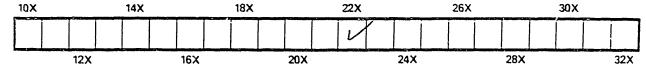
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THE

Canadian Agriculturist,

AND

JOURNAL OF THE BOARD OF AGRICULTURE

OF UPPER CANADA.

VOL. X.

TORONTO, DECEMBER, 1858.

No. 12.

CLOSE OF THE YEAR.

The present number completes the tenth volume of the Agriculturist. In consequence of the publication of the monthly parts having got behind before the transfer of the work from the late Proprietor to the Board was finally determined upon, its subsequent issues have, in point of time, been retarded; not so much, however, as to prevent the current volume being completed within the year. The T. ansactions, however, cannot be brought to a conclusion for 1858, with the present number, as additional matter is still on hand, and more time is required, than was anticipated, to procure the completion of the cuts and illustrations relative to the late Provincial Exhibition. The remaining sheets necessary for completing the volume of Transactions for the current year will be mailed to each of our subscribers, now on the books, as speedily as possible. Separate title pages and indices will be prepared for the Agriculturist and Transactions, so that they may be bound separately or together, at the option of the subscribers.

In reference to the future, we have the pleasure of announcing that a new and much improved series of this periodical will be commenced in January next, and that it will regularly appear hereafter, on the 1st of each month. Every effort will be made to improve both the mechanical execution and literary character of the work. The price to single subscribers will be \$1 per annum, but to agricultural societies or clubs, the former rate of half-a-dollar, will be continued. The size of the monthly parts will probably vary, according to the amount of official matter on hand; but each number, including the Transactions of the Board of Agriculture, will consist of not less than 48 pages; thus making an annual volume of from 600 to 700 pages, for the unprecedented low charge of only fifty cents!

The great objects of this Journal being to record, in a condensed and popular form, the most important agricultural improvements of the day, and to offer a regular means of communication between the Board and the various agricultural societies throughout this section of the Province, it must be obvious that, in carrying out these purposes, we shall require the co-operation of those individuals who take a lead in such matters in different parts of the country. We trust that this kind of assistance will not be withheld. Any information, or suggestions, tending to facilitate these objects, will at all times be thankfully received.

We cannot conclude these few remarks, written at the close of a year which has proved so widely disastrous to the agricultural and trading interests of the country, without expressing a strong hope that the worst is past, and that the new year will, under the guidance of a beneficent Providence, be characterised by increased activity in all our industrial pursuits and the full restoration of commercial confidence; an abundant harvest, and, as a consequence, general prosperity and happiness.

AMERICAN SHORT HORN HERD BOOK.

[The following communication from Lewis F. Allen, Esq., Editor of the American Herd Book, in reference to his forthcoming new volume (the 4th of the series) would have appeared at an earlier date, had it not unfortunately got mislaid. It may not even now be too late to order the pedigrees of animals, if parties desirous of so doing communicate with Mr. Allen immediately. The work is highly deserving the support of all short-horn breeders, and indeed of all farmers interested in that important breed of stock, (and who now-a-days is not?) throughout this continent. —ED. AGRICULTURIST.

BLACK ROCK, N. Y., October 8, 1858.

Editor Canadian Agriculturist.

DEAR SIR,—The approbation with which the previous volumes of the American Herd Book have been received by the Short Horn breeders of this country, together with the large contribution of pedigrees to their pages, and the solicitations of many breeders to have a fourth volume in preparation, have induced me to give this notice, that sufficient time may be given for the full examination which is required by every Short Horn breeder to properly arrange their pedigrees. Since the compilation of the last volume, hundreds of young animals have been produced, and new importations made from abroad; and by the time the next volume can be ready for the press, a further natural increase to our existing herds will be added. I therefore give you this notice, that in case you choose to record your pedigrees, you can have ample time to do so. I ask your attention to the following particulars:

1st. All pedigrees must be sent in previous to the first day of December, 1858, to allow me time to compile them, and issue the book by May 1, 1859.

2nd. Every pedigree must be made out at full length, after the manner of those in the volumes of the American Herd Book, as I can not encounter the labor and responsibility of making out full pedigrees from short notes, hints and memorandums. The imperfect condition of many private records required me to do that labor for my previous volumes, which it is now unnecessary to repeat, with such extensive authorities as those volumes before you will afford. I can not, therefore, accept such imperfect papers, only in cases where your animals or their ancestors have not been previously recorded, either in the English or American Herd Books. Another reason for this is, that every breede, ought to be supposed to understand the lineage of his stock better than a stranger, and consequently he can give their pedigrees with greater accuracy.

3rd. Let every individual pedigree be complete in itself, like those in the published Herd Books. State by whom the animal was bred, (if you wish that fact known;) the date (by month and year) of its birth; the name and Post Office, (County and State, ;) residence of its present owner; its sex, (this may merely say "Bull" or "Cow," in parentheses, by the side of the animal's name;) the color, whether white, red, red and white, red roan, light roan, or roan, simply without qualification. In reans, where white is the prevailing color, they are light roans; where red prevails over the white, they are red roans. By referring to the past volumes of the Herd Book, you cannot mistake the mode of description, or the tabling the produce of the cows. Do not send me printed pedigrees from newspapers, hand-bills, or catalogues, &c., unless they are in Herd-book form, and complete; nor when they are printed on both sides of the paper, as, if so, they must be copied by me for the printers. of bulls occurring as sires in the pedigrees, may be referred to by their numbers when recorded in the Herd-books, either English or American. When such bulls are not recorded, let their pedigrees be written and referred to distinctly under the pedigree to which he is a party. Any unrecorded and unnumbered bull referred to in a pedigree must also be numbered and recorded to properly clucidate such pedigree, and a charge of fifty cents will be made for such bull In cases where uncommon labor is necessary for me to find out the pedigree, an additional charge of fifty cents to a dollar each will be made, of which the owner of the animal will be notified at the time.

4th. Every animal presented for record must be well-bred; and where evidence of the fact cannot be traced to animals recorded in an existing Herd Book, documentary evidence must be furnished to sustain the fact that they are true Short Horns, and are descended from well authenticated Herd-book animals.

5th. Fifty cents will be charged for each animal recorded in a distinct pedigree by name, excepting the animals named in the tables of produce of recorded cows. The record fee, in current money at your place, to be remitted when the pedigrees are sent to me. In all cases where a pedigree, for insufficiency, cannot be recorded, such pedigree will be sent back, if requested, and the few returned.

6th. In making out your pedigrees, write only on one side of the paper.—Write legibly, and with perfect distinctness, all proper names, as without such writing, many names can only be guessed at, and important mistakes may occur. Let your lines be quite half an inch apart, and between each pedigree let there be a space of at least two inches blank paper. When pedigrees are written on both sides of the paper, they will be immediately returned, as one of them must, in all cases, be copied in order to print them.

7th. If any extraordinary quality of milking, in accurate weights or measures, and times, belong to your cows, or of dead weights of careases in slaughtered

recorded animals, have been made, they may be noticed; as we claim that the Short Horns are the greatest milkers, and the heaviest beef, of any neat cattle whatever, and such instances carry proof of these facts to the public.

8th. If there have been any errors or omissions in the pedigrees of your animals already recorded, by my fault, please correct them and send them to me, and I will rectify them in proper order in the fourth volume, by name and reference, without charge.

9th. I will print any number of well-drawn, accurate portraits of animals, for the fourth volume, at five dollars each for the whole edition of the book; the portraits and cuts to be furnished by the owners. This will be done on the best of fine tinted paper. I cannot print portraits without charge, as the expense is too heavy an outlay for me, and the main benefit accrues to the proprietors of such animals. In this relation, I am authorized by Mr. John R. Page, a good artist, whose address is Sennett, Caynga Co., N. Y., to state that he will proceed to take such portraits, whenever a sufficient number can be furnished to justify it, and that he will superintend the engraving of them by competent workmen. Many portraits in the second and third volumes are samples of his execution. All persons who contemplate giving portraits of their cattle, should lose no time in obtaining them at once, that there may be ample time to have them properly engraved.

10th. The price of the book to contributors and subscribers, will be the same as the last—five dollars a copy—payable on ordering it for delivery. The work to be the same in style and material as the third volume.

11th. If you have sold unrecorded animals to any breeders whose names are not in the third volume, I will thank you to send me their names, that I may send them a copy of this circular, as it is of advantage to you to let animals of your breeding, now in other hands, be recorded and known to the public.

12th. I suggest that even in cases where you record by name the produce of your cows, it is still better to give all such produce a distinct record of their own. They become thus more conspicuous, as such produce merely recorded with the cow is not much looked after by inquirers,—the chief advantage in the produce tables being to show that the cow, whose progeny is so recorded, is a successful breeder. This separate record will add an item to the expense, but it is a trifle compared with the value of an animal worth from one hundred to five hundred or a thousand dollars. Address me at Black Rock, N. Y.

Respectfully yours,

LEWIS F. ALLEN, Editor American Herd Book.

Familiar Robin.—In the garden of the Laurels, at Clewr, near Windsor, a robin comes every day, when called, to be fed. He will perch himself on the hand of the lady of the house, and take his meal without displaying the slightest symptom of fear. Frequently he has flown across the garden, and has taken bread out of her mouth. When satisfied, he perches himself either upon the bench near his mistress, or upon the nearest bough, and sings his song. In no instance has he refused to be fed, or neglected the usual call for him. The little fellow has never been caught or confined, but is in his natural state.—
Cottage Gardener.

MISCELLANEOUS.

Enjoyments of Winter.—Awed by the progress of time, winter, ushered into existence by the howling of storms and the rushing of impetuous torrents, and contemplating with the satisfaction of a giant the ruins of the year, still affords ample food for enjoyment which the vulgar never dream of, if sympathy and association diffuse their attractive spells around us. In the bosom of retirement, how delightful is it to feel exempt from the mean intrigues, the endless difficulties and tumuits, which active life ensures, and which retirement enables us so well to contemplate through the telescope of recollection! When seated by the cheerful fire among friends, loving and beloved, our hopes, our wishes, and our pleasures are concentrated; the soul seems imparadised in an enchanted circle; and the world—vain, idle, and offensive as it is—presents nothing to the judgment, and little to the imagination, that can induce the enlightened or good to regret that the knowledge they possess of it is chiefly from the report of others, or from the tumultuous murmur which from a distance, invades the tranquility of their retreat, and operates as a discord in a soft sonata. These are the moments which affect us more than all the harmony of Italy or all the melody of Scotland; moments in which we appear almost to emulate the gods in happiness.—Bucke's Beauties of Nature.

CURE FOR SHYING.—If a lady's horse be addicted to shying, I will give her a sure and simple cure for the same; one which I have never known to fail. Let us, for instance, suppose the existence, of a heap of stones on the near side of the road. The horse sees an indistinct grey object, and prepares to shy at it. The moment he shows such symptoms, let his fair rider turn both her eyes on exactly the opposite side of the road, and look steadily away from the offending heap, and I'll engage that the horse will walk quietly by. For many years I have ridden horses of all tempers and dispositions, some of them much given to shying, and have never yet found this simple remedy to fail in its effect. Let those who scoff at me try it. The reason is this: The human eye has, doubtless, a great influence on all animals, and there is a strong and secret sympathy between the horse and his rider. The horse sees an indistinct object, and looks doubtfully at it; his rider becomes alarmed, imagining that the animal is going to commit some eccentricity; the fear is communicated to the animal, and he starts in terror from the object which has frightened him; whereas, if he finds that his rider sits unmoved and unconcernedly, he regains his confidence, and goes on "in the even tenor of his way." I believe that one-half of our horses are ruined for life by being "hit over the head" by grooms to cure them of shving .- Horse Taming.

Peach Raising in Ohio.—The Ohio Cultivator says that the Brothers Loughry, of Adams county in that State, raised the present season 3600 bushels of peaches, which they sold in the Cincinnati market at an average of three dollars per bushel, amounting to \$10,000; which, after deducting the expenses of gathering and marketing, leaves a net profit of \$9.000. This crop was obtained from about ten acres.

DAILY DUTIES.—My morning haunts are where they should be, at home! not sleeping, nor correcting the surfeits of an irregular feast, but up and stirring; in winter, often ere the sound of any bell awakes men to labour or to devoti n; in summer, as oft with the bird that first rises, or not much tardier, to read good authors, or to cause them to be read, till the attention be weary or memory have its freight; then with useful and generous labour preserving the body's health and hardiness, to render lightsome, clear, and not lumpish obedience to the mind, to the cause of religion, and our country's liberty.—Milton.

THE GARDEN.—The Garden is a bound volume of agricultural life written in poetry. In it the farmer and his family set the great industries of the plow, spade, and hoe, in rhyme. Every flower or fruit bearing tree is a green syllable after the graceful type and curse of Eden. Every bed of flowers is an acrostic to Nature, written in the illustrated capitals of her own alphabet. Every bed of beets, celery, or savory roots or bulbs, is a page of blank verse, full of the belles betters of agriculture. The farmer may be seen in his garden. It contains the synopsis of his character in letters that may be read across the road. The barometer hung by his door will indicate certain facts about the weather, but the garden lying on the sunny side of the house, will mark, with greater precision, the degree of mind heart culture which he has reached. It will embody and reflect his tastes, the bent and bias of his perceptions of grace and beauty In it he holds up the mirror of his inner life to all who pass; and, with an observant eye, they may see all the features of his intellectual being In that choice rood of earth he records his progress in mental cultivation and professional experience. In it he marks, by some intelligent sign, his scientific and successful economies in the corn field. In it you may see the germs of his reading, and can almost tell the number and nature of his books. In it he will reproduce the seed-thoughts he has culled from the printed pages of his library. In it he will post an answer to the question whether he has any taste for reading at all. Many a nominal farmer's house has been passed by the book agent without a call, because he saw a blunt bruff negative to the question in the garden or yard.— "lihu Burritt.

The Emperor Napoleon as a Farmer.—On Saturday the Emperor of the French, accompanied by Marshal Canrobert, Generals Ney and Fleury, and several other officers, went to visit the farms of Bouix, Vadenay, Cuperly Suippes, and Joachery, which had been formed within the last four months by his orders. He expressed great satisfaction at the rapidity with which all the works had been executed. In addition to the barns and buildings for the accommodation of the persons engaged on these farms, each of the esta' lishments has sheds for 100 cows and 1,200 sheep, and stabling for 20 horses; and already 400 cows of the Breton, German, and Swiss breeds, more than 3,000 sheep, with a number of English rams, and 30 fine breeding mares have been collected there. Five other similar farms have been planned out, and will be completed in 1859. The establishment of these farms will be of great benefit to the country, by transforming land which has been hitherto waste into productive property.—English Paper.

FLOWERS OF THE OLDEN TIME.—The floral beauties of Britain were confined to those wild flowers which are to-day the delight of childhood. eyes of the "barbarians" looked upon the modest daisy, which then presented the same simple form that it does to-day. Prim-roses, nursed in the recesses of gnarled roots of trees, came forth in abundance in the spring; so did the blue-bell and the violet. These familiar flowers, with dog-roses, foxgloves, traveller's-joy, flowering heaths, and water-lilies, were the chief beauties of the bouquet of the ancient Briton. Fuchsias, balsams, dahlias, auriculas, hyacinths, pinks, tulips, roses, and a host of other beauties that now adorn our gardens and dwellings, were then quite unknown. Even the wall-flower and the mignonette were strangers to our land; and the honeysuckle, which is now a common inhabitant of the hedges, came to Britain a stranger, and stole out of the confines of a garden, to share the fortunes of our native wild flowers. Nor was the state of the British flora peculiar to the earliest period. It prevailed, with only slight additions and improvements, down to the sixteenth century !- Phelp's Progress of Agriculture.

LIFE OF AN OYSTER.—But the life of a shell-fish is not one of unvarying rest. Observe the phases of an individual syster from the moment of its carliest embryo life, independent of maternal ties, to the consummation of its destiny, when the knife of fate shall sever its muscular cords and doom it to entombment in a living sepulchre. How starts it forth into the world of waters? Not, as unenlightened people believe, in the shape of a minute, bivalved, protected, grave, fixed, and steady oysterling. No; it enters upon its career all life and motion, flitting about in the sea as gayly and lightly as a butterfly or a swallow skims arough the air. Its first appearance is as a microscopic oyster cherub, with wing-like lobes flanking a mouth and shoulders, uninsumbered with inferior crural prolongations. It passes through a joyous and vivacious juvenility, skipping up and down as if in mockery of its heavy and immovable parents. It voyages from oyster-bed to oyster-bed, and if in luck so as to escape the watchful yor city of the thousand enemics that lie in wait or prowl about to prey upon youth and inexperience, at length, having sowed its wild oats, settles down into a steady, solid, domestic oyster. It becomes the parent of fresh broods of oyster cherubs. As such it would live and die, leaving its shell, thickened through old age, to serve as its monument throughout all time—a contribution towards the construction of a fresh geological epoch, and a new layer of the carth's crust—were it not for the gluttony of man, who, rending this sober citizen of the sea from his native bed, carries him unresisting to busy cities, and the hum of crowds. If a handsome, well-shaped and wellflavored oyster, he is introduced to the palaces of the rich and noble, like a wit, or a philosopher, or a poet, to give additional relish to their sumptuous feats; if a sturdy, thick-backed, strong-tasted individual, fate consigns him to the capacious tub of the street fishmonger, from whence, dosed with course black pepper and pungent vinegar, embalmed partly after the fashion of an Egyptian King, he is transferred to the hungry stomach of a costermonger, or becomes the luxurious repast of a successful pickpocket. - Wesiminster Review.

SPONTANEOUS FERMENTATION .- Dough, as it contains both gluten and sugar, when moistened, is capable of fermentation without adding another substance. If simple flour and water be mixed and set aside in a warm place, after the lapse of several hours it will exhibit symptoms of internal chemical action, becoming sour from the formation of lactic acid, while minute bubbles appear, which are owing to a gas set free within the dough. These changes are irregular and uncertain, according to the proportion and condition of the constituents of the flour. They also proceed with greater or less rapidity at the surface or in the interior, according as the parts are exposed to the cooling and oxidating influence of the air. Bread baked from such dough, is sour, heavy, and altogether bau. Yet the true vinous fermentation may be spontaneously established in the dough by taking measures to quicken the action. If a small portion of flour and water be thus mixed to the consistency of batter, (its half fluid state being favorable to a rapid chemical change) and the mixture be placed in a jar or pitcher, and set in a vessel of water kept at a temperature from 100 to 110 degrees, in the course of five or six nours decomposition will have set in with a copious production of gas bubbles, which may be seen by the appearance of the batter when stirred. If this is mixed and kneaded with a large mass of dough, moulded into loaves and set aside for an hour or two in a warm place, the dough will swell or "rise" to a much larger bulk; and, when baked, will yield a light, spongy bread. A little salt is usually added at first, which promotes the fermentation, and hence bread raised in this manner is called "self raised bread." Milk is often used for mixing the flour, instead of water; the product is then called "milk emptyings bread."- Yeomans.

AGRICULTURAL COMMERCE OF OHIO.—In 1855 the state sent twenty-three thousand head of eattle to New York City, and in 1857, 50,000 head, besides some 15,000 sent to Philadelphia, and many to Baltimore. At least 70,000 head of cattle were sent to these three cities in 1857. The hog trade is far greater; and notwithstanding that the number of live and dressed hogs exported from the state has, in the past few years, increased rapidly, the numbers packed at Cincinnati have not declined. According to the Annual Report of the Commissioner of Statistics, just published, the aggregate value of farm produce is \$132,700,000, and the net profits \$57,300,000. The price of wood varies from \$7.60 to \$2.75 per cord, and is highest in counties through which main lines of railway pass, on account of the vast quantities of wood consumed by the locomotives. These roads consume annually the product of twelve thousand acres of land. Farm labor is uniformly high, the average wages being fifteen dollars per month and board. This is owing to the growth of towns and manufactures, which attendily causes the agricultural supply to diminish, so that large farmers are only able to secure their crops by the use of machinery.

LOOKING GLASSES.—The manufacture of silvered mirrors, as at present carried on, is one of the most curious of modern arts. The process of thus silvering glass mirror, is very simple. The sheet of tin-foil, somewhat larger than the mirror, is laid upon a smooth table, and quicksilver poured over it until it covers the tin-foil with a thickness of one-tenth of an inch or more; when the mercury has been swept by the edge of a stick to clean off the drops from its surface, the glass plate, scrupulously clean, is brought even with the edge of the table, and pushed gently forward sideways, so as to slide over the bath of mercury, its edge just dipping beneath its surface, so as to push before it all impurities, and to exclude all air-bubbles. Weights are then evenly applied over the back of the mirror, and the whole table inclined to such an angle as to favor the drawing off of the superfluous mercury. This requires some days or weeks, according to the size of the plate. Here is an additional risk and cost in large mirrors, since the time consumed is not small, and the danger of fracture imminent. The amalgam sometimes crystallizes, producing imperceptions which require the renewal of the whole process; and the health of those engaged in it also suffers, and is finally destroyed by mercurial salivation .- Life Illustrated.

"WITCHCRAFT" AND AGRICULTURE.—Pliny has recorded the story of an industrious and ingenious husbandman, who, being in advance of the knowledge of his time, cultivated a small piece of ground upon an improved method, by which he gathered much more fruits, and reaped larger profits than the neighbors about them, though their possessions were more ample. His uncommon success excited their envy, insomuch that they brought this accusation against him: "That by sorcery, charms, and witchcraft, he had transported his neighbors' fruits, fertility, and increase to his own fields." For this he was ordered peremptorily, by Albinus, a Roman general skilled in agriculture, to answer the charge before him. Cresinus, fearing the issue, resolved upon his best defence, brought his plough and other rural implements, and displaying them openly, he set there also his daughter, a lusty, strong lass, big of bone; then, turning to the citizens—"My masters," quoth he, "these are the sorceries, charms, and all the enchantments that I use. I might also allege my own travel and labor, my early rising and late sitting up, and the painful sweat that I daily endure; but I am not able to present these to your view, nor to bring them with me into this assembly." This bold and open defence capti-

vated the people; ii proved the coup dc main which turned a doubtful result to his entire favor; he was pronounced "not guilty," and those present took note of his inventions. This story, though not strictly belonging to the history of our own island, is derived from those who are said to have first taught the Britons the art of husbandry. It may, therefore, be fairly employed to show that the first improvers of agriculture had their days of trial; that in all ages and countries, and in every path of inquiry and invention—in the discovery of the rotation of crops, as in that of the rotary motion of the earth—a Galileo has had to answer for his daring, before some embodiment of ignorance constituting an inquisition.—Ibid.

EXTENT OF THE ROMAN EMPIRE.—We are sometimes under a little delusion in the estimates we form of the magnificence of the Roman Empire, or the multitude of troops that it maintained. Russia surpasses it in extent of territory, and maintains an army considerably more numerous. and Austria, who rank next to Russia in the number of their standing armies, could singly bring into the field a much larger force than the whole Roman Empire. The military force of the Pagan Empire is here estimated at 450,000 men; the Christian monarchies of France and Austria are each of them reputed to maintain an army of 650,000 men. And when we reflect upon the invention of gunpowder and the enormous force of artillery, it is evident that any one of the first rate powers of modern Europe could bring into the field a destructive force that would sweep from the face of the earth the thirty legions of Adrian. The very division of Europe into a number of States involves this increase of soldiery. In the old Roman Empire the great Mediterranean sea lay peaceful as a lake, and the Roman ships had nothing to dread but the wind and the waves; whereas, in modern Europe many artificial boundaries have to be guarded by an array of soldiers. "Belgium defends her flats with a hundred thousand men, and the marshes of Holland are secured by sixty thousand Dutch." Hitherto everything has tended to develop the military power in Christendom.—White's Eighteen Centuries.

OF REGIMEN OF HEALTH.—There is a wisdom in this beyond the rules of physic; a man's own observation what he finds good of, and what he finds hurt of, is the best physic to preserve health; but it is a safer conclusion to say, "This agreeth not well with me, therefore I will not continue it," than this: "I find no offence of this, therefore I may use it;" for strength of youth in nature passeth over many excesses which are owing a man till his age. Discern of the coming on of years, and think not to do the same things still; for age will not be defied. Beware of sudden change in any great point of diet, and, if necessary, enforce it, fit the rest to it; for it is a secret both in nature and state, that it is safer to change many things than one. Examine the customs of diet, sleep, exercise, apparel, and the like; and try, in anything thou shalt judge hurtful, to discontinue it by little and little; but so, as if thou dost find any inconvenience by the change, thou come book to it again; for it is hard to distinguish that which is generally held good and wholesome, from that which is good particularly, and fit for thine own body. To be free-minded and cheerfully disposed at hours of meat, and of sleep, and of exercise, is one of the best precepts of long lasting. As for the passions and studies of the mind, avoid envy, envious fears, anger, fretting inwards, subtle and knotty inquisitions, joys and exhilarations in excess, sadness, not communicated. Entertain hopes; mirth rather than joy; variety of delights rather than surfeit of them; wonder and admiration, and therefore novelties; studies that fill the mind with splendid and illustrious objects, as histories, fables, and contemplations of nature. -Lord Bacon.

RANCID BUTTER.—The Echodu Monde Sayant says: "A farmer in the vicinity of Brussels, having been successful in removing the bad smell and taste of some butter by mixing it with chloride of lime, he was encouraged by this experiment, and he has restored to butter, the taste and odor of which were insupportable, all the sweetness of fresh butter. The operation is extremely simple, and practicable by all. It consists simply in working the butter in a sufficient quantity of water, in which 25 to 30 drops of chloride of lime have been added to every two pounds of butter After having mixed it till all its parts are in contact with the water it may be left in it for an hour or two, afterwards withdrawn and worked again in clear water. The chloride of lime having nothing injurious in it, can with safety be augmented; but after having varied the experiment, it was found that twenty-five to thirty drops to every two pounds of butter were sufficient. Another method of restoring sweetness and flavor to rancid butter, said to be very effectual by those who have tried it, is to put it into a churn with new milk and work it till the old salt and rancidity is removed, after which it is to be taken from the churn, worked and salted afresh.—N. E Cultivator.

Dog Hounds.—Theirs is the sort of form which expresses to me what I want to express-nature not limited, but developed by high civilization. The . old savage ideal of beauty was the lion, type of mere massive force. That was succeeded by an over-civilized ideal, say the fawn, type of delicate grace. cunning breeding and choosing, through long centuries, man has combined both, and has created the foxhound, lion, and fawn in one. Look at that old hound, who stands doubtful, looking up at his master for advice. Look at the severity, delicacy, lightness of every curve. His head is finer than a deer's; his hind legs tense as steel springs; his forc-legs straight as arrows; and yet see the depth of chest, the sweep of loin, the breadth of paw, the mass of arm and thigh; and, if you have an eye for form, look at the absolute majesty of his attitude at this moment. Majesty is the only word for it. If he were six feet high, instead of twenty-three in hes, with what animal on earth could you compare him? Is it not joy to see such a thing alive? It is to me, at least. I would like to have one in my study all day long, as I would have a statue or a picture; and when Mr. Morrell gave (as they say) two hundred guiners for Hercules alone, I believe the dog was well worth the money, only to look at -Rev. Charles Kingsley.

Scientific Paradoxes.—The water which drowns us, a fluent stream, can be walked upon as ice. The bullet, which, when fired from the musket, carries death, will be harmless, if ground to dust before being fired. The crystallized part of the oil of roses, so grateful in its fragrance—a solid at ordinary temperatures though readily volatile—is a compound substance, containing exactly the same elements, and in exactly the same proportions, as the gas with which we light our streets. The tea which we daily drink, with benefit and pleasure, produces palpitations, nervous tremblings, and even paralysis, if taken in excess; yet the peculiar organic agent called theine, to which tea owes its qualities, may be taken by itself, (as theine, not as tea) without any appreciable effect. The water which will allay our burning thirst augments it when congealed into snow; so that Captain Ross declares the natives of Arctic regions "prefer enduring the utmost extremity of thirst rather than attempt to remove it by eating snow." Yet if the snow be melted it becomes drinkable Nevertheless, although, if melted before entering the mouth, it assuages thirst like other water, when melted in the mouth it has the opposite effect. To render this paradox more striking, we have only to remember that ice, which melts more slowly in the mouth, is very inefficient for allaying thirst .- Blackwood's Magazine.

UNWRITTEN SONGS.—Anywhere by some fringed stream in New York woods, or under the shadow of a New England mountain, or even here away in the leafy edges of Indiana or Michigan. But he must needs to get up before breakfast; it is the matins he must have performed in that hour of gold, silver and pearl, between the dawn and the sunrise. The blue-bird and the robin, the bobolink and the thrush; the mocking-bird, the martin and the sparrow, all these, and "ever so many more," fill the morning and the heart with melody. But with the first flash of sun, the cestacy subsides, and the grand anthem is ended

Very few, we imagine, have ever heard this gush of song. Duty may rouse them, or pain forbid sleep, but they were not chaimed awake. There is a startling beauty in that concert; the listener can not be done wondering at the volume of sweet sound there is in a single grove; the variety of the tones, and

the marvellous harmony of the whole.

Beginning gradually with a warble in the grass or a note in the trees, it rapidly multiplies and deepens and extends, until every leafy bough conceals a singer, while the east is slowly brightening. With the first deep crimson and golden glow, the enthusiasm culminates, and the swelling wave of song subsides. And when the lazy World and his wife yawn their way to breakfast, they pause at the window, and while the robin holds on in its sweet old story, and the sparrow chirps a solo, they say, "how charmingly the birds do sing!" not dreaming, luxurious souls, that the concert was all over before their last dream began.—B. F. Taylor.

MICROSCOPIC WONDERS.—Among the most remarkable of those myriads of animals which exist in every drop of water, is the navicula-a little creature which has some twenty or thirty legs, and is endowed by Nature with an armor of flint. In a paper which was recently laid before one of the scientific societies of London, some curious facts concerning this diminutive animal were stated. Among other things it was mentioned that if an observer watches narrowly for five or six hours, he will note a thin transparent line spreading across it in some direction. After the line makes its first appearance it becomes every moment more distinct, and rapidly increases in width. At length the creature begins wiggling its limbs violently, the body splits asunder, and two new navi-oula are made out of one old one. The animal has something like a hundred stomachs, and its mouth, which is situated near one extremity, is surrounded by a number of almost invisible tentacula, with which it grasps its food; but as soon as the transparent line appears, which denotes its approaching division into two, as another nouth will be wanted another is seen sprouting from the other extremity, and is ready to perform its functions as soon as the separation is effected. The navicula divides itself in two, once in twelve hours, under ordinary circumstances. But there are some kinds of naviculæ which split themselves into sixteen instead of two in the same space of time. Were there no checks to the increase, a single one of the tribe would become the producer of hundreds of millions of creatures in a month.—Portfolio.

OUR CHANGING CHMATE.—The following beautiful passage by Washington Irving, might almost make a March day cheerful:—

"Hore let us say a word in favor of those vicisitudes of our climate, which are too often made the subject of exclusive repining. If they annoy us occasionally by changes from hot to cold, from wet to dry, they give us one of the most beautiful climates in the world. They give us the brilliant sunshine of the South of Europe, with the fresh verdure of the North. They float our summer sky with gorgeous tints of fleecy whiteness, and send down cooling showers to refresh the panting earth and keep it green. Our seasons

are full of sublimity and beauty. Winter with us hath none of its proverbial gloom. It may have its howling winds and chilling frosts, and whirling snow storms; but it has also its long intervals of cloudless sunshine, when the snow clad earth gives redoubled brightness to the day, when at night the stars beam with intensest lustre, or the moon floods the whole landscape with her most limpid radiance. And the joyous outbreak of our Spring, bursting at once into leaf and blossom, redundant with vegetation, and vociferous with life and the splendor of summer-its morning volumptuousness and evening glory-its airy palaces of sunlight clouds piled up in a deep azure sky; and its gusts of tempests of almost tropical grandeur, when the forked lightning and bellowing thunder-volley from the battlements of heaven shake the sultry atmosphere; and the sublime melancholy of our Autumn, magnificent in its decay, withering down the pomp of a woodland country, yet reflecting back from its yellow forests the golden screnity of the sky. Truly we may say that in our climate, 'The heavens declare the glory of God, and the firmanent showeth his han-Day unto day uttereth speech, and night unto night showeth knowledge."

WATERING SHEEP IN WINTER.—That Sheep can do with less water than other domestic animals, is well known. That they should be forced to do with a less quantity than they desire, or compelled to do without any, except what is accidently supplied by melting snow or rain, no reasonable or merciful man can believe for one moment. In some experiments on South Down Sheep, at Rothamstead, we found that in the summer months each sheep cat 3 lbs. of clover hay, and drank about 6 lbs. of water daily. Thinking that they drank more than was favorable for the deposition of fat, we confired them to a less quantity of water for one week. The result was that during that time they eat less food and lost weight. This result satisfied us that sheep knew better than man, though he were scientific, how much water they required. not quote experiments. The common sense of every man tells him that sheep, as well as all other animals, should be abundantly supposed with fresh water. Cows and sheep, if possible, should have free access to it at all times. unlike the horse, they will not always drink at stated times, however regularly A well, pump, and troughs would seem, therefore, to be necessary appendages to every well managed barnyard or sheep fold. Kind reader, act on this matter, and your sheep and cows will bless you, if not in words, at least in wool, milk and profit. - Genesee Farmer.

THE WASTE OF WOOLLEN MILLS.—The Dumfries Courier describes a process now in operation at the Kingholm Woollen Mills, near Dumfries, by which the hitherto refuse water of the washing-houses is converted into valuable commercial material. By means of mechanical appliances and chemical action, the refuse, formerly turned into the River Nith, to the injury of the salmon, is made to produce stearine, which forms the basis of composite candles, as well as a cake manure that sells at 40s per ton.

Common Plants.—A recent writer well observes: "There is nothing too common, or betokening stinginess or poverty, in having the oldest or simplest plant well-grown and bloomed in a pot; everybody loves to see them. Look at the hanging plants in the Crystal Palace, and say if you ever saw so many of the very commonest plants put together before. Not one of them but the poorest man in the next village might have in his window, and yet everybody admires them. It is only that fashion requires the rich to have more costly plants, but surely there is no reason why you and I should be so foolish as to hanker after guinea plants, which are not a bit better for being dearer."

SPREAD OF THE ENGLISH LANGUAGE.—"The spread of the English language, says a document of the London Tract Society, "is a remarkable fact in the providential dealings of the Most High with mankind. Its study is increasing all over Europe. It is the nother tongue of the United States, as well as of the British Isles, and prevails over the whole of the vast colonies of North America appended to the British crown. It is the language of many of the West India Islands, and is heard more or less in all the centres of commercial activity in South America. It is the tongue of the infant empires of Australia, Van Diemen's Land, and New Zealand, and appears destined to overspread the whole Polynesian Island groups. From the Cape it is moving upwards into the interior of Africa, and into whatever part Dr. Livingston pierces from the west, he will take with him not only the merchandise but the speech of his Along the Egyptian nighway to Asia it is becoming a familiar sound. Throughout all India, from Cape Comorin to the Himalayas, it is being acquired by the most active and influential of the native population; and in five of the crowded ports of China it is one of the dialects of every-day life. Wherever the English tongue is spoken its literature finds its way. Hence it is no exaggeration to say that the preparation of a Christian literature in the English language is an object of world-wide importance."

DEATH OF A NOTED HORSE.—The celebrated trotting horse Ned Forest, who at one time was the acknowledged champion of the turf, died on the 13th of October, at the stable of James Hamill, N. Y., at the advanced age of thirty-four years. This extraordinary horse, son of Grand Bashaw, was once the property of Gen. George Cadwallader, of Philadelphia, and it is said, while in his possession, trotted repeatedly half a mile in 1.08 and 1.09; and that on a private trial he performed his mile in harness in 2.26.

THE ENGLISH CHRISTMAS HOME.

BY ELIZA COOK.

A loud and laughing welcome to the merry Christmas bells!
All hail, with happy gladness, to the well known chaunt that swells.
We list the pealing anthem chord, we hear the midnight strain,
And love the tidings that proclaim old Christmas once again.
But there must be a melody of purer, deeper sound,
A rich key-note, whose echo runs through all the music round;
Let kindly voices ring beneath low roof or palace dome,
For these alone are carol chimes that bless a Christmas Home!

Then fill once more from Bounty's store red wine or nut-brown foam, And drink to kindly voices in an English Christmas Home.

A blythe and joyous welcome to the berries and the leaves That hang about our household-walls in dark and rustling sheaves; Up with the holly and the bay, set laurel on the board, And let the mistletoe look down while pledging draughts are poured. But there must be some hallowed bloom to garland with the rest—All, all, must bring towards the wreath some flowrets in the breast; For though green boughs may thickly grace low roof or palace dome, Warm hearts alone will truly serve to deck the Christmas Home!

Then fill once more from Bounty's store red wine or nut-brown foam And drink to honest hearts within an English Christmas Home!

EUROPEAN ANIMALS IN AUSTRALIA.

The extended introduction of useful animals into our Colonial possessions, occupies, we are glad to perceive, a large share of public attention, and will, we hope, lead to ultimate beneficial results.

The columns of the Times, which are usually available during the Parliamentary recess for the discussion of topics of social and general interest, have recently been made use of by Mr. Edward Wilson, of Melbourne, who, in a very sensible letter, brings prominently forward the importance of the introduction and diffusion of European animals over the Australian continent and islands. Without following Mr. Wilson in the poetry of his subject, when he inquires, "Why should the heart of our ploughmen not be gladdened by the song of the skylark? and why should the daughter of Australia, as she linge s with her lover upon a moonlight evening, be depri ed of one more felicity, one more topic of conversation, in the nightingale perched in the neighboring thicker?" we may confine our elves to the utilitar an and practical point of view.

When we see what has already been done in Australia for the comfort and susten ance of man, there is ample en couragement for further spirited exertion. The country, soil, and climate are highly favorable to the spread and support of living creatures.—"It is but the other day," remarks Mr. Wilson, "that we got the sheep; yet we already supply Great Britain with the chief portion of her finer wools. The first cow was imported within the memory of living man; and now vast herde roam over millions of acres, from Wide Bay to South Australia, and good judges are beginning to ask whether the colonial cattle will not bear a favorable comparison with the English We have got the herse, univalled in the whole world for his powers of endurance; for we e the deeds of our grass-fed stock horses but whispered within your well-kept English stables, the narrative would be roared down by a general chorus of incredulous horse laughter. The 'time' of our races would compare not very unfavorably with your own. And thus, with the dog, cat, pig, domestic fowl, duck, rabbit, pigeon, down to our old friends the common house rat and mouse, which with their own amusing pertinacity, stick by us with a fidelity worthy of a better cause, and multiplying exceedingly among us, give a home aspect to our colonial houses in their own ingemous and significant style."

The demand for mutton, beef and pork will lead to improved breeds of these live stock. Poultry, which have been little attended to, will greatly increase, in order to keep pace with the demand. Turkeys, we perceive, are fetching 25s., geese 10s. to 12s, ducks 6s., and fowls 5s. a-head in the Melbourne market. Dairy produce is also brought to market on a very limited scale, or such prices as these would not be realized in an old colony—fresh butter 3s. 6d. a pound, milk 1s. a quart, and eggs 3s. 6d. a dozen. All the cheese consumed, is also imported. The absence of good roads, and the expense of transport from distant farms to the town, has, doubtless, had something to do with prices and supply. But the extension of railways and common roads, the water communication by steam on the Murray river, and other tributary streams now available, will greatly facilitate the forwarding of dairy produce to the market, both to

Adelaide and Melbourne.

In the matter of horses, of which Mr. Wilson speaks so favorably, the demand for them for India, and increased local wants which population brings with it, will lead to

great extension of horse-breeding.

It appears that the flock of alpacas for Victoria are to be sent out in the Goddess, which will sail in a few days. They are under the charge of a competent attendant, obtained from the Zoological Gardens. There is no doubt other introductions of new animals will follow. The Angora, or Thibet goat, which the Cape colonists and South Australian; are now trying to acclimatize, should also be introduced into Victoria. We pointed out a few months ago the great importance of these efforts for the future of Australia. It is a great disgrace that the camel has never yet been introduced into Australia. What an admirable beast of burthen it would prove for the use of the explorer in the interior deserts, which have hitherto proved so fatal a barrier to progress and communication across the Continent! The animal could be obtained very cheaply in Algeria, Tunis, or by the way of the Red Sea. The colony of Victoria has ample funds at disposal: and what a benefit would a thousand pounds or two be, laid out for such a purpose, conjointly with the colony of South Australia, on public grounds, for the introduction of the camel, especially for exploring purposes! We should then not imperil the lives of those bold explorers who go forth to trace out the unknown parts of that great island continent, destined to play hereafter a prominent part in the roll of history, and whose coasts are now being rapidly filled up with population, while sheep and cattle are depastured by millions over its w dely-extended

plains.

Other suggestions are thrown out by Mr. Wilson descring notice, and certainly there is no reason why the table of the colonist should not be supplied with an occasional hare or pheasant, or why the aldermon of the antipodes should not have his salin on cutlet, or his slice of venison, as well as his English confrere. The introduction of game-birds has not yet been very successful; but then the attempts made have been only partial, and on a limited scale. It is of no use to turn adrift a dozen pheasants in the woods, and to call that trying an experiment, in the proper acceptation of the term. The game of Australia is at present very limited, and getting more so, as the natives depend entirely upon them for their support. Kang roo tail soup is not bad; and the popular colonia dish called a "steamer," which it furnishes, is well known. The flesh of the wombat, the bandicoot, and even of the oposaun, may do for the bushman. The flesh of the emu is passably good; but this bird, the kangaroo, and the other native animals, are becoming rare as settlement advances, a war of extermination seeming to he ve been declared against them.

It is satisfactory to find that a zoological society has been formed at Melbourne, which has received from the Government a valuable tract of land, and a grant of

£3,000, for the introduction of new animals.

Besides the broad question of interest and profit to be gained by individuals in this movement, we heartily concur in the desire "to see the good things of the earth spread as rapidly as possible over every p ration of its surface, and to find every reasonable effort made to multiply, as far as can be, the legitimate enjoyments of mankind."—Mark Lane Express.

PROFESSIONAL TERMS IN STOCK-BREEDING.

Columbella asks me to define what I understand by the lerm "breed" as applied to the propagation of live stock; and at the same time he gives the following definition of the word as he understands it:—

"A recent variety made up by crossing and mingling the blood of two or more races, thus producing what is called a hybrid, a mule, a cross, a grade, of a peculiar type, like the Ayrshire, which was unknown until within a few years, and whose tendency is to

return to its native elements or run out."

This definition of the origin of a breed of live stock, and of the meaning of the word, strikes me as being singularly defective and faulty. It is true that a new breed may originate in a cross or grade, but not necessarily in either. To each of the words race, breed, hybrid, cross, and grade, the writer attaches separate and distinct meaning, which is something like the following: A race is a large division of a species which is always produced by nature. A breed is always the product of donestication and breeding, operating on the natural susceptibilities of every race and species. It is therefore the work of art. A hybrid is always the offspring of parents whose sexes belong to different species, as a mule, which is the product of the mingled blood of the ass and horse. A cross is never a hybrid, but always the offspring of sexes belonging to different breeds or different races of the same species. A grade is the offspring, not of different breeds or races, but of a breed which possesses pure or comparatively pure blood, and of the impure blood of a common herd. The grade is higher or lower, according to the amount of pure blood in the veins of the offspring.

Like the white inhabitants of the Caucasian race of Europe, its domesticated neat cattle all belong to one race. To attempt to divide the Caucasian race of the human species into sub-races, would obviously lead to confusion of terms, and a worthless nomenclature, which all sensible writers on the subject will be careful to avoid. Precisely the same objections exist to the multiplication of races in treating of neat cattle and of other domestic animals. The small hump-backed cattle of the Ganges and Central Asia, whose hides are often sent to this country under the name of "Calcuta"

skins," are regarded as a race distinct from the common cattle of Europe, and yet they belong to the same species. Nature, under the local influences of a different continent, has developed, independently of all domestication and art, a different race of the bovine species. But all history relating to the matter, goes to prove that the Devons and Herefords have become what they are, by long culture and care in breeding; and they are, therefore, truly breeds all over, inside and out. Indeed, whatever of peculiar value they may possess for breeding purposes, is due to the length of time and thoroughness with which and in which these breeds have been propagated. As a race, or as races, they have not a particle more claim to distinction than they have as a species. Possibly they were favorite breeds before the flood; and while Noah selected the beautiful Devons for their purity of blood, his oldest son may have had the taste of Mr. William Sotham, and preferred the white faced Herefords, so that both breeds were preserved in the Ark. At all events, I doubt whether they could find more quiet domestic animals among all their live stock. Gentle blood, whether in the veins of a gentle man, or of a gentle Arabian horse, has been purified by many generations of good breeding. It is mainly this social advancement among the higher orders of animals, which renders base, blood undesitable, or pure blood an object of interest in the most civilized nations. "Blood will tell;" and for this reason all its elements deserve the closest study of every farmer, and of every person, no matter what may be his or her condition or pursuit in life.

Columella is entirely right in insisting on the natural obstacles to be overcome in establishing a new and really valuable breed, whether Short Horns, Ayrshires, or any other products of human skill. There is ever a strong tendency "to cry back" in the young of every race; for nature is ever true to herself, her instincts, and her offspring. When they seem inclined to depart too far from her ways, she renders them impotent like the mule, or cuts them off by death. Nevertheless, the plasticity of animal and vegetable vitality is very considerable, and presents to the intelligent husbandman a wide and fertile field for improvement. To change the constitution and habits of living beings, whether animals or plants, for the better, involves the consideration of some of the prefoundest principles of philosophy and science. It is this fact that gives to agriculture its dignity as a learned profession. I want to see it more and better cultivated in all its varied and useful departments; and it was to draw out Columella, and make him share with me and the public the rich fruits of his reading and experience, that I ventured to criticise what he said on the subject of breeds and races. Cato.—Country Gentleman.

SINGULAR HARE HUNTING. - Some time since, as Mr. Clarke, of Horndean, was going a few miles on foot, in the forest of Bere, to visit a friend, he observed a hare come into the green road before him, which seemed to be listening, and looking back for something which pursued her. He stood still, and hearing no dog, was curious to discover the cause of her alarm; when to his great surprise, he discovered the object of it to be a small yellow-red and white stoat, (a species of a weasel,) which hunted her footsteps with the utmost precision. He, wishing to know if so diminutive an animal could have a chance of coping with the great speed of the hare, retreated to a holm-bush hard by, where he was an attentive observer of this silent hunt for nearly two hours, during which he is certain to have seen both hare and stoat at least forty times. They were frequently gone for five or ten minutes; but the hare still unwilling to leave the place where she was found, came round again, and her little pursuer sometimes close at her heels. Towards the end of this remarkable chase, which became uncommonly interesting, the hare took advantage of the thickest covert the place afforded, and made use of all her cunning and strength to escape, but without effect; till at length, wearied out by the perseverance of the stoat, Mr. C. heard her cry for some time. At last, the cries coming from one point, he concluded she was become the victim of the chase; on which he went to the spot, where he found the hare quite dead, and the stoat so intently fastened on her neck, as not to perceive his approach.-The stoat, in its turn, now fell a victim to Mr. C's st ck; after which he proceeded, with both hare and stoat to the house of his friend .- London Sportsman.