

AGRICULTURAL.

Preserving Eggs.

A. H. Keane, London, England, writes that a trial shipment of eggs from Victoria, made by the Honorable J. H. Conner, was quite recently inspected by an officer from the department of the Agent-General for Victoria in London. With regard to the packing of the eggs they had, in the first place, been rubbed over with grease, and afterward placed with bran, flour, lime and meal in small cases. This method of packing has proved itself to be a decided success, for when the cases were opened, the eggs were found to be perfectly fresh and sweet, while there was an entire absence of all musty effluvia, or of sweating.

The Value of Surface Drains.

Immediately after the heavy spring rains many a farmer will see where he ought to have opened ditches last fall. He will also note the utter uselessness of the little single furrow ditches opened by the plow.



FIG. 1. FAULTY SURFACE DRAIN.

The ridge of earth thrown up on one side prevents the water from entering the furrow (Fig. 1). It is not only a miserably poor drain on level land, but it is also a ridge and a gully, which shatters machinery passing over it. The sensible farmer makes his shallow drains in the form shown in Fig. 2. A machine to do this is shown in Fig. 3. This is a simple, homemade implement, but its value for opening shallow drains can hardly be overestimated.

This drain plow or ditcher is made of two oak planks twelve inches wide, the farther side, as shown in the sketch, runs straight with the pole, while this side sets at an angle with it. The point is shod with iron, and the top is covered with boards firmly nailed on. There is a brace across the center, under the boards, to stiffen the sides and make the implement stronger. The dotted line shows where it is placed. The driver stands on the boards, and by changing his position can change the character of the drain he is making. By standing near the front he forces the nose of the ditcher down into the soil and makes a narrow drain. When following a furrow opened by a plow he stands near the farther or straight side and holds it down to the bottom of the furrow, doing the same as he returns. This makes a drain like that shown in Fig. 2, and a harrow follows after, leveling the ridges raised. A skillful operator will soon learn where to throw his weight to make any sort of a drain desired. The spring rains are not over when oats are sown, and it is advisable to open drains for possible floods that may drown out



FIG. 2. PROPERLY MADE SURFACE DRAIN.

much of the crop. If they are opened with this implement there is no danger of shattering harvesting machinery in crossing them. If the soil is likely to wash badly along such drains they should be opened wide, and not less than a foot deep, and heavily sown with grass seed, and then not plowed any more. It is far better to have a strip of grass extending across a cultivated field than to have an impassable gully. If the land is sown to permanent meadow or pasture these drains should be made at the time of such sowing. No variety of grass is benefited by having water cover it for a week.

Just before a field is planted to corn, it is a good idea to open these shallow drains along all the low places. I have seen the soil in prime condition and the weather all that could be desired until the corn was planted, and then a flood came and acres of the corn rotted just for the lack of a few shallow, open ditches to carry off the water quickly. It pays to be prepared at all times for floods. When the water has a chance to flow off freely the soil is fit to work a week to ten days sooner than where it is compelled to slowly flow over level ground. In fact, a shallow, open ditch is sometimes the difference between a good crop and none at all. In an experience extending over twenty-five years, I have not seen more than three or four seasons when the opening of surface drains was labor lost. But I have many a time seen acres and acres of wheat, oats and corn flooded and drowned out just for the lack of a few such drains. It pays to open them every time a crop is planted, whether it be

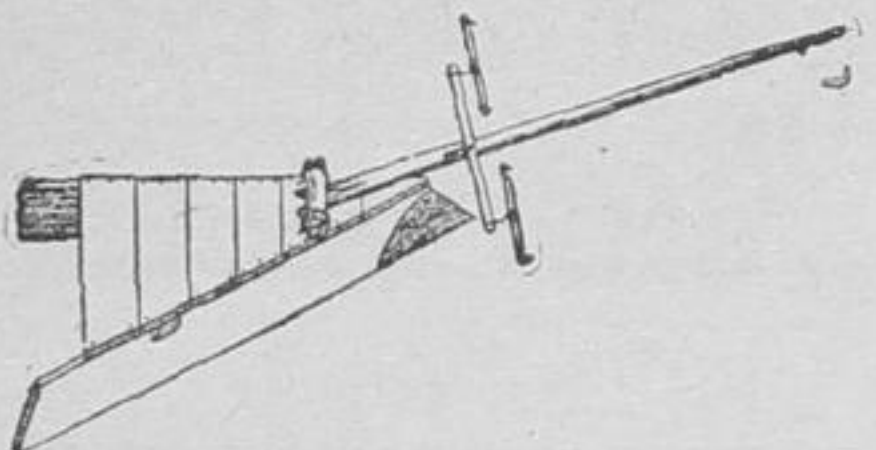


FIG. 3. SURFACE DRAIN PLOW.

winter wheat, grass or corn. And with the implement shown in the sketch, and a smoothing harrow, it can be done quickly.

To make a good permanent drain, plow two furrows four feet apart, throwing the soil outward. Follow with the ditcher, running the nose or prow along the bottom of the furrows. Continue to plow and scrape until the center is reached. Then if any part of the drain needs to be deeper, plow as before, only nearer the center of the drain, and scrape out with the ditcher. Run along the outer edge of the ridges thrown up with both plow and ditcher and continue until the edges of the ditch are reached. This will move all the loose soil farther away from the ditch, and also level it down more. Finish leveling with a smoothing board or plank clod crusher. Two men with teams, can quickly open a wide, shallow drain that will remain a drain for years, unless filled by plowing.

Cultivating Orchards.

By all means cultivate the soil about the fruit trees, whether they have been recently set or are in full bearing. Apple trees that are set forty feet apart can have hoed crops raised between the rows for eight or ten years after being set, providing the fertility of the soil is maintained, or rather increased, by the yearly application of commercial,

or homemade fertilizers. The yearly growth of trees takes considerable fertility from the soil, the older the trees, the greater the amount required, and with heavy crops of fruit the drain is still greater and the loss of fertility should be made up in some manner, either by direct application or the growth of clover or peas to be plowed under. Many orchards are left in grass for several years. It is thus more pleasant to gather the crops, and the standard fruits which fall are not usually so badly bruised. When in sod, pasturing is far preferable to mowing. The fallen fruit is then eaten by the stock. But the sod affords a breeding place for insects. The most successful fruit growers are those who practice cultivation until the tree comes into bearing, and then do not allow the land to remain in sod more than one year at a time. Of late years the prevalence of insects, fungous and other diseases and pests has made it quite necessary to give the fruit tree as much observation as the stock at pasture.

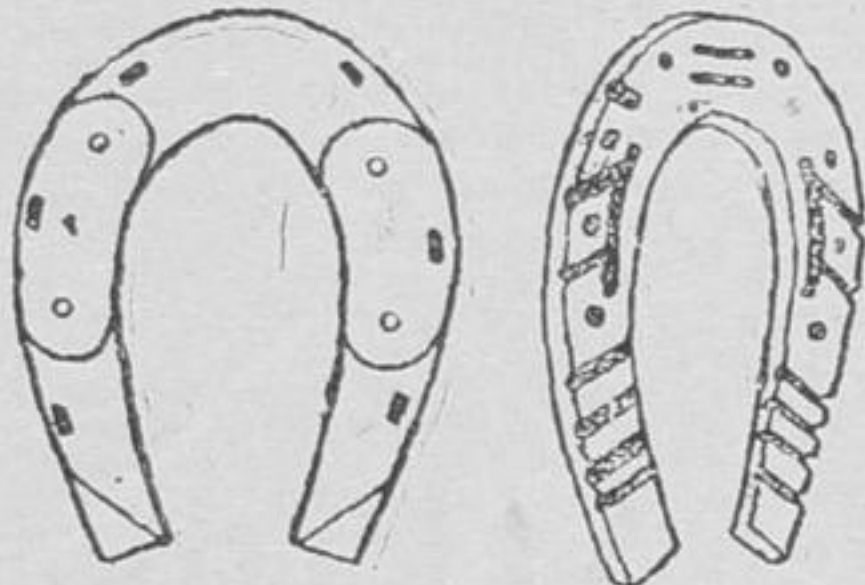
Keeping up with the Farm Work.

The successful farmer is the only one who keeps up with his work. In the spring the teams have been driven and engaged in other work that their shoulders may be hardened and ready for the arduous labor of plowing and similar work. Implements are ready for instant service. The seed grain is all thoroughly cleaned and put away for seed time. The fences that may have become dilapidated or out of order during the winter, are placed in proper condition so that when stock are turned into the field, they do not have the range of the entire premises. The corn is kept free from weeds, and at haying time work is commenced promptly and the work is pushed also at harvest. The first field of grain for the harvest is cut when hardly ripe, but the juices contained in the straw will fully develop the kernels. The next field is cut at just the right time, and the harvest is finished before any is lost by over-ripeness. Thus all the work has progressed, while an easy-going neighbor on the same sized farm with the same amount of help is always behind with his work, and there is a continual direct and indirect loss from one year's end to the other.

NEW HORSESHOES.

Two Novel Ideas Which Were Recently Patented.

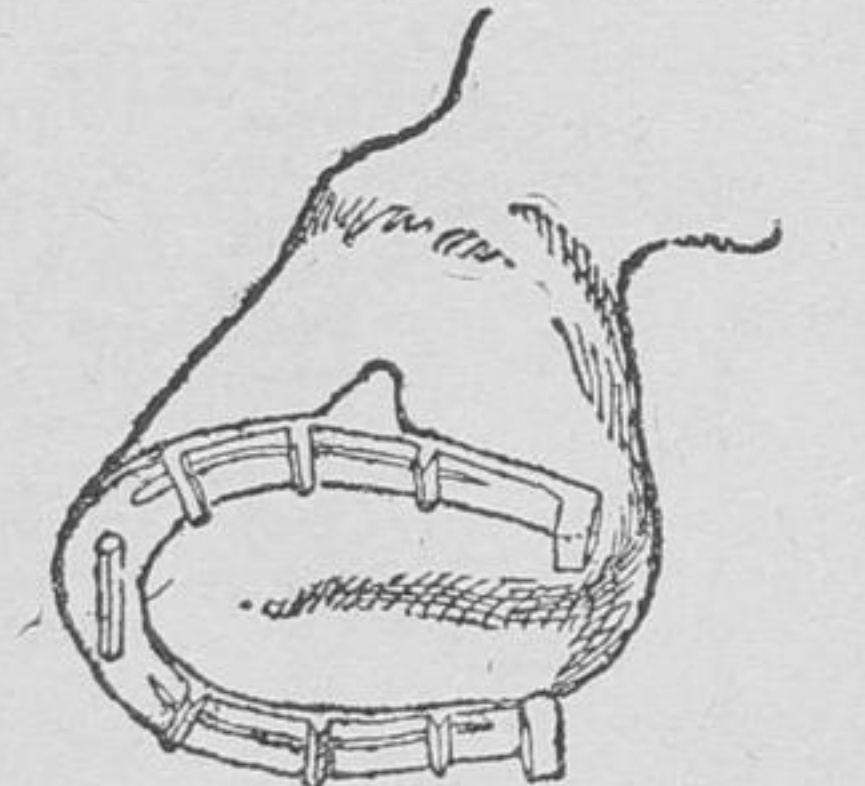
Some new ideas in horseshoes are shown below. The first consists of a combination of a metallic base portion made up of two or more sections pivoted together with two free ends tapering as described and a rubber shoe vulcanized to the lower or calked surface of the metallic portion, apertures



HORSESHOES OF METAL AND RUBBER.

in the rubber portion for the reception of the calks nail holes which register with holes in the metallic portions. This compound shoe is capable of adjustment to hoofs of different sizes.

The other consists of a shoe designed principally to give the horse a surer footing than is generally secured.



TO GET A FIRMER FOOTHOLD.

Besides the usual toe-and-heel calks, this shoe is supplied with a plurality of wedge-shaped side calks, which are so placed that it is impossible for foreign matter to lodge between them.

French Shepherds on Stilts.

On the barren, sandy "Landes" in the south of France, the sheep and pigs do not live in clover, nor does the shepherd fare luxuriously. The people are full of queer notions. They assert that potatoes cause apoplexy, that milk is unhealthy, that wheat bread spoils the stomach, and that onions, garlic and rye bread a week old, in their country, is the best and most healthy diet. The shepherds walk on stilts, eat on stilts, and if they do not sleep on stilts, they rest on stilts for hours together by



LANDES SHEPHERDS AND THEIR FLOCKS.

means of a stilt rest. This is a long, stilt-like stick, having a crescentic curve at the top to fit the back. Thus with the stilts stretched out to right and left, and this stick in the rear, they are well braced. The stilt-walkers manage to go through the deep and shifting sands at the rate of six or seven miles an hour. The dress of the shepherd is rough and quaint. He wears a sheepskin with the wool on, in form of a loose hooded coat.

WHY AUSTRALIA SLUMPED

SHE PROSPERED SO LONG THAT HER BOOM SWELLED TO BURSTING.

Enjoyed by Gold Diggings, Sheep, Immigration, and Good Credit She Got Conceited and Overdid Things—18 Months Ago Came the Collapse—Now She Is Recovering.

Economists and theorists of every kind and in every place have been searching for the reason of the remarkable collapse, the commercial, financial, and general disaster, which overtook and almost overwhelmed Australia a year and a half ago, and many and ingenious have been the explanations offered. The tremendous slump which occurred in this country was perhaps the most remarkable of economic events in recent times.

From the time of the first rush of the gold-seekers to this continent until two years ago, clear up to the moment of the collapse, the country has been regarded, at least by the British people, as a veritable commercial and social Utopia. The manner in which some of the greatest economic problems of the times and the most difficult sociologic questions were taken up by the colonial governments and the people, and apparently set in the line of solution and settlement off hand, was a source of wonder and admiration, and England was wont to regard her Australian colonies as marvels of rapid yet perfectly sound development. When the sudden crash and collapse came, which shook the whole fabric of the colonies to the foundations, and brought such almost universal conditions of ruin, not only England, but the whole world was astounded.

In the past year or so Australia has been more than ever prominent, but it has been principally because of her broken banks, her armies of unemployed, her decreasing revenues and her diminishing population. The searchers for explanations of the collapse have mostly been led astray by its magnitude to imagine that the causes have been intricate and manifold, and Australians have read with melancholy amusement the learned disquisitions on the economics of the situation which have reached them from the press of the world. The real explanation is simple enough, and it is frankly offered by the *Argus* of Melbourne, after a mournful survey of the state of affairs to-day and a look back over the course of events of the past few years. Australia simply "overdid it." This has been the especial folly of the Australians, in every one of the colonies. They "overdid it" as individuals, as commercial concerns, and as communities. The big mansions of the cities, built fit for princes, are standing empty. Their former owners "overdid it," and are now living in frame houses in the less fashionable quarters. The banks over-borrowed, the companies over-constructed, the Government over-estimated, and the country overreached itself. That to borrow money or the development of the new country was good policy needed no demonstration. The country's credit was excellent, and loans were easily obtained. But it was overdone. The Government and individual enthusiasts flooded the country with loans, and the country is now struggling hard to pay the interest on an excessive importation of capital.

Australians thought one of their world-missions was to show how irrigation would make their arid deserts blossom as the rose. Irrigation was a good thing, undoubtedly. But they overdid it. The Governments took up the subject with reckless enthusiasm and set out "to do in a year what could only be done in a generation, and to achieve in a generation, what could only be accomplished in a century." Borrowed money was lavishly spent in vast irrigation works and the whole area of arid Australia was taken in hand at once. Works were projected and begun that might possibly be made profitable when the population doubled or quadrupled. There was an expensive haste followed by disappointment and heavy loss. The farmers had to pay taxes for irrigation before there was any prospect of benefit from the schemes. Then the water trusts found themselves unable to meet their obligations, and the collapse came. The people, as individuals, overdid everything. They jumped into every new scheme with an enthusiasm which unflinchingly swamped them. There was a silver mining craze, and everybody wanted shares in mines. The market for the scrip went up to an enormous figure of purely artificial value. Every share was thought to represent a fortune. But the inevitable slump came.

Then real estate became the universal craze, and every one who had money invested it in land. Values were inflated tremendously, and in this craze the working people were perhaps more involved than in any other. Of course the inevitable collapse came here, too, and many thousands of Australian artisans are dearly paying the piper now. The cities overdid it as bad as did the general governments and the individuals. Docks and wharves were built here that would accommodate the whole commerce of Australia, and dry docks big enough for a navy. In fifty years sufficient commerce developed in this port to find use for the accommodation already provided. It would be a notable growth. Millions of money were spent providing for a superb future, and the necessity of provision for meeting present requirements of interest on the money thus spent was overlooked. Heavy tariff and port charges were imposed, but no one seemed to see the inconsistency of providing splendid accommodation for commerce and then taxing commerce so high it would not come to the port.

Melbourne became unique on account of its tariff and its shipping accommodations. Both matters were sadly overdone. Everything about the city was considered and handled on the same grand scale. Plans for sewerage for the city were made, based on the idea that the population of the city would be doubled in a decade or so. It was overdone. The market accommodation

became inadequate. Gorgeous new markets were promptly built large enough for a city at least twice Melbourne's present size. The expenditures were so great that merchants cannot now afford to pay the rents required to meet the interest on the money spent in building the markets. There seemed to be a fever abroad that blinded people to what they now see was the simple logic of the way they were doing things.

The fever seems to have passed now, but it has left a terrible weakness behind, and it will take Australia a long time to recover from what was for so long the especial folly of the country, the folly of "overdoing things." During last year every colony suffered a decrease of revenue, and the population had a smaller increase than in any year since the development of the country began. Thousands of people have left the colonies, and in some there has been a practical loss of population. There are still many thousands of unemployed, and the prospects for the coming antipodean winter are not bright. But it is believed the worst is past. There has been a return to common sense principles, and Australians are hopefully looking forward to a speedy return of prosperity. But it is pretty certain they want no more booms.

AUSTRALIAN CHEESE.

Her Initial Shipment has Reached London and is Described as Excellent.

Canadian producers and exporters of cheese will note with some interest that Victoria, one of the Australian colonies, is now reaching out for a share of the British demand for that staple. Her initial shipment, some fourteen hundred cases, has reached London and been sold at prices quite on a par with, in some cases above, those ruling for Canadian. The quality and condition are described as excellent. Of course, being new cheese and arriving at a time of year when the stock of Canadian on the market was run low, it would have advantages, aside from its merits, that it would not have later in the season. Victoria is no laggard in trade, as she has shown by the rapid development of her butter exports to Great Britain, where she had strong competition and conservative ideas to make head against. Now that her export trade in butter can stand on its own legs, the Government has turned its attention to fostering an export trade in cheese. The butter bounty is withdrawn, and instead of it a bounty of 6s. per cwt. is allowed on all cheese sold abroad at a figure above 50s. Several new factories have been started, and it looks as if the colony would soon be a lively competitor of other cheese-exporting countries. The fact that its make will come earlier on the market than Canadian or United States cheese must count in its favor. Whether it proves to be better or worse, more or less saleable than the makes that are now imported into England, it is pretty certain ultimately to pull down the price. Canada has won a reputation and a foremost place for its cheese in the British market, in the face of keen competition, by sheer superiority, and will have to depend on the same title to hold her advantage against all comers. She can keep herself from being displaced if she cannot prevent prices descending.

The English Coal Barons.

The aggregate gross rental of the coal mines in England and Wales only amounts to £3,601,836 for the year 1889, or about 8 per cent. of the selling price at the place of production. It has been asserted that these rentals are grossly undervalued in certain of the north country mines; but, accepting the Government returns as approximately correct, the amount which goes to the landowners in the shape of dead rent, royalties, and way leaves, is, at the lowest computation, 15 per cent. of the selling price at the place of production. In his evidence before the Royal Commission, Sir Lowthian Bell stated that the royalty alone on iron ore amounts to 10 per cent. of the gross price of the manufactured article, and he added that, in the present depressed state of the iron trade, it was entirely impossible not only to make any profits, but even to pay working expenses.

Numerous proofs of this statement might be given, but I will content myself with one instance only, that of the Barrow Hematite Steel Company. "It has a share capital," writes Mr. Morrison Davidson, "of £2,000,000. For years not a penny was paid in dividends. Three noble Lords—Devonshire, Buccleuch, and Muncaster—divide between them both the site of the town and the minerals under and around it. They receive from the company as their dues, £125,000 per annum, while the numerous "hands" who swelter at the furnaces have to content themselves with an aggregate of £63,000 a year. In addition to this, the "hands" pay the rates, while the three aristocratic Brahmins get off scot-free."

The First Derby.

The first race for the English Derby was run on Thursday, May 4, 1780, and the conditions were thus set forth on the card:—"The Derby Stakes of fifty guineas each, h. ft., by three-year-olds, colts 8st., fillies 7st. 11 lb. The last mile of the course." The subscribers numbered thirty-six, nine of these came to the post, and victory rested with Sir Charles Bunbursy, Diomed who started first favorite at six to four against. Two years later a further condition was added, to the effect that the second should receive £100 out of the stakes. Since the first race there have been several alterations in the conditions. In 1838 the day of the race was altered permanently to Wednesday, having previously been run on Thursday, except in 1786. Probably the crowd who witnessed the first Derby in 1780 was not one-thousandth part the size of that which foregathered on Epsom Downs to-day; and it is somewhat interesting to learn that in 1826—forty-six years after the race was established—the number of spectators was estimated at 60,000. In these days anything like a proper estimate is, of course, quite out of the question, but it is more than likely that during the last decade the people present on the Derby day have been nearer 1,000,000 than 500,000.

Injustice.

Mr. Richello—"What a peachy complexion Miss Beuti has!"
Rival Belle—"You do her injustice, really, Mr. Richello. Her face isn't so very fuzzy—except on her upper lip."

THE SMALL-POX AT CHICAGO.

Why the Disease Was Enabled to Fasten on the City—Carelessness in Regard to Vaccination.

It is apt to strike most people that Chicago takes a long time to stamp out the small-pox. The reason is, according to an accusation of the Evening Post of that city, that isolation is far from strictly enforced. Plumbers and other workmen are allowed in and out to do odd jobs at the pest-house, and precautions are not always taken to have them change or fumigate the clothes they work in. Some of these men, boarders and lodgers in crowded houses, have been stricken with the disease, and each of their cases becomes a new centre of infection. Thus it was that the disease was enabled to fasten on the west side, where its progress has been assisted by the pains taken by family physicians to prevent the city authorities from learning what was the matter with their patients. The reason for this care was the loathing that patients have of the pest-house, which appears to be an abominable place. Health officers neglect their duty, and new cases multiply under their perfunctory inspection. Even in regard to vaccination there has been great carelessness. In these circumstances it is alarming, though not surprising, that small-pox is on the increase. A great and usually healthy city like Chicago might be expected to make short work of the disease in its incipient stage. The city as vital point in the commercial and railway system of the country. From such a centre the plague might be easily radiated in all directions over the continent, if prompt and effective measures for its repression were not resorted to. Times are not too bright in Chicago. It is likely to be the centre of the coal famine, which the great strike at the mines is rapidly bringing about. Two of the building trades have been meditating a strike, and it looks as if another railway strike were impending. Neither the present situation nor the immediate prospect of industry in Chicago is cheering. In such circumstances a considerable outward movement of labor is to be expected. People out of employment will leave Chicago to seek work elsewhere. Among the idle ones there can hardly fail to be a considerable number of the many Canadians who live in that city. Some of these may make their way homeward. It is, therefore, of the greatest importance to this country that Chicago should confine the small-pox to strictly-guarded limits. The Commonwealth army, which draws a contingent from Chicago, in dread in the United States on account of the danger that it will spread the small-pox over the whole country. New York dealt much more promptly with the small-pox than Chicago has done.

A Munificent Giver.

In her warm admiration of the Anglican Church the Baroness Bardett-Coutts has founded the Bishoprics of Adelaide in Australia, British Columbia in North America, and Cape Town in South Africa. Her contributions to one of these Dioceses were £15,000 for the Bishopric, and £35,000 toward the support of the clergy, making a sum equal to a quarter of a million dollars. This is exclusive of other large and liberal gifts to other sections of the Colonial British Church.

But she has been equally liberal in assisting the work of the Church of England at home. At Carlisle, she erected a handsome edifice, seating about 700 people, to accommodate a congregation formerly worshipping in a disused warehouse; and at Westminster, the Church of St. Stephen's, with all its adjuncts of schools and institute, was put up entirely at her own cost, and stands as a lasting monument, not only of her generosity, but also of her practical forethought for all the needs of the congregation, young and old. The buildings were commenced in 1847, and the consecration took place in 1850. The actual cost was close upon £100,000. From then till now, the Baroness has entirely supplied the working expenses, no small item when one considers the manifold branches emanating from this centre of active Christianity. No wants are overlooked; from the tiniest toddler in the infant-class to the gray-haired worshiper at the beautiful services, some organization embraces their needs. Clubs, guilds, classes, friendly societies, district visiting, etc., are all in active operation, and, in addition, a Self-help Club, which deserves more than passing mention. Established at a comparatively recent date on co-operative principles, it can now show a working capital of upwards of £2,000. Of the success of the schools it is impossible to give an adequate idea, for facts and figures fail to convey a thorough grasp of the real benefit conferred upon, literally, thousands of a rising generation. Upwards of fifteen thousand boys and girls have, in these schools, been properly trained for their future position in the world.

Eastern Metal Work.

It is one of the unexplained mysteries of Asia that the achievements of its best metal workers, so long as their work is useless, should be completely beyond rivalry. We can understand this as regards the setting of precious stones, for, as we once said before, many years ago, the instinct of a Southern Asiatic living in wonderful sunlight, is to blend the bright colors he works in till they do not hurt the eye. Consequently the enameler of Jeyapore, though he uses flakes of ruby and emerald, produces a surface which looks, even in sunlight, absolutely cool.

But what helps him or a Japanese, or even a Turk, if a Sultana has given the order to make a gold or silver ornament which the West can only gaze at in defeated admiration, is still a problem not completely solved. The Asiatic does not know anything particular about gold and silver; he has no tools except pinners and a hammer; and he has not the power of producing intense heat, yet he will do things with the metals which his European brother cannot do with all his appliances and skill.

No doubt, if he is a hereditary workman, something has passed into his fingers which cannot be acquired by a new competitor, and he has the advantage of remembering patterns originally designed by the men of genius, who are apt, at intervals perhaps of centuries, to crop up in the artist families; but is that the whole matter? We doubt it greatly and believe that there is an Asiatic "taste," or instinct, for the beautiful, which is as true in its way as the instinct of Athenian sculptor or Florentine wielder of the brush.