

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for scanning. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of scanning are checked below.

L'Institut a numérisé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de numérisation sont indiqués ci-dessous.

- | | | | |
|-------------------------------------|---|-------------------------------------|---|
| <input type="checkbox"/> | Coloured covers /
Couverture de couleur | <input type="checkbox"/> | Coloured pages / Pages de couleur |
| <input type="checkbox"/> | Covers damaged /
Couverture endommagée | <input type="checkbox"/> | Pages damaged / Pages endommagées |
| <input type="checkbox"/> | Covers restored and/or laminated /
Couverture restaurée et/ou pelliculée | <input type="checkbox"/> | Pages restored and/or laminated /
Pages restaurées et/ou pelliculées |
| <input type="checkbox"/> | Cover title missing /
Le titre de couverture manque | <input checked="" type="checkbox"/> | Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées |
| <input type="checkbox"/> | Coloured maps /
Cartes géographiques en couleur | <input type="checkbox"/> | Pages detached / Pages détachées |
| <input type="checkbox"/> | Coloured ink (i.e. other than blue or black) /
Encre de couleur (i.e. autre que bleue ou noire) | <input checked="" type="checkbox"/> | Showthrough / Transparence |
| <input type="checkbox"/> | Coloured plates and/or illustrations /
Planches et/ou illustrations en couleur | <input checked="" type="checkbox"/> | Quality of print varies /
Qualité inégale de l'impression |
| <input checked="" type="checkbox"/> | Bound with other material /
Relié avec d'autres documents | <input type="checkbox"/> | Includes supplementary materials /
Comprend du matériel supplémentaire |
| <input type="checkbox"/> | Only edition available /
Seule édition disponible | <input type="checkbox"/> | Blank leaves added during restorations may
appear within the text. Whenever possible, these
have been omitted from scanning / Il se peut que
certaines pages blanches ajoutées lors d'une
restauration apparaissent dans le texte, mais,
lorsque cela était possible, ces pages n'ont pas
été numérisées. |
| <input checked="" type="checkbox"/> | Tight binding may cause shadows or distortion
along interior margin / La reliure serrée peut
causer de l'ombre ou de la distorsion le long de la
marge intérieure. | | |
| <input checked="" type="checkbox"/> | Additional comments /
Commentaires supplémentaires: | | Continuous pagination.

Page 104 is incorrectly numbered page 204. |

THE INSTRUCTOR,

FOR
**NOVA SCOTIA, NEW BRUNSWICK,
AND PRINCE EDWARD ISLAND.**

EDITED BY ALEXANDER MUNRO,

Bay. Verte, New-Brunswick.

All Communications to be addressed to the Editor, POST PAID.

TERMS—3s. 9d. per annum. Clubs of Five 15s.—One Copy Extra.

Vol. 3.

JUNE, 1860.

No. 6.

The Preservation of Hay.

THE observing traveller, in passing through Nova Scotia and New Brunswick, must be astonished at the vast extent of alluvial hay land with which the country is interspersed; there is no country of equal extent on the American side of the Atlantic, that possesses such a vast area of rich alluvial lands. There is not one of the scores of rivers that everywhere penetrate the country, but what has more or less of these valuable lands skirting their borders. On some of these rivers the eye alone, by a mere bird's eye survey, may measure thousands of acres, especially on the various arms that form the head waters of the Bay of Fundy; where a deposit of marine matter has been for centuries enriching the flat lands irrigated by its high tides. In proof of the fertility of these lands, it is only necessary to state, that some of them have been producing hay for upwards

of a century, without any appliances whatever. However, it is generally believed that the properties in the soil that has given rise to such vast quantities of excellent hay, and for so long a time, are nearly exhausted; there is an evident decline in their productiveness. But the means of giving fresh life and fertility to the soil are at hand; the rivers passing through these marshes still hold abundance of the fertilizing properties in solution, and all that is necessary is, to remove the artificial abutments erected across their mouths, and let them be again covered by the muddy waters of the Bay of Fundy for a short time.—And the expenditure of as many pounds in digging tide canals, as there are acres of (now useless) bog, at the head of some of the rivers emptying into Cumberland Bay, would make thousands of acres of marsh that would, in a short time, be worth ten times the expenditure.

With this digression from the main object of our remarks, we turn to the hay producing qualities of these Provinces:—

Nova Scotia, in 1851, produced 287,837 tons; and New Brunswick, in the same year produced 225,093 tons; amounting to 512,930 tons.—Probably over one-half of this quantity is placed in stacks, varying from one-and-a-half to three tons each.—Some of these marshes, on a fine November day, present an imposing spectacle.

Notwithstanding the large quantities of hay annually raised, the price is generally high, and well repay the labour expended on its production.

Looking at this subject in an economical point of view, and allowing that *one-sixth* of the value of hay placed in stacks, and exposed from three to six months in open fields, during the most stormy part of the year, is lost as an article of food,—we are presented with the astounding fact, that not less than 43,000 tons is annually lost to the country, for the want of sufficient barn room to hold the hay. Now, if we average the price of the various kinds of hay raised in the country, at six dollars per ton, a low price, we have a money value of £64,000 annual loss.

The cost of erecting barns for the purpose of holding hay is not very great; they only require to be shells, with floors, which should be raised a foot at least from the ground, to lay the hay on; and without stalls for cattle, or stands for horses. The hay floors should be raised sufficiently

high to allow the air to pass freely under the hay; indeed, if this precaution was taken in the erection of hay stacks, the loss would not be so great as at present. There can be little doubt but many of the diseases affecting cattle in the spring of the year, arise from the use of musty hay, (stack bottoms) and other damaged hay, which had been exposed to storms for months.

The cost of erecting a hay barn that would hold fifty tons, would not be more than twenty-five pounds; consequently the hay lost in two years would pay for the erection of sufficient barn-room for all the hay that is annually "stacked out." Besides, not unfrequently, hundreds of tons of hay are allowed to remain on the marshes for two years, which becomes generally speaking, useless as an article of food, which, if it had been put in barns, would have been good fodder.

In further illustration of this subject, if we take, for example, the Counties of Westmorland and Cumberland, at the head of the Northerly arm of the Bay of Fundy, where the largest quantity of marsh land exists, and where, at least, two-thirds of the hay raised is placed in stacks; we have two counties containing 60,000 acres of marsh and bog land, worth £370,000. Of this large quantity, thirty thousand acres produce from one-and-a-half to two tons of hay to the acre; some portions of the remaining thirty-thousand acres are also producing hay. The quantity of hay annually made in these two counties is not less than 54,000 tons, including

upland hay: 36,000 tons of which is put up in stacks and left exposed to the Autumn and Winter storms. If one-sixth of this quantity, which is the general calculation among farmers, is lost as an article of fodder, then 6,000 tons, worth *nine thousands pounds* is annually lost to these two counties. Expend this sum in the erection of barns and allow them to last twenty-five years, which they would do without much repairs, a saving of £200,000 would arise, after paying the expense of erecting the barns.

Barns properly built, and placed sufficiently high from the ground, will last twenty five years; and by re-shingling and re-ceiling, will last forty years.

Admitting our calculations to be correct as to the amount, one-sixth, lost by being stacked out, and if we are not correct, we will be glad to hear from some of our intelligent farmers on the subject,—then Nova Scotia and New Brunswick loses in twenty-five years, £1,472,000; which is a very important loss to the country. If only *one-twelfth* of the hay “stacked out,” is lost to the country, these provinces would save £736,000 in twenty-five years, by the erection of barns.

This matter is considered of such importance in the United States and other countries, that not only is there a great increase of barn room, but caps have been manufactured, which are found to be of great service in the preservation of hay and grain; and why, in this country where hay is one of the staple articles of agricultural com-

merce, should we continue to suffer this loss. It is an old adage, that “money saved is money gained.” This large saving in the quantity and quality of hay, would, in a short time result in larger and better stocks of cattle, and tend to a larger and more profitable system of agriculture throughout the country.

In cutting grass, says the *Prairie Farmer*:—Season, soil, and kind of grass are to be regarded. It is no particular gain—directly to cut timothy close, and it certainly results in loss, on most soils where it is grown.—Grasses that grow on wet soils, are rarely ever injured. Clover on upland, notwithstanding its long roots, may be injured by too close cutting, if the season is dry.

Time to cut grass.—It is established that grasses attain their full development after the time of flowering, and then contain the highest percentage of soluble materials, such as starch, sugar, and gum: and that these, with the nitrogenous compounds, then, also, most abundant, are of greatest value as furnishing nutriment of animals. While woody fibre, and mineral matter, though important as giving bulk to the food, are insoluble and least nutritious. In the transition, from the flowering to the ripening of the seed, the starch, sugar, &c., are gradually transformed into woody fibre, in which state they possess no nutritive qualities, and are of course, of little value. These points conceded, it is easy for the agriculturist to fix upon the condition in which grasses should be cut.

Curing Hay.—Of the best mode, time required, &c. there are as many opinions as people. We should like to receive and publish an abstract of 400 answers to the questions. There is a class who store hay too green. Some cut before the dew is off—others deem it an injury to do so. Some put

it in cocks with the pitch fork as fast as cut, believing it an injury to rake and compress it; others adopt other modes. * * * * *

Remember that the man succeeds best who has a settled policy—has fixed upon his course—sees it clearly. It is getting to be more and more the practice, as the correspondence published in this work shows, to let the grass wilt and cure it in the cock.

Butter Making.

In these Provinces where large quantities of butter is annually made; and where we sometimes hear it said, that all that's made is not good,—and where the best made butter might have been improved;—the following intelligible article will be read with interest.

The writer recommends a 'Pendulum Churn,' as better calculated to secure the end, than the common churns, and says:—

"As we all know, butter exists in the form of minute balls or globules, each being enclosed in a sac or membrane-like covering. It is not the material of which butter is made that is contained in these little sacs, but butter itself, in a perfect state. While invested with their coverings, these globules float about in the milk, or rise to the top as cream, but cannot be made to adhere together. Before this can take place, the coverings must be removed. The effect of 'churning' is to remove them, thus liberating the butter, and then to bring them together into a mass. These facts are known to all intelligent dairymen.—But now comes the error, namely, the supposition that it is of no consequence how the coverings of the butter globules are removed and the contained butter liberated; that it is of no moment whether the butter globules are crushed or ground between hard surfaces, or burst by concussion from

being dashed violently against hard substances, or by whirling bars, slats or rods rapidly though the milk or cream; or whether they are released from their investments in some more gentle manner. Now this is all a mistake. It is of the most essential importance, if we would have good butter, how the globule is divested of its covering; and we will state why.

"Butter being in the most perfect condition possible while it is in its globular state, and covered with its natural investment, any change of that condition excepting the mere removal of this investment, whether from the temperature being raised too high, from the globules being crushed, mashed or broken down, or their natural conformation being in any other manner destroyed or to any extent altered, necessarily injures the quality of the butter. (This fact, hitherto entirely overlooked, is the discovery hereinbefore alluded to.) It is for this reason that too much butter is injured by being 'worked,' which is only a process of pressing the globules upon each other, and thereby crushing them out of their original shape and state into a compact mass, like lard. It is for this reason, also, that the modern contrivances for grinding milk and cream between metallic rollers or revolving disks, and all the quick-moving rotary churns, while they may 'bring the butter' quickly, injure its quality, making good grease rather than good butter. The best butter is said to have a 'grain.' What does this mean? Simply that the original globular formation of the butter has not been broken down, and just to the extent that it is broken down is the quality injured; the 'grain' disappearing, and the mass becoming 'greasy' and lard-like. The butter globule must not, then, be divested of its covering by any process which shall break down its original structure, if we would have good butter.

"What, then, is the true method of

removing the coverings of the butter globules? We answer that it is to wear them off by the rubbing of the globules against each other and upon the fluid surrounding them; not by crushing or bursting them by grinding, pressing or striking them with or against hard substances, but by a continuous but gentle agitation, causing friction among the globules themselves.

"Another essential is that all the butter globules shall be divested of their coverings, as nearly as possible, at the same time; otherwise, some are too much 'worked' before the others are free, and some may not be liberated at all, and remain in the butter-milk."

Practical Remarks on Agriculture.

The following remarks are from an Agricultural Lecture delivered by Dr. True at Lewiston, U. S. This lecture, the best we have seen on this subject, is too lengthy for our columns, so that we only can afford space for the cream of the Doctor's remarks:—

"Agriculture is perhaps the only occupation that can be carried on by all classes, grades, and conditions of men. The slave who keeps a pig around his hovel, and spades up the earth, is a farmer of the lowest grade. The man who has his trim garden and a few acres of highly cultivated ground, is another. He who has a hundred or more acres, but who saps its vitals every year, is another. The man who has his fifty or a hundred, or more acres, who raises bountiful crops, and keeps his farm in a high state of cultivation and improvement, is another. The man who has inherited his millions and a title, as in England, and may have his thousands of acres, covered with everything that wealth, taste, and ingenuity can invent, is still another; and in all these grades of agriculture, the man can be more elevated than he is, if he but know how.

And there is one idea that you will

find developing itself in your minds as you meet in your club, and discuss your various farming operations, and that is, that you need a little more manure on your farms. Almost anything will grow with a plenty of that item. Have you a muck swamp? Be sure and haul a generous supply into your hog-pen and barn-cellar. Collect the leaves of the forest, turfs by the road side, old lime, and different manures from the city, if convenient, but above all, make all you can on your own premises. This subject is all important, and I only introduce it here, to remind you of what you can do, and must do, to progress in your calling."

On mental and mechanical improvement he says:—

"The too prevalent idea among farmers, that work is the only consideration worthy his attention, must be laid aside. His ox can do as much as this. He must learn to read, to think, to converse with those who know more than himself. The poor ignorant drudge never will invent a horse-rake, or a plow, or a paring machine. No, it is the man who thinks as well as works, who knows his wants, and considers how he may best supply them. The ignorant peasantry in some parts of Europe still use a crooked stick for a plow, a straight stick fastened across the cattle horns for a yoke, their own backs, or those of their beasts, instead of a cart for their burdens, while much of the hoeing is done with the hands rather than with a hoe. And why all this? Why, the New England farmer is differently situated. It is because his mental faculties were sharpened in his youth in the school house, and put in practice on the farm in his riper years.

* * * * *

Fortunately there is one class of men in this city to whom every farmer in the county can entrust his secret thoughts. I refer to the editors of the several newspapers printed here,—

Every one of them will be glad to hear from you, not only as a subscriber to his paper, but as a contributor to its columns. Not a successful farmer lives in this country who is not full of ideas, and a little courage on your part in writing, not what you think so much as what you know, and a single idea of yours may find its way to every farmer in the land. This is one thing that has rendered Massachusetts so much our superior in farming; the farmers communicate their knowledge to others thus making the editors of papers their obedient servants. If you have raised a better piece of corn than your neighbors, write out your mode of cultivation, and carry it to the printing office. Don't be afraid of the black imp with the cloven foot that stands at the printing press. Find the editor as soon as possible, deliver him your message, keep an eye on the aforesaid black imp as you retreat, and leave with the expectation of seeing your article in the next week's paper, to benefit thousands of others.

Too many of our very best farmers are afraid of themselves in this respect. In my travels among this class of men, I frequently meet with the farmer whose thoughts are as good as the best newspaper, but yet who is not aware of it.

* * * * *

Did time allow, I might suggest to you a multitude of topics for your consideration as progressive farmers. The planting of orchards, where your land is suitable; a regard for the quality of stock rather than the size; the improvement of every kind of seed; a careful watch of natural phenomena that appear before storms; the suitable mixture of various soils; the cheapest and most durable fences; the value of painted over unpainted utensils and buildings; the propagation of forest trees in some locations; the ravages of insects and their remedy; the study of scientific agriculture, such as in

Great Britain has enabled twenty millions to subsist on the soil that eighty years ago could support but nine millions; the better manufacturing of butter and cheese, though your ladies can now make them most excellent; the more extensive cultivation of roots; on the breeds of stock adapted to your respective locations; the introduction of labor-saving machines; the construction of barn cellars and manure sheds; the composition as well as the right decomposition of manures; a sketch of what would constitute a complete farm, with the kinds of manures adapted to the different soils; the rise and use of underdraining; the renovating and manuring of old orchards; the best possible kitchen at the least expense; the keeping of farm accounts so as to show the most economical way whereby labor and capital can be invested. It would be pleasing to discuss with you the condition of farmers' wives, so that they might be a helpmeet indeed, and yet not be compelled to drag out their lives in hopeless drudgery in order to fulfil the duties that press upon them. The construction of the kitchen so as to save the steps of that woman you pledged to love, might demand attention. I would like to take a walk with you into that pasture of yours, and see if it could not be improved in such a way as to support double the number of cattle that it now does; the planting of ornamental trees by the road side; the construction of your school house. I would like to step into yours and see if some improvements could not be made there; and lastly the fencing and adorning your cemetery lot, where some fond object of your affection perchance already lies, and where you anticipate your final resting place."

A Talk with Farmers' Daughters.

The following sensible talk, we clip from the correspondence of the *Practical Farmer*. We advise farmers daughters

to read it, and act upon the advice given; in fact, it will not injure merchants' daughters, mechanics' daughters, or any other daughters to give it a careful perusal:—

Dear girls—Like you I am a farmer's daughter, and hence there is, in this instance, much sympathy between writer and reader. For the same reason, what I shall write will not be non-practical, common-place and unappreciative advice, but I shall derive my knowledge solely from experience; I shall "speak that I know, and testify of that which I have seen."

* * * Will you promise me that some calm, clear night before long, while the world is asleep, and the moon and stars are watching it, you will stand alone under the silent sky, and ask your hearts these questions, "What am I? Why am I?"

I request you to do this, because I remember a night like the one I have described, years ago; I remember how I stood alone and talked with myself. I was a careless girl then, but the reflections and resolves of that hour did much to change me for the better, and we are more alike than we are wont to think,—what made me wiser and worthier will make you so likewise.—Human hearts are woven out of similar material the world over; the soul has been compared, not inaptly, to a harp, and if its strings are swept by the same hand, it will in most cases give forth similar sounds.

Well, while you stand there thinking, will you remember that you have a four-fold being; a physical nature, an emotional nature, an intellectual nature, a moral nature. God has given all of these to you and to me for wise and glorious purposes; that we might commence in this state of existence the process of expansion and cultivation which shall be continued in the other life. Unequal development is, of necessity, unjust. When we train the

hand to ply the needle and perform the various duties with which farmers' daughters must be familiar, to the exclusion of culture in the other three departments of our natures, we do wrong, and suffer for that wrong. It is a sin against the soul, and an equal sin against the maker of the soul, to dwarf any of its powers, to cramp and fetter any of its faculties. A hump-back or a cripple we regard as an object of compassion, we say it is "deformed," but do we ever reflect that upon our right hand and our left, are objects yet more pitiable than they? You may be one of them, or I may be one.—"Tom Thumb," is not so much of a dwarf as men and women whom you meet every day; whose physical natures may be well developed, but whose intellects, and hearts and God-ward natures lie beneath the leaden weight of years of inactivity. Those minds with the possibilities of a Newton or a Milton wrapped within them, have been cramped into the compass of a round of daily duties which involved no higher exercise of mental power than the computation of the proceeds of a crop, or the comparison of the receipts with the disbursements of a month's business. The "Siamese Twins," are not half so much of a lusus natural as the souls of some of our neighbors,—if we could see them; and the custom of the "Chinese to bandage the feet of the women so that they never exceed the size natural to them at two years old, is not more barbarous than that to which many persons voluntarily subject their mental and moral natures; doing this great injustice all unthinkingly, only because the spirit is invisible to mortal eyes, and its scars and wounds unseen; only because the shriek of the injured soul is unheard by mortal ears, as well as its mournful sighs and supplications for deliverance. Away with the meaningless prating about "practicality" and "plain common sense," and

equally in earnest, are we in this other exclamation,—away with fine spun theories and elegant nonsense, about "refinement" and "elevation;" let us dismiss our favorite hobbies for the moment, and try as we shall be able, to look at the subject justly, and apart from prejudice.

All true advancement has for its result the power to think aright, and if we have in any degree attained to this, let us employ our ability now. Work is excellent. The hard hand and burned brow of the laborer, wins for him the respect of every sensible man whom he meets. He shows that he has faced the world bravely, and has not meekly started back from its rough tasks, nor shunned the toilsome path which has been pointed out for his feet to travel in. But work is not everything. Whoever claims that it is, lacks judgement, and must be classed with the city fop who despises labor, and ignores the fact that it was said in a certain Garden long ago, "in the sweat of thy brow, shalt thou eat thy bread." No, work, in the common conception of the term, is not everything. Not a day passes but we are reminded, directly or indirectly, that we are to go hence, ere long, to rest in Abraham's bosom, or with Dives to lift up our eyes to him, being in torments. These three words, life—death—eternity—have meaning enough in them to make any one feel that it is a solemn thing to have been created; to make the stoutest heart tremble for itself and the ruddiest cheek blanch. And these three words compromise what we ought to think most about. It is well to "think of living," but whoever does this alone, is planting thorns around his dying pillow, and making of that last glorious change that might await us all, "a leap into the dark."

Hand-work, head-work, heart-work, conscience work must go together or we are deformed beings—monstrosities in the world. When God gave us in-

tellects, he meant to show that we were to expand and cultivate them, learning His truth,—and all Truth is of Him,—reading it in Nature and in Revelation, in mathematics and history, and in the thoughts that the geniuses who have lived among men, have prisoned in glowing language.—When God gave us hearts, He meant to show that we should have great love and kindness for all the creatures He had made,—the lowest as well as the highest—and towards Himself more than they all—because He is infinitely more worthy of love than they. When He gave us consciences He meant to show that we are responsible beings,—that we can distinguish right from wrong, and that we are to follow the one, and avoid the other.—Thus we have found—as far as we can know them,—the answers to those "root questions of all thought," as a learned divine has called the queries we at first proposed—"What am I?" "Why am I?"

Interesting to Women.

Mrs. M. L. Varey, in a recent number of the "Scientific American" says:—

The present working dress is a shame to the age of invention in which we live. I am aware of the conscientious efforts of many who have made martyrs of themselves, by trying to introduce a better style of dress for active life.—Their experiments show a want in this direction. Women need a dress that will allow a full play of the chest, the free use of the arms, and the unconstrained action of all the blood vessels, nerves and muscles of the body. We want one of many pounds less weight, which shall not drag the body down or knock about the ankles at every step, and which will not "mop the house," from garret to cellar. The present working dress requires to be carried up stairs. No matter what

else is to be carried, one hand is always monopolized by the dress. If any scrubbing or dirty work is to be done, the dress must be taken care of. Outside of the demands of health, buoyancy and cleanliness, time is too important to spend so much in taking care of the working dress, especially when servant's hire is such an item as it is in this country. Some sort of tunic and trousers, made of warm material, forms a desideratum. Such a dress is also needed for out-door exercise, and for active life in general. Witness the calisthenic exercises of school-girls and mark the painful contortions of those in close waists, with arms tied down, when compared with the ease and grace of those in loose tunics. Is there not inventive power enough in the country to get up some shape or fashion of working dress which will better answer the purpose than the one in present use?

New Employment for Women.

BY MRS. F. D. GAGE.

Oh! dear! cries Mrs. Tiredout, who has had the house work to do for a family of five, baby to tend, and Tommy sick with the measles, and expects every minute that Sarie Jane or Andrew Jackson Tiredout, will be down soon.

"Oh! dear! don't talk about employments, for women. Women have more than they can do now. I only wish I could get time to comb my hair once a day, or look out doors once a week. I don't see what people want to be talking about new employments for women for."

Dear Mrs. Tiredout, you are a little too fast. You don't understand us at all. It is not you we are exactly talking to—though, perhaps, we can contrive a way among these new employments, to even relieve you, and give life a more cheerful and truthful aspect.

We don't believe that the mother of a young child, either before or after its birth, should be so weighed down with care and toil as you are! It is, physiologically, wrong.

Now, Mrs. Tiredout, I want to ask you this plain question—Why don't you keep a girl?

"Can't afford it. Mr. Tiredout works as hard as a man can—he's up early and late, and he says, he can't stand any more expenses; he can't send Tommy to school because he wants him to chore about the farm—and I have to keep Sarie Jane home to help nurse the baby, or I'd never get thro'."

There! I thought so! Now don't you see, you do need some employment; something at which you can earn money. If you could earn three or four dollars a week, you could hire a girl to do your kitchen work; at least, the hardest of it—and lay up a little now and then, to pay for the PRAIRIE FARMER, or some other useful sheet; have a dime to put into the contribution box of a Sunday, &c., &c.

I know there is none, or but little of this manufacturing work carried on in the West. But there will be, one of these days, I hope. Look about you and see, if in the long run, it would not be better to change some of your work for something that is done near you, and thus relieve yourself from such harrassing toil, by trying to do everything in one household. Don't be afraid to do anything profitable that comes to hand. See the fashion, others will follow.

MISCELLANEOUS.

The state of Europe.

Under this head the "North British Review," for May, 1860, has an excellent article, from which we glean a few of the leading facts:—

Of the 30,000,000, the population of

Italy, six millions have been emancipated and brought into a state of civil and intellectual freedom. About ten years ago the little kingdom of Sardinia began to light the lamps of civil and religious liberty, which has continued to burn more or less bright up to the present time. "We have traced," says the Review, "a marked progress towards that ultimate settlement of Europe, which we believe that the growth of knowledge, and social development of race and class, must sooner or later bring into conformity with the rights of nationalities."

The extension of Sardinia from the Mediterranean to the Adriatic, has interrupted the territorial communication between Austria, Naples, and Rome. And the Army of Sardinia every man being a voluntary soldier, is ready to cope at any time with the coerced army of Austria; there is a great difference between fighting for liberty, like Sardinia, and fighting to suppress it, like that of Austria.

"In an age in which nearly all Europe is in arms, the force of singular moderation alone can render the period on which we are entering generally pacific. We observe that one Court has armed, because it is apprehensive of the ambition of another Court; that a third Court has armed, because it has so misgoverned that it is afraid of its own subjects, on whose support it ought, beyond that of all others, to depend; and that a fourth Court has armed, because it has im-

perfectly trampled down alien nationalities that would recoil from its usurpation. Assuming, then, that violence in some shape will mark the passage of the next few years, there are three forms it will be liable to assume. It may take the shape of a conflict between the traditions of empire and the treaties of 1815; or of popular insurrection contending against the abuse of monarchical power, as in Austria and Naples; or of fresh nationalities rising into government, as in Hungary and Poland."

Although the personal character of the Emperor of France, both before and since the settlement of the Italian question, appears to manifest a great degree of frankness in all his official relations; still it appears to be mixed with profound dissimulation, as the annexation of Savoy and Nice fully testifies. The ninety-second article of the Congress of Vienna, provides that Nice and Savoy shall form a part of the neutral Helvetic Confederation; by the treaty of 1815, the neutrality of these States was guaranteed between France and Switzerland, and between France and Great Britain: hence the violation of these guarantees by France, shows a breach of Treaty and a breach of faith. It is true there was an appeal to universal suffrage; but what of that, "without some guarantee for the freedom of its exercise, and for the justice and independence in which votes by ballot shall be recorded, and their result proclaimed, is an insult to public understanding."

Geographically considered, France bounds for 1,200 miles on three seas,

with an equal frontage on four chief nationalities ; hence it has " a great trade at command, and the means of political alliance both by sea and land." France has 5000 miles of railway, besides a great extent of telegraphic communication ; the railways alone have cost £140,000,000 sterling. The revenue amounts to £68,000,000 sterling ; and is raised without much pressure on the people. The navigation of France, foreign and colonial, represents a tonnage of 7,500,000 ; and the French coasting trade a tonnage of 2,500,000. The area of France is about 127,000,000 acres ; of this area 60,000,000 is arable . and 50,000,000 acres more or less unproductive.—Agriculture in France has been on the decline, but is now about to revive, in consequence of encouragement offered by the Government to reclaim her unproductive lands. It is asserted that France, under a proper system of tillage and commerce, is capable of supporting 86,000,000. Belgium, with 7,000,000 acres, has a population of four and a half millions ; while France, with 127,000,000 acres, has only a population of 36,000,000 ; so that this nation under proper management is capable of becoming one of the most colossal and powerful nations of Europe.

Turning from her agricultural to her naval and military standing, we find in time of peace, she keeps over half a million of men under arms, and between conscription and bounty offered, France may augment her army indefinitely.

In a naval point of view, concentration of forces, with her Cherbourg and Toulon arsenals, independently of three arsenals in the Bay of Biscay, manned by 40,000 sailors, gives this nation a great advantage. England, on the other hand, has but a small army, though a mighty navy, scattered over the face of the world ; France is all concentration ;—ready at any time to strike a blow wherever her interests serve, to her, to demand it. " France at this moment forms the axis on which the international policy of Europe chiefly turns." " We find," says the " Review," " nearly equal incentives to peace and materials of war."

But to counterbalance the influence of France, and keep within bounds the grasping power of Russia, the Germanic Confederation stands forth as the leading fortification of European independence.

The independence of Prussia, as one of the five great powers, seems to be a matter of necessity ; though with a population of only 18,000,000, three million more than Spain, with France on her West with 36,000,000, Austria on the South with 37,000,000, and Russia on the East with 65,000,000 in Europe,—it would appear, even if the whole Zollverein population of 32,700,000 would continue united, difficult to maintain against either of the circumjacent powers, if an attack was made ; and more especially so as the extensive land frontiers of Prussia are without fortifications, and her vast seaboard without ships. But " one great disadvantage of Germany

is her decentralization, as well as her disunion;" still "the Federal Empire of Germany and the composite Empire of Austria, two well-organized, distinct, yet confederate powers, together number 70,000,000, would form a barrier between France and Russia, for the protection of themselves, and Belgium in the West, and Turkey in the East.

However, there appears to be more danger at present of disturbance between the European governments and their subjects, than there is between one government and another; and when such disturbances arise it appears to be the aim of grasping nations to arm, if possible, the disaffected territories. The two alternatives, revolution or reform, appears to lie at the very foundations of a great part of the European dynasties of 1860

In viewing the state of Europe; the disaffection that exists in Austria, especially with Hungary, the low state of her finances; Russia, on the other hand, has her internal disaffections between the Sovereign and his nobles respecting the liberation of the serfs; and the conflicts in the administration of Prussia;—there appears to be more danger to be apprehended from France, in disturbing the peace of Europe, than from any, or all the other nations.

The Emperor of the French is evidently a man of great foresight: has managed to unite and consolidate the national feeling in his favour; extend its commerce, improve its agriculture, and otherwise add to the material interests of the mass: so that the France

of 1860, though under a despotism, is infinitely superior in material wealth and general prosperity, than ever was the France of the past. It is to be hoped that this concentrated power will be used for the social, moral, and intellectual well-being of Europe.

"And Another Queen was Enthroned."

The month of May was long esteemed in Europe as one distinguished above the other months of the year; among the Romans there was the *mensis marium*, or month dedicated to the elder persons, while the young people had their *mensis juniorum*, or month dedicated to the young people of the community. May day has been celebrated by festive demonstrations, —and the May-pole dance, from time immemorial.

Two hundred years ago, it was as much the custom to wish a happy May, as it is now the custom of wishing a happy new year. At one time the citizens of London went a Maying; we read of Henry VIII. and Queen Catharine, with the Lords, ladies and Commons joining in the sport; May-poles, of which there were hundreds in every city, were as tall as a ship's mast.

In many countries the flowering of plants and the putting forth of buds, distinguishes the month of May.

The day is not yet forgotten; even in New Brunswick; on May day the female portion of Miss Davidson's school, Shemogue, Westmorland, held their *juniorum* festivities, by erecting a bower, ornamented with all

the evergreens the season permitted of; a throne was placed in the centre upon which one of the number was seated as *Queen*, who was arrayed in robes of *Royalty*. Tea was served up in a style, of course, peculiar to such an inauguration; after tea a procession was formed, when the *Queen*, with her retinue, visited several of her subjects, who were loyal to the core,—thus ended one of these harmless juvenile meetings of the pupils of this school.

Education in Nova Scotia in 1859.

ELEMENTARY SCHOOLS.—The attendance of pupils was 37,847, while in 1838 it was 34,440; the number of teachers, male and female, was in 1859, 1140; the average salary of each was £44 per annum, being a little in advance of the previous year. Of the support of Schools, the Province pays 3s. 4½d. per pupil, and the pupils each pay 9s. 5½d. The number of Grammar Schools in 1859, was 56; being an increase of five on the previous year.

NORMAL SCHOOL.—Since the commencement of this institution over 100 persons have obtained first class diplomas at this institution. And at the Model Schools the number of students enrolled is 193, and the average attendance 169. Doctor Forrester strongly urges the establishment of a system of local Inspectorship; and comments on the little interest taken in the *Journal of Education and Agriculture*.

Doctor Forrester recommends the adoption of direct taxation in part support of Schools, and the erection of better School-houses.

The Superintendent had in the course of the year visited some of the leading institutions of education in Nova Scotia—Free Church Academy, Dalhousie College, Halifax Grammar School and the Pictou Academy, and found that the average attendance in all these institutions was somewhat less than 55, and only a small proportion were studying the higher branches of learning. The Doctor urges the establishment of a thorough *University* for the Province, as the crowning point in the education of the country. This is a step in the right direction; let the country have good elementary schools, superior schools, and a thorough *University*, and we have no fears for the result.

We shall return to a further review of this able Report at some future time.

Editorial Items.

It is said that one of the Pennsylvania Oil Wells yields sixty barrels a day of forty gallons each. Some of these wells produce pure oil, while others contain about one-tenth of water in the oil.

A Railway train on the Hudson River railroad lately ran seven miles in six minutes.

A new translation of the Bible is being published in the Russian language.

The California and Australia mines have produced in the last ten years £350,000,000.

The Oil Works, Albert, New Brun-

wick, is said to produce seventy-two gallons from a ton of coal.

Sardinia contains a population of	5,167,542
Lombardy,	1,866,396
Tuscany,	1,806,940
Modena,	604,512
Parma,	499,835
Bologna,	375,631
Ferrara,	244,524
Ferli,	218,433
Total,	11,783,813
Deduct Savoy and Nice,	847,738

Sardinian Empire contains 10,937,075

It is now ascertained that the heaviest and best formed seeds produce the strongest and healthiest plants.

Cows, says Dr. Dodd, in the "Stock Journal," cannot hold back their milk; they cannot controul their lacteal organs.

In the year 1350 Glasgow had a population of 1500; in 1600, it was 700. In 1678 a contract was entered into to run a stage coach between Edinburgh and Glasgow; leaving on Monday morning and returning on Saturday night. In 1700 the population was about 14,000; it is now (1860) about 400,000. The shallow and crooked Clyde, one hundred miles long, has been straightened and deepened, and made, from a mere rivulet, to float a steamer with all her armament of 4,000 tons. The first British steamer was launched from the Clyde. This river is now one of the great commercial rivers of the world. On its banks are built the mightiest and swiftest steamers that plough the ocean. The ex-

penditure of £800,000 in the improvement of the Clyde, yields an annual revenue of upwards of £80,000.

Valuable silver mines have been discovered in California; it yields to the value of £1,500 to the ton.

There is a very handsome young man in one of the Lunatic Asylums in the United States, the cause of whose lunacy is said to be self-conceit.

There is a railroad rails manufactory in Canada West, that covers 36,000 square feet.

The Province of Canada has over 2,000 miles of railroad in operation. The Grand Trunk Railway alone is 1,100 miles in length; and constructed at a cost of £15,000,000; Canada paying £4,000,000 of this sum; the balance of eleven millions was made up in England.

The capital employed by the Hudson's Bay Company is £1,265,068; and the dividends declared for the last twelve years has been about ten per cent.

The population of New Brunswick has doubled itself every 17 years since 1782, up to 1850.

The Hon. S. L. Tilley in a recent lecture, said the inhabitants of New Brunswick are taxed 17s. 9d. per head.

California is said to contain 395,315 Americans, 15,000 Frenchmen, 2,000 Englishmen, 10,000 Irishmen, 10,000 Germans, 15,000 Mexicans, 38,000 Chinese, 2,000 Negroes, 63,000 Indians, and 15,000 of other races.

The population of the Russian Empire was estimated at 65,200,000 in 1850. In 1858 it contained 3,883 schools, attended by 210,030 pupils.

The census of China as taken in 1812, by order of the Emperor Kai-Fing, gave the population at 360,278,597; and the second census in 1852, under the reign of the present Emperor, Hien-Fung, gives the population at 536,090,300; so that if these figures be correct, the Chinese population has increased in forty years 176,629,703.

In Great Britain and Ireland there are thirty institutions for the education of the deaf, dumb and blind. In the United States, twenty one.

The total number of ships in the British Empire in 1857, was 37,014,—tonnage, 5,519,154,—manned by 284,135 men; this is exclusive of 1,916 steam vessels, of an aggregate of 682,433 tons.

In 1859 the United States had 5,145,037 tons of shipping.

TO REMOVE A STYE FROM THE EYE.

—Put a tea-spoonful of black tea in a small bag; pour on it just enough boiling water to moisten it; then put it on the eye pretty warm. Keep it off all night, and in the morning the stye will most likely be gone; if not, a second application is certain to remove it.

The *Wisconsin Farmer* says every farmer should have his workshop, where all the small breakages that occur on the farm can be mended, in place of losing time in sending them to be mended. Besides, when a wet day comes, the boys will interest themselves in learning a little mechanism.

From two to five per cent. of tungsten added to cast steel, produces a metal which is much superior to steel for the manufacture of edged tools.—Instruments made with it are said to retain their edge four times as long as those made with ordinary steel.

Meteoric stones have recently fallen in Ohio within the circumference of a few miles, weighing from thirty-six to fifty-six pounds. The thundering noise made by the phenomenon alarmed the community for many miles.

The Republican candidate for the Presidency of the United States, Abraham Lincoln, was a *flat-boatman*; he had but little or no schooling; but never missed an opportunity of improving his mind, and by industry, ability and integrity, has advanced to be a member of the Senate, and a useful man in society.

Switzerland with a population of about 2,000,000, has an army of nearly 200,000 men.

The scarcity of fodder in many parts of Ireland is beyond any parallel in modern times; one gentleman sold ten tons of hay for one hundred pounds; a vast number of cattle have starved to death.

The cattle disease in Massachusetts is infectious; various means are being adopted to stay its progress. The disease is called Pluro-Pneumonia, and appears sure death. Large numbers of cattle have been destroyed by order of the authorities, and at the public expense. The Legislature of Maine had been called to devise means to stay the disease: it is spreading into other States.

Marriage is said by those who have attended to the subject, to be conducive to long life. For 41 bachelors who attain the age of 40, there are 78 married men who do the same; at 60 there are only 22 unmarried men alive, for 98 married; at 70 there is 11 of the former for 27 of the latter. As age advances the difference increases. The same rule holds good as regards the female sex.

The English language is made a compulsory branch of Education in the public schools of Norway.

The Instructor.

We endorse that portion of the following eulogy from the "Sussex Times" which sets us down as "the oldest—the pioneer of our educational journals, and on that ground," along with the importance of the subjects advocated, we think the reading public ought to extend to us a fair proportion of patronage.

When we published our "Treatise on Theoretical and Practical Land Surveying," there was not a work of this nature, of Provincial publication, in British North America, neither has there been one since, we believe; and our *History and Statistics* of the three Lower Provinces, is the only full work extant on these, and all other subjects connected with the resources of these Provinces.

And when we commenced the publication of the present work—devoted to Education, Agriculture, and general Intelligence, those subjects had not a special advocate, among all the fifty journals published in the Lower Colonies.

The Instructor, unlike a weekly newspaper, is convenient for preservation; and therefore the matter contained in its pages, which we think must prove useful to the reading public, may be referred to at any time.—Every subscriber should take care of the numbers, as they will form a volume, at the close of the year, of useful family reading.

The "Sussex Times" says:—

"THE INSTRUCTOR," edited by Alexander Munro, Esq., of Bay Verte, N. B., needs no praise at our hands. This monthly (formerly conducted under the name of the "Parish School Advocate,") is the oldest—the pioneer—of our educational journals, and on that ground, as well as for the ability and research exhibited by its able editor, is entitled to our particular esteem. It has worked its way to the public mind, and has made many friends, and is calculated to do much good. We like these energetic, persevering efforts, laboriously maintained, with the laudable object of supplying a desideratum, and instructing the public mind in matters relating to its well-being. There seems to be something so commendable—so full of regard for one's fellow men—so like carrying out the golden rule, "to do to others," &c. May it continue to prosper, and its proprietor be handsomely remunerated.

Arrears.

Those of our readers who are in arrears of payment, we hope will see the necessity of forwarding their subscriptions either to the Editor at Bay Verte, or to the nearest Agent. There are many of our subscribers who have been reading "The Instructor" from the first issue, and have not paid a fraction for it yet. Printing is expensive, and cannot be continued without means.

We are very thankful to our friends and the public generally for the patronage extended to us, and while we hope to continue to make "The Instructor" a useful family Magazine, we beg to say, that the outstanding claims, if in hand, would be of great assistance in enabling us to do so, and paying the Printer.