

Science.

New Process of Refining Sugar.

The statements made in some of the newspapers respecting the new process of manufacturing sugar, for which Mr. P. Abraham has applied for, and will no doubt obtain a patent, are generally incorrect. The system about to be introduced under the agency of Messrs. P. Abraham and Co., has nothing whatever to do with Mr. Bossemer's improved machinery. Mr. Brandies is the sole patentee, and the process consists of clarifying cane juice, and all saccharine solutions by one of the most powerful and effective defecating agents ever discovered, and any objectionable agent, hitherto difficult to neutralize, is by the new invention and method totally and perfectly eradicated. This is easily accomplished by any inexperienced hand, who can remove all impurities, and prepare a pure liquor, consisting solely of sugar and water for the boiling house and concentrating process. The quality of the sugar is expected to be improved in value to the extent of 4s. or 5s. per cwt., and the quantity from the same amount of juice, increased to 30 per cent. The improvement thus noticed involves no alteration in the existing plan of boiling houses, and for the additional machinery which is necessary, a very moderate outlay only is required. We understand that the machinery by which the process is to be exhibited, was to have been imported in the last packet, but some of the pieces being too heavy, it was determined to ship the whole apparatus in the *Barque Planet*, which is to come direct to this port. The machinery will be put up immediately after its arrival, and operations commenced at an estate which is but a few miles from the town of Falmouth.—*Falmouth Post*.

The Philosophy of Sensation.

A striking case occurred in one of the London hospitals some time ago. A man was taken in who had received an injury in the lower part of the brain, which deprived him of all sensation below the head. No impression made upon his body was able to reach the brain, or, consequently, the mind. He possessed all his faculties entire. He could feel as well as ever about the face and head, the parts in connexion with the brain, and he had his usual intelligence. He lived for several months in that state, and ultimately recovered. He furnished a remarkable instance of the reflex power of the muscles. If the palm of his hand was touched, the arm would begin to quiver, and by degrees the motion was communicated to the other arm. If his feet were touched, his legs began to fling themselves about in a most violent manner, till he seemed in danger of being thrown out of bed. A hot plate applied to his body would make him literally shake the bed. Did these convulsions prove pain? What said the man himself? He said he felt no pain, nor any sensation whatever. If his eyes were closed, he could not tell whether he was experimented upon or not, except by the shaking of the head, communicated by the motion of the bed; and, so far from being tormented, as might have been supposed, he felt pleasure, interest, and amusement, from the odd way in which his legs moved about. When he began to recover, sensation returned, and then, instead of the limbs shrinking away of themselves, he requested the experimentalists to cease. This was quite sufficient to show that shrinking from an offending agent was no proof that the shrinking was connected with, or occasioned by the sense of pain.

Expanding the Chest.

Those in easy circumstances, or those who pursue sedentary employment within doors, use their lungs but little, breathe but little air in the chest, and thus, independently of position, contract a wretchedly small chest, and lay the foundation for the loss of health and beauty. All this can be perfectly obviated by a little attention to the manner of breathing. Recollect the lungs are like a bladder in their structure, and can stretch open to double their size with perfect safety, giving a noble chest and perfect immunity from consumption.

The agent, and only agent required, is the common air we breathe, supposing, however, that no obstacle exists, external to the chest, such as twining it around with stays, or having the shoulders lie upon it. On rising from the bed in the morning, place yourself in an

erect posture, with your chest thrown back and your shoulders entirely off from the chest then inhale all the air that can be got in; then hold your breath and throw your arms off behind—hold your breath as long as possible. Repeat these long breaths as many times as you please. Done in a cold room is much better, because the air is much denser, and will act much more powerfully in expanding the chest. Exercising the chest in this manner, it will become flexible and expandible, and will enlarge the capacity and size of the lungs.—*Scientific American*.

How to Convert Salt Water into Fresh.

The following simple process to procure fresh water at sea, was published in the newspapers many years ago. The experiment can be easily made—and knowing how easy it is to obtain fresh water, by digging in the sand, near the sea shore, we see no reason why it should not be successful, in which case it might prove in certain cases of great advantage:—"A common hoghead is provided with a false bottom, about three or four inches above the lower head. This false bottom is perforated with a number of holes, and over them a filter of flannel. The barrel is then nearly filled with the finest sand, beat down very hard; a tube communicating with the space between the two bottoms, is extended to a convenient height above the top of the barrel. The sea water is poured into this tube, and pressing every way according to its altitude, it endeavors to force its way through the sand to the top of the barrel, from whence, by this mode of filtration, it is drawn off fresh and fit for use. Any other filter will do as well as flannel, which will stop the sand and admit the water. The saline particles being heavier, and perhaps differently formed, meet with obstructions from the sand, and are left behind."

The Farm.

THE FARMER'S DAUGHTER.

She may not in the merry dance,
With jewel'd maidens vie,
She may not smile on courtly swain
With soft, bewitching eye—
She cannot boast a form and mien
That lavish wealth has bought her,
But, ah! she has much fairer charms,
The farmer's peerless daughter.

The rose and lily on her cheek,
Together love to dwell;
Her laughing blue eyes wreath around
The heart a witching spell;
Her smile is bright as morning's glow
Upon the dewy plain,
And, listening to her voice, we dream
That Spring has come again.

The timid fawn is not more wild,
Nor yet more gay and free,
The lily's cup is not more pure,
In all its purity.
Of all the wild flowers in the wood,
Or by the crystal water,
There's none more pure and free than she,
The farmer's peerless daughter.

Then tell me not of jewel'd fair—
The brightest jewel yet
Is in the heart where virtue dwells,
And innocence is set!
The glow of health upon her cheek,
The grace no rule has taught her—
The fairest wreath that beauty twines,
Is for the farmer's daughter.

From the Maine Farmer.

Importation of Kerry Cows and Scotch Cattle.

Who of those among us who have the means, will also have the enterprise and the courage to import some Kerry cows from Ireland, and some Galloways and Kyloes from the Highlands of Scotland?

Our friend Howard, of the Boston Cultivator, has long advocated the utility of introducing these breeds, viz.: Galloways and Kyloes into New England, but no one as yet seems disposed to risk the experiment. Where any cattle have been imported they are specimens of the barn-yard aristocracy, such as Durhams, Herefords, Devons, Ayrshires and Alderneys, while the more democratic and humble, but to many locations far more useful cattle, the humble Kerry cow and others named, are wholly neglected.

Why do not some of the rich agricultural

societies turn their attention to this subject, and spend some of their "surplus revenue" in this way. Could the Massachusetts Agricultural Society do better with some of their money than to expend it in importing some of the above-named cattle? They have heretofore done the public great service by their importations. Why not continue in well doing by sending an agent to the Scotch highlands and to the Emerald Isle, to select and bring over specimens of their cattle, and perhaps a few of the small and delicate Welch sheep, that may be kept on the seaboard and yield good lambs at any age and all times of the year. Though an "outsider," and belonging to another parish, we respectfully submit the proposition to their consideration.

Indian Corn for Fodder.

Perhaps there is no vegetable or plant that we can cultivate, which will yield so much fodder to the acre as Indian corn. Now is a good time to put it in, although it will yield quite a crop if not planted until the last of this month. There are two ways or modes of cultivating it for fodder, viz.: Broadcast, as you would oats or wheat, and in drills or rows. If the soil is free from weeds, it will do to sow it broadcast, but we much prefer to sow it in drills. After ploughing and harrowing the ground, furrow it into drills, from two to three feet apart, so as to enable you to run the cultivator between them. Then, if you have manure, sprinkle it in the drills, and then scatter in the southern flat or horse-tooth corn, as some call it. This will come up and grow luxuriantly, and may be weeded out once or twice by means of the cultivator.

Mr. Ellis, of Smithfield, in this State, informed us not long since that he grew some in this way last year, and he believed, by a little care and pains in preparing the land, he could raise twenty tons to the acre. He cut his in the fall, while the stalks were green and tender—let them lay a day or two and wilt, and then bound into bundles by a band around their tops, and put them into stooks or shocks, precisely as you would stalks obtained by topping our common corn in the field. These shocks were suffered to stand out in the field till quite late in the fall, when they were put into the barn, and they made excellent fodder during the winter.

If you have not land or time to plant it on a scale sufficiently large for winter fodder, plant a small patch to cut green for your milch cows when the grass begins to fail in the fall. The utility of it for this purpose is too well known to need further recommendation.

Irrigation of Gardens.

From repeated experiments we are induced to draw the conclusion, that next to manure the great prime mover is successful culture, there is nothing more important to vegetable growth in many cases than irrigation. Practical gardeners, in countries far more moist than our own, regard it as indispensable, and a large share of their success depends on copious watering.

Some interesting instances, which have recently occurred, may be worth stating. Two rows of raspberries stand on ground in every respect alike, except that one receives the drippings from a wood-house, and the other does not. The watered row is fully four times as large in growth as the other. Again—the berries on the bushes of a Fastolph and Franconia raspberries were, at least, twice as large when the soil was kept moistened, as afterwards when allowed to become dry; a repetition of the watering again doubled their size. Again—a near neighbour, who cultivates strawberries for market, and who uses a water-cart for irrigating the rows, raised at the rate of one hundred and twenty bushels to the acre, on common good soil by this means; and he noticed that where the cart was left standing over night, so that the water gradually dripped from it, for some hours, upon a portion of the plants, the fruit had grown to double the size of the rest in twenty-four hours.

It should be observed that these advantages of a copious supply of water pertain chiefly to small or annual plants. The roots of fruit trees being larger and deeper, are to be supplied with moisture in a different way; that is, by a deep, rich, mellow soil, kept moist by cultivation, or by covering thickly with litter. Water applied to the surface rarely descends so low as the roots, and only hardens the soil to a crust.

Irrigation of gardens should be accompa-

nied with some soluble material suited to the requirements of the plants. Rank feeders, like raspberries, will be benefited by a solution of night-soil, guano, &c.

Effects of Irrigation.

Speaking of orchards, a writer in the *German-town Telegraph* says, "a friend of mine whose orchard was situated on the side of a gentle slope, with an extensive travelled thoroughfare upon the upper side, finding that his trees were failing in health and productiveness, opened a number of small drains from the latter in such a manner as to secure the benefits of irrigation to each individual tree. The effect was wonderful—every tree took an almost instantaneous start, threw out a mass of young and vigorous shoots, and produced more shoots in a single season than for years before."

Compost for Corn.

EDITOR OHIO FARMER:—As you was so good as to notice in your valuable paper my mode of making winter butter, I now send you my manner of making domestic guano, for my corn, which if you think worth publishing you are at liberty to do so.

I take my leached ashes and to four bushels I put one bushel of hen manure from my hen house, and mix them well with a shovel, and then cover the whole with plaster. In a few days the whole mass will be completely dry and if I do not wish to use the compost immediately I let it remain on my stable floor until my corn is coming up, and then put a single handful on each hill. But before using I mix it thoroughly, which is not so agreeable a job, as the ammonia is apt to make the tears run while mixing. I have tried almost every kind of top dressing for corn, but have found nothing that will compare with my domestic guano. The best time to put the above on the corn is, just before a rain. I am sure it will add one third to the crop.

Respectfully yours,
FRED'K. WOODBRIDGE.

DOMESTIC RECEIPTS.

EGG DUMPLINS.—Make a batter of a pint of milk, two well beaten eggs, a salt spoonful of salt, and flour enough to make a batter as thick as for pound cake; have a clean saucepan of boiling water, let the water boil fast, drop in the batter by the table spoonful; four or five minutes will boil them, take them with a skimmer on to a dish, put a bit of butter and pepper over, and serve with boiled or cold meat; for a little dessert, put butter and grated nutmeg, with syrup or sugar over.

TO BROIL HAM.—Cut some slices of ham, quarter of an inch thick, lay them in hot water for half an hour, or give them a scalding in a pan over the fire; then take them up, and lay them on a gridiron, over bright coals; when the outside is browned, turn the other; then take the slices on a hot dish, butter them freely, sprinkle pepper over, and serve.

Or, after scalding them, wipe them dry, dip each slice in beaten eggs, then into rolled crackers, and fry or broil.

TO DESTROY ROACHES.—Take an earthen bowl or other high earthen vessel, and fill it half full of molasses and water, made very sweet; place it on the floor near the haunts of the insects, and place one or more strips of board or shingle, with one end resting on the vessel and the other on the floor. The insects, attracted by the odor of the mixture, will ascend these strips and plunge into the mixture, where they will speedily drown. Of course, precaution should be first taken to exclude everything else which will attract them, from their reach.

TO CURE WARTS OR CORNS.—Take half an ounce of sulphur, half an ounce of ninety per cent. spirits, put into an ounce vial, shake them well together, then freely apply to the affected part, or wart, for a few days once or twice a day, and in a few weeks, or months, at most, the warts will disappear. And so with corns in like manner. Warts can also be cured by washing them with a solution of soda, and allowing it to dry on them.

TO DRILL GLASS.—A correspondent wishes to inform the readers of the *Telegraph*, that glass can be easily and neatly drilled with a small drill, operated by a bow, and kept moist by spirits of turpentine.—*German-town Telegraph*.