stock

is there

off every

quantities of produce, and assumed quantities sold off the land.]

It will be seen by this table that the average amount of nitrogen removed in grain is 21½ lbs. per acre, of phosphoric acid 6½ lbs., and of potash, 5 lbs. In potatoes the amount of the two former substances is the same; but of potash 8 lbs. instead of 5 lbs. are removed by them. Hay removes a much larger amount of nitrogen than corn, and more than three times as much potash. Owing to my ignorance with regard to the number of acres required to keep live stock, I am unable to assign to each acre the constituents removed, I therefore give them altogether. There are 53 acres of pasture in every 100 in the State of New York; and if this area kept the stock, we should arrive at the amount of constituents removed per acre, by dividd which constituents removed per acre, by divid-ing the figures I give by 53; or, if the hay is consumed by the stock, by dividing these figures by 80. 000 acres

Table IV.—Showing the amount of nitrogen, phosphoric acide and potash, in pounds, per acre, removed every year from the land, first, assuming that the grain, potatoes, meat and milk, are sold off the farm, the straw and hay being consumed and returned to the land in manure; and secondly that the hay also is sold off the farm.

211 62 5 62 144 Average per acre over 100 acres if corn, potatoes live weight, As above, with hay sold.....

In either case it will be seen how exceed-ingly small is the amount of plant-food re-moved by animals and in their products. The last line but one gives the amount of nitrogen, phosphoric acid, and potash re-moved her age per annum over the 100 of these dry a few stock and milk are sold off the farm, and the straw and hay consumed or returned. The straw and hay consumed or returned. The last line gives the same, with the hay sold instead of being consumed. The difference in the removal of these substances when the hay is sold is very striking, showing plainly how much this crop exhausts the soil. It will, I fear, be some considerable time before figures like these become of any real value to practical farmers; the removal of a few more tical farmers; the removal of a few more or less pounds of one substance or another or less pounds of one substance or another over an acre of land being only bare facts which do not tell him what he wants to know; such as, whether his soil is becoming exhausted of these substances too rapidly, or whether one ingredient is being removed faster than others, relatively to the amount which his soil contains. Neither does it tell him whether it would pay to restore these constituents in some artificial form, nor which of them he should restore

to the soil.

As portions of my farm are the only pieces of land in the world where the constituents of the crop removed have been estimated for a long period of years, it may be useful to give the figures obtained in one of the fields here for comparison with the New York figures. In 1840, a field of 14 acres which had been under ordinary arable cultivation for a century or more was sown with barley unmanured, followed by unmanured crops of peas, wheat, and oats. In 1844 and since, wheat has been grown for 34 years. Portions of the field have grown corn without the return of any manure whatever. No attempt has been made to increase the yield by deep ploughing or subsoiling, and probably the land has not been stirred to the depth of more than three or four inches from the surface. Careful analyses have been made of the products obtained; and recently the ash of the mixed straw and grain of the last ten years and of the previous ten years' produce have been carefully analysed.

In the following table I have given the amount of nitrogen, phosphoric acid, and potash removed we are seen as a second content of the products of the products of the previous ten years' produce have been carefully analysed. nts of the crop ren

amount of nitrogen, phosphoric acid, and potash removed per acre per annum in the State of New York and over the unmanured acre of Rothamsted land, taking the average of the last twenty years:—

New York.	Nitrogen. Pounds per acre.	Ph osphoric acid. Pounds per acre.	Potash. Pounds per
Corn, hay, meat, & milk sold; straw retained	14}	41	101
ROTHAMSTED. Unmanured land	20	101	17

It will be seen by this table that the removal of the three constituents of plantfood from the Rothamsted soil is very
much larger than from the soil in the State
of New York; and it would be larger at
Rothamsted even if I had calculated the
New York soil as selling off the whole produce, grain and straw, hay, meat and milk,
and restoring nothing. I am disposed,
therefore, to think that destruction of
weeds and more careful cultivation would
be quite as efficacious in increasing the produce of the State of New York crops as
the employment of artificial manures.

duce of the State of New York crops as the employment of artificial manures.

As far as practicable the land at Rothamsted is kept free from weeds; the wheat can therefore take up all the available plantfood in it. With how many natives of the soil has the wheat grown in the State of New York to contend for its share of food? As far as I can judge, exhaustion of the soils in your State is not taking place to any alarming extent. There are various processes by which a greater produce can be obtained from a soil, but the selection of these must in all cases depend on a variety of local circumstances, such as the price of labour, the value of the product sold, the cost of the various processes to be employed, &c. A person therefore writing from a distance would be almost certain to commit serious errors if he attempted to profier advice on this complicated subject.

The Clarendon Teachers' Association enoyed a picnic at Shawville the last week in

STRANGE EFFECT OF THE TOUCH OF A CAT.—Mr. Lewis Webb, in our towa (Buena Vista, Ga.), is strangely affected. For several years he appeared paralyzed in his feet and legs. For some time he went on crutches, but for the last eight years has been walking with a stick. He says he could drive a knife through his foot and not feel it; that when he strikes his foot against any object he knows it, just as he knows when he strikes a stick against a substance, by the resistance offered only, and not by the feeling. He frequently blisters his feet in walking, but knows nothing of it until the blisters burst. He bathes his feet often—sometimes in cold. Sometimes in hot water. He cannot tall by feeling in the foot whether water is hot or cold. Thus he has lived for eight years, sometimes walking about, and often in bed. When a cat touches his foot he instantly feels it. The touch of a cat against his foot, whether the foot is bare or with socks on, sends instantly prickly sensations all through the foot. He may be blindfolded, but can instantly tell the touch of a cat however alight, whether day or night, and whether expecting or not expecting the touch.—Buena Vista Arons. STRANGE EFFECT OF THE TOUCH OF A

AN ADVENTURE IN JAPAN.

The contributions of Japan to the American Centennial Exposition have familiarized the minds of a large number of Canadians with the physiognomy, the dress, and the arts of the Japanese. In the engravings on this page many will recognize the curious night lamp or lautern, the little low table, and especially the screens or partitions presenting those ever recurring storks or flamingoes on the wing, the sketchy, struggling vegetation and the conventional pyramidal mountains; but the bed may surprise some whose notions of a Japanese couch are derived from that wonderfully elaborate carved bedstead which was one of the marvels of the exposition. The bed here shown is the common one found everywhere in Japan. The sleeping arrangements are heroically simple, requiring no extra rooms, the bed and sleeping apartment being improvised anywhere with large screens, a thin mattrass of rice straw and a wooden pillow—the latter a sort of gullotine-block with a hard cushion on top covered with many sheets of white paper. These sheets are turned or changed as they become soiled. This strange head-support, the same, we are told, as that used by the ancient Egyptians, preserves an elaborate coiffure, like that of the Japanese, from all danger of derangement during sleep.

The illustrations of this paper are from sketches made on the spot by a French gentleman, M. Collache, who was one of the corps of American military officers sent to Yeddo, in 1868, to instruct the Japanese troops in the art of European warfare. On one occasion he was received by some ministers of a provincial prince in a tea-house (otchaya.) His description of the dinner is very interesting. Hot saki—a fermented liquor made from rice—was passed from hand to hand in a delicate porcelain cup, thin as an egg-shell. Eggs variously prepared, a sort of radish preserved or pickled, fish, raw and cooked, boiled bamboo-roots, and shell-fish, formed the first course. Tables about a foot high were then brought, and placed one before each guest, who squatted on his heels,

dinner ended with tea, served in little cups; afterward came smoking in tiny little pipes, and the performance of dancing girls.

The military instruction of the troops was interrupted by grave political troubles, the insurrection of the daimios or feudal lords against the tycoon, who represents the temporal party and the party of progress of Japan. The French commission, however, remained in the country, and wever, remained in the country, and took up arms for the tycoon.

welotte to come up with her fresh troops in the heat of the combat.

The expedition proved an utter failure. The Aschwelotte's crew heard the cannonade with terrible impatience at the slow progress of the ship, which could not reach the scene until after the action had ceased. Entering the Bay of Miako, they saw the Kaiten come out and sail north with all speed, refusing to reply to the signals of the Aschwelotte. This was a mystery which was not explained until long after.

that could be obtained was a small quantity of yellow and rather insipid grains of seeds, which was a factor insipid grains of seeds, which was a siderable crowd gathered before every inn where they dismounted; but as M. Collache was beardless, bronzed by Collache was beardless, bronzed by Collache was beardless, bronzed by Collache was never suspected of being the European. They always mistook one of the Japanese officers for him—a man council with his men, to discuss the situation. He proposed that the party should separate—that the Japanese, disguising which was not explained until long after.



M. Collache now saw himself, his ship and his men in imminent peril. Capture was inevitable, unless the ship could be run ashore and the crew escape into the mountains of Nambou. About thirty yards from the shore the ship ran on the rocks.

Then occurred a seene of indescribable confusion. M. Collache, revolver in hand, compelled the men to defer lowering the boats until the cargo was thrown overboats until the cargo was thrown overboats until the cargo was thrown overboats until the cargo was thrown overboats. They spiked the guns, smashed the engine, and the commader, PORTRAIT OF M. COLLACHE IN JAPANESE COSTUME.



A JAPANESE SED.

On one occasion during the straigele it does not be added to surgriss and strack the semmy first lite harbour of Nambou. It consisted of sight ships, large and strack the semmy first lite harbour of Nambou. It consisted of sight ships, large and strack the semmy first lite harbour of Nambou. It consisted of sight ships, large and strack the commanded the Ashrelette. The credition fielded in the object when the ship for the rest; but the same straight the straight ships and stranged to the ship for the rest; but the same straight ships and sh



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when the cavalcade reached the suburbs of Yedo, one of the officers came to M. Collache and announced with evident em-barrassment that he had received the cruel

THE WEEKLY MAIL, TORONTO, FRIDAY, OCTOBER 11 1878.

Collache and announced with evident embarrassment that he had received the cruel order to take away his arms. Another came with a present of fifteen rios (one hundred and twenty francs) from the Prince of Nambou, and a gracious message demanding pardon for all the discomforts experienced during the journey, and apologizing for the modest sum remitted; the state of his fortune did not permit him to do mere. M. Collache was profoundly moved by the kindness of the prince, and returned a message to that effect.

From his last halting place the prisoners were carried in cangos, a kind of sedan chair, to the prison. They were divested of whatever they carried about their persons, an exact inventory being made in every case, and then conducted to their cells, which were literally cages, having a double row of bars. M. Collache was put in a cage with fourteen others. The sole article of furniture was a bucket of water. He remarks upon the gaiety of spirits of his companions, which, from the first, never left them, and adds, that this gaiety so reacted upon him, that he found himself, despite his position, and the fact that he might at any moment

be led ont to execution, joining in their laughter and their devices to while away the time.

Three meals were served to the prisoners daily, composed exclusively of rice, except at mid-day, when salt fish was added. M. Collache, not liking salt fish nor a diet exclusively of rice, asked for some of the money taken from him on his entrance to the prison. The request was granted, and this enabled him to procure soup at each meal, prepared by one of the jailers. On the third day his companions were taken away, and he was left alone in the cage. "I should have suffered intensely from solitude," he says, "but for a singular adventure which happened the next day. The barriers of my cage were sufficiently far apart for me to pass my arm between them. On three sides I had a view of prison walls, but they were distant from me about six feet. In these walls, high up, there were very small windows, through which my cage was lighted, By climbing up my bars I could see a small patch of sky, and the few trees embraced by my narrow horizon. The fourth side of my cage looked out on a board wall of a neighbouring prison. My companions had left me on the morning of the preceding day. As the night approached, and as I felt myself gradually being overcome by a gloomy melancholy, I heard some one call me in Japanese. I trembled in every limb at this call; I could not imagine from whonce it came. It was a muffled voice, seeming to come from under the ground. To the prisoner every unusual sound suggests the hope of escape. Visions of trapdoors and underground passages rushed into my mind. I listened intently. The voice called again, but this time all mystery vanished. It came from the board partition. It was only a prisoner, like myself. Still, it was a pleasure to have any one to talk with, and an animated conversation ensued. My neighbour was also a prisoner of war. Captured at the opening of the campaign, he had been confined eight months in a dark cell, so low that it only permitted a sitting posture. I expressed pity for his ho

braided a cord some four yards long, and fastening a small weight upon one end, threw it to his friend. On this cord he sent a little money, with which to procure much-needed articles, through the turnkeys. The things most coveted were India-ink and pencils. These were strictly forbidden, but M. Collache, by great perseverance, and especially by promising to give the turnkey some sketches, obtained them at last. These he shared with his neighbour, and from this time the continued interchange of sketches of all kinds became the most precious pastime.

ime.

Eight days passed. The cage was then pened, and two yacounins appeared. They ame to conduct M. Collache before a council of war, held in a hall of the prison. council of war, held in a hall of the prison. A large part of the room was occupied by a platform, in the centre of which sat the president, assisted by two judges. On each sat a reporter with writing materials. By one of the judges sat an interpreter. The four central figures held fans in their hands. Behind them was a folding screen, which concealed a person evidently of high rank. Papers, apparently bearing questions to be put to the prisoner, were continually passing from behind this screen. The prisoner knelt upon an old mat placed before the platform between the two officers who had introduced him, and who also knelt. After the first words, the interpreter said to the prisoner, that it would be better for him to state his case himself, as he snoke Japanese far better than he, the interpreter, spoke French.



THE LOVERS ROCK. What then do you think will be your ! "You will cut off my head," replied M.

LADIES' CORNER.

Collache, emphasizing the sentence with a gesture.

"Right," said the president; and this ended the examination.

The details of the trial were, of course, communicated to the prisoner before mentioned. He appeared deeply moved at the result. The next morning at sunrise, the cage was opened by yacounins, who, not results a sunrise, the cage was opened by yacounins, who, not results a sunrise, the cage was opened by yacounins, who, not results a sunrise, the cage was opened by yacounins, who, not results a sunrise, the cage was opened by yacounins, who, not results a sunrise, the cage was opened by yacounins, who, not results a sunrise, the cage was opened by yacounins, who, not results a sunrise, the cage was opened by yacounins, who, not results a sunrise, the cage was opened by yacounins, who, not results a sunrise, the cage was opened by yacounins, who, not results a sunrise, the cage was opened by yacounins, who, not results a sunrise, the cage was opened by yacounins, who, not results a sunrise, the cage was opened by yacounins, who, not results a sunrise, the cage was opened by yacounins, who, not results a sunrise, the cage was opened by yacounins, who, not results a sunrise, the cage was opened by yacounins, who, not results a sunrise, the cage was opened by yacounins, who, not results a sunrise, the cage was opened by yacounins, who, not results a sunrise was may be kept in only just sufficient water to nicely wet the bosom and wristbands. Roll up and lay aside for about an hour, then having with the pumpkins for domestic use may be kept in only just sufficient water to nicely wet the bosom and wristbands. Roll up and lay aside for about an hour, then having wrinkles, your holder whole and clean, and in the cage was opened by yacounins, who, not results a sumrise was a sufficient water to nicely wet the bosom and wristbands. Roll up and lay aside for about an hour, then having wrinkles, your holder whole and clean, and in the cage was opened by yacounins, who, not results a sumrise was a sum of the pum

sait, two of cinnamon or grated nutmeg, and a couple of tablespoonfuls melted butter or suct chopped fine. If you wish to have the pudding very rich add half a pound of raisins—they should not be put in until the pudding has baked five or six minutes. If raisins are used an additional half pint of milk will be required, as they absorb a great deal of milk.

A lady writes the Farm Journal:—An excellent cold slaw is made by shredding a solid head of cabbage with a thin, sharp knife or slaw cutter, then placing the cut cabbage in your dish, pour over it a dressing made by heating a pint of vinegar scalding hot, then beating into it quickly one beaten egg, with a lump of butter as large as a walnut, and a tablespoonful of sugar. The cabbage should be slightly sprinkled with salt and pepper as it is put in the dish.

To fry cabbage, chop or shred quite fine; have a spider hot on the stove, in which is a small quantity of butter or meat drippings; season, and put in the cabbage, and cover tight, stirring often and taking care it does not scored on the spider. Cooked in this way it is very sweet and nice.

Cabbage makes a nice dish also cooked by derecting its calked. FOR THE TABLE,

Cabbage makes a nice dish also cooked by dropping into salted boiling water, and when tender taken out, minced fine with a

by dropping into salted boiling water, and when tender taken out, minced fine with a knife, then pouring over it a dressing made by taking a piece of butter the size of an egg, and a coffee-cupful of boiling water; cut up the butter with a half teaspoonful of flour, and stir it gradually into the hot water. When it boils, stir in a dessert spoonful of vinegar, and a dust of pepper, with a little salt. For the sauce, thick sweet cream is an excellent substitute.

For hot slaw prepare the same as for cold slaw, cook tender, and pour over the dressing, or merely season with vinegar before dishing up.

Somebody has said that corned beef with boiled cabbage makes the best 365 dinners a man can eat in a year. To realize the full measure of excellence, the quality, curing, and cooking of the beef should be considered, but with this I have nothing in this letter to do. Perhaps some sister can give us directions by which we may secure perfection in this part of the process.—As to the cabbage, have a solid head stripped of the outside leaves, except one layer, divide it into quarters by gashing down nearly through to the lower end of the core. Skim the floating grease as nearly as you can from the top of the water in your pot of boiling beef, and about one hour before dinner drop in your cabbage and keep it boiling steadily and slowly until you are ready to dish it. Now, carefully lift it out with a skimmer and lay on a platter, draining well, take off the outside leaves left, and your cabbage will come out clear and free from grease or scum

and your cabbage will come out clear and free from grease or scum IRONING SHIRT FRONTS

DINNER GIVEN BY A JAPANESE MINISTE

two or three layers of old newspapers pinned or stitched together. As soon as potatoes begin to sprout, as they will in the spring, they should be overhauled once a week, all the sprouts removed, and the potatoes put in as dark and cool a place as possible.

mence. To make assurance doubly sure that your iron is perfectly smooth and clean, put a bit of bees-wax on a square of brown paper, and rub your hot iron over it a few times, then rub well after on another square of paper or piece of old soft cloth. a few times, then rub well after on another square of paper or piece of old soft cloth.

TURNIPS FOR SAUERKRAUT.

An Arkansas correspondent of the Country Gentleman says that turnips cut fine and put up with less salt than cabbage make an excellent substitute for sauer-kraut. He has put them up in Arkansas for the last 28 years, and has seen them put up in Germany. They do not taste exactly like cabbage-kraut, but it will make a variation of dishes ou the table, which will be much appreciated by every family.

OATMEAL PUDDING. march commenced. I was calm outwardly, for I had long been accustomed to the idea of death; moreover, my pride made me wish to show the Japanese that Frenchmen can die as bravely as they."

After a long march through the populous streets of Yedo, the prisoner was set down

march commenced. I was calm outwardly in Germany. They do not taste exactly like cabbage-krant, but it will make a variation of dishes on the table, which will be much appreciated by every family.

OATMEAL PUDDING.

\*Mix two ounces of fine Scotch oatmeal in a quarter of a pint of milk; add to it a pint skirts and the like, I always boil my starch,

