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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.

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The Press, a Great Teacher.

An intelligent and independent Press is not only a great Teacher of mankind, but it is one of the most important defences of a nation; wherever a free and intelligent press exists, society stands in an elevated position. A Free Press is the exponent of society; through it, society becomes intelligent; and so to speak, acquainted with its own wants; through it Ministries are changed, and Monarchs exiled; through it laws are repealed or promulgated as necessity may direct; and through it abuses are redressed.

The character of a people may also be known by the language and tone of the press. Indeed, the press is a mighty teacher, sending its lessons, on every subject into the palaces of Royalty and down through the vast and multifarious ramifications of society; making its views known, and giving tone and character, either healthy or unhealthy, to the social, intellectual, and moral framework of society. Our Schools, Academies, and Colleges are dependent upon the press; through it society becomes moulded, and changed, and the resources of the world becomes gradually developed. Indeed through the power wielded by the press, the phases of society are continually undergoing change:—what was, apparently, the fixed opinion last year is now changed; and what is the opinion of a nation this year, may through the mighty power of the press, be entirely changed next year. Thus, through the power of the press, or rather mind of its director, knowledge is made to run to and fro in the world:

The control in which some of the standard papers of the day, hold the public mind is very remarkable. In Great Britain, when the *Times* and some of the standard papers of the nation harmonize, and devote their energies to the advancement of any particular object, the mind of the nation becomes aroused, and the object is at once effected.

Nations become free, independent and enlightened, in proportion to the freedom, independence, and moral and intellectual stamina possessed by the press. In all countries where the press is trammelled, the mind of the people is also chained down and enslaved; the mass grossly ignorant. In Great Britain and North America the press is free, and so are the minds of the people, and the resource of both mind and matter are being continually developed; not so, however, with the other sections of the world;—the minds of the people are fettered, their energies paralyzed, ignorance and superstition prevails, and their resources, in a great measure, lie undeveloped.

A free and intelligent press will soon educate the people to be free and intelligent also. Ignorance, despotism, brute force, and a trammelled press, generally go hand in hand.

The press, then, being invested, when free, with such great power, it is important that it should be wielded aright—in the elevation of our race, and not prostituted to suit the degraded mind of man.—The press, we have said, is a great teacher, therefore it should send forth lessons of moral and intellectual truth, until every son and daughter of Adam's race becomes elevated, and fitted to assume their proper sphere in the scale of creation. But a portion of the press of the day, continues to flood society with a low effeminate literature, vulgar slang and abuse; reason, truth, and argument are lost sight of.

The passion of society for novel-reading, and the extremes into which political parties run, tend to retard the moral and intellectual development of society, and lower the character of the press. In novel-reading, effeminate trash is the most eagerly sought for by the corrupt mind: and in party politics, party is sustained by its friends, and its opponents condemned whether right or wrong. It would be well for the political press to copy after the *London Times* and other standard papers of Great Britain. No matter what party is in power, the *Times* justifies every act which is conducive to the interests of the Nation, and condemns every act that does not meet the approbation of the people; so that measures and not party is its political motto.

In the Lower Provinces of British North America, the press has assumed an important position in society; and we are proud to say, with few exceptions, it is an honest exponent of public opinion. The religious portion of the press is well worthy of its respective denominations; by it, all questions are discussed in a spirit of christian forbearance, and with a view to truth. This class of papers is decidedly the safest teachers, whether of moral, religious, or political truth, and

should be read by society, in preference to extreme partizan papers.

The premises upon which a portion of our political press base their statements,—namely, the support of every act of one party, and the condemnation of every act of the opposite party, whether right or wrong, is incorrect, and tends to lower the dignity of the press, and teach the public to disbelieve truth even when it is told. Some of our partizan papers seem to lose sight of truth and argument, and devote their energies to abuse those in opposition. False imputations, low slang and vulgarisms, are not good lessons for our youth.

The press, being so great a teacher, and so powerful for good or evil, should aim at truth and propriety of diction. When we think, that every page written, most every paper published, is read by thousands, and some by hundreds of thousands, how important it is, to publish truth and nothing but the truth.

HALIFAX AND QUEBEC RAILWAY.—The commencement of this important work is at hand. The agitation has commenced this time in the right quarter, England, where the money and influence is.—Whether the work will commence this year or not, one thing is certain, it cannot long be delayed. Great Britain must have access to Canada, through her own territory at all seasons of the year; and Canada, now a great and prosperous country, with national resources, must have a winter out-let through British Territory to the Atlantic Ocean; and Nova Scotia and New Brunswick require to be united, and with Canada also, by an inter-colonial line of railway. All things now contribute to the end:—that this gigantic undertaking will shortly be commenced.

NOVA SCOTIA GOLD DIGGINGS:—The fact of their being gold in Nova Scotia is now placed beyond dispute; whether sufficient to remunerate labor is not known. Probably its extent and richness will be fully ascertained during the summer of the present year, as several experienced miners have gone to Tangier River. The Government have laid off the district in lots of thirty by fifty feet, and charge ten pounds for the privilege of mining on each lot.

The Instructor discontinued in its present form.

This number closes the issue of our *Monthly*. In consequence of the new Postage Law of New Brunswick, which imposes a tax on native literature, in the Magazine form, we are forced to discontinue the publication of the *Instructor* in its present shape.

We cannot afford to pay *one fourth* the subscription price of the *Instructor* in postage, and depend upon the credit system for returns; besides, we should either have to increase the subscription price, or suffer a heavy loss, neither of which we are disposed to do,

During the debate, in the Legislature, on this, so called amendment of the postage law, the *Instructor* was made honorable mention of, and several Members asked the government to allow it to pass free, which was refused.

Education in Canada East

The following statistics of Education in Lower Canada, we condense from the *Journal of Education*—published in Montreal. There were in 1859, 3,011 primary schools; showing an increase over 1858 of 211; the number of scholars 141,533; increase over previous year, 10,593. In addition to this large school attendance, 26,287 pupils and students attended Colleges and other high class institutions of education. More than two thirds of the teachers were females; and full two thirds of the whole number of teachers held diplomas. The wages of teachers averaged from one hundred dollars to four hundred per annum.

The following tabular statement will show the progress made during the years indicated by the table. The *Institutions* named includes Colleges, Academies, Grammar Schools, and all other institutions as well as Elementary Schools; *Pupils* include those who attended other institutions also. The average increase of school attendance has been over nine thousand per annum. This certainly speaks well for the School attendance in Canada East.

The progress of the Pupils is also in a healthy state. Let the reader compare the number studying the various branches named in Table in 1853, with the number studying the same branches in 1859, as well as with the intervening years, and it will be seen that the progress made is very satisfactory. In some particulars, the figures under 1859 present a remarkable contrast with those under 1853; for example, the number "learning Parsing" increased from 4412 in 1853 to 44,466 in 1859.

However, the whole can be seen at one view by reference to the table:—

Years;	1853	1854	1855	1856.	1857	1858	1859
Institutions,	2352	2795	2869	2919	2946	2955	3199
Pupils,	108284	119733	127068	143141	148798	156872	168148
Contributions, (in dolls.)	165848	233032	249136	406764	424208	459396	498436
Pupils reading well,	27367	32861	43407	46940	48833	52099	64362
" writing,	50072	47014	58033	60086	61943	65404	80152
Learning simple arith.,	18281	22897	30631	48859	52345	55347	63514
" compound "	12428	18073	22586	23431	26543	28196	30919
" Book-keeping,		799	1976	5012	5500	6689	7135
" Geography;	12185	13826	17700	30134	33606	37847	45393
" History;	6738	11486	15520	17580	26147	42316	45997
" French Gramr,	15353	17852	23260	39328	39067	43307	53452
" English "	7066	7097	9004	11824	12074	15348	19773
" Parsing,	4412	9283	16439	26310	34064	40733	44466

A Word to Patrons and Subscribers.

Our *Monthly* was the *first* and now the *last* of the Educational and Agricultural Magazines published in the Lower Provinces; it would almost seem, according to the usual fate of this class of Provincial Literature, that our Magazine has lived its full time.

It seems impossible for Monthly publications to exist for any length of time in the Lower Provinces: The *Journal of the New Brunswick Society*, for the encouragement of Agriculture, Home Manufactures and Commerce; throughout the Province of New Brunswick, though edited by the late, and much lamented, DOCTOR ROBB, only lived a short time; the *Farmer*, and *Guardian*, both ably conducted Monthlies, in St. John, did not live a year; the *Journal of Education and Agriculture*, Edited by Doctor Forrester, Principal of the Normal and Training School of Nova Scotia, did not see the end of its second volume. And several other ably conducted Monthlies, in the Lower Provinces, have shared the same fate.

And our Monthly has only lived to see the fifth number of the fourth volume, and it goes the way of all the rest.

We have used every legitimate means to procure a sufficient subscription list to meet the expenses of publication; our subscription list is double that of any of the Monthlies heretofore published in the Lower Provinces, still, in consequence of the credit system, into which we have drifted, in common with others; and postal impositions; the want of encouragement, on the part of the reading public, to indigenous literature; the want of Educational and Agricultural system and appreciation of these important departments; it is almost impossible to procure sufficient support to warrant the publication of a Magazine devoted to the advancement of the most important objects of a Provincial nature, without loss to the proprietor.

The amount now due us from subscribers is upwards of *one hundred and sixty pounds*; this is a large item, and we hope those in debt to us will remit, on the receipt of this number, to the nearest Agent, or direct to the Editor, Alexander Minto—Bay Verte.

We beg to return our thanks to the Press of the Lower Provinces, and our Patrons and subscribers generally, for the good feeling manifested toward us; and we are sorry that our humble efforts were not more worthy of your advocacy and patronage.

Those of our subscribers who have paid in advance, will have the balance of this year's subscription refunded to them, or receive *twelve* numbers of a previous volume in payment for the *seven* numbers of the *Instructor* for this year, which will not be issued.

A New Edition of Munro's Land Surveying to be issued.

This work, the only one on land surveying, we believe, ever published in British North America, was issued in 1844. The first edition has, long ago, been disposed of.

And in consequence of numerous applications from literary gentlemen, land surveyors, and instructors of youth, throughout the Lower Provinces, we have commenced the revision of the above work, and intend shortly to re-publish it with such modern improvements as this important department has undergone during the last fifteen years. Having had upwards of fifteen years additional experience; a portion of which has been devoted to the railway and other surveys of a similar nature; and also the use of various kinds of mathematical instruments,—we hope therefore, to render a new edition of this work fully adapted to the use of our schools, Academies, &c. and an unerring guide to the practical land surveyor.

The following opinions of the press and other literary Gentlemen will show how far the edition of 1844 met public approbation:—

"It is original in its contents, and many of its problems and diagrams have never before appeared in any work of the kind. The author cannot fail to obtain an extensive sale for this important and valuable publication. The MS. has undergone the criticism of competent judges, and has proved highly satisfactory."—*Mechanic and Farmer, Pictou.*

"*A Treatise on Theoretical and Practical Land Surveying, adapted particularly to the purposes of Wood Land Surveys*—BY ALEXANDER MUNRO, Land Surveyor, Pictou, N. S. Geldert and Paterson, 260 pp.—A work, having the above title, nearly got up, and having the reputation of much accuracy, and value, from competent judges, has been placed in our hands for notice. As a Colonial effort, we hail it with much pleasure, and receiving it as of particular importance in these Colonies where so much litigation arises from imperfect surveys. We are happy in extracting from the Author's Preface a few observations in relation to it, which we deem worthy of consideration.

The publication is highly creditable to its author, and its typographical appearance is exceedingly good."—*St. John, N. B., Courier.*

"The work will be found, from its simplicity, perspicuity, and comprehensiveness, eminently useful to practical men, and to gentlemen of the Legal Profession and Teachers, as well as those desiring to acquire initiation in the principles and practice of Land Surveying. As a literary and scientific production, the book is truly creditable to Provincial talent, and we cordially hope that its author will meet a due return, by the products of its sales, for the skill and labor bestowed on its composition."—*St. John Observer.*

"CROWN LAND OFFICE, FREDERICTON."

Dear Sir—I accept, with many thanks, a copy of your Treatise on Land Sur-

veying. It is an excellent work, and so well suited to this country, that no Practical Surveyor ought to be without it.

I remain, Dear Sir, yours, &c.,
(Signed) THOMAS BAILLIE, SURVEYOR GENERAL,

To Deputy A. Monro.

"I have examined Mr. Alexander Monro's Treatise on Land Surveying, with attention, and I have great satisfaction in adding my testimony to the liberality and accuracy with which it has been composed. The typography, also, is excellent, and the diagrams are beautifully executed. It is my candid opinion that the young Surveyor will find it a sufficient and interesting guide to a knowledge of those branches which are indispensable to his profession, and that its merits justly entitle it to a place in every school in which mathematical science is taught. (Signed) JAMES PATERSON, L. L. D.

Principal of the Grammar School, St. John, N. B."

"To MR. ALEXANDER MONRO—

Sir—Your Treatise on Theoretical and Practical Land Surveying, seems to me admirably adapted to the wants of this country, inasmuch as it contains within itself, just as much information as is requisite for its professed purpose, without presuming upon any previous acquaintance with Mathematical principles whatever. The arrangement of your subject is judicious, the rules are perspicuous, the diagrams remarkably neat, and the tables, which are well got up, render the whole work the most complete thing of the kind, at so small a price, that I have ever met with. * * * * *

As an Instructor of Youth I strongly recommend the adoption of this work in the different Schools in the Province; and I may also venture to express my conviction, that every practical Surveyor will do well to make it his pocket companion. I am, dear Sir, your obedient servant,

(Signed)

GEORGE ROBERTS.

Head Master of the Collegiate School, Fredericton."

Monro's History of the Lower Provinces.

Two thousand copies of this work was published in 1855; there only now remains unsold, about 150 copies; so that by the close of the current year, we do not expect to have ten copies left. Those of our friends desirous of procuring copies of this work would do well to secure them as early as possible. Every family in the Provinces should have a copy; there are two maps in the work which will be found important, showing the railway lines in operation and in contemplation, also the position of our minerals, and the subdivision of the Lower Provinces; the work contains full descriptions of each county, including the early history of the country.

Defective Education.

The following extract, from a lecture recently read before the Mechanic's Institute, St. John, by H. W. Frith Esq., is to the point:—

I proceed now to notice some of the many props with which we shore up Empiricism: I mention first—Defective Education, producing Prejudice, or pre-judging, a very stronghold of Empiricism, the very bane of Truth.

By defective education I mean not merely lack of Latin and Greek, or shortcomings in reading, writing and arithmetic; not so much a want of the Schoolmaster abroad, as of a little philosophy at home. Education is not got by swallowing a Dictionary, or even a first rate classical library. There are wells full with water that cannot be used: eggs with meat that cannot be eaten. It is one thing to be learned, another to be wise. But parents and pedagogues think they are doing their utmost for children, by *stuffing*, when they ought to be *exercising*, their minds, by cramming in everything, and drawing out nothing; by giving such quantities to think about, that the poor creatures have no chance to think. Or, by another error, they cultivate and force one faculty at the expense of another; polish elaborately the mind and neglect the heart; or over stimulate the perceptive organs and deaden the reflective. In the first instance they produce, perchance, a very well got up *machine*—but only a machine. In the second—that, most horrible, because most unnatural of all things—*precocity*. In neither instance a *MAN*. In the former you will have propriety for independence of character, orthodoxy for reality, conservatism for self reliance, conventionality for originality; in the latter you will have cleverness for common sense; wit instead of reverence; selfishness for goodness; declamation for logic; success for virtue. In the one you get the fit subject for Empiricism.—In the other the Empiric. In neither case *TRUTH*.

A young man, half educated, as the first, accustomed to take his father's word for everything, and sedulously taught a few ancestral maxims as the very essence of truth, instead of being made to bring *all things* to the test of candid criticism, before ~~forming~~ his judgment—come out into the world to find his ideas ridiculed, his *authority* disputed, his *dogmas* shivered—the chances are he becomes either a recluse or a sceptic. It is a phenomenon often quoted, that the children of clergymen and the most straight-laced parents frequently turn out the worst. It is one easily accounted for. Habituated to have others think for them at home—when they enter the world the habit continues, and what they will be, depends mainly on the associates among whom they may be thrown.

A young man, half educated, as the second, comes early into the world intolerant, heady, impetuous. Ahead he must go; in some new course if possible, and his parts being unequally developed, he cannot go straight; so, fast and crooked, he soon runs off the track, and leaves room for a better man. Premature ripeness must result in premature decay.

Let those who would stay Empiricism and promote Truth, educate slowly; nature gives plenty of time. Educate fully—the heart as well as the mind; the

reason as well as the imagination—and take care to send forth their children among men, neither fettered with the maxims of party and conventionality, nor distorted by a process unnatural as pernicious.

Evidences of Design.

The following are the concluding remarks of a Lecture, delivered before the Young Men's Christian Association, Charlottetown, on the "Evidences of Design;" they should be read by all, especially young men, for whose benefit they are more immediately intended:—

Young men, members of this Christian Association, this part of our Lecture is especially for you. You are just entering on the journey of life, and are peculiarly prone to forgetfulness of the grand design of your being. To err in this matter would only be the fate of millions who have trod this earth before you. Temptation in endless diversity of form and shade lies in your path; and under the guise of friendship, it will approach and fondle around you, and seek to insinuate the deadly element into every avenue of your being. "Days brighter than ever dawned, summers fairer than ever bloomed, joys more exquisite than were ever experienced, companions lovelier than ever graced the earth, live in the chambers of your imagination"—those chambers of imagery—and expand in all their treacherous and illusive attractions. Youth, beware! Listen not to the voice of the charmer. Grand and glorious is the design of thy being,—high and holy should be the aims of thy life. Seek not to satisfy the cravings of thy soul on the hollowness of this world's attractions. There is a thirsting, then, for immortality which immortal glories alone can satiate. We do not wish to damp your energies—to check and chill your youthful aspirations. We would rather strive to fire your hearts with a holy and generous ambition. Let your soul be filled with a holy and noble purpose, and let it engage every affection, and fire every energy of your soul. Let that purpose be the glory of God, the welfare of man, the regeneration of the world. In order to subserve this noble purpose, you do not require to live in seclusion—to live in exile from the delights and amenities of social life, or renounce ordinary or legitimate pursuits. No, it is possible to be an orator, and yet a Chalmers—a statesman, and yet a Wilberforce—a soldier, and yet a Vicars—the champion of the world's redemption, and yet a Martin Luther. Young men, one and all, arise! arise! Fulfil your high and glorious destiny, and high and glorious and eternal shall be your reward. While not away your precious time in following the empty and illusive mirage of this world's enjoyments; prostitute not your immortal powers by indulging in vain and unhallowed practices; spend not the precious morning of your life "in buzzing out a brief moment of pleasure, like the ephemeron which is born at noonday, and at eventide goes gaily to its grave;" but devote your life to the attainment of objects worthy of your being. How many young men of talents and opportunities, who might with any reasonable diligence have risen to eminence and distinction, have thus been duped by the wiles of

the destroyer; who, instead of laboring for the promotion of their moral and spiritual improvement, are nothing better than polished idlers, watching the ever-varying fashions, quaffing their bottles of beer, or indulging in others divers practices "of which it is a shame even to speak." Give your hearts to Jesus; enlist under his banner, seek to be washed in his precious blood, and sanctified by his Holy Spirit, "for eye hath not seen, nor ear heard, nor hath it entered into the heart of man the things God hath prepared for those who love him."

Emigration to the Lower Provinces.

No. 5.--Concluding Article.

NEW BRUNSWICK AS A FIELD FOR COMMERCIAL ENTERPRISE.

To those who have means at command and are desirous of investing a portion of it in commercial operations, these Colonies present a sufficient field. The facilities for shipbuilding are almost without a parallel; our extensive coast line, is a line of harbors; our forests, containing 20,000,000 of acres, are covered with excellent wood, which may be floated down the rivers which everywhere penetrate the country. Consequently, ships can be built in these Provinces as cheap as in any country in the world.

Our mineral treasures are both varied and extensive. The iron ore, which is very abundant, of Londonderry, Nova Scotia, and Woodstock, New Brunswick, is unequalled on this side the Atlantic; and, with the exception of the Swedish, is not surpassed in quality in Europe; the advantages for smelting are also at hand. There are numerous other districts where iron ore of good quality is abundant. Still, for the want of enterprising men to work these mines, we import our iron.

Coal of the best quality, for all the purposes of commerce, is very abundant. In this branch, a large business is being done, though not equal to the demand. By means of the highly bituminous coal of Nova Scotia and New Brunswick, especially the Albertite of the latter Province, the cities and towns of these Provinces and the neighbouring Republic are now chiefly supplied with Gas, and it of the best quality.

The Manganese mines of Albert County, New Brunswick, are rich in this useful mineral. There are other places in these Provinces where it has been found, but not worked. Copper, of good quality, has been discovered in numerous places, but little has yet been done to render these deposits serviceable to the country.

Favourable indications of gold and silver have also been found.

Gypsum and limestone, which are highly beneficial in agricultural operations, are everywhere abundant. Freestone of various qualities and colors, is everywhere to be found. Companies have recently been

organized for the purpose of preparing and shipping some of our free-stone to the States, where it is preferred to the stone of the Union.

Lastly, and certainly not the least valuable of our natural resources, stand the fisheries. In this department, Nova Scotia and P. E. Island have made some advances, whilst the people of New Brunswick, with equal advantages, do not take enough fish for domestic use. Of all the sources of wealth scattered over the face of the Lower Provinces, and around their borders, that of the fisheries presents the greatest inducements to the capitalist. Unlike mining operations, the outfit is not expensive; while, with Europe and America for a market, the profits must, under all ordinary circumstances, be great.

It is evident we have the resources; it is also evident we have a market for our products, and all that is required is capital and enterprise to render them profitable. But how to effect this end is the question. We have got neither men nor money, and little is known of us beyond the confines of our own Provinces.

The visit of the Prince of Wales and suite with the numerous able newspaper correspondents who accompanied the Royal visitor, cannot fail to school the public mind of the mother country, from whence cometh our aid, into a more extended knowledge and appreciation of our resources, and the advantages to be derived from a more extended emigration to our shores.

Indeed, the recent discussions in the British press, touching our resources, have already led many in the mother country to make enquiry as to our "whereabouts" and resources. In anticipation of a more enlarged emigration to these Colonies, we should offer much more liberal inducements to actual settlers; by laying out and opening roads through our best lands; lay the lands off in lots of one hundred acres each; give free grants of all the lands on one side of the roads passing through the lands to actual settlers, and charge double price for the land on the opposite side of the roads. In this way, without a shilling's loss to the Provinces, many more settlers might be induced to locate themselves. Our emigration schemes have been all planned upon selfish principles; few, very few, inducements have been offered to those entering our forests, beyond a hundred acres of land for ten pounds sterling. Canada, Australia and other colonies have been more liberal in this respect than the Lower Provinces, except when first colonized by the mother country, when large tracts of land were given to actual settlers, which induced a large emigration to these Provinces at that time.

A. M.

Salting Wheat in the Mow.

Most of our readers know the effect of salting rather green hay, when it is put into the mow. But few, doubtless have ever thought of or practiced salting wheat. W. P. Cooper, of Lancaster, Pa., in

an essay on Cutting and Harvesting Grain, published in the *Farmet and Gardener* says, in storing wheat in a mow, he commences on one side, places the sheaves in regular layers with the butts outside, tramping heavily on the butt of each as it is laid down. The next layer is placed with the tops lapping about half way over the first, care being taken to keep the heads or tops uppermost. When the entire space of the mow is covered in this way, common ground salt is sprinkled all over the mow on the top of the layer, at the rate of 4 quarts to every twenty dozen sheaves of wheat—a larger proportion of salt if the sheaves are very large. During the sweating the salt is dissolved and absorbed by the grain and straw. The effect of this practice has been, to make the grain brighter and bring two or three cents more per bushel, than that which was not salted. Millers say the yield of flour is larger and whiter. Cattle eat the straw freely. It is a most effectual remedy against the barn weevil. Experience has *proved* this to be a fact.

Items of Agricultural Experience.

A correspondent of the *Genesee Farmer*, writing from Hamilton, Canada West, gives the following valuable suggestions:—

1. All soils are benefited by underdraining, unless the subsoil is gravelly or porous enough to form a good drainage of itself. But the benefit of drainage is most apparent when applied to soils of a clayey nature, or having a subsoil retentive of moisture.

2. After drainage, subsoiling and thorough pulverization are the chief means to be employed to secure good crops on clay lands.

3. There is no soil so poor and sterile but some means may be found to ameliorate it, and recuperate its wasted fertility.

4. Blowing sands may be made productive by spreading a thick coat of straw over the soil to remain a year or two, till decayed, and then seeding clover on the straw without plowing, and afterward pasturing sheep on the clover.

5. Lime is not beneficial as a manure when applied to strong clays.

6. Seeding land to clover and feeding off the clover by stock on the ground (sheep especially), is the cheapest and easiest mode of enriching the soil. According to Von Thaer, it adds 20 per cent. to its fertility each year.

7. Green crops plowed under are powerful auxiliaries in rendering a light soil fertile. But if this is done too often successively, it eventually renders the soil too carbonaceous—i. e., too full of vegetable matter.

8. The productiveness of the land depends greatly on the nature of the subsoil. If that is cold, wet and poor, all efforts to improve the soil will be labor in vain unless recourse is first had to under draining.

9. Lands naturally fertile soon loose their fertility by growing

Successive grain crops on them, unless the organic elements abstracted by the crops are again restored to the soil in the shape of manures.

10. Deep plowing is beneficial on all soils that are not wet, and is the most so when done in the fall.

11. Two successive grain crops on the same ground leave the land in a foul state.

12. Summer fallowing, although apparently a waste of land and labor, is the most efficient means we have of preparing clayey soils for wheat. It ameliorates the soil, enables the seeds of all weeds to sprout and be destroyed, and, by constantly turning and exposing the soil to the sun and air, renders the inorganic elements contained in it more readily available to the roots of the wheat plant.

13. Barn-yard manure is best to be composted before it is applied to the land. It has then a greater value, weight for weight, than when in the long or unfermented state.

14. All concentrated manures, as guano, bone dust, sulphate of ammonia; etc., should be used sparingly at a time, and with a cautious judgment, and are best applied on or near the surface.

Scotch Mountain Sheep.

At the Connecticut Valley Fair, Isaac Stickney, of Boston, exhibited a pair of long woolled sheep, which were purchased in Scotland. Their wool is described as being of a better quality than any other long woolled breed—long, wavy and soft with no harsh or wiry feeling like most of the mutton breeds—peculiarly adapted to worsted stuffs, and the carcass is said to give the very best and highest flavored mutton. Mr. Howard says they live and thrive on their native mountains on very coarse vegetation. They are kept in very large flocks on the mountains and moors of Scotland—in flocks of 8000 to 15,000 often. Those in this country appear docile and quiet, have black or spotted faces with a symmetrical form of head, neck and body, unsurpassed by any animal of woolly kind. Mr. Stickney says lambs 4 months old weighed 80 lbs. each, live weight.

Deterioration of Manures by Fermentation.

It is a prevalent impression with the majority of farmers that a complete fermentation of farm-yard manure should take place before it is applied to the land; and a most common practice is to suffer it to ferment until the fibrous texture of the vegetable matter is completely softened so as to be readily cut with the spade. Such manure has lost all its heat, and may be termed cold manure. Now there are several excellent reasons why this excessive or violent fermentation should not be permitted, among which are the following:

Every observant farmer has noticed that whenever violent fermentation in the manure heap is in progress, a large amount of gaseous matter is evolved which of course is lost. Again there is always an escape of fluids which con-

tain a large proportion of the soluble ingredient, and the loss of which reduces the quantity and quality of the manure heap sometimes, to the extent of fifty per cent. A most conclusive experiment was made by Sir Humphry Davy, more than fifty years ago, which I will transcribe for the benefit of those who are the advocates of excessive fermentation.

The beak of a retort filled with hot fermenting manure was introduced into the soil among the roots of some grass in the border of a garden. In less than a week a very distinct effect was produced upon the grass; upon the spot exposed to the influence of the matter disengaged in fermentation, it grew with much more luxuriance than the grass in any other part of the garden.

If such effects are produced by the escape of gases from the small quantity of manure which would be contained in a retort what must be the loss of fertilizing matter from a large manure heap?

But there are still other arguments against it. Heat, we know, is essential to the germination of seeds. When manure has undergone the process of violent fermentation, much heat is lost; but if this fermentation takes place in the soil, the important services of this otherwise lost heat are secured for the newly sown seed, or the young plant. Moreover, chemists tell us that 'in all cases of decomposition, substances combine much more readily than after they have been perfectly formed.' Such being the case, it is not difficult to understand why the fermentation of manure beneath the soil, should add so much more to its efficacy, than when it takes place in the farm-yard. The gaseous and fluid matter evolved are brought into direct contact with the germinating seed or growing plant, and before they enter into any new combinations, and are thus in a condition to be more efficiently appropriated.

These reasons, which are not offered as new, may not strike some of your readers as being very cogent; but a few experiments will demonstrate their correctness with them as they have done with us.—*Farmer and Gardener.*

Secret Societies:

The following sentiments adopted at the last session of the Iowa Conference of the Wesleyan Conference, meets our views on this subject:—

“We are more than ever convinced that the duties we owe to God and Christianity cannot be performed by any man who is in fellowship with secret oath-bound societies; and this antagonism is not merely or mainly on account of the character of the initiatory obligations; nor even because of the secrets that may be held sacred. All these are sinful, and to be condemned by all Christian people; yet if the oaths were all dispensed with, and no secrets held by any, the principles maintained, the character assumed, and the results following the prevalence of such societies, must forever preclude Christian people from holding fellowship with them. They are selfish, favoring a system of caste, multiplying artificial distinctions, and thus interfering with

the divine plan of benevolence, which seeks to equalize humanity by a law of universal brotherhood. Then, in some cases, moreover, by their ritual ceremonial services, they counterfeit religion; assuming to approach God with a man-made form of worship; which, being imperfect in itself and associated with the vindication of ungodly principles, becomes in fact a sacrilegious mockery. Finally, wherever professing Christians become devoted to the interests of secret societies, accepting their principles, and participating in their religious mockeries, their soul of sympathy is absorbed, leaving for the church of God and the cause of Christianity, a mere remnant and a wreck. We, therefore, agree to recommend to our next General Conference, that they maintain in full force our present testimony and law on that subject.

True Freedom—How to Gain it.

BY CHARLES MACKAY.

We want no flag, no flaunting flag,
For Liberty to fight;
We want no blaze of murderous guns,
To struggle for the right.
Our spears and swords are printed words:
The mind our battle-plain:
We've won such victories before
And so we shall again.

We love no triumphs sprung of force—
They stain her brightest cause;
'Tis not in blood that Liberty
Inscribes her civil laws,
She writes them on the people's heart,
In language clear and plain;
True thoughts have moved the world before,
And so they shall again.

We yield to none in earnest love
Of Freedom's cause sublime;
We join the cry, "Fraternity!"
We keep the march of Time,
And yet we grasp no pike nor spear,
Our victories to obtain.

We've won without their aid before,
And so we shall again.

We want no aid of barricade
To show a front of wrong;
We have a citadel in truth,
More durable and strong;

THE INSTRUCTOR.

Calm words, great thoughts, unflinching faith,
 Have never striven in vain;
 They have won our battle many a time,
 And so they shall again.

Peace, progress, knowledge, brotherhood—
 The ignorant may sneer,
 The bad deny; but we reply
 To see their triumph near.

No widow's groan shall load our cause,
 No blood of brethren slain;
 We've won without such aid before,
 And so we shall again.

 Industry.

Industry lays the foundation for happiness and usefulness. Behold the man, who is always to work and who improves every moment as it passes; he is building a foundation for future happiness, broad and deep, that will last as long as he himself remains an inhabitant of earth. And he is not only securing happiness for himself, but he is teaching those around him by his example, that lasting happiness is derived from a life well spent, whose moments must be improved as they swiftly fly. Let us for a few moments wander back into the dim vista of the past, and review the lives of those who distinguished themselves as great, and discover if we can, what the most prominent trait of their character was. Were they noted for any thing more than they were for industry? and can we conceive of a closer relationship in any other trait? or can we recall any one of these men, for one moment, except it be a moment of great and eternal activity? Let their lives answer these questions. Was it not by industry that Washington was enabled to accomplish so much? Even when a child, he was noted for being very industrious, for he was up and at work before the sun made its appearance in the morning; and its setting rays found him still engaged at his always commendable employment; and we find him no less distinguished for being industrious, on the field of battle, than when a child; for when a general, he was always at his post, ready for any encounter at a moment's warning. Was it not industry that caused Alexander and Napoleon to conquer so many nations? Was it not industry, inspired with ambition, it is true, that led them forward from one field of battle to another, until it was said of Alexander, that he had conquered "all the then known world," and of Napoleon, that "he made his friends kings, and established and demolished thrones." But let us follow time in its rapid flight, until we arrive at the present century, and in our own country, and we find the names of Mann and Irving, printed in almost every paper, as men who spent their lives in benefiting their fellow men. They are examples, worthy of study and imitation.

A stupid mistake of the printer's occurs on the first page of this No. For *March*, 1861, read *May*, 1861.