Stock.

The Cow as a Machine.

A paper on Dairying read before the London Farmers' Club in November by Mr. G. M. Allender, has attracted considerable attention in our English exchanges. We quote his remarks on the above subject as follows:

I do not mean to say that a cow is like a steam boiler—viz., that the more coals (food) you throw into the furnace (within limits), the better results you obtain; but I do maintain that the food, both in kind and liberal quantity, has much to do with the important items of profit and loss.

The cow should be to all intents, from the dairy farmer's point of view, a machine; and a very sensitive and wonderful machine she is, and perfectly constructed for the work she has to perform—viz., the conversion of food into milk—the raw material from which butter and cheese are manufactured. To work this beautiful machine to its best advantage, is a question of the most vital interest to the owner. What would be said of a man who, requiring a steam engine, would go out and buy the first he saw, and so long as there was a boiler, furnace, cylinder, piston, cranks, wheels, valves and certain other appliances and fittings, take not the slightest care to ascertain by whom the machine was made—in fact, how it was bred—and having bought his engine, forthwith proceeds to put it to work, regardless of the description of coal, the sort of oil, or the quality of the water with which he supplied it, or whether it was left out in the fields, exposed to the weather, or housed under some tumble-down old shed, where all its most delicate parts and fittings became clogged with dust and dirt? Well, I expect that man's neighbors would think "it would not last long." This, however, is just what a lot of farmers do with their cows; they heed about as little how they are bred as how they are fed.

Let us begin with water. I do not think that half the attention is paid to the watering of the cows as there should be, either as to the regularity of the supply, or the quality. Cows will rather drink foul water that is near them than go a distance; when tied up they are, of course, totally dependent upon those in whose care they are. Depend upon it that the supply of clean, wholesome water, and in good quality, is of the greatest importance.

Salt, again, is a positive necessity to a cow. If salt be withheld, the quantity of milk will be lessened; and it is a question whether a good supply of salt does not greatly increase the keeping quality of milk. Every animal ought to have access to a large piece of rock salt. While we are on the subject of water, let me impress upon all dairy farmers the importance of washing the cow's udder and teats; this ought to be done at least twice a day, before each milking. Attention to this has much to do with the flavor and keeping qualities of milk, butter and cheese.

Improvement of Horses.

Instead of the farmers throughout our country breeding annually so many inferior horses, which they are obliged to sell at a price that scarcely pays for their rearing, if they would take a little more pains in the selection of the parents, they might be able to produce them of so superior a kind as to bring double the amount they now generally sell for, at three years of age and older. In breeding for the general-purpose horse, after securing the proper size and figure, the endeavor should be to get those which have a free-and-easy, natural walk of four and a half to five miles per hour, and a trot of seven to eight. Such animals would be much more useful than those which can be driven at a three or four-minute gate for a single mile, but whose ordinary natural paces are less than those spoken of above; and the former would outwork and out-travel the latter considerably in a succession of days. Horses of this kind may be bred powerful enough to do all but the heaviest plowing on the farm in stiff soils, and wagoning in muddy roads, and sufficiently elegant for the gentleman's carriage. Thus they would be highly useful to the farmer as long as he wished to keep them, and could then be sold at a round sum to the wealthy residents of towns and cities.—*Live Stock Journal.*

Importance of Using Good Boars.

December is the month when the coupling will mostly be done for next Spring's crop of pigs and next Winter's crop of fat hogs. Their value will depend in a great degree on the quality of the boar by which they are sired; and if he is well bred, well shaped and prepotent, he will do much to overcome defects in the sows, and beget pigs of good form, stamina and uniform excellence—and the latter is really all the "uniformity" worth anything. If the boar is of mixed breeding, doubtful quality and has a good deal of daylight under him, some of his pigs will inherit one or more of his shortcomings, and some others, or all of them, no two of which will be alike except in worthlessness; the results will be in no wise satisfactory, from the time they are farrowed to the day when they are weighed up to their—in too many instances—unfortunate purchaser or consumer. In hog raising the only way to go right is to start right, and no man can do that with a poor, or so-called "cheap" boar.—*Live-Stock Journal.*

Ventilation.

At this season of the year, never have open, at the same time, two doors or windows opposite each other, which carry the air either over, behind or before horses. A door or window at this time should be opened only on one side or end. Stables should be ventilated inside by having a spout run from the ceiling and through the roof, and topped with a cap. This avoids strong currents, and keeps the atmosphere quite equable, which is necessary for the good health, not only of horses, but of animals of all kinds.—*National Live-Stock Journal.*

One is a beer mug and the other mer mug. The conundrum is o n

THE OWNERSHIP OF LAND.

Comparative Results of Producers.

American Cultivator.

In sixty-one years 11,000,000 persons have immigrated to the United States, or considerably more than one-fifth of all the present population. The majority of all these immigrants have come to this country for the purpose of obtaining cheap land. The children of these immigrants, born on the soil, have nothing about them to indicate any foreign extraction. The greater number of these have been, and are now being, educated in the common schools of the country. They are thoroughly American, and are fully imbued with liberal principles. In Austria, according to a writer in the *International Review*, 11,800 nobles own 62,000,000 acres of land, and 3,431,000 other persons own 72,000,000 acres more, or an average of twenty-one acres each. In Belgium the average price of land per acre is £63, and the rent is £3 per acre. But Belgium has 469 people to the square mile, and farming there is conducted with more skill than in any other country, if we may judge from the average products produced. In Denmark the average value of first-class land is £35 per acre; of second-class £23 an acre; and the rent ranges from 25s for the best, to 18s for the second best.

France has a population of 36,900,000, and has an area about five sevenths that of Texas. She has also the largest national debt of any nation in the world, and is obliged to keep up a large naval establishment and a standing army of half a million of men. The landed estates of France are 154,000 of an average of 320 acres, 636,000 of an average of fifty acres, 620,000 of an average of twenty acres, and 1,816,000 of an average of six acres. The medium price of tillage land, on purchase, is £88 per acre; meadow, £135 per acre; vineyard, £168 per acre. Rent per annum for tillage land is 56s per acre; meadow, 88s per acre; vineyard, 82s per acre. Of the tillable area of France, nearly 6,000,000 acres are devoted to vineyards, which in good years produce wine of the value of $250,000,000. Germany has 54,000 owners of land who average fifty acres each, 1,033,000 who average forty-eight acres each, 475,000 who average forty acres each, 15,000 who average thirty-three acres each, 456,000 who average twenty-five acres each, 152,000 who average seventeen acres each, 111,000 who average fifteen acres each, and 140,000 who average ten acres each. She produces 750,000,000 bushels of grain, which is not enough for the wants of her population. She imports an average of 60,000,000 bushels annually. Her annual product of wine is about 90,000,000 gallons, and of beet sugar 300,000 tons. She has nearly 33,000,000 acres in forest. In Saxony and Wurtemburg the average value of the farming land is £17 per acre; in Bavaria, £9 16s; and in Prussia and the other German States, less.

In Holland the price of land averages £40 per acre, and the rent is £2. In Russia there is land enough, but there are 440,000,000 acres of waste land, and there are only about 165,000,000 acres of land under tillage. There are no data as to the price of rents. Of the 77,364,340 acres in England, Wales, Scotland, Ireland and the channel islands, 7,000,000 are taken up by lakes and rivers. Scotland has more than 14,000,000 acres in mountains and morasses. In England and Wales the soil is owned by 155,000 proprietors, and in Scotland by 8,250. The average price of land in England and Wales is £62 per acre; in Scotland £20, and in Ireland £18 per acre. In England and Wales land rents for £3 2s an acre; in Scotland, 19s; in Ireland about 13s an acre. There are over 32,000,000 of people who have less than 50,000,000 acres of land for tillage and pasture. Italy has an area about half as large as the State of California. Including Sicily, the annual product of wine is 650,000,000 gallons, and 33,000,000 gallons of oil. In Spain more than 55 000,000 acres are devoted to wine and olives. The rental of land in the most productive parts of Valencia ranges from £5 to £6 per acre, and is graded down to 15s and 5s an acre in other parts of Spain. The amount of money in all the savings banks of Europe is set down at $1,705,000,000, and in the United States $1,925,000,000. Here are some suggestive facts:

While the United States are expending annual labor in their army and navy to the amount of $16,856,000, Europe is expending in the annual labor of her 2,983,631 men in army and navy to the value of $690,000,000. The United States have an area of 2,263,040,000 acres, and Europe has 2 155 490,000 acres. The area unfit for cultivation and good pasture in the United States is less than in Europe. The amount of this waste land in Russia alone considerably more than equals the entire area of Alaska, though the southern part of the latter is quite equal in point of climate and resources of soil to much of the well-populated countries of Europe. The annual average amount of the wheat production of Europe is 1,035,000,000 bushels; that of the United States, 435,000,000 bushels; while they have rich lands enough unoccupied, and inviting the husbandman and the plow, to supply all Europe with flour. They are now producing more than two-thirds of all the cotton in the world, and have cotton lands enough remaining unplanted to yield double the present demands of civilized mankind.

The property values of the United States have more than doubled during the past twenty years; although in that time not less than $4,500,000,000 was lost during the civil war. There is land enough in the States and Territories, which can be bought at prices ranging from $1 25 to $10 an acre, to sustain another fifty millions of population. Immigration will be vastly augmented, because hereafter, as it has been heretofore, there is no other country where the immigrant can secure comfort and independence quicker than here.

Says Josh Billings: "I have finally cum to the konclusion that the best epitaff enay man ken have, for all practical purposes, is a good ank ackount."

Horticultural.

Grapevine Grafting.

In grafting the vine that is damaged or fruitless, care should be had to select thick vines to graft in. It is better to graft six inches under the soil; in this manner the wind does not affect the graft. The soil should be quite loose around the graft, that it may not retard or injure its tender growth. The best time to graft is in the Spring after the frosts have passed. In selecting the graft, choose those vine shoots that are round and solid, and which have the buttons or buds nearer to each other. It should have three or four buds. You cannot make more than two grafts from a vine shoot, because, after the first seven buds or buttons, the rest of the vine shoot is worthless. When you cut the graft for the purpose of grafting, the lower or cut part should be protected from the air. Then you will saw off the old wood even, and at the time when it wants to sprout. Should you wish to put two grafts, place the other on a slanting incision near the top of the old wood. Care should be had not to touch the heart of the old wood in making the incision. In making the cut for grafting, the two woods must close nicely so as to leave the sap undisturbed, and in vigor for the graft.—*Correspondence Los Angeles Herald.*

Hungarian Grass for Hay.

When forced to grow fine through crowding, and grown on rich and suitable land, this plant makes from three to four tons of fine appearing fodder, sweet smelling if cut early and properly cured, and relished by stock. So far as observation can detect its value for feeding, if cut early it is certainly quite equal to ordinary hay. If grown thinly, the forage is coarse and is not so well relished by, nor does it appear to be so nutritious to animals. If not cut early, its value is greatly impaired. Cut after the seed is ripe, it is said to be unhealthy for horses, being, as some say, too nutritious and heating; as others say, too indigestible. A small patch grown for seed a few years ago, offered me an opportunity of testing it in an overripe condition, but the cows would not eat it with relish. Experience leads me to sow much and on rich land, and to harvest when the heads begin to appear generally over the field. The crop is then always heavy, fine in growth, affords a good appearing hay, and is relished by stock. Being a rapid grower, and intolerant of cold and wet, the sowing should not be done until the weather, both day and night, has become settled warm, nor should it be delayed so long as to be affected by the cool nights of approaching Autumn. The best time in this region is from the 20th to the last of June, or the early part of July. The crop will be ready to cut in from six to seven weeks after sowing, and if sown in June, it can be cut at a season favorable for drying it into hay. The surface of the soil must be mellowed; and after this preparation, sow the seed from five to six pecks per acre, evenly, and harrow in with a light implement.—*Live Stock Journal.*

Poultry.

A Hen that Sang.

A novel case was heard before 'Squire Wilson, of East Nottingham Township, Chester county, Pa., recently. Last Spring a farmer of East Nottingham had thirty chickens stolen. Summer wore away, but no traces of the lost fowls. A few days ago the chicken owner visited a farmer in the same township, and, while looking at the fowls on the premises, saw a hen, which, he thought, resembled one of the number stolen from him. He inquired how the farmer obtained it when a conversation followed, and concluded by the poultry owner saying: "If that chicken comes to me when I call her by name, she is mine." This was agreed to "Annie, Annie," called the owner, and sure enough the hen came to him. "Jump upon my hand." Up jumped Annie. "Now sing for a grain of corn, Annie," called the owner. The pretty little hen immediately began to sing in her fowlish style a solo, which fully convinced the two men to whom she rightfully belonged. The thief and pet chicken were brought before the 'Squire, who heard the story and Annie's solo and sentenced the thief.—*Reading (Pa.) News.*

Fowls should not be permitted to have access to the horse or cow stables, nor the feed room or hay mows of the barns, if for no other reason than that they befoul the feed, hay, etc. They do more, they feed themselves irregularly and often too profousely. Their rooms and runs should be separated from the yards of other stock; so they may not slip in, and then be chased and scared to get them out.

Moderately fat hens are the most profitable layers. Overfatness engenders laziness and decreases the secretions, which are necessary to form eggs.

In Winter fowls may be kept to advantage three days after killing. The flesh will be tenderer and sweeter after cooking, when this is done.

This much should be settled with all farmers, that they raise all they can with the least possible expense, which they never can do by slighting their work. Fields should never be half-cultivated to save the expense of doing it well; and a small quantity of seed never should be sown when a larger quantity promises better paying results.

Ashland *Tidings*: The building of a railroad through Rogue River valley will probably make "mixed farming" more profitable than a farming business confined exclusively to one branch of agriculture, and we expect to see some grain raising, some stock and a good deal of fruit raising on almost every arm in the valley.

HUMOROUS ITEMS.

You can tell dogwood by its bark.

Prairie chickens are game to the last.

A boarding-house keeper's tree—'ash.

High pitch—that on the California big trees.

Every harness-maker leaves traces of his work behind.

How to restore oil paintings—Carry them back to the owner.

The mean temperature is what disgusts a man with every climate.

What kind of robbery is not dangerous? A safe robbery, of course.

A Massachusetts mule is sixty years old. It has kicked everything but the bucket.

Ambitious man—Is there any fixed rule for writing poetry? There is! Don't!

If a man's biography is called history, why should not a woman's be called herstory?

A Nevada school-teacher died, the other day, and the local papers announced under the head, "Loss of a Whaler."

Two men disputed about their powers of endurance, and one said testily to the other: "I bet you that I can hold my legs in boiling water longer than you can."

"Done!" said the other; and the steaming water was brought.

In went the legs—No. 1 with an air of defiance, No. 2 with edifying serenity. No. 1 began to wince; No. 2 called calmly for the newspaper. No. 1 began to find it intolerable; No. 2 smiled at the humor of the paper.

"In heaven's name!" at last exclaimed No. 1, exasperated by the heat of the water and the coolness of his antagonist, "what is your leg made of?"

"Wood!" sententiously replied the other.

The various trades and occupations depend in a greater or less degree upon the farmer for success in their different callings, and where will you find the professional man, the merchant, artisan or mechanic, who can say he does not measure his success or failure, in a greater or a less degree, by the prosperity or adversity of the farming community?

A Liberal Offer.

Purdy's *Fruit Recorder and Cottage Gardener* is the best journal on fruits, gardens and flowers, published in the United States, price $1. As this is a standard journal that every family should read, we have made arrangements to club with it and to furnish its premiums to our own subscribers on the following terms:

Any person wishing to renew subscription, who pays $3.25, or any new subscriber, who sends us $3.25, will receive the Farmer and *Fruit Recorder* one year, and can have any one of the premiums he may name in addition.

Any subscriber who has already paid up, can send us 75 cents more and have the *Recorder* one year and a premium. Any person who will send us $2.50 for a new subscriber, can have the *Fruit Recorder* and either one of the premiums as compensation for trouble in procuring us a new subscriber.

The premiums are:

2. Twenty five plants of the famous Sharpless strawberry.
3. Six plants of the new early and most productive, large, black cap raspberry known, the Tyler.
5. Six plants of Taylor's Prolific, the hardiest and most prolific blackberry known.
7. Two strong, well rooted, hardy and beautiful roses.
8. One Helena Honey Suckle, the most beautiful grown.
12. Purdy's Small Fruit Instructor, 64 pages, all about growing fruits, with plans for dry houses, green houses and hot beds.
14. A splendid and almost life-size engraving of our dead President—Garfield; by one of the most eminent of living engravers, worth one dollar.

Simply give the number opposite the premiums, and don't describe it.

Just now Frank Abell is taking some of the most charming and lovely promenade and panel photographs we ever saw. Call at his studio on first street, Portland, and see them. Strangers always made welcome.

A CARD.

To all who are suffering from the errors and indiscretions of youth, nervous weakness, early decay, loss of manhood, etc., I will send a receipt that will cure you, FREE OF CHARGE. This great remedy was discovered by a missionary in South America. Send self-addressed envelope to the Rev. Joseph T. Inman, Station D, New York City. dec30-6m

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A LETTER.

Having been a great sufferer from rheumatism several years, and tried numerous remedies of every imaginable description, and a great number of physicians, all to no purpose, last Spring I had a very severe attack of inflammatory rheumatism so as to confine me to my bed. I was advised to try Dr. Henly's Rheumatic Neutralizer, and to my great surprise I commenced gaining and in a short time was able to get about. I do freely recommend the Neutralizer to all afflicted as I have been, and I firmly believe it is, without exception, the best medicine for eradicating rheumatism from the system in the world

S. F. Mathews,

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The active blended properties of these vegetable remedies constitute an alterative and general corrective of the highest class, and endow it with a preventive value entitling it to the first rank as a medicinal safeguard for fortifying the system against malarial and other maladies which cause serious disturbance of the Liver. It relaxes the bowels without griping; purifies the blood, rarests pain, spasms in the side or shoulder blade, purifies a bilious breath and completely relieves the many indescribable symptoms which torment sufferers from dyspepsia, liver complaint and kidney troubles. It also effectually removes those nervous symptoms felt when bile is imperfectly secreted, or misdirected.

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