

CHAPTER XX.—(Continued)

"For I always did desire idle people: one's thoughts must get cleared by some sort of diversion, or they can never be clear. I don't think I ever did anything worth anything. What I did was to keep alive at all if you are of no use?" she protested, as she held forth on the dignity of labor, while her lover readily agreed with her, replying, with all the eloquence of youth, upon the necessity of some kind of occupation, any longing to make. He had no particular inclination to be consulted; he would go into business, or politics, or anything else that Muriel fancied, he was quite ready to allow himself to be directed. He was not so much in his life to suit her fancy, to adopt her principles—almost too ready, for such a facility of disposition seemed to suggest that he had no private establishments of his own. Only it was in the projects for which she had pleasure continued very clear and well defined, his projects for usefulness were very vague and always continued so; but he always maintained that Muriel had been an invalid, and that her influence had always been derived from the life of careless pleasure in which he had hitherto delighted, and elevated him to

DISAPPOINTMENT

and, new house, John died, and the best
 part of my enjoyment of life died with him,
 and poor Tom has never been anything but a
 dull disappointment. I sometimes think if
 I had been a poor man, obliged to live
 as I was living, he would have been better and hap-
 pier, but he had no inclination for business;
 the management of everything remained in
 my hands, and I liked it: it kept me busy
 and gave me a little comfort for the little
 money which was once our home now just
 for a little bit of heaven to me. I drive past
 just for the sake of looking at it, and if
 I might could bring the dear old days back
 again, and I could find myself preparing some
 of the things I used to do, I should like to
 do them, with Tom an innocent baby in my
 arms. I should be a happy woman to
 decide. You see, the happiness I should have
 had, I missed, and I never found anything to
 replace it. I tried to buy that house, though
 I could not afford it, and I thought I might
 have it and my refuge, but the people
 asked them to let me come in just to look at
 the rooms. They looked so strangely small,
 dark and narrow, but I could have kissed the
 walls; the people stared at me so that I
 could not go again. Do you know I feel
 that I must have my husband's hand in my
 hand, and I should like to have him with me

ness deepening daily her craving for God, her sense of the impossibility of existence without his blessing grew stronger. She began gradually to acknowledge that if she were "pierced through with many sorrows" it was her own fault, and she had had no heavier burdens upon her than the Lord had ever intended for her soul. In the midst of this darkness, at the time when her only prayers were aching sighs, she began to near the light; the silence of desolation was the preparation for the sound of the Master's voice. The days passed slowly, sadly, unprofitably; and those who were never dreamed of what was passing in the poor little mind. Grace was perhaps a little more lively, but she was not suddenly changed; she had always been subject to sudden changes of mood, they said, to each other then.

sends us, but I am always glad when November is over. Is that Muriel?" said Mrs. Gordon, as the younger sister, followed

d remained for the evening. Miss Mark-
d's life might be equal to the sweetest poem

remain unknown, unless some scientist should investigate the haud and the sulphur bank where was found and explain these mysteries—

OTIVE which, if it equals

remain unknown, unless some scientist should investigate the haud and the sulphur bank where was found and explain these mysteries—

SUBSCRIPTION RATES.

ALL IN ADVANCE.		
Monthly	Witness	\$3.00
Weekly	Witness	1.10
Monthly	Messenger	3.00
Weekly	Messenger	1.10
Monthly	Witness	3.00
Weekly	Witness	1.10
Monthly	Messenger	3.00
Weekly	Messenger	1.10
Monthly	Witness	3.00
Weekly	Witness	1.10
Monthly	Messenger	3.00
Weekly	Messenger	1.10

TERMS TO MINISTERS AND TEACHERS.		
Monthly	Witness	\$2.50
Weekly	Witness	.85
Monthly	Messenger	2.50
Weekly	Messenger	.85

ADVERTISING RATES:

Two cents per line each insertion.		
Births	per insertion	.25c
Deaths	per insertion	.25c
Marriages	per insertion	.50c
Deaths	per insertion	.25c
Contract	1 year	\$3.50 per line
Rates	6 months	\$2.00
	3 months	\$1.25

NOTES OF LABOR TIPS double the above rates.
 "FALL WITNESS, 10c per line first insertion, and 5c after insertion, on outside page.
 Quotations payable quarterly in advance.
 Five is the minimum number of lines for which an advertisement is taken.

ISSUED LAST WEEK.

Number copies of WEEKLY WITNESS	29,030
" " " DAILY WITNESS	76,562
" " " MESSENGER	39,500
" " " L'ATROBE	900
Total	136,992

We invite communications from farmers giving their experience on matters interesting to them as a class, also enquiries which, if we cannot answer ourselves, some of our readers may.

The Witness.

WEDNESDAY, MAY 5, 1880.

MR. MACKENZIE'S RESIGNATION OF THE OPPOSITION LEADERSHIP.

The great event of to-day is Mr. Mackenzie's resignation of the leadership of the Reform party. The party may find a more brilliant leader, one of broader culture and broader views, but, as Sir John Macdonald hinted, it will be hard to find one more honest or more earnest. Mr. Mackenzie is more of a party man than Mr. Blake. It would be better for the country if partyism were less of a power than it is. Whether it will tend to the strengthening of the Reform party to follow a leader to whom party servility is not attractive remains to be seen. The motto of Mr. White, whose party loyalty on the other side of the House is absolute, is that one who would lead successfully must first learn to serve. Mr. White is himself learning the lesson of assiduous service and a day or two ago tendered advice on this subject to Mr. Blake. Mr. Mackenzie's resignation recalls in some respects that of Mr. Gladstone six years ago. Mr. Gladstone had been for years much overworked, and his very earnestness of character had told on his temper to his disadvantage among his immediate followers. The Conservatives in Canada have been watching for signs of estrangement and pique among the members of the Opposition and have exaggerated every symptom. There is no doubt that when Mr. Mackenzie had the burdens of the Public Works Department on his personal shoulders, as well as the responsibilities of the Premiership, he was taxed much beyond his strength, but there is no evidence of anything but the utmost cordiality between him and his immediate followers, then and now. There is in the very character of a Liberal party an inherent tendency to disintegration which shows itself most when the party is in Opposition. As Mr. Goldwin Smith recently put it, the Tories are a party of opinions, while the Liberals are a party of opinions. Interests tend to draw men together—"to pool," as the Americans say—while opinions tend to divide. Conservatives are the natural rulers, and when their conservatism is real it is desirable that as a rule such men should be in power. Reformers are only thoroughly at one when rallying around one over-shadowing issue. In the absence of such an issue as arouses the moral enthusiasm of a nation, interest is sure to rule. The great question before Canada just now is her fiscal policy, and in the present House there is no prospect of change in that. A more immediate question is the Pacific Railway, and in that matter present public opinion in the Reform party seems to be at issue with the antecedents of that party. Under the leadership of the *Globe* the party at first approved of the general design of the railway and of carrying it forward in the cheapest way with reasonable speed. Mr. Blake was inclined to regard the burdens which the Railway must lay on the country with greater seriousness than the rest of the party. He wished, with Mr. Dorion, to limit the expenditure by the existing rate of taxation, and came to a distinct issue with his party on the Carnarvon terms, whereby it was attempted to secure the loyalty of British Columbia at the expense of building the Esquimaux & Nanaimo branch, and a promise to complete the road within a given time. Mr. Blake's view has been justified by time. The nation is beginning to groan under the burden which this enormous railway expenditure is imposing upon it, and the popular feeling is likely, ere long, to express itself in some form. Mr. Mackenzie having accepted a certain railway policy, would carry it through whatever it cost, and therefore could not, in the interest of any good work, make himself the exponent of popular discontent. Mr. Blake, on the other hand, who has been opposed to the high rate of expenditure throughout, will be the people's natural mouthpiece. Seeing, however, that the nation is committed to the enterprise, it will necessarily be difficult to frame a policy which will acknowledge this fact, and yet satisfy the clamor of an overtaxed people. It is not our part to foresee what this policy will be, but that the change of leadership must be coincident with some change of base on this question there can be little doubt.

THE OPPOSITION LEADERSHIP.

Within a few days the political drama of Canada has been enlivened by an act full of interest and significance. Exit Mr. Mackenzie, enter Mr. Blake as Opposition leader. Explanations have not been condescended on either by the ex-leader, or the Ontario organ of the Opposition. The latter has merely verified the proverb, "Welcome the coming, speed the going guest," but it has done both so cordially and gracefully as to excite the belief that the recent change is acquiesced in even by the *Globe* itself, and consequently that it has come to pass without causing any breach in the unity of the Reform party. If with all his abilities and excellencies Mr. Mackenzie has not proved a perfect leader of the Reform party of Canada, it has been through no fault of his own. He has been unsparingly faithful—unflinchingly diligent—wholly true. Yet he may lack that suave quality of bearing and that quickness of impression, which, while they make a man a magnet among his fellows, enables him to judge correctly how to deal with and how to use the men about him. Moreover, though not old himself, he belongs to an "old order" which has been for some time giving place to a new. His devotion has been supreme to the ideas and policy of the Hon. George Brown. That statesman, while honored as the faithful exponent and mighty defender of true political principles, has not gained a character for generosity, either to political opponents or to members of his own party who might differ with him. Such a man, although truly great on the political battle-field, is liable, from the very intensity of his convictions, to become what Mr. Brown long ago acknowledged himself to be, a "governmental impossibility," and some of this impossibility has descended to his equally inelastic follower. For some time there has been an impatience of Mr. Mackenzie's leadership, which the profound respect felt for him personally hardly concealed. There have been almost no end of caucuses and consultations as to the best manner of bringing about the change which all, or nearly all, felt must come. It is reported among knowing ones that matters reached a crisis just prior to the lamented death of the late Hon. L. H. Holton, and that the last service that gentleman performed for his party was to convey to Mr. Mackenzie in his own bland and kind manner an expression of the general wish that he should retire, and make way for Mr. Blake. It is reported further that this communication was made to Mr. Mackenzie the very day before Mr. Holton's demise, and that time was asked and given to consider the matter. Mr. Holton's sudden removal delayed things a little, but, as might have been expected, Mr. Mackenzie concluded to yield to the inevitable. It is a rather singular combination of circumstances, that the step should have been finally taken during Mr. Brown's temporary exclusion from active life through the murderous attack that has brought him so near his end; and it will perhaps not be pleasant to him on his return to health and strength, should he recover, as we are persuaded all his fellow-citizens fervently hope and pray that he may, to find that in the meantime the sceptre has departed from his hands. But the step could not have been delayed much longer, and perhaps less of acrimonious feeling will attend it on account of the peculiar circumstances just referred to. The case, in some of its features, resembles that of the Reform party in Britain. Lord Hartington was the nominal and official head of the party, but Mr. Gladstone was plainly the choice of the people. Lord Hartington showed his good sense and patriotism in yielding to the popular will, and it is to be hoped that the turn affairs have taken in this country, will awake the same spirit. We are not at all sure, however, that we have seen the last of Mr. Mackenzie in the leadership of his party. He has a tenacity which few men can equal, and which Mr. Blake has not yet had an opportunity to exhibit. No one will grudge Mr. Blake his well-earned honors. As a man, a lawyer and a statesman, his country has reason to be proud of him. His antecedents are full of promise as to his future. He will not excel his predecessor in patriotism, integrity, and the many sterling qualities which have given Mr. Mackenzie so high a place in the esteem and affection of his fellow-countrymen. But it is not invidious to say that Mr. Blake is, in many respects, the ablest man of the two, and it is an undeniable fact that he is more in sympathy with the present generation of Canadian Reformers. The enthusiasm with which he was appointed to the leadership, at a very full meeting of his party, every member present rising to his feet before the motion could be formally put, indicated very plainly how he is regarded, and should he be supported in the same spirit, of which there can be little doubt, a brilliant career is before him. Mr. Blake has not the jauntiness of address by which Palmerston ruled the English, and which has proved so valuable to Sir John Macdonald. He is not half fellow-wet net with everybody, and wastes no enthusiasm on strangers, but he is genuinely good and kind. Along with the staunch adherence to Reform principles and unbending integrity of his predecessor, he will bring to the leadership a suavity and moderation which will tend to conciliate opponents, and banish from the political arena much of the bitterness which has unfortunately characterized it in the past. It is thought by some that Mr. Blake is deficient in courage and backbone, but we are inclined to think this impression has been caused by his remarkable freedom from personal ambition and self assertion. He has for a long time been in a delicate position. His independence of the Brown influence has been well-known, and to maintain that has required the back-bone of a political mastodon. Yet he has not headed a revolt. He has been unwaveringly loyal to his party, and even when there has been no lack of provocation, has refrained from causing a split in the ranks. He has patiently "bided his time," and now that it has come without any convulsive throes or revolutionary concomitants, we believe he will prove himself large enough and firm enough for the place. We hope that the sentiments of high-minded patriotism and honorable statesmanship

which have adorned his political speeches, even those delivered from "the stump," will become the watchword of the Reform party under his tutelage; and that the country at large will be educated into another deal of citizenship under their influence.

THE NORTH-WEST MOUNTED POLICE.

The Hon. Mr. Royal stated in the House of Commons last Tuesday that very serious charges of gross immorality had been made against the conduct of members of the North-West Mounted Police, and that unless these evils were soon brought to a close, the Indians might be provoked to resort to arms in order to be avenged on their white protectors for the indignities done to their squaws, both married and single. It is much to be regretted that there is too much foundation for the complaints referred to by the Hon. Mr. Royal, and from the present composition of the North-West Mounted Police, it would be rather wonderful if all its members continued to lead moral lives when exposed to such temptations as abound among a semi-civilized community of Indians, so far removed from the influence of enlightened public opinion. It has been often remarked that the effect of frontier life is either to deepen the tone and standard of morality in those who are for some time exposed to its influence, or else to cause a great relaxation in this respect, and, unfortunately, the majority incline toward the latter course. As the recruits for our North-Western army are chosen with a view to muscular rather than moral development, it was scarcely to be expected that they would become examples of modesty and good behavior amid such strong temptations to do otherwise. When this force was first organized their presence in the North-West was of considerable value in preventing the introduction of intoxicating liquors among the Indians by unscrupulous western traders, and as our western Indians were in comparatively good circumstances, owing to the abundance of buffalo and other game, they did not come much into close contact with the members of the police force. Unfortunately for the moral well-being of both Indians and police, this state of affluence and independence among the Indian tribes has become changed, owing to the scarcity of buffalo and other game, to a condition of penury bordering on pauperism, and instead of living far removed from the white man and his vices, they have become a kind of camp-followers to the police force and hang around their barracks in the hope of deriving some benefits from their hospitality, or in subservient to the gratification of their evil passions, and degrading and demoralizing both whites and Indians. Our Government should lose no time in altering the complexion of this force, to fit it for the changed circumstances of the country. No more unmarried young men should be sent to be themselves tempted, or to tempt the unfortunate Indian women into vicious habits. After all, the best police provision will be found in the promotion of a healthy civilized population. A much less sum than is now yearly expended in maintaining the police force, if spent in assisting poor but respectable young married people, either from Great Britain or the older provinces of Canada, to form large colonization settlements all over the fertile portions of the North-West, would in a few years afford greater protection to both Indians and whites, than if the present police force were doubled. These colonization settlements would also furnish honest work, either as herdsmen or farm laborers, for such Indians as are in need of assistance, and thus hasten the time when they will again become self-supporting, and when the presence of a large body of police will not be required. Such a scheme would also greatly accelerate the settlement of the country.

END OF THE AFGHAN REVOLT.

General Stewart, whose march to Candahar is perhaps the greatest feat that has been performed during the present Afghan campaign, has had the additional honor of terminating, by one great stroke, all hopes of successful resistance on the part of the enemy south of the Hindoo Koosh mountains. Nearly a year and a half has elapsed since General Stewart entered Candahar, and Candahar has been under British rule, practically, for about a year, and though great efforts have been made during the last nine months to end hostilities, it has been impossible or impracticable, during that time, to capture the strongest fortress in Afghanistan, the centre and rallying point of the rebellion, notwithstanding the fact that it lay about half way between our two occupying armies, and prevented all but an extremely round-about communication between the two forces. General Stewart understood well the importance of the possession of this stronghold, and with an enthusiasm and confidence very admirable, he had no sooner finished his long and hazardous march to Candahar than he divided his force, and sending one division out with the apparent purpose of marching to Herat, he garrisoned Candahar, and then set out with the remainder of his force to capture Ghuzni. It appears that he had been given full power to take any step he deemed best, but this bold design confounded the Government, and special messengers were sent ordering him to fall back upon Candahar and remain there for the time. The Herat division was overtaken by the messenger, at Gerishk, about ninety miles from Candahar, and General Stewart had reached Kalat and Ghilzal, about the same distance from Candahar, and considerably more than one-third of the way to Ghuzni. General Stewart obeyed orders, and has occupied his time in administering the affairs of the province. He has done this so well that the prosperity of the province has never been so good as at present, and his departure was regarded as an evil by the natives themselves. He has always been supplied with an abundance of provision for the natives, so that his occupation was not a difficult one, and the expedition which he at last was called upon to make to Ghuzni was not hampered by lack of supplies. Khatia Ghilzal had since his recall to Candahar been held as an advanced post by the British, so that he

encountered no opposition until a point within twenty miles of Ghuzni was reached. On the nineteenth of this month the enemy was observed in considerable force about two miles distant. General Stewart had hardly placed his men in position before a mounted force, consisting of about three thousand Ghazis, made a surprisingly sudden attack, and with the impetuous fury of fanaticism some of them even forced their way into the very heart of the British position. General Stewart's force appears to have remained surprisingly firm under this trying attack, for only seventeen were killed throughout the whole action, which lasted about an hour, leaving the British on the field with over one thousand of their enemies dead around them. The Afghans made apparently exactly the same mistake as the Zulus at Ulundi, though, of course, a greater one, for they chose to risk all in an open battle on equal terms with the British while they had a fortress which could have been made all but impregnable with their force, whereas the Zulu capital was merely a mud city. General Stewart after a hard fight of two hours with a smaller force on the day following, in which his loss was only two, while that of the Afghans was four hundred, occupied the city apparently without opposition. The capture of Ghuzni may be looked upon as the end of the campaign. The tribes south of the Hindoo Koosh, who are still in rebellion, will now recognize the hopelessness of further resistance, and will probably consent to lay down their arms and take their share in selecting and establishing a new ruler. The tribes to the north of the Hindoo Koosh will probably be satisfied if Abdul Rahman Khan, their leader, be chosen Ameer. Lord Hartington declared that the policy of the Liberal Government will be to withdraw, as soon as possible, from Afghanistan, but it is believed that a British resident, in the person of a native prince, will look after British interests in Cabul, and that subordinate native officials of the British Government will be appointed in Candahar and Ghuzni. General Stewart is to supercede General Roberts at Cabul, an arrangement made, probably, in order to render the reasons for a new departure less startling to the Afghans.

OUR LABOR TROUBLES.

Human economy is governed by law just as nature is. Not only its physical conditions but its mental and moral conditions are under fixed laws, and when these laws are transgressed there is sure to be moral as well as physical disturbance. There is not only the abnormal and unhealthy increase of certain kinds of industry and consequently of certain kinds of population, but a latent and undefined sense of injustice on the part of classes of citizens not privileged as well as on the part of other countries to whom such artificial regulations may be hostile. We in Canada have been interfering very seriously with these laws, and it appears certain that we will have to suffer the punishment which follows. To the natural law of supply and demand we have opposed a purely artificial one, which is bearing its fruit, and will yet bear even more evil fruit. We cannot say that if free trade were the rule with countries all over the world instead of the exception that there would be no emigration, but it is certain that there would be much less sense of mutual injustice. The jealousies which our recent policy has bred in England and the United States are well understood. But the all-prevailing plea is that we must look after ourselves first, and the jealousies of other countries is only another proof that we are looking after our own interests. It seems in this reasoning to be held as an axiom that when we are injuring our neighbors we must be benefiting ourselves. When plainly put, however, such a theory seems absurd, and the facts of our home experience are going a good way to prove its falsity. We are experiencing a series of labor troubles, of such a serious nature that we are endangered. We do not hold that with free trade we would not have any such troubles, but what we do say is, that there would be less cause for them, and they could be safely left to be settled by natural laws. But when any factor of the trouble is artificial, there is required an artificial remedy or else injustice has been done. These cotton operatives show by their temper that they imagine rightly or wrongly that they are suffering an injustice. Is the question whether they are not suffering some injustice worth consideration? The present tariff owes its existence to the belief that it would promote home manufactures. It has done so momentarily at least. Home manufactures were to benefit, so we were told, not one class alone, but all classes, those whose capital would be invested, those whose labor would produce the food for both labor and capital. These manufacturers, laborers and agriculturists were all to be benefited, the first by higher interest, the second by better earnings, and the third by a better home market. Now the distribution of this increase was necessarily allowed to remain in the hands of the capitalists, and here is just where injustice has room for play. The protection policy could not have been carried unless the laborers had been induced to vote in its favor, and this they did, because they were told that it would give them more labor and better paid labor. They have a claim quite distinct, therefore, apart from the workings of the natural laws of supply and demand to a due share of the increase which has been brought about by an artificial re-arrangement of the relations between labor and capital. One company appears to recognize this right, perhaps unconsciously, but none the less distinctly, when they state that they have only earned a dividend of six per cent. Rightly or wrongly, however, the operatives believe that they have not a due share of the earnings. In such case who is to decide. Under a less artificial state of affairs the laws of supply and demand would at the only court of appeal finally adjust the difficulty. In this case the law of supply and demand, so far as it controls the manufacturer, has been interfered with, and he has, consequently, an abnormal share of power. The

power which created the artificial condition has provided and can provide no just arbitrator power. The operative does not always understand the injustice but he feels it, and he acts just exactly as though he did understand it. He tries to fight the capitalist with his own weapon, namely, power arbitrarily employed. He is overpowered, of course, as he has been at Valleyfield, but the sense of injustice is there. The kind of population which is stimulated by protection is that which next to the idle class is least valuable and most dangerous to the body politic—namely, that class which comes under the designation of cheap labor, a class with no stake in the country, and with small expectations of ever rising out of its present condition—and which is, therefore, naturally uncultured, improvident and reckless. The time was when the manufacturing class was incorporated with the rest of the community and produced a grand proportion of great thinkers and inventors as well as of thriving citizens. But the systematizing of methods of manufacture has rendered cheapness the great desideratum, and consequently created a class who in proportion to numbers do less to develop and more to disquiet the community than any other. Yet for the abnormal development of this class, our steady agricultural population who are attached by strong ties to the soil and who have generally a substantial stake in the country are heavily taxed. The very long hours of labor which are naturally demanded of an ignorant laboring class tend not only to crush out mental and moral improvement, but must actually produce physical deterioration, the result of which will be felt in another generation when the continent becomes burdened with superannuated and broken down cheap labor and peopled with its unwholesome offspring.

OATHS AND INFIDELS.

For the first time in the history of the British Parliament a member-elect has declared his disbelief in God. Many men have, like Mr. Bradlaugh, refused to take the oath of allegiance, but on totally different grounds. Mr. Bradlaugh declares that he does not believe in the existence of God, and that, therefore, it would be ridiculous in him to call upon God to witness his affirmation. Quakers have refused, but because they believe that God has forbidden the taking of oaths. An act passed in the reign of the present Sovereign substituted the consolidated oath for the three oaths of allegiance, supremacy and abjuration, and provided for a form of affirmation "by Quakers and others" declining to take the oath. It appears strange that this form of affirmation was not submitted to Mr. Bradlaugh at once, as it is perfectly clear that the word "others" covers his case. Probably there is something in its form that he would object to. If Mr. Bradlaugh is as conscientious in other matters, it appears probable that he would refuse as decidedly to make an affirmation as to take an oath, as he is pledged to the overthrow of the monarchy and the establishment of a republic in England. In that case, however, the issue would be on the very question for which the oath was devised and his refusal would clearly disqualify him, and if the constituency could re-elect him, there would be nothing for it but disfranchisement, so long as it continued obstinate. It is probable, however, that after the first fit of spleen was over the borough would recall the fact that Mr. Bradlaugh was elected as a Liberal or even a Radical, but not a Republican or an opponent of the monarchy, and would drop Mr. Bradlaugh accordingly.

LITERARY REVIEW.

WHO WAS JABEZ?
 Readers of the early chapters of Chronicles have always been struck with the pathetic little story of Jabez, which is unexpectedly inserted among the apparently uninteresting genealogical lists. The Jewish commentators supposed that Jabez was a wise doctor of the law who lived at some unknown period in an unknown city called Jabez, and there the matter has quietly rested until to-day. A new and remarkable solution of the problem is now proposed, which seems at first sight impossible, but gathers credibility as the proofs are enquired into. The Rev. John Campbell, of this city, after spending the leisure time of ten years in trying to reconcile the genealogies in Chronicles with others in the Scriptures, proposes this solution in a pamphlet entitled *Jabez*, and although it is impossible to do justice to the subject in our short space, we will try to put our readers in possession of the main points of the argument. In the second chapter of Chronicles we are told of certain Kenites who dwelt in the city of Jabez. Jabez, Prof. Campbell identifies with Thebes in Egypt, the university of the Upper Kingdom. These Kenites scribes, probably of the family of Jethro, expelled from the land of Egypt by a dynasty which had no sympathy with their pure religion, carried their genealogies of the Egyptian royal family along with their pure faith, into the desert of Sinai and thence into Palestine, and these important documents of their seem in some way to have been entangled with the brief genealogies of the tribes of Israel given in Chronicles. In the same chapter in which Jabez is mentioned we find Mered, who married Bithiah, the daughter of Pharaoh. This Mered seems to have been one of the Kenites, and a royal scribe as well as a prince in the court of Pharaoh. Lepsius and Osburn identify him as Merhet, the son-in-law of Cheops, and his sepulchral chamber has been unearthed at Gizeh and carried to Berlin. So far from being a descendant of Judah, he must have lived some generations earlier than the entrance of Israel into the land of Egypt, and this supposition is confirmed by the intimation given a few verses farther on, "These are ancient things." Now the scribes who mentioned Mered may well have recorded other points in connection with Egyptian history, and Prof. Campbell accordingly finds that "Coes, the father of Anub, and the families of Achachel and Jabez" (1st Chronicles, iv. 8), was the same as Choes I., the first pyramid builder and the king who introduced animal worship into Egypt. Anub he identifies with the shep-

herd king Anub, and Achachel with the shepherd king Achel. At this period, according to Manetho, it was decided that women should have the prerogative of royalty, and Zobebe, the daughter of Coes, and presumably the mother of Jabez, is identified with the Egyptian queen variously called Usapsa, Binotheria and Biophis. The husband of this queen was, during an insurrection, killed by his guards; hence when her son was afterward born she called his name Jabez, saying, "Because I bore him with sorrow." It is to be noticed that we are told that Jabez called on the God of Israel, showing that he was a proselyte; his name has no significance in Hebrew. He was evidently a ruler, because he prayed that his coat might be enlarged. Now there was a certain king of Egypt called variously Apophis, Apepi, Pepl, and Appapus, of whom the first, Sallier Papyrus relates that he took to himself a new deity for Lord, "refusing to serve any other God in the whole land." He is said to have reigned a hundred years, and to have been one of the most glorious and powerful of kings. This king, who was the friend of Joseph, Prof. Campbell identifies with Jabez. He was but a child when Joseph stood before him, and became, as he said to his brethren, "a father to Pharaoh." It was this lad who, taught by the Hebrew captain, became more honorable than his brethren and called on the God of Israel. Many other points are made in this pamphlet which are either remarkable discoveries or curious coincidences. Prof. Campbell holds the old doctrine and common sense view that the heathen gods were in the main historical characters deified by their descendants, but it seems unjust to give his conclusions without at the same time giving the arguments by which they are justified. However, we may mention that in the Egyptian deities Chonos, Anubis and Bubastis, he finds three members of this family, Coz, Anub and Zobebe. In Ammon the father of Coz he finds Ammon, the son of Lot, and one of the divinities of Egypt. He then traces out the corresponding personages in Grecian mythology, and shows that the personal names of the Pharaohs survive in other records "not only in that contained in the book of the Chronicles, nor in those which Sanscrit and Persian, Greek and Latin authors have written, but also in the oral tradition of far-off peoples, in whose ears the name of Egypt has never been breathed." One mission, therefore, of these chapters in Chronicles, is to reduce to system and unity all these old legends of the world's second infancy, and to prove that God has made of one blood all nations of men. Another important result, of this study, is that it reduces the alleged antiquity of the Egyptian annals and shows that Abraham must have been the guest of one of Zoan's most ancient Pharaohs, and that Isaac halted on its borders before Cheops reared his pyramid.

IN CONNECTION WITH MR. MARTIN'S LETTER we have a word or two to say. The word infidel means conventionally among Christians all who do not believe in Christianity, or any other religion. The word Free Thinker which our correspondent prefers, is etymologically still less exact, as most Protestants claim as an inalienable right entire freedom of thought and belief, which they exercise more or less according to their capacity. What we hear our ministers say is, "Oh that men would think things out, and not be satisfied with half thoughts." Scepticism can never be called anything better than half thought. It declines to accept what is currently held, but holds nothing in its place. Great men may have been sceptics, but scepticism did not make them great. Scepticism only creates a void. We question whether scepticism is a necessary step between error and truth. Christianity ignores it. Its way is to force out error with truth. The early teachers of Christianity did not go about pulling down people's faith, but seeking out, proclaiming and building upon the truths which underlay their accepted beliefs. The Apostle Paul among the Jews appealed to the oracles, and among the Greeks to the poets and to the unknown God who was ignorantly worshipped. Lastly, reason is not supreme in man. There are powers affecting him intimately which he has not yet analyzed or measured. The highest thoughts of genius come not by process of reasoning. They are in harmony with reason, but not its fruit. So, still more, the moral life of man is not bettered by reason alone or chiefly. Man has a spirit in him which can be touched by the Spirit of God, and by such contact brought into harmony with laws which are too high for man to climb to by the ladder of reason. In Jesus Christ this harmony between God and man is complete.

THE PRINCE EDWARD ISLAND LEGISLATURE was prorogued on Monday, April 26th. Lieutenant-Governor Haviland assented to twenty-five bills passed during the session. The only bill to which he refused assent was an Act Incorporating the Orange Institution. Shortly before the rising of the Legislature, an address from both branches to Her Majesty was passed, which contained the whole case of the Province respecting its claim to a share in the Fishery Award. During a discussion in the House upon the resolution authorizing the address, the Premier, Mr. Sullivan, made a somewhat remarkable statement. His words are thus reported in the local press:—"He believed we were entitled to a share of the Fishery Award. Our duty was to press our claims as far as we can. It had been brought before the Dominion Government and we had their answer. Our next course was to appeal to the Imperial authorities. He was in a position to say to this House that in pursuing such a course he would have the countenance and support of the Dominion Government. He had it over the signature of Sir John Macdonald that in pursuing such a course he would have his approval and assistance." We presume that Sir John Macdonald hails this appeal as the readiest mode of convincing the people of the Island province that their claim will not hold even in the opinion of unprejudiced judges.

MR. LOWE CALLS THE LIBERAL GOVERNMENT to immediate and comprehensive action. "The first session of a new Government," he says,

"is golden, the second is silver," and so on. Mr. Cochen before the victory said in like manner that the Liberals were proud of having sacrificed their former majority to the great measures which they had achieved, and which once passed could not be reversed, and that they were prepared again to sacrifice their majority to the accomplishment of those changes which the conditions of the country demanded. This is the true spirit of patriotism. Reformers in all ages, including the greatest Reformer of all, have had to be content to sacrifice themselves to their principles, happy in the faith that the principles would bear fruit after they were gone. Mere place holding belongs to lesser men—men of expedients—men, as they call themselves, of common sense, men who are always watching which way the wind blows—men who represent existing interests combined for mutual protection. The average ruler must be such as this. The man of principle can only hope for ascendancy at times when others have got things so tangled that they can do no more with them.

THE APPRENTICE SYSTEM prescribed by the Trades Unions of the United States, during a large number of years past, is rebounding upon its authors, as all tyrannies are apt to do, sooner or later. An article that we reprint from the New York *Tribune* describes how the Union children are coming "home to roost," and conveys a warning to Canadian mechanics and workmen. While the placing an impediment in the way of young men desirous or willing to learn trades by the Unions has proved a suicidal policy, there is an evil on the other hand for which a remedy is demanded, in this country and probably in the United States as well. We refer to a growing disposition on the part of boys who have been educated to a respectable degree of attainment in our schools, to avoid mechanical occupations and rush into callings of a more "genteel" character. The whole subject is of great importance, and offers a field of investigation and discussion worthy the attention of the best minds of the country. If the youth are prevented from taking right courses, and are permitted, for want of friendly warning, to take wrong courses in life, the nation will suffer in the end proportionately.

THE TRIPLE ALLIANCE BUREAU will now produce little alarm in England. The ambassadors of Germany and Austria may have political motives in view in visiting the Czar on the anniversary of his birthday, but it is certain that any concession that they are willing now to grant to Russia, preliminary to a fresh treaty, cannot be of such a nature as to conflict with British interests in Europe, even viewing those interests from the most selfish point of view. They are not likely, now that Austria aspires to be the ruler of the Balkan Peninsula, to make any concession in that direction to Russia, and it is not probable that any others that they can make will be so important to Russia as the understanding which she hopes to come to with the new English Government on the Eastern question in Europe. It looks as if the Turkish Empire in Europe was built to fall, and if it does, then Russia has more to hope from England than from Austria and Germany.

THE REMEMBRANCE of rulers who govern for the people's welfare will surely be cherished when the memory of ambitious warriors, who have deluged many lands with blood for their own personal glory, will have rotted. We are led to this observation from reading a high compliment paid the other night by Jules Ferry, at a banquet in his honor, to the present President of France. M. Ferry was confident that so long as President Grévy remained in office, he would not permit France to become in any way unpleasantly entangled in her relations with other powers. An undue sensitiveness to the words and acts of other governments would not be cultivated and nothing accepted as an occasion for war, which could by any possibility be more mildly construed. At present the Republic was peaceful and prosperous, and the existing administration would devote all its energies and wisdom to the development of home industries and the general welfare of the French people.

A WRITER in the *Herald*, who has evidently followed the events closely, in commenting on the attitude of Great Britain in the matter of the Fortunate Bay outrage, points out that the Imperial Government in declining to consider the American claims does not do so on the ground that the invaders had no right to break local laws applicable alike to citizens and strangers, seeing that, although this is unquestionably right in principle, yet it is conceivable that local laws might be made with the very purpose of nullifying a treaty right. They have planted themselves on the general principle that the invaders were not only transgressing local laws but the treaty itself, which conveyed no right to throw a seine across a harbor. Such a proceeding, and several others, were specially disclaimed as forming any part of the American demands by the advocates of the United States before the Commission, their object being to have the valuation of the conceded rights put as low as possible.

THE HON. MR. BLAKE has assumed the leadership of his party in the House of Commons. This change betokens no alteration in the financial policy of the party, as Mr. Blake is as studiously opposed to class protection as Mr. Mackenzie, but it is thought by some to carry with it the idea of bringing other issues into greater relative prominence. We do hope, however, that agitation will be kept up on this all important question. Our country must suffer more than most from a fettered commerce, as from its shape along one narrow line of the temperate zone its products must be largely homogeneous, and in commerce must lie its wealth.

THE DUKE OF EDINBURGH is reported to be doing all he can to make the visit of the United States steamer "Constellation" a success. It is said that he will make a house-to-house distribution of a portion of that vessel's cargo of South Galway. This reminds one of the many interesting stories that are told of the benevolence and generous consideration of the Duke's noble mother and great-grandfather, George III. Actions like

is beginning to arrive, and sells at from 13c to 14c per lb. Good old cheese is quoted at 14c to 15c per lb. Eggs have been selling for some days at 12c per dozen, but the market is weaker to-day. Maple syrup is 85c to 95c per wine gallon of eleven lbs.; maple

first prizes at the different Provincial Exhibitions, and Messrs. McMorin & Co. say they have a number of strong testimonials in their favor from leading residents, as also from many of our railway and other large corporations, who are using these pumps.

SEED GRAIN AND HOW TO SECURE IT.

There is probably no other place on this continent in which the farmers suffer so much from the practice of sowing inferior and foul seed on their lands as in the Province of Quebec. A traveller passing through the rural parts of this province about the beginning of July, need not leave the highway in order to ascertain that large quantities of weeds (some of them very bad ones) grow and flourish among the grain and hay crops, as their blue and yellow blossoms can be seen from afar. In some places the weeds are so thick as almost to hide the other crops, which are thus compelled to grow almost in continual shade and will not yield half as much as they would if they had the ground all to themselves. But the evil is not all comprehended in the diminished product, for the fertility of soil is exhausted by producing crops of weeds as well as if grain and hay only were grown on it. A very large amount of this annual loss might be avoided by a little care in properly cleaning all the seed grain before it is sown. Hay and clover seeds are so small in size as to make it very difficult to separate them from some kinds of weed-seeds after they have been once mingled together, but the time to exercise care is when they are being cut and removed from the field when ripe, at which time all weeds can be taken out of them before they are thrashed. Another very serious loss arises to our farmers from their sowing the same seed many years in succession, until it becomes "run out," and will not produce more than half the crop which it did at first. Some farmers who have different kinds of soil on their farms such as heavy clay, sandy, or loamy lands, manage to prolong very considerably the period before their seed grain becomes run out, by sowing it alternately on heavy and light soils. Other farmers change their seed grain by getting it from some other part of the country. At the present time large quantities of seed wheat are being imported from Manitoba by farmers in the Western States, and no doubt it would be for the advantage of farmers in Ontario and Quebec to secure large quantities of seed wheat from the "Prairie Province." Farmers could themselves postpone almost indefinitely the time when a favorite variety of seed wheat would become run out by adopting the following plan. Suppose a case where a farmer is in the habit of sowing, say, twelve bushels of wheat each spring, and that he has just secured a new and productive variety, such as the "Black Sea" or "Fife" wheat were when first introduced. Out of his first crop let him put away about twelve bushels in barrels or other secure place where there is no danger of its being eaten by vermin or damaged by changes of temperature. Let him each year take one bushel out of this wheat, thus laid up in store, and sow it in good ground and use the grain it produces as seed for the next season's crop. By continuing this practice the farmer will find at the end of twelve years that his seed grain is still only two removes from his first crop, and will not have deteriorated to any appreciable extent, while if he had continued selecting his seed each year from the crop of the previous season, it would be far advanced toward being "run out."

AGRICULTURAL LETTER BOX.

(Conducted by Mr. W. F. Clarke, of Lindenbank, Quebec.)

MORE ABOUT CRANBERRIES.

Sir.—Seeing a few answers to questions on cranberries in the last WITNESS I thought it would be interesting to others as well as myself to hear more. I append a list by answering which you will oblige me:

1. What are the average prices of cranberries wholesale in November?
2. What is the difference between the price of tame and wild berries?
3. Are there any raised in Ontario, how many, and where?
4. Why are there never any quotations in Toronto?
5. Is there a ready sale for wild berries in Ontario?
6. Should the flooding be always from a running stream. Some folks say flood in fall and leave till spring.

Goderich, April 25th, 1880. A. S. CHURCH.

Sir.—For several years past cranberries have sold in the United States at from \$3 to \$5 per bushel; occasionally a little lower, and sometimes higher. Speaking from general recollection only, I think they have averaged about \$5 in this country.

2. I am not aware that there is any difference between the wild and cultivated berries, either as to quality or price. My impression is that the chief advantages of culture are an increase of yield from a given area, and convenience of gathering.

3. "Cranberry swamps," as they are termed, are to be found in various localities in Ontario, but I do not know of any plantations having been made with a view of growing this fruit for the market. From the fact that it is abundant in a wild state, it may be inferred that it would do well if cultivated. Large quantities are gathered every fall by Indians along the shores of the Georgian Bay, on the Manitoulin and other islands, but what the aggregate yield is I do not know.

5. I presume because this fruit has not become a sufficiently large and important article of commerce for it to be included in the lists of market prices.

6. I do not think the demand for them is very brisk. The fact is, that few people know the excellent qualities of this fruit. Probably not one half the inhabitants of Canada ever tasted a cranberry, and of the remaining half, the great majority have only made its acquaintance as a sauce to roast turkey. Its value for pies and tarts, also as a preserve and jelly, is almost wholly unknown. When known in these uses it is a general favorite. It is not only a pleasant but a wholesome article of food. It has valuable antiseptic and anti-scurbutic properties, and is highly recommended by the medical faculty for various diseases. There can be little doubt, that, as in the case of other fruits, more attention to the cultivation of the cranberry would lead to a wider demand for it.

6. Running water is considered the best for flooding cranberries, and plantations should be well flowed from December to May. The water fertilizes the vines, protects them from frost, and, what is of great importance, is an effective remedy against the vine worm, which is the worst enemy this fruit has to contend with. It is thought that the warmth of the water, when kept on the vines until the

10th or 15th of May, destroys the eggs deposited on the leaves the previous year.

A LETTER ON ALFALFA OR LUCCERNE.

Sir.—A querist asks in the WITNESS for information concerning Alfalfa clover. I beg to state that it is a most valuable clover for permanent sowing, consisting of leaved, sand, or gravel, as it is so resistant to a great depth. It is more difficult to establish the first year, requiring a fine mellow soil, but once established it will produce a valuable crop from five to twelve years. It yields a prodigious amount of green fodder for cattle and should be cut when first coming into bloom. It is no sooner cut than it pushes out fresh shoots and the after growth is wonderful. It is called Lucerne as well as Alfalfa, grows from two to three feet high, and has a purple blossom. It does not exhaust the soil; three or more cuttings can be had in one season, and it should be sown in April or May at the rate of one bushel to the acre. It has been grown to some extent in the Eastern States, in a climate similar to our Dominion.

H. G. BURRAGE.

Hatley, Que.
P.S.—You will probably remember my presiding last winter as chairman at a meeting in Hatley in connection with your lecture. Your lecture did good, stirred up the farmers to some extent, and caused them to think a little.

I have a distinct and pleasant recollection of the cordial and efficient aid rendered by Mr. Burrage on the occasion referred to in the foregoing letter. It led me to think, as I have often done, how much good clergymen settled in rural neighborhoods might accomplish by giving some attention to the natural, as well as the spiritual, husbandry. I hope the above letter will help to induce farmers to make trial of the valuable fodder plant referred to. On one point, perhaps, a cautionary word may be necessary. Though Lucerne is not an exhaustive plant in the usual acceptance of that phrase, it must not be supposed that "prodigious" cuttings of green fodder can be got year after year from five to twelve years, without the use of proper means to maintain the productiveness of the soil. Liberal top-dressings of manure will be required to keep up such an enormous yield of green fodder.

TWO ACRES OF WHEAT.

Sir.—I have taken your WEEKLY WITNESS and Messenger for five or six years, and we are all anxious to get them as fast as they come. I am pleased with the Agricultural Questioner, although not much of a farmer. I am a blacksmith. I intend to sow two acres of wheat this spring. I have a manure made from shad garbage, about enough for one acre, and for the other acre I must buy some kind of manure. I can get fine shad garbage for \$2.00 per 100 lbs, and have some unincubated chicks and a plaster. Would it be a good idea to mix the bone-meal and plaster together? If so, in what proportions and how much to the acre? The land is not just the condition I would like it to be. It was grass land, ploughed last fall (one and half acres of it), and one half acre had potatoes on it two years, manured with barn-yard manure each year. This last will be better condition for wheat, I suppose. Please answer in WITNESS, as soon as convenient, and oblige.

Yours truly,
ROBERT McLEOD.
Upper Economy, Nova Scotia, March 20th, 1880.
The fertilizers mentioned are all good. No particular object would be served by mixing them. I should spread the bone-dust and ashes by themselves, and reserve the plaster for application to the wheat after it is up. The land in question is not in the best state of preparation for spring wheat; still, if the soil is pretty well decayed, it may give a fair crop.

COMPOST.

Sir.—Will you be kind enough to inform me through the columns of the WITNESS, if a compost of bog mud, stable manure, lime and salt will produce good potatoes in the manner I shall prepare if you give the coming year.

Dear Sir, N.S.
An excellent compost can be made with bog mud and stable manure, in the proportion of three loads of the former to one of the latter. It requires time, however, to decompose and intermingle. Lime would hasten the process of decay, but such a preparation could hardly be used on a potato crop the present season. A compost of this kind is an excellent application for any crop. As salt rather tends to retard decomposition than otherwise, it is better to keep it out of the compost heap, and apply it directly to the soil.

GRAFTING TURNIPS.

Sir.—I see many useful answers in your paper. Please when is the best time for grafting apple trees? How would it do to seed down new ground with turnips?

Weterville, April, 1880. A. S. CHURCH.
It is a good time now for grafting apple trees. Turnips do well on new land with proper attention, but as the stumps prevent the use of a drill, and compel broadcast sowing, it is a rather troublesome job to thin them. The success of the crop may be said to depend mainly on the young plants being properly thinned. They grow rank and luxuriant on new land, and want plenty of room.

MANURE FOR A POOR LIGHT SOIL.

Sir.—I have a piece of land that needs manure, and as common manure is not available, I will have to use artificial. What kind is the best for sandy loose land?

Newmarket, Ont.
The cheapest and best way to enrich such land is to seed it down to clover; help the clover with some super-phosphate, or bonedust. Mow two seasons, at the end of which time the soil will be well fertilized with decayed clover leaves and old roots.

LAWN GRASS.

Sir.—What is the best kind of lawn grass?

I consider Kentucky Blue Grass the best single grass for a lawn in this climate. Sown thickly, and mown often it makes a fine, compact, velvety turf, fit for a queen to walk upon. Blue grass, red-top, and Dutch or white clover, make a good and cheap mixture. Seedsmen sell a lawn grass containing a large variety of kinds, and, for a small lawn, it may be advisable to buy this, but it is rather expensive if a large lawn is contemplated.

"MANHATTAN FEED."

Sir.—In the Montreal DAILY WITNESS of 13th inst. we notice a communication signed "D. J.," in which he refers to an experiment made with our

Allow us to call your attention to the fact that it depends largely as to whether the cow has been milked for a short or long period as to what results the Manhattan Feed will show. For instance, (as no doubt you own experience tells you) from any cow that has been milked for a short period of a few months, the yield gradually decreases, and although the decrease is very materially lessened by the use of our Manhattan Feed it cannot be altogether prevented. The only fair way to test our Feed is to give for from forty to sixty days to a number of animals, and then to milk them for a long period, and again at the end of the time, and compare with the yield of other animals not fed on the Feed.

We shall esteem it a great favor if you will kindly give your views to the matter in question, and shall have much pleasure in forwarding to you some of the Feed for trial any time you may wish us to do so. Free of charge.

Calling your attention to the enclosed circular, and especially to the certificate from Mr. Thos. Irving, of Logan's Farm.

We remain, dear Sir,
Yours respectfully,
MANHATTAN & CO.
Montreal, April 22nd, 1880.

There can be no doubt that the points mentioned by Marsden & Co. need to be taken into account in estimating the effect of any particular article of diet on milk cows. The certificate referred to is as follows, and is one of several in commendation of the "Manhattan feed."

Logan's Farm, 22nd March, 1880.

"Marsden & Co."
This is to certify that I have used the Manhattan Feed for cows for some time, and find it beneficial both for milk and fattening, if given to them regularly.

WM. F. CLARKE.

VETERINARY.

(Conducted by Dr. McEachern, F.R.C.V.S.)

WORMS.

Sir.—I have a horse seven years old, in good spirits and eats well; but for the last two years I can't get him in condition, he keeps thin all the time. He bites his sides, rubs and bites his tail. Can you tell me what is the matter with him and the remedy?

A. S. CHURCH.
Your horse evidently suffers from worms. Feed him on bran mash only for two days, let him fast eight hours, then administer a pint and a half of raw linseed oil with a wine glassful (two ounces) of spirits of turpentine. Repeat this in two weeks, and in four weeks again if necessary.

RETENTION OF PLACENTA.

Sir.—Having had a good deal of trouble with my cows this spring after calving I apply to you for information. Will you please favor me through your columns with something that would be good to make a cow clean.

OLD SUBSCRIBER.
It should be removed within twenty-four hours after calving, before contraction of the womb takes place. If not, give barley tea to drink and administer daily half a pound of Epsom salts, with half an ounce of ginger, sweetened with molasses, and given in two quarts of water, till the bowels are relaxed. Keep her separate from other pregnant cows, and sprinkle clover of lime behind her.

SWOLLEN KNEE.

Sir.—Will you please inform me what is best to do with a swollen knee. I have a thoroughbred Arabian bull. He bruised his knee three weeks ago; it was very much swollen. I lanced it and it discharged a little. We then poulticed it for three days. It still kept swelling and not discharging any. For the last few days we have applied a poultice of bread and milk. It seems to take the swelling down a little, but I don't appear to get any better. Yours truly,

OLD SUBSCRIBER.
Get your veterinary surgeon to insert a seton through the swelling, and continue the poultice, moving the seton at least twice a day. Leave it in for a week. After it heals up the remaining swelling should be blistered.

KNUCKLING.

Sir.—I have a three-year-old colt that is what is called knuckling. That is, his hind legs lock joints and he cannot move forward when he steps. What would likely have caused the above and what treatment is needed for its cure?

CONSTANT READER.
Salisbury, N.B., April 15th, 1880.
Knuckling is caused in some cases by colts standing in stalls having too much fall, throwing the weight on the hind legs; in other cases it is an indication of chronic disease in the hock, carpal bones, or fetlock pad. Have him kept in a large loose box with a level floor, level the feet and shoe the toe with tips, leaving the heels low, blister the back of the leg from the hock downward, and give the colt a summer's run on pasture.

SUBCUTANEOUS TUMORS.

Sir.—Can you inform me through your valuable columns what is the name, cause and cure of a tumor under the lower jaw, and sometimes under the neck of my cattle? The tumor grows from the size of a hen's egg to the size of a child's head, has been lanced but returns its size, and is very painful, but no serious results as yet, but great fears are entertained.

KEVIN, Manitoba, April 10th, 1880. A. S. CHURCH.
Such tumors are common in stall fed oxen, caused by the chain or rope with which they are tied bruising the tissues. In some cases they are indications of tuberculous tendency and are enlarged glands. Remove the cause. When first seen rub freely with iodine ointment once a day; when they become large nothing but dissecting them out will remove them.

Sir.—Some two weeks ago I noticed a lump on the side of the under jaw of my cow; it is hard and callous and seems to be attached to the skin and not to the bone, and about the size of a hen's egg. I do not know of any reason of it coming on. She had been grazing on the old farm grass during the day. Last spring she had a swelling in the throat which a large number of other cattle in this stall had. She got all right of it. This lump does not seem to bother her in eating, but it is an eye sore.

COCHEN, April 17th, 1880. A. S. CHURCH.
If you are in reach of a veterinary surgeon he will probably dissect it out. If not, rub it with tincture of iodine. If that doesn't reduce it, blister with biniodide of mercury ointment.

CRACKED HEELS.

Sir.—I have a horse that has been troubled with cracks on his feet about the hoofs, and I cannot get anything that will cure them. I have tried various ointments and mixtures, but they did not effect a cure. Can you tell me what can be done to prevent them next winter, as they are worse then and sometimes bleeding?

Montreal, April 13th, 1880. A. S. CHURCH.
As you are within reach of several veterinary surgeons consult one of them. Such a case requires close professional attention.

BOOKS.

Sir.—Where can I find a book on horse cattle, and the price?

ALDER, Que.
Clutter's Cattle Doctor will suit you best, price \$3.50. Order from Dawson Bros., Montreal.

INJURED FETLOCK.

Sir.—I own a valuable working mare and two months back she got a bad twist in the fetlock joint on the front leg. As we were pulled up and she turned her foot over. The joint is very much swollen and hard; she turns her foot out and steps on the inside of the foot. She is unable to move forward and cannot take any weight on it. I have poulticed it and done everything that I could hear of, but to no purpose. I cannot get the swelling down, some people think it is partly out of joint.

J. M. McLEOD, April 19th, 1880.
We suspect the ligaments have been torn, if the bone has not been split. Have her examined by a veterinary surgeon, who will have her shod in such a way as will tend to bring the foot to its natural position, and probably apply an active blister.

OBSTRUCTION OF THE MILK DUCTS.

Sir.—Would you oblige me through the WEEKLY WITNESS by inserting in your paper a cure for garget that is, cows losing one and two of their teats?

Obstruction of the milk ducts is a very difficult to treat successfully. Get your veterinary surgeon to open the duct with a test bistoury and supply you with test syphons to remove the milk and dilate the duct. This sometimes proves successful.

SELLING BUGGY PEAS FOR SEEDS.

A good deal of indignation is felt in the grain trade here over the fact that buggy peas have been sold to the farmers of the province for seed.

It is said that the same thing was done last year, and that as a consequence some eighteen or twenty farmers living on this island have for the first time grown peas which have turned out bugs. The Province of Quebec has thus far escaped this pest, and it was hoped that the peas were "clean," and that the Quebec peas would retain their quality and continue to bring the comparatively high prices of the last few years. The dealers claim that the bugs develop after the peas are sown, and that consequently you "sow buggy peas, you will reap buggy peas." They think that the matter is important enough to engage immediate attention of the Government. The only way to prevent buggy peas from being sown is to convince farmers that it is to their own interest to sow none but first class seed.

COOLING AND VENTILATION OF MILK AND CREAM.

While it is quite true that the utmost care as to the food which cows eat, and in the matter of milking and milking does not suffice to remove entirely what is known as the "cowy color," it is a fact that a great part of it may thus be avoided, and that proper rapid cooling and ventilation of milk while cooling is of the greatest service in improving the flavor, and securing longer keeping qualities in the milk, the cream and the butter. A ventilated can or pail cover for milk placed in pools or in springs for cooling was introduced somewhat last year. This consisted of a tolerably close fitting cover having a large tube, four or five inches high in the top. This tube is divided perpendicularly by a septum or partition making virtually two tubes. One of these is closed at the top, but has a large opening in the side to the outer air, which is covered with wire gauze. The opening of the other half of the tube at the top is covered also with gauze (see fig. 1). So long as the milk is warmer than the surrounding air, the air blows in, circulates over the milk and passes off, following the direction indicated by the arrows.

This top is useful for milk set in pools or springs to cool, or for milk set for cream to rise. The milk being perfectly protected from insects, animals and dust, or foreign matter of any kind, while a free circulation of air is passing over its cooling surface so long as the milk is warm at all.

A. S. CHURCH.
Mr. J. C. Long, of Orange, added for his own use an improvement to this useful invention, rendering it a perfect and rapid means of cooling milk.

This is a stirrer, which is simply a disc of tin from which a long stiff wire rises and passes through the ventilator in a small tube made for the purpose. By means of this wire the tin disc, which is 4 to 6 inches in diameter, is moved up and down through about three inches space in the bottom of the can or cooler—the down strokes being quick and strong. Three strokes are sufficient to change all the milk in the can, causing that at the bottom, and coldest, to be stirred through all the rest.



FIG. 1.—A 40-QUART CAN.

If more milk is to be added the top is slid off half way, and held by the stirrer-wire. Figure 2 shows a 40-quart can of the modern kind, supposed to be standing in a spring or tub of ice water.

A. S. CHURCH.
Cream, as taken from the cans, coolers, or other milk-setting vessels, always contains a notable quantity of milk which separates from it.

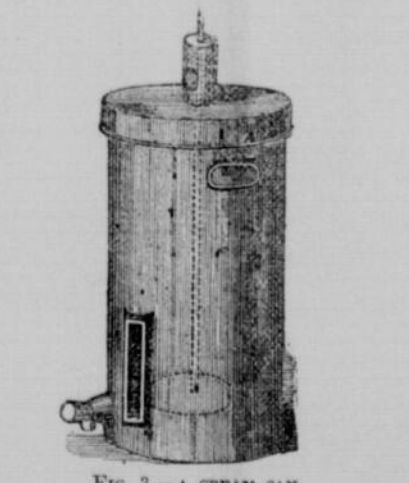


FIG. 2.—A 40-QUART CAN.

It is in the course of a few hours. If cream is sold as such, it should be sold cream, of course. There are two ways for getting solid cream—dipping out of the cream jars or cans, or drawing the milk from under it. The latter mode is preferable.

I have in use a cream can which holds six or seven gallons (see fig. 3). It is provided with the ventilating cover and stirrer just described, and has a window at the bottom to show how much milk separates. At the bottom there is also a spout, run by a cork. Whenever cream is added, the whole mass new cream, old cream, and milk, are stirred together, by a few dashes of the stirrer. This cream holder may be kept cool by being placed in water, or by having lungs of ice laid upon the top, and thus the cream freed from milk is available for use, and the whole mass is kept cool by a few dashes of the stirrer. When cream is to be ripened for churning, it should be kept at a temperature of 60 to 63 degrees until it turns slightly sour. This cream holder, when used for this purpose, may

be set in lukewarm water, in a warm room, or on a hot water pipe, or where any other means of heating are used. Where either of these can be had and controlled, it would be very convenient to have warmers made for the purpose, to be placed under the cans (see fig. 4). This warmer being connected by a rubber tube to the hot water tank, or pipe, would keep the milk at a desirable temperature by allowing more or less water to flow through it.

The best way of ascertaining the temperature of milk or cream, is by means of a floating thermometer. One advantage which the stirrer described offers, is that the milk may be thoroughly stirred while the thermometer floats in it without its receiving any injury; further the test is more accurate.—*American Agriculturist.*

WATER THE LIVE STOCK.—The necessity of plenty of pure water for stock is one of the first importance to breeders and feeders. It must not only be abundant, but should be in such supply that the stock may either take it at will, or if supplied at stated times, it should be offered at least twice a day and three times will be better. No animal can thrive properly that has access to water but once a day. Every good feeder knows this, and hence in all large feeding establishments, the greatest care is taken to keep the supply ample and constant. Many farmers neglect this, and always to their cost.

THE LONDON TIMES.
Sir.—Would you please to let me know through your paper the exact address of the London (England) Times and oblige.

A. S. CHURCH.
The Times is printed and published by Francis Gode, printer, of No. 1 Printing-house-square, at the offices in Printing-house-square and Playhouse-yard, in the parish of St. Ann, Blackfriars, in the City of London.

If water cannot be had near in any other way, wells should be dug, and the water raised by wind or other power as the case may be. Having plenty of water see that stock get it as regularly as they feed. It will pay.—*Prairie Farmer.*

THOMAS JEFFERSON said: "let the farmer for evermore be honored in his calling, for they who labor in the earth are the chosen people of God."

QUESTIONS & ANSWERS.

We receive questions on all possible subjects, to which we shall do our best to obtain the correct answer. Correspondents are invited to send in replies to questions which are not satisfactorily answered.

TO DULUTH BY WATER.

Sir.—At what date do the steamers between Collingwood and Duluth start running? A. S. CHURCH.

Oranston.
The steamer "Winipeg" has already left Collingwood for Duluth, but the latest news from Saint St. Mary indicates that the channel, both above and below that point, is still impeded with very solid ice, which will take a week or more of warm weather to remove.

CARPENTERS IN THE U. S.

Sir.—1. What part of the United States would you, or any of your readers recommend a first class house carpenter to go to? 2. What wages is paid to carpenters in some of the principal cities at present? I see by the papers that wages for carpenters in Leadville is \$4.00 per day.

CHUTE AU BLONDIN, April 19th, 1880. A. S. CHURCH.
There is great demand for carpenters at Coney Beach, near New York, where the wages are about \$3.00 per day at present, but this job will not last over six weeks. The latest news from Leadville is to the effect that large numbers of men are out of employment at present; still many more continue to arrive.

Sir.—Will you be so kind as to let me know through the WITNESS the best time to cut casks of apple, pear and plum for grafting, and oblige a reader.

Bethany.
Mr. W. R. Shepherd, Jr., answers this and succeeding questions.—Cions are generally shoots of the previous year's growth. They should be cut in the autumn after the fall of the leaf. If wanted for out door grafting they should be buried in dry sand in a cellar until required for use in spring. But I have been quite successful with cions cut in the spring just before the buds begin to burst, and grafted immediately.

THE BEST APPLE TREE FOR QUEBEC.

Sir.—What is the best apple tree for planting in the Province of Quebec? Three things to be considered are its hardiness, its market value and its keeping qualities.

A. S. CHURCH.
The best apple to plant for profit is the Fameuse. The tree is hardy, productive, and the fruit is the most salable of any, but it is not a late keeper. There are very few late keepers that are hardy enough for the Province of Quebec. The Wealthy, a new variety, is recommended by the Montreal Fruit Growers' Society. The tree is very hardy and productive; the fruit is handsome, large, and keeps till April; but the fruit has not been placed on the Canadian market; therefore we are unable to speak of it in respect to its market value. Canada Baldwin is a late keeper. The tree is hardy on heavy soils, and the fruit sells well, but its size is only medium. Golden Russet is an excellent late keeper of fine quality, but the tree is only hardy enough for some portions of the Province. I would recommend "A Subscriber" to send a dollar to the secretary Montreal Horticultural Society and receive the Society's annual reports.

BROODY HENS.
Sir.—I keep thirty hens, Black Spanish, Bantams and Cochins Chinese. During winter I am bothered with brooding hens. Can you give me any effective way of curing them of broodiness.

Fortune Bay, Nfld.
Separate the clucking hen from the others as soon as the fever is observed coming on, and enclose with a lively young cock.

Sir.—Is Mr. Parrell, the agitator, a Protestant or a Catholic? A. S. CHURCH.

AMBER NUGAR CAN SEED.
Sir.—Can you inform me through the columns of your WEEKLY WITNESS, where early Amber Nugar Can Seed can be obtained, where sugar beet seed can be obtained, and the price per bushel of each?

ENQUIRER.
The above can be had from Wm. Evans seedman, corner of McGill and Foundling streets, Montreal.

GREENHOUSES FOR BLACKBERRIES.
Sir.—Your correspondent, who enquires for a good material for blackberries, will find a good substitute for putty in the form of a composition, an ordinary thick wood-paste paper pasted upon a smooth wall. The cost is only 8 or 10 cents per yard, and in addition the milk and water used in applying it, by its use, it has also the merit of cheapness. In applying the paper, it is better that it and not the wall, should be painted first.

J. W. D.
Midland, 20th March 1880.

LIVE WEIGHT.
Sir.—When your market reporter quotes the price of a pair of cattle at 4½ cents per lb., or any other figure, is it live weight or dressed—the usual one third deduction.

A. S. CHURCH.
The quotations given in the reports of the Montreal cattle market are in all cases the live weight, and this is the estimate on nearly all sales made by weight here and in the west, although in New York, and some other cities on the Atlantic seaboard, it is customary to sell at so much per lb. dressed weight, sinking off all, hide and tallow. The allowance in such cases is usually from 54 lbs. to 57 per hundred lbs. gross weight. Some choice fine boned cattle will dress over 60 lbs. per gross weight, while many rough bony animals will often dress below 50 lbs. per cwt. Occasionally a few sales are made in this market at so much much per lb. dressed weight, which is supposed to include beef, hide and tallow, and in such cases the deduction made is about one third from the live weight.

THE "LONDON TIMES."
Sir.—Would you please to let me know through your paper the exact address of the London (England) Times and oblige.

A. S. CHURCH.
The Times is printed and published by Francis Gode, printer, of No. 1 Printing-house-square, at the offices in Printing-house-square and Playhouse-yard, in the parish of St. Ann, Blackfriars, in the City of London.

THE EPISCOPAL BISHOP OF NOVA SCOTIA offers to give fifty dollars toward a fund for erecting a drinking fountain for man and beast in Halifax.

A YOUNG MAN named Ball, of Ball's Creek, Cape Breton County, N.S., has just fallen heir to the title and estates of Sir William Keith Ball, second baronet of the United Kingdom.

THE CANADA TEMPERANCE ACT.—The St. Croix Courthouse, at St. Croix, N.B., has been the effect of the operation of the Canada Temperance Act upon the liquor dealers of that place, saying: "Several of the most prominent men, avowing that it was of inferior quality, and according to sample. Hence the action, a large number of witnesses, principally millers and grain dealers, were examined, and a very strong case made out against the dealer, a miller formerly in their employ testifying that the wheat was all right. Judgment for plaintiff, carrying costs, which are heavy.

MARITIME PROVINCES.
THE AMHERST BOOT AND SHOE COMPANY, Amherst, N.S., are busy, employing over sixty hands.

THE EPISCOPAL BISHOP OF NOVA SCOTIA offers to give fifty dollars toward a fund for erecting a drinking fountain for man and beast in Halifax.

A YOUNG MAN named Ball, of Ball's Creek, Cape Breton County, N.S., has just fallen heir to the title and estates of Sir William Keith Ball, second baronet of the United Kingdom.

CULTURAL USES OF LIME.

The advantages of the use of lime are so many and so great that it is almost impossible to enumerate them. Their effects may be described as being both chemical and mechanical, and as being exercised both upon the

