The next in order of desirability are the smooth-matte-surface or semigloss photographic papers which are developed by artificial light. Rough-surface mattes of all kinds should be avoided, as the fuzziness and grain of the paper cast shadows which are reproduced in the finished plate.

In form, the copy should be a flat, unmounted print. Nothing should be written or marked on either the front or back of the photograph. Write all instructions as to size, trimming, retouching, and special details on a separate sheet of paper and attach this sheet to the back about one-fourth inch from the bottom of the photograph, using a very thin line of paste.

Keep the photograph clean and do not roll or fold it. Always retain it in flat form. Do not write on the back of the photograph with a pencil, as the indentations made in writing will show on the face, and the all-searching eye of the camera will reproduce them in the plate. If a soft, colored pencil is used for the same purpose, the colors will rub off, either on a contiguous print or on the fingers of those handling the photograph, causing disfiguring marks which will appear in the finished plate.

Still-life subjects.—The production of still life may be either

direct or from photographs. A direct half-tone can be made from the object itself if it is too large and unwieldy, but, as a general rule, a well-taken photograph, judiciously retouched, is more desirable as copy.

In making photographs of still life, great care should be taken in the grouping and with the background. If the object has bright surfaces, the reflections of foreign objects on such surfaces should be prevented by the use of screens. The background should not be in focus with the subject of the picture, and therefore the background should be placed far enough behind the subject to keep it out of focus. If the subject to be photographed is light in color, the background should be of a dark, neutral tint; if a dark-colored subject, then the background should be light.

The cloth used for a background should be plain, without design or figures. It must be perfectly smooth and clean, free from wrinkles, folds, or creases.

For coloring a plain background, distemper is superior to oil colors, as the latter produce a glazed surface which is objectionable. The colors laid on should be quite dead and opaque.

The following formula will make a good distemper, to be used on painting canvas or heavy muslin for a background:

Water	gallon	1
Treacle	pint	1
Glue powder	pound	.50
Whiting	do	2

Mix the foregoing thoroughly and then add:

Ivory black	ounces	2
Red ocher	do	.25
Ultramarine	do	.50

Copy for etchings.—Good results in line work cannot be obtained unless the copy is first class in every respect. The paper or board on which the drawing is to be made must be pure white and have a smooth surface. The ink to be used in drawing should be the best quality of jet-black waterproof drawing ink. Lines must be clear, distinct, and unbroken. Wash effects in line drawings cannot be reproduced in etchings. If shading is desired, it should be simulated by plain black lines.

Determination of sizes.—Given the subject to be reproduced, whether a photograph or a drawing, the size of the printing plate remains to be determined. Sizes may be designated as face measurement or base measurement. The face measurement of a plate is the entire printing surface. The base measurement is the size of the block upon which the plate is mounted. Ordinarily, the base of a plate is approximately one-eighth of an

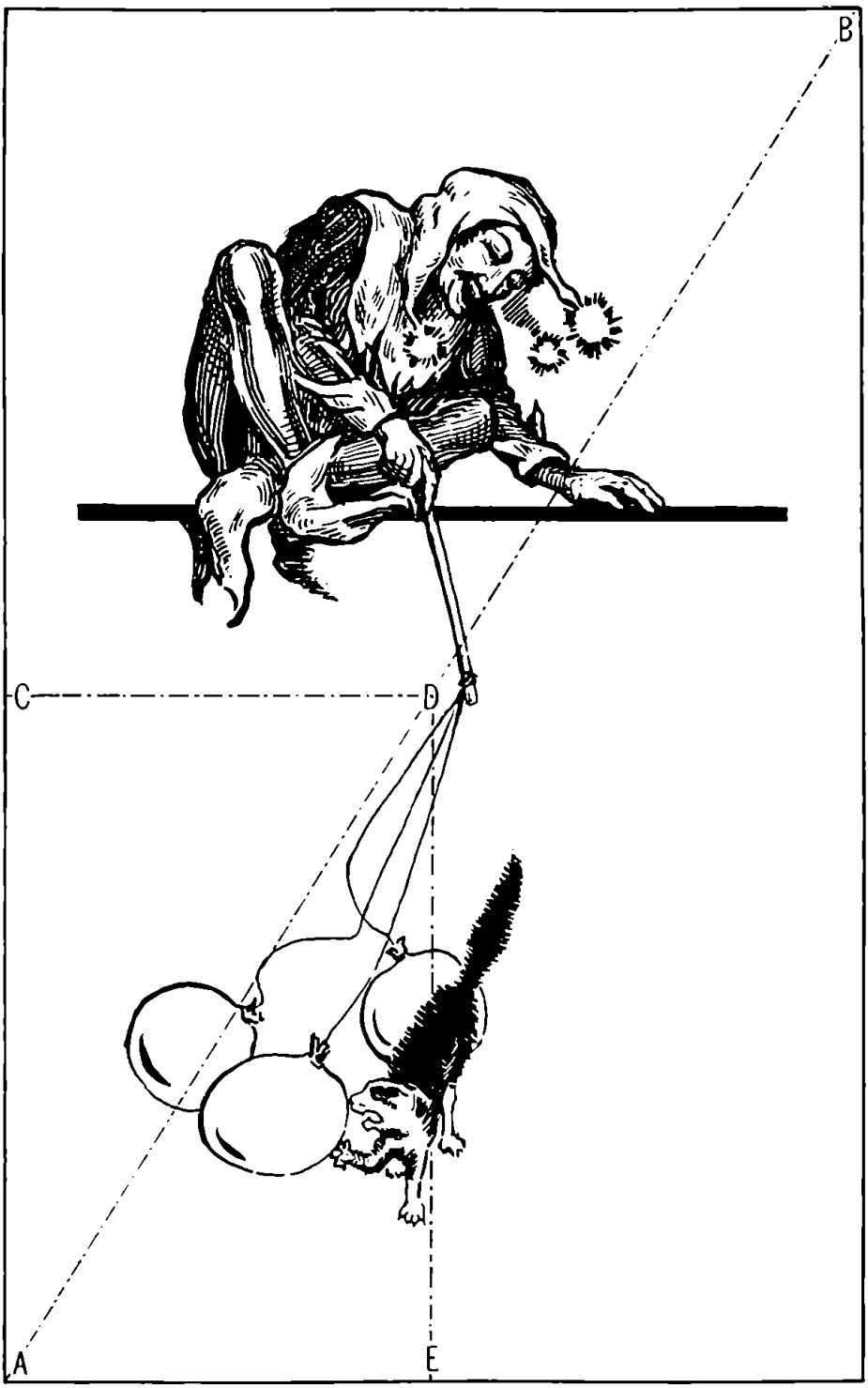


Diagram showing how to ascertain the size of the printing plate by either enlargement or reduction.

inch larger all around than the face. The difference is in the beveled edge of the plate, which space is required for the purpose of tacking the plate to the block. Half-tones may be mounted flush with the edges of the block, but this necessitates the expensive operation of anchoring the plate to the block. In the case of etchings, the plates often may be mounted flush on the block, as there is usually blank or white space within the printing face to accommodate the tacks.

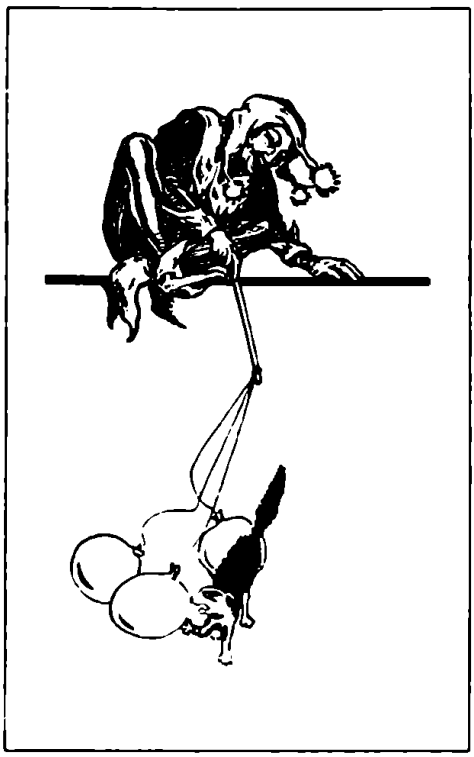


Figure showing the image after reduction.

The accompanying diagram shows how to ascertain, from the original copy, the size of the printing plate by either enlargement or reduction. First, select and measure that portion of the original which is to be reproduced. Then draw an outline, in square or rectangular form, of the portion selected. Draw a diagonal line from the lower left-hand corner to the upper right-hand corner, *A B*.

To illustrate a reduction by means of the diagram: If a 5 by 8 inch photograph is to be reduced to 2½ inches in width, draw a horizontal line 2½ inches long at a point where the right end of the line will intersect the diagonal line, *C D*; a perpendicular line from the point of intersection to the bottom, *D E*, will show the other dimension.

To ascertain the size of an enlargement, extend the diagonal

line from the upper right-hand corner to a distance where either a horizontal or a perpendicular line of the required length will intersect it, as *D B*. Connect all lines from the intersection to make a rectangle, which will show the size of the enlargement.

In stating sizes, the horizontal dimension should be given first and the perpendicular next.

THE CARE OF PLATES.

Proper care given to plates at all times will result in prolonged usefulness and in a saving of time and money. Protect your plates by keeping them clean and dry. Carefully heed the following details:

Before storing printing plates, clean them thoroughly by applying gasoline with a soft cloth or brush; then cover the face of the plate with vaseline.

Wrap each plate with paraffin paper and with an outside covering of strong manila paper. In stacking, put a piece of blotting paper between each plate, the top plate to be face down.

When plates are to be used again, the vaseline can be removed with benzole. Always examine cloth and brush before applying to plates to see that they contain no hard substances which will scratch the surface.

As a substitute for vaseline, a thin coating of melted white, or paraffin wax may be applied to half-tones, and can be removed with gasoline or benzole.

As an easy means of identification, a proof of the plate should be pasted on the outside covering.

If plates should become wet, dry at once over a fire to prevent corrosion; this applies especially to zinc plates.

Never permit ink to dry on a half-tone plate. Copper and zinc plates, especially half-tones, should be thoroughly cleaned immediately after being taken from the press.

The question of agricultural education is, however, in the last analysis more than economic. We need it not so much that we may raise more corn and wine, but that we may raise better men and women in our country districts. Any work is to be judged rather by the human being it develops than by its material output. (Ruth Mary Weeks.)

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The results of adequate industrial education will be "peace, precision, and prosperity in industry; happiness and hope in our homes," in the opinion of Secretary of Commerce Redfield.

EDITORIAL.

School Desks.

One of the suggestions made in Doctor Monroe's "Survey of the Philippine Public Schools" was to the effect that more attention should be paid to the relation of the size of the school desk and seat to that of the pupil occupying the same. Leading teachers and medical men are firm in advocating the use of the adjustable seat and desk. By this means, each child has a seat and desk exactly suited to his physical development. It is often found advisable to readjust the heights of the seat and desk twice a year, owing to the rapid growth of the pupil.

We do not question the contention for the adjustable seat and desk, either in theory or in practice. Many of us, however, took up our school work in classrooms where there were only one or two Spanish desks at which sat a few privileged pupils, generally with feet dangling in air. The remainder of the pupils were seated either on the floor or perched on bamboo poles fastened against the walls, thus having no foot rest, little seat rest, and still less back rest, to say nothing of the complete omission of anything in the semblance of a desk. When we remember the planning and scheming necessary to contrive ways and means for providing each pupil with any kind of a seat and desk, it seems a far cry from the conditions facing us upon our arrival to those typified by the use of adjustable seats and desks. And for the present, the acquisition of the adjustable seat and desk seems comparatively out of the question. The state of school funds will not permit such expensive equipment.

Improvement, however, can readily be made along the lines suggested in the article on school seats and desks, found elsewhere in this issue. The making of seats of three sizes will cost no more than the making of a single uniform size, and the improvement in health conditions of the pupils will more than justify the extra cost and labor required by the carrying out of the suggestions made.

Domestic Science in Our Schools.

When a course in domestic science was first adopted in the schools of the Philippines its purpose was rather vague and undetermined. We wanted to do something through the schools to better home conditions. There prevailed a vague idea that domestic science meant the teaching of the American way of "bak-

ing cakes and washing dishes" with the addition of some instruction in the art of hemstitching a dainty handkerchief.

Since that time methods and procedures have changed. Domestic science has developed naturally and rapidly into a general desire to teach cleanliness, the preparation of nourishing food for the sick and well, and the preparation of the individual for future usefulness to herself and the race. The present aim of the course is to teach Filipinos not to be imitators of the American housewife, but to learn how to use to better advantage the things they have and to want more than they have.

The adoption of stoves illustrates this evolution in domestic science. It was not wholly the will of the Bureau or the teacher, nor of the pupils or the public, but a compromise, and adaptation of theory to practice. When the work was first started we thought we could not possibly get along without an American stove; we had a prejudice in its favor and a prejudice (a very decided one) against the Filipino stove. We thought our opinion of the American stove a reasonable one; really it was not, and when we had had some experience, we knew it was not. But we had to get a cumbersome iron stove into our domestic science kitchen and actually prove ourselves wrong before we would give up the idea. So the trial was made. The stove was installed, and was duly rusted out in three rainy seasons. But long before the first season had passed, we had become convinced of its inadaptability for Filipino homes; and had gone over to the growing ranks of instructors adopting the Filipino stove. The American stove we now use only for an occasional orgy of cake baking.

The habits of life of a people are strongly rooted because they are the slow growth of generations under peculiar social, climatic, and economic conditions. It is not possible to uproot them and plant anew. Only by budding and by developing the new growth in the right direction can lasting results be achieved.

Standardization of Prices.

The pricing of articles fabricated in the public schools has a direct bearing upon the plan to establish in the homes the industries which are taught in the schools. It is evident from the wide disparity of prices of similar articles displayed at the annual industrial and sales exhibits in Manila that little attention has been given to the task of working out a proper basis for pricing the product of the pupils' labor. The controlling factors which determine the cost price of an article are the cost of the materials and the value of the labor. The cost of materials will remain

more or less constant; the cost of labor will vary with the locality and the season.

It should be the aim to fix the price of a school-made article the same as, or less than, the price that an outside worker would receive. If the pupil receives a larger amount he is led to believe that the industry is more remunerative than is actually the case. Especially where the Bureau of Education furnishes the supervision, collects the articles, and transports them to Manila and markets them, the pupil should receive not more than 60 per cent of the amount received after deducting the cost of the material. The balance should be paid in to the municipal or provincial treasury, as the case may be, or it may be turned into a pupils' fund.

Annual Report on Reforms and Changes in Chosen.

The report published under the editorial caption contains a large number of points that must be of value to every industrial teacher whose scope of interest is not limited by his immediate surroundings. The story of how an eastern nation, imbued with a western spirit, is endeavoring to effect changes and reforms in one of the oldest nations in the world contains lessons of unusual interest to all who are engaged in the uplifting of these Islands. Especially interesting is the fact that Japan, the younger nation, received practically all of her own arts, up to the time of the influence of western civilization, from Korea, the older, and that she is now endeavoring to restore the worn-out temper of her dependency to something of its former nature.

The establishment of the Japanese protectorate over Korea in 1905 and the later annexation in 1910 gave Japan a number of problems almost identical with those encountered by the American administration of these Islands. A few of the reforms mentioned in the report are of special interest when compared with some of the changes effectively carried out in the Philippines.

A bureau was established for the investigation of old usages so that Japanese institutions might be better grafted upon Korean usages by the use of the knowledge of the customs and habits of the older people. General vaccination for the people was attempted, but the Korean religion proved a stumbling block in the way of vaccinators, owing to the fact that it forbids women or girls to be in the company of men or boys over the age of 7, thus requiring either disregard for the Korean religious beliefs or the training of female vaccinators, which latter course was adopted. In the improvement of weaving, the Japanese felt that it would be fruitless to introduce at once the most

modern Japanese looms, and accordingly devoted their energies to the gradual improvement of the old native loom. However much care was paid to the observations of old usages, however much deference was paid to the Korean religion, and however much judgment was exercised in the gradual change of the native looms, such was not the case with the establishment of the Japanese language, which was made the official language immediately upon annexation. Even the name of Korea was changed to Chosen and the ancient capital of Seoul is now known as Keijo.

Our efforts at forest conservation and of forestation are probably being surpassed by Japan. On one "Arbor Day" alone, in 1911, over 4,000,000 trees were planted, of which 70 per cent were expected to grow. In the matter of cadastral surveys, also, Japan is taking more energetic measures than is our Government. Out of a loan of 16,000,000 yen, an average of 2,000,000 yen per year is being expended upon cadastral surveys which will be completed for the whole peninsula, according to the present rate of progress, by the year 1916.

Japan also found it necessary to reform the currency, putting it upon the Japanese gold-standard basis, the copper cash varying in value from 60 to 100 per cent just as our old Mexican peso had its ups and downs. A number of minor changes had to be made by Japan which correspond closely to some of the reforms necessitated in this country. Among these were the Government recognition of private schools, the Government control of the raising of contributions, the licensing of private surveyors, the regulation of firearms, the establishment of experimental farms, and the sending of experts to give agricultural advice.

Several phases of the report show, however, as great a divergence from our methods as others show similarity. Among these divergent features, it may be noticed that flogging is a punishment for certain misdemeanors, but is confined to Korean offenders only; Japanese offenders escape with a fine. In the matter of education, another large difference will be noted. In a country of 13,090,856 people, there are 17,095 Korean pupils in the public schools, of which number only 1,321 are female. Out of the 171,543 Japanese living in the country, 9,252 Japanese boys and 8,012 girls are in school.

To the student of the administration of dependencies, no more fascinating study is open than that of the comparison between the conditions in Korea and those in the Philippines, and between the efforts made by Japan and the United States to improve their respective dependencies.

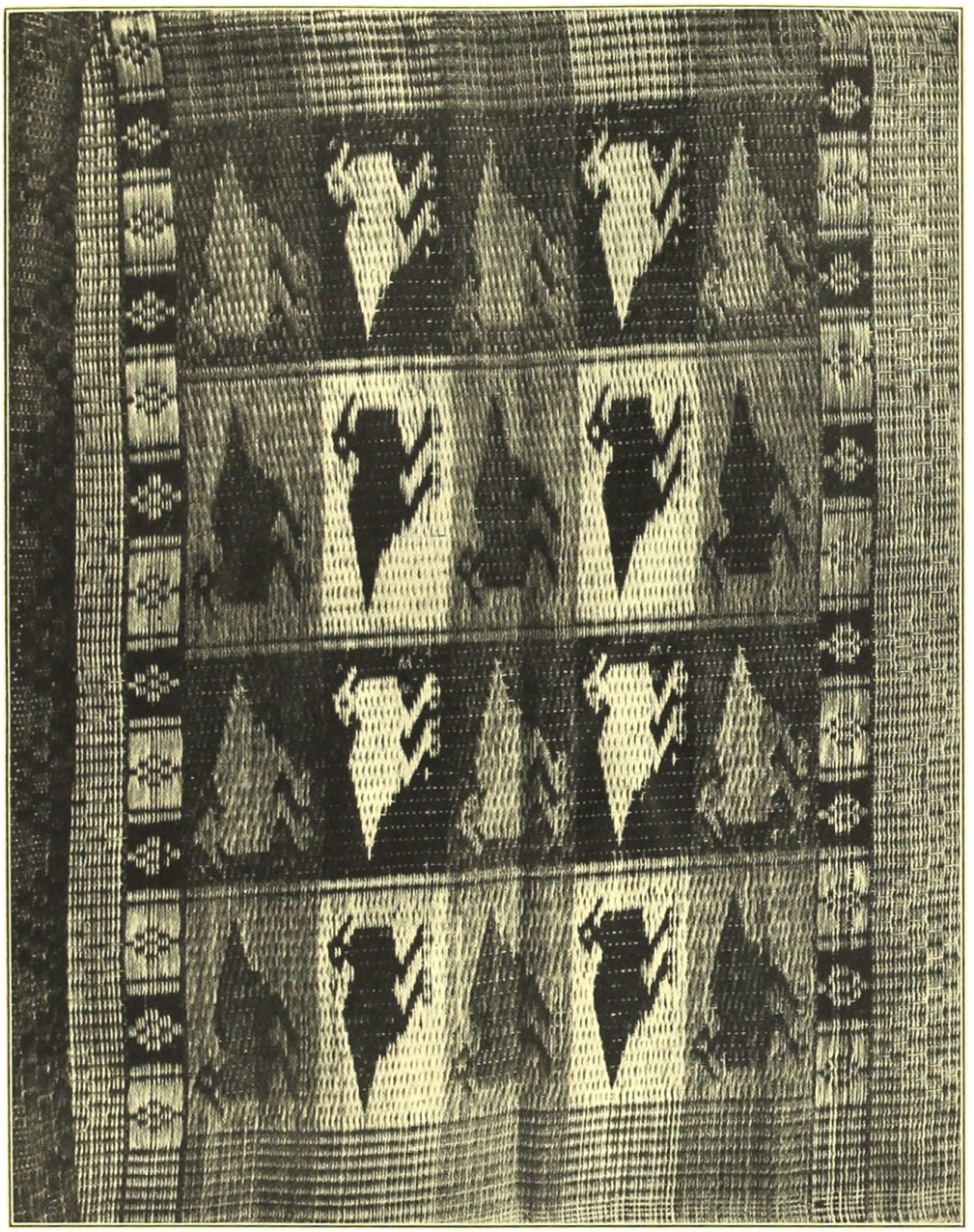

Photo by Commercial Museum, Philadelphia.

Matting of fiber somewhat similar to manila hemp. Siam.

The alternate rows of birdlike figures are similar and the alternate figures in each row are similar. On the top row the first figure is red on a yellow background and the second is a yellow figure on a red background.

The second row shows a black figure woven on white, followed by white on a black background, etc.

The border above and below is black and white and the other borders above and below are red and white.

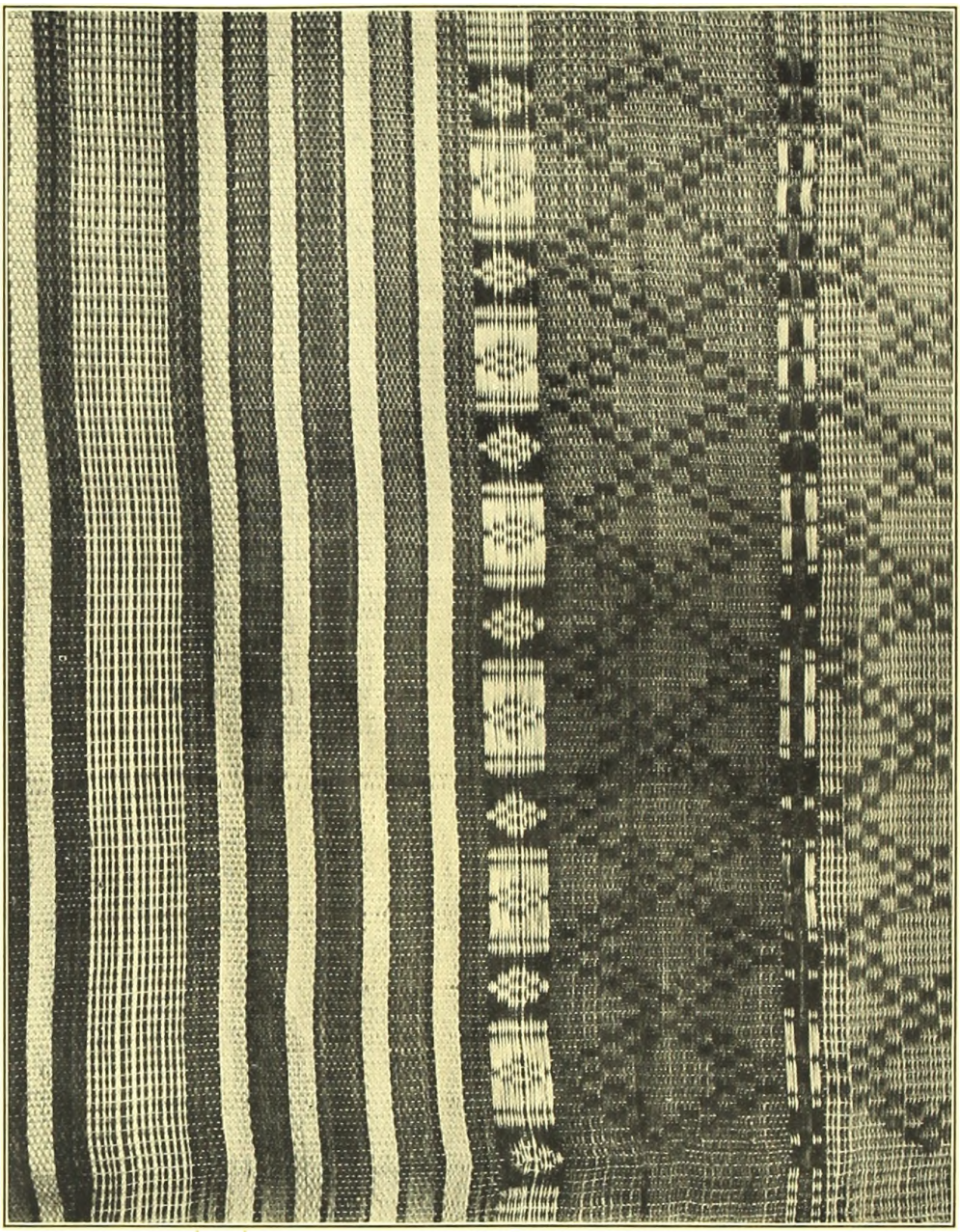

Photo by Commercial Museum, Philadelphia.

Matting of fiber somewhat similar to manila hemp. Siam.

The two wide stripes, one of which is only partly shown, have a red figure—one woven on white, the other on yellow. The stripe between them and the one to the left of the darker one is black and white.

Each alternate stripe of the narrow ones shown is white. The others are really two or three stripes in one—a yellow one, for instance, having a narrow black band above and narrow red band below. One of these stripes, a red one, has a narrow band of yellow above and below and then bordering the yellow bands two narrow black bands which border on the white.

The wider stripe to the left of this series of narrow ones is red and white.

INDUSTRIAL NOTES.

WOMEN WORK IN GERMANY.

Twenty-six per cent of the feminine population of Germany is engaged in some trade or profession, and the number of women wage-earners exceeds the number of men in five groups of trades, such as textile, clothing, laundries, hotels, and restaurants. The wage-earning women in Germany are eligible to membership in trade unions, yet it has been found a very difficult matter to bring them into the folds of unionism, and the number who have joined the various unions is very small. Married women in Germany who hold positions in nearly every calling are numerous. The twelfth census shows that only 769,477 married American women hold positions. (The Furniture Journal.)

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MUNICIPAL SHOPS IN NEGROS.

Of the seven municipal shops now operated in the Province of Oriental Negros, Bais is the only one that has a special house built for shop purposes. The building is of dressed lumbayao, galvanized iron, and concrete. It was constructed by the provincial trade school boys from Dumaguete who were hired by Bais for two weeks and a half during the last long vacation.

Although provided with framing for iron roofing, it was the intention of the school officials to cover the building with nipa roofing for the present. The public protested when all but the roof was completed. And the result was that the municipal officials requested an application from the division superintendent for another appropriation for the purchase of galvanized-iron roofing.

POPULAR CORN DEMONSTRATION AT TAGBILARAN, BOHOL, FRIDAY, OCTOBER 24, 1913.

In spite of a heavy shower that came up unexpectedly at about 9.30 in the morning and threatened to last all day, Tagbilaran celebrated corn day by a corn demonstration that was conceded by all visitors to be the finest exhibit on record for this province.

Booths, built by the pupils of the provincial trade and high schools, lined three sides of a large quadrangle just off of Plaza Rizal, adjoining the church. Decorations of the various booths and the construction and decoration of the pretentious arches at the entrance from the plaza were in charge of the central school. Each of these schools also had special booths for industrial exhibits, the one for the trade school being particularly attractive, although the many excellent articles in the central school section and the embroidery work of the high school proved especially interesting. The corn shellers and grinders, plows, cultivators, and other implements in the Pacific Commercial Company's booth received their share of attention and quite a number of orders were placed. Several local merchants had constructed special booths one of which, a rest booth, was particularly appreciated during the shower. The others were for exhibit or sales, the one erected by the Singer Sewing Machine Company being the most popular. The animal food demonstration with its live exhibit was also interesting. The little house erected for the Bureau of Agriculture was one of the most artistic structures on the grounds, being covered with corn stalks and corncobs, the ceiling being composed of pure white, selected corn cobs

with husks prepared so as to give a flower effect, the whole being set off with red bunting. But the buildings that satisfied the appetite as well as the eye, attracting and holding the attention of the multitude, were the two 30-foot cooking booths, divided into sections for the demonstrators of the dozen different appetizing corn recipes. These were appropriately decorated with palm leaves, corn stalks, and cobs.

The young ladies of the domestic science classes of the high school made a reputation by the excellence of their dishes and their dainty service that can never be lost. The morning's rain took the starch out of their neat little caps and their camisas but dampened their spirits not in the least, and after the rain they went back to the work with renewed ardor and were working long after the sun went down. Fortunately, the site of the demonstration was so located that all of the thousands of people from the surrounding towns who were taking advantage of market day had to pass the grounds and very few were permitted to pass on the outside. Several thousand grown people sampled the various dishes and no one knows how many school children received more than their share. Bohol has always been a corn province but from the remarks of the visitors, it would appear that the excellent food properties of this grain had not been fully appreciated up to date, but that the recipes in the dialect which were distributed would be tried and used in future. The lessons in seed selection, cultivation, and preparation were also of great value.

One of the features of the exhibition was the large Constabulary patrol corn man who stood in a cornfield just in front of the grounds and pointed to a large sign over the main entrance arch which bore the legend "Plant and cultivate your corn." He was otherwise and perhaps better known as "Santo Maiz," he having appeared mysteriously in the dead of night (from the Constabulary barracks). Being made of selected white ears with a stripe of lavender down his trousers he was an attractive individual and created a very favorable impression. The municipal president in his address in which he explained the purpose of the demonstration and the objects of the Bureau of Education in the present corn campaign, stated that on this day the town of Tagbilaran was celebrating a saint's day. It was true, he admitted, that his name was not on the calendar but that was because he was not a dead saint but a live one, who, unlike all the others who presided over the welfare of our souls, had special jurisdiction over our stomachs and had power to make us strong and healthy.

Owing to the absence of the sun during the greater part of the day, it was impossible to secure views of the crowds attending the demonstration within the grounds or of the athletic events of the afternoon.

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JAPANESE BOOK PAPER.

The Japanese paper, which has been found useful in the making of books that would, in case ordinary book paper were used, be too bulky for convenient handling, is a distinct variety, having little in common with the American-made product. It has a strength of fiber that cannot be produced here, and as it is handmade it is much more costly than any other kind. This paper is made from the bark of certain Japanese plants, which is cut up into strips, some of which may be a yard long. These strips are then tied up into bundles and put to soak in a weak

solution of lye, by which they are softened sufficiently to be worked without breaking. The real work of making the paper then begins. The strips of bark are laid flat and separated into fine fibers with a special form of mallet, and this step in the process is so carefully done that the fibers obtained are much longer than those produced in a pulp-making machine. When the fibers have been separated they are spread out on a sieve. By shaking the mass in the sieve the fibers are swelled out and drained of lye. The Japanese do not use the animal glue which is found in American papers and which has such a rank odor, but employ instead a cement obtained from the roots of one of their native plants. When the fibers have been drained and settled down in the sieve and the cement is introduced the pulp is spread on a board with a soft instrument and rubbed down smooth and to the desired thickness—or perhaps thinness would be the better word. The board with its thin coating of pulp is then put out into the sun to dry, and when this has been accomplished the sheet of paper peels off the board as a sheet of remarkably tough paper. The Japanese use this sort of paper instead of window glass. It is also twisted into threads of great strength, which are used in embroidery and other kinds of ornamentation. The native painters, owing to its porousness, find it specially adapted to their colors, and it is unsurpassed for writing on with India ink. (New York Sun.)

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THE SANTO TOMAS, UNION, CORN DEMONSTRATION.

One of the popular corn demonstrations which are being held in all parts of the Philippines as a part of the present corn campaign was made a special day of interest in the town of Santo Tomas, Union, on October 12, 1913. In general the work was carried out in the same manner as similar work in other towns. Many interesting things were shown but the largest amount of interest was centered on the hand corn mill for preparing corn meal. The use of this mill was demonstrated in a separate booth which was at all times surrounded by a dense crowd anxious to see the mill at work.

In large open booths where the people could observe all the processes of preparing foods, the school girls prepared and served 1,000 people with samples of hominy, mush, and johnny

Crowd at the johnny cake booth, Santo Tomas, Union, October 12, 1913.

cake. The last named was the most popular of all foods as is seen by the illustration showing the people packed around the booth. The amusement features consisted of fat and thin men in comic costumes and placarded "I eat corn" and "I eat rice." (N. H. F.)

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COOKING AND PLAIN SEWING IN TAYABAS.

In the annual reports of the Director of Education for the past few years there are to be found figures indicating the number of pupils engaged in the various lines of industrial work. These figures are of interest and value as showing the

trend of industrial instruction in Philippine schools and the relative importance of its various phases in the different divisions. A report from the Division of Tayabas of October 30, 1913, contains some recent and enlightening information on this subject. The fact that is particularly worthy of note in the accompanying table is the increase of pupils receiving instruction in cooking and plain sewing. The distribution for the division is reported as follows:

Cooking	456
Plain sewing	2,525
Embroidery	309
Irish crochet	107
Lace	44
Hats	149
Tatting	153
Drawn work	12

The division industrial supervisor also adds the following comment in this connection:

"Every girl in the schools has been doing work in plain sewing and by the end of the school year will have completed the work in plain sewing which is outlined for her grade in Bulletin 53.

"In order to avoid the use of recipes which were not appropriate for school use, a definite list of recipes was sent out to every teacher of cooking. Each girl is expected to prepare fifteen of these recipes and by the end of the year be perfectly familiar with them.

"In this province there is still a great need for teachers who have been trained to teach girls' industrial work. The teachers are as a rule doing better work than they did last year and the work produced this year will be in advance of that done last year."

THE BUTUAN CORN DEMONSTRATION.

The first popular corn demonstration in the Province of Agusan was held on November 1, 1913, at Butuan, the capital of the province. The success was shown by the crowd which was very much interested in the best methods of growing, harvesting, storing, and preparing corn for food.

The day of the demonstration began with a civic corn procession at 8 o'clock in the morning. The king of all corn, riding on horseback, led the procession. Just behind came the queen of corn guarded by boys with corn stalks. There were floats contributed by the municipal and provincial governments and by the division superintendent's office. The last named was the most interesting of the three floats.

After the procession, speeches explaining the object of the demonstration were made. Eleven booths, decorated with corn, were erected in the plaza, for demonstrating selection of seed corn, testing seed corn, preparing land for corn, planting corn, cultivating corn, cross breeding of corn, corn pests, and preparing palatable dishes of corn. About 1,000 people were present. Among these were Judge and Mrs. Weissenhagen, Governor Bryant, Fiscal Tuazon, and Justice of the Peace Tionko from Surigao.

The demonstration was followed by popular games. The most interesting one was the corn-eating contest. In the afternoon there was a baseball game between teams representing Cabadbaran and Butuan central schools. In the evening a dance was given in the central school building. In this manner the Butuan corn demonstration was made a pleasant and profitable day for the people. (José C. Orteza.)

No. 7.—Back Cover Design.