o'clock, to read a chapter in the Bible which was placed in the window. Every morning, when the shop was opened, a fresh leaf was turned over, and shortly after the girl would come. She did not, like most others stare at the foreign editions, but immediately went to her own book, read through the page and went away. This lasted for about three months.—Latterly we have not seen her. She may have been taken off by the Cholera, which has been violent also in Cologne. Perhaps we shall find the sequel to this simple story in a better world."

POVERTY AND OPIUM.

The same distress and poverty which, in our country, follow excessive rum-drinking, follow the use of opium in China. This drug does a fearful work in a short time. A missionary of the American Board at Shanghai, China, describes under a late date the effects now being produced by opium in that portion of China where he labors. He thus writes:

There is abroad in the land, at this moment, a good deal of distress;—distress caused partly by famine, and partly by the intemperate use of opium. Of this drug there are coming to China, this year, seventy thousand chests, of one hundred and thirty pounds each, and to be sold to the people at a sum total of not less than thirty-five millions of dollars. Thousands, nay, tens of thousands, are falling by this poison, worse than the Bohan Upas. Almost every day, as I pass through the city, I see its victims dying or dead in the streets.—Most of these are men, between the ages of twenty and thirty-five. In some of the neighboring towns and cities many, and a few in Shanghai, are dying of hunger. The crops of grain, over all the plains of Kiang-nan, were much injured last year by inundations. In the northern provinces, too, there was but a poor harvest of bread stuffs, and the winter has been long and severe. There is probably grain enough in the empire to supply all, could it be equally distributed. But the means of transportation are inadequate. The number of poor who are now suffering in the district of Shanghai, is said to be two hundred. To these the public granaries are being opened, and large contributions are made for food.—Only a few rods from our own door, there are collected, in one group, two thousand children, all under the age of ten years, and furnished with food by the government. Foreigners are contributing generously to aid in these charities.

Phosphorescence of the Sea.

The phosphorescence of the sea, or that condition called by fishermen *briny*, when the surface, being struck by an oar, or the paddle wheels of a steamer, gives out large quantities of light, has been ateributed to the presence of myriads of minute insects which have the power of emitting light when irritated.—The night-shining nereis emits a light of great brilliancy, as do several kinds of molusca.—The nereides attach themselves to the scales of fishes, and thus frequently render them exceedingly luminous. Some of the crustaceæ possess the same remarkable property; twelve different species of the *cancer* were taken up by the naturalists of the Zoire in the Gulf of Guinea. The *cancer fulgens*, discovered by Sir Joseph Banks, is enabled to illuminate its whole body, and emits vivid flashes of light. Many of the medusæ also exhibit powerful phosphorescence. These noctilucous creatures are, many of them, exceedingly minute, several thousands being found in a tea-cup of sea-water. They float near the surface in countless myriads, and when disturbed they give out brilliant scintillations, often leaving a train of light behind them. By microscopic examination no other fact has been elicited than that these minute beings contain a fluid which, when squeezed out, leaves a line of light upon the surface of the water. The appearance of these creatures is almost invariably on the eve of some change of weather, which would lead us to suppose that their luminous phenomena must be connected with electrical excitation.

Envelop Machine.

We have been favored with an inspection of a newly-invented envelop-machine, patented by Remond, which is now being made at the Atlas Works (Messrs. Sharpe & Co.'s,) Oxford-street. It is small and of simple construction, consisting of a "carrier," with a "plunger" and "folding-box," which has on one side a stamper, continually supplied with colouring matter, and on the other a plain bit of wood, covered with felt, and supplied with gum. The whole is worked by means of bellows. In working, the paper, which has already been shaped by a die, is placed on the "carrier," from which it is immediately taken off by a powerful aspiration from the bellows, and carried forward to the "folding-box," when the "plunger" drops on it and squares it, the "stamper" and "gummer" on either side dropping simultaneously on the edges. By another operation these edges are blown down, and the envelop, now gummed and stamped, is thrown off by the machine by a side-opening. The machine is worked by steam, and is capable, we believe, of throwing off from fifty to sixty envelops per minute.—*Manchester Examiner.*

Uses of Gutta Percha.

Gentlemen's hats and the coverings of umbrellas are now made in London of gutta percha. The *Athenæum* says:—"But this is apparently only a beginning. Last week a sailing yacht built of this substance was exhibited on the Serpentine in Hyde Park which it was said could neither be sunk nor overturned. Various experiments were tried,—all with success. The boat sailed equally well full of water or empty! An attempt made to capsize her failed. We must add, that she was built on the life-boat principle, and was provided with air-cells, which enabled her to float and make fair way even when full of water and carrying her cargo besides. The plan on which she is built is claimed as a new invention, which has been registered under the copyright of designs act.

Extemporaneous Safety Float.

Perhaps one of the readiest and simplest floats, in such a case of shipwreck as that of the Orion, may be formed in an instant by any one with a hat. Take a pocket-handkerchief (or towel,) place the hat on its crown in the centre of the handkerchief, gather up the corners and tie them together over the centre of the opening of the hat, and a life-buoy is at once completed. All the precaution required is to take care and keep the crown of the hat upwards, and hold on by the knotted portions of the envelope. It will support a weight of twenty pounds, much more than would be sufficient to sustain a person's head and shoulders above water. But should the hat accidentally get filled, it can easily be emptied in an instant, and replaced in the water with the open end downwards.—*Newark Adv.*

The Farm.

ABOUT THE CATERPILLAR.

Of all the insect depredators, which prey upon the vegetable kingdom, none, perhaps, is more universally destructive than the caterpillar. In voracity they are scarcely exceeded by the locust, while they probably exceed them in power of increase—each female caterpillar producing annually from one to five hundred eggs. "It has been estimated," says a recent entomological writer, "that one thousand butterflies will on an average, in favorable seasons, produce from two hundred and fifty to three hundred thousand, and six thonsand seven hundred and fifty millions to the third generation!" As the principal portion of the food requisite to sustain this enormous mass of insect life is derived from the vegetable kingdom, and mostly from those departments of it which are of value to mankind, the injury they produce is almost beyond the power of calculation. There are some caterpillars, however, that subsist by devouring the solid substance of trees and shrubs; others find their common aliment in the pith of plants, while a third class restrict their ravages exclusively to seeds and grains. There is, also, a species of caterpillar which often attacks and destroys furs and woollen fabrics, and are not unfrequently very destructive to feathers. We sometimes find leather perforated by them, and even detect them in flour, wax, meat, and lard; all of which are voraciously consumed by caterpillars of particular species, and at particular stages of their developement and growth. The form of the caterpillar, though various, is always more or less cylindrical.

Their heads are covered with an indurated or shelly helmet, and their bodies are composed of twelve wings, and provided with from fourteen to sixteen legs, the first three pairs of which the microscope discovers to be an extremely hard and shelly skin, supplied with several joints of a tapering conformation, and armed with minute claws; the remainder are solid and more cumbrous, unprovided with any regular joints, yet contractible, and endued with considerable elasticity, and presenting at their extremity a system of minute tubercles, or hooks.

They are well provided with visual organs, having no less than eight eyes on each side. Their jaws open sidewise, and they have two distinct antennæ, or feelers. The apparatus for the construction of the extremely delicate silken or arenulous web in which they envelop themselves, is located near the centre of the lower lip or mandible, and consists of a minute conical tube connecting with two bags disposed in the interior of the chest or body. These contain the sticky or glutinous fluid which flows in a fine, invisible stream, and becomes indurated and elastic on exposure to the air.

The quantity of silk produced by these insects varies with their habits and character: some produce but very little; others, such as the silk worm and the apple-tree insect, elaborate in great abundance. Before arriving at maturity, caterpillars usually change their skins four times. Most of them, at this period, cease feeding, spin about their bodies the web which is to protect them, and soon after pass their first transformations; others suspend themselves in different ways by threads, without any covering or cocoon; while a third class bury themselves in the soil, and there undergo their transformation in a naked state, which the former experience in their protecting shrouds, or cocoons, or in the open air.

They are sometimes gregarious, herding together in immense numbers, and passing their brief existence, or at least the early part of it, in society. Some of them unite in their labors, form habitations, and appear to be directed by a system of instinctive laws and regulations, as is the case with the bee and ant. Others live and die in solitude. Such are some of the peculiar characteristics of this singular worm, than which, perhaps, no enemy with which the husbandman has to contend is more common or destructive, or less perfectly understood.—*Germantown Telegraph.*

Large and Small Farms Compared.

Most young farmers are unsuccessful simply because their farms are too large, and the complaint is often heard that no money is to be made at farming. Take up the directory of ten years since, and mark the names of all the merchants then doing business in New York; follow these names through the directories of subsequent years, and see if one in twenty have continued to do business for ten consecutive years without failing. This is a sorry fact, and arises from the fault of the merchants themselves. In agricultural language, "*they turn too heavy a sward and do not lay it regular.*" So with the unsuccessful farmer; he has too much land; he cannot manure it properly, and his labour bestowed on unmanured land is not effective. Land fully manured, and thoroughly cultivated, will produce double the amount of crops that can be obtained from half manured land. Land well manured is more easily worked. Its particles more readily disintergrate, and large crops do not require expensive labor in proportion to results.

English Gardens.

England's glory is in her gardens; she is all a garden—full of gardens. They are unbounded except by the sea-shore. They hang upon her precipices, they cover her hills, they spread along her valleys; they make the whole island like an ideal landscape. Not a cascade or streamlet leaps from the rock, but it runs on its errands of irrigation; it falls in showers upon the universal flower-bed. And the sun never sets the summer long without having opened more fully some damsel's rose-tree, or heightened the tulip's glow. No traveller visits England, but he sees the garden immediately. He cannot wander far without seeing the happy cottar and his hoe, and the maiden with her posies; bowers and rosaries, grottoes and hedge-rows, all green and flowery, captivate him wherever he journeys. Linnæus found a garden in the country common, amongst the wild furze-bushes, that wave like a sea of gold. And we lay it down as a truth that England cannot but be happy if she prosper in her gardens. The flowers and fruit, the more orchards and potatoe-grounds, the more cultivated plots for vegetables and for amusements, and the more peace. What need has a nation for the sabre and the bomb when the delight of her sons is in the pruning-hook?—*People's Journal.*

Milk Cellars.

Farmers about to build a dwelling, should know that by carrying up a large flue (12 inches in diameter and *circular* is the best,) in the chimney stack from the *cellar*, and having a window or two opening to the north or cold side of the house out of the cellar,—they can have as good a "Milk Room" under their house as could be had over a spring, that may be perhaps 200 yards, or one fourth of a mile off; which is so *pleasant* to go to in *bad* weather, eepecially by the *female* portion of the family.

The floor should be flagged with stone, as they can be kept sweeter and are colder than either bricks or cement which absorb "spilt milk" and thus taint the atmosphere. The walls and ceilings should be plastered to facilitate white-washing and cleansing. Nothing but milk and cream should be kept in the room, as the pure atmosphere for cream to rise in, is absolutely essential to the making of sweet butter.

What is needed to have a *cool sweet cellar*, is a current of air, which will be secured by the aforesaid flue, and the open windows—as a stroug current of air is at least ten degrees colder, than the same air at *rest*.

Churning.—Farmers ought to know that churning can be done with any good churn in five to fifteen minutes as well in winter as summer—by having the temperature of the cream right, say 58 to 68 degrees. The temperature of an ordinary sitting room, would be the best place to keep the pot in the winter. In the summer the cream can be readily reduced to the right temperature, by breaking up clean ice and putting into the churn.

A thermometer, which is necessary to regulate these matters, costs but one dollar, and such an investment every farmer ought to make, who has churning to do, and thus save labor and time, which is money and make this much dreaded part of the duties of farmers wives and daughters much pleasanter and easier—and for this I know they would thank your modest correspondent, if they knew him. *Ohio Cultivator.*

SMART WEED.

"Smart weed" which grows in abundance by the road side, and along the margin of ditches, clay-pits, &c., is said to be worth $5 per hundred for a stock of cattle, if cut and well cured when in bloom. One pound per week given to a cow, ox, or horse, when up to hay, will keep their bowels from constipation, and their hides loose. It is also said to be a sure remedy for cholic, in which case it is to be steeped and drank as any other herb tea.

FLIES.

Flies are a great trouble to horses at this season. They will eat the skin off the inside of their ears, and then feed upon the flesh, producing a great deal of pain and uneasiness. This evil may be prevented by rubbing upon the inside of their ears a little grease or oil which should be repeated occasionally.

CHARCOAL.

Six quarts of charcoal, finely pulverised, and put into a cistern of the capacity of fifteen hogsheads, will make the water sweet at any time. It is worth the trial.

When the Sun shines bright, take a looking glass and hold it nearly perpendiculary over the well so that it will reflect on the water, and you may see a straw, or a pin, or any small object at the bottom, of any depth.

PROFITS OF HIGH CULTURE.

At one of the Boston Agricultural meetings, Mr. George Pierce, of West Cambridge, "advocated the high culture of fruit trees, and raising no crop among them after they were large. From four apple-trees which he set in 1839, he gathered last year (ten years) twenty-nine barrels of choice fruit, twenty barrels of which sold for $100. He sold $997 worth of fruit the past season, from eight acres of land."

FOR A FIT OF IDLENESS.

Count the tickings of a clock. Do this for one hour, and you will be glad to pull off your coat the next, and work like a negro.—"Slothfulness casteth into deep sleep; and an idle soul shall suffer hunger."