

horse racing, or any kind of monkey-shine, dances, or gambling at the Delaware Exhibition, but the people and the products of the country were there, and only small monetary inducements. The ladies' useful and ornamental work was very well represented, and a marked improvement was shown in many departments. Provincial and Dominion exhibitors and prize winners exhibited at this exhibition, and in some of these exhibits the prizes were fairly and honestly won by township exhibitors, showing that one cannot depend on the Provincial prize list, as they should if they really wished to prove where the best in the Province or Dominion could be procured.

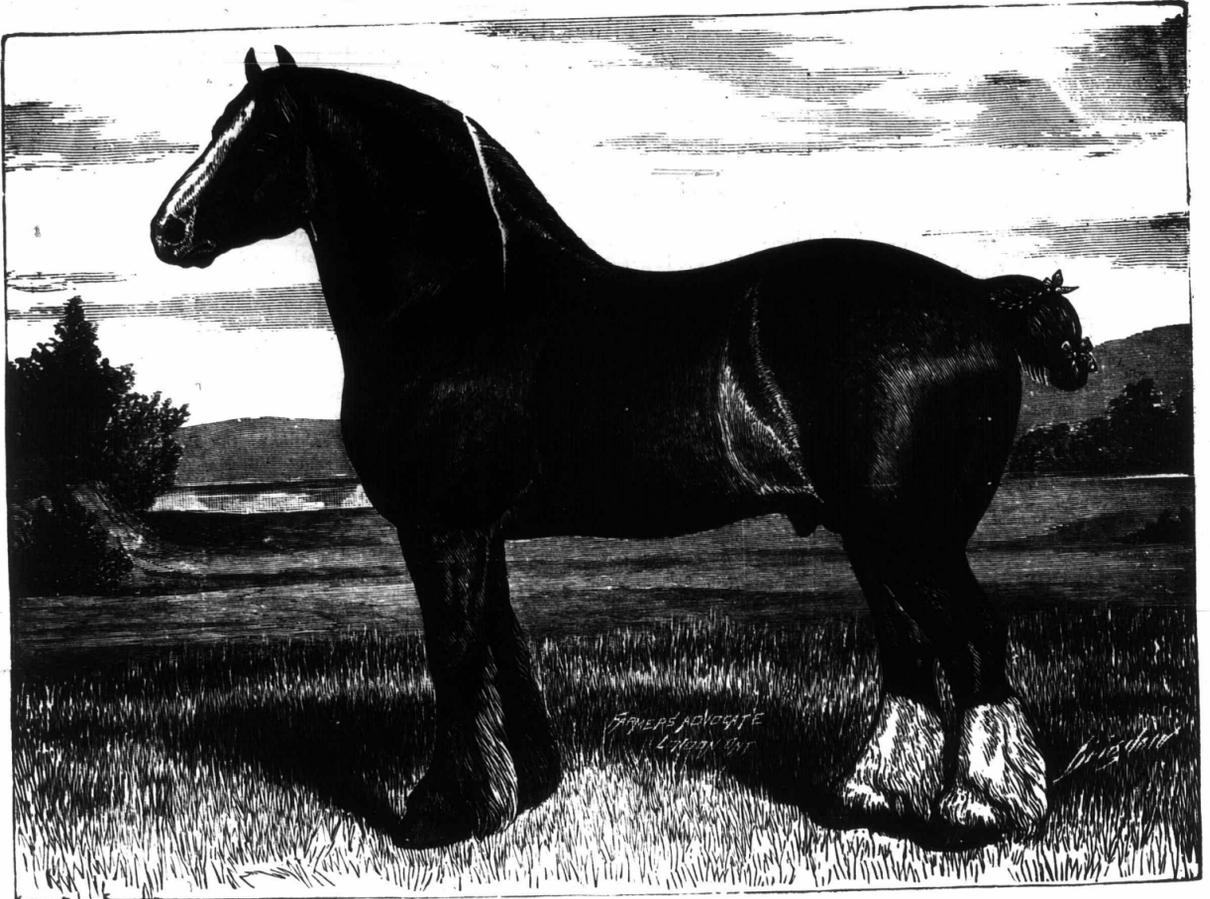
lators. The cities are perfectly able to look after their own interests, and can attract by other means outside of agriculture.

In our last issue we briefly called attention to the Welsh cattle. A correspondent in this issue, signing himself "Young Welshman," extends on the merits of this class of animals, and adds, in a private letter to us, "That his father, after breeding Shorthorns for over 20 years and winning many premiums with them, still prefers the Welsh cattle for profit." From our observations while in Wales, we do not think that our correspondent has exaggerated the merits of the Welsh breed, and we have no doubt that they would admirably suit on

The competition was unusually great this year, as the heavy drafts have been the most remunerative to breeders, there being such a great demand for them in the States.

Mr. Simon Beattie has, we believe, imported more horses and cattle than any other individual in Canada; he has imported largely for the Millars, for the Hon. H. M. Cochrane, and many other breeders, also for many Americans. He is an excellent judge of stock, and has the confidence of the stockmen as an importer and dealer.

Messrs. Beattie & Torrance have now a large number of Clydesdale stallions at their stables in Markham, which they imported this year



"PICKWICK," THE PROPERTY OF MESSRS. BEATTIE & TORRANCE, MARKHAM, ONT.

We regret that we were obliged to decline the kind invitations to be present at many other township exhibitions, this being the only one we had an opportunity of attending this year. Those having the real interest of the agriculturist at heart could hardly wish to destroy these highly beneficial gatherings, as like the sectional school houses, they instruct those who will not waste much time or go long distances to see the larger exhibitions. The county, city and provincial exhibitions are strengthened and made more popular by these exhibitions. We trust that some parties who have opposed township exhibitions on the ground that they are injurious to larger exhibitions may alter their views, and that the first consideration may be given to the townships by our legis-

Northwest conditions and even in many other parts of our Dominion. If our last trip to Europe results in the introduction of this class of cattle, it will not have been in vain.

["On the Wing" continued in Home Department.]

"Pickwick."

The accompanying illustration has been made by our artist from his sketch of this animal, made on the grounds at the Toronto Exhibition. "Pickwick" is an imported three-year-old Clydesdale stallion, owned by Messrs. Beattie & Torrance. This horse carried off the first prize and silver medal at Toronto, and the first prize and sweepstakes at the Provincial Exhibition at Guelph. These honors ought to stamp him as the best Clydesdale stallion in Ontario.

Mr. Beattie has arrangements with breeders and judges in Scotland and England, so that he can at any time command such animals as may be required, although he almost always crosses the Atlantic himself and makes his selections personally, to see that all arrangements are properly made. It often pays better to have stock imported by a good judge than to take a trip across the Atlantic. Mr. Beattie has entered into partnership with his nephew, Mr. James Torrance, of Markham, as much of Mr. Beattie's time is spent in Arran, Scotland, where his family resides.

The weather in this locality during the past month has been we consider most exceptionally warm and dry, excepting some timely showers; also almost free from frost, maturing the late

grapes and tomatoes to perfection and giving the apples an extra color. The pastures have been unusually luxuriant, cheering our dairy-maids and dairymen. If the winter wheat has any fault, it is that it all looks too well. The fall plowing has been done in good order, and roots and fruits have been well taken care of. The prospects are that we may look for a long continuation of good fall feed and pasturage for our stock. Prices of products are still low, with the exception of cheese, which is the most remunerative in this locality, although those who take care of their apples and have them properly stored, are likely to realize well from them in the spring. Larger quantities than usual have been shipped this year, and with better prospects of higher remuneration.

Caution.

We have been informed that the names and addresses of our subscribers have been in some manner obtained, and that every device has been and is being used to reduce the influence of this journal; also that some parties have used their influence to induce the public exchequer of more than one Province of our Dominion to be drawn on to aid in circulating other literature, and indirectly aiding partizan publications under the name of agriculture, etc., etc. We have been informed that some officials have been and still are using their influence for such a purpose; that even ministers of the Gospel have been engaged and agents induced to act—that truth has been disregarded in attempts to injure the *ADVOCATE*. We trust none of our subscribers who really desire the prosperity of the agriculturist, will be influenced by any clap-trap. If the *ADVOCATE* has not been true to its cause, by all means reject it; if it has done its duty, use your influence to increase its utility.

Pleuro-Pneumonia.

Strenuous efforts are being made to counteract the effects of the reports that this disease is spreading on American soil. It is becoming extremely hazardous to venture an assertion of truth in matters pertaining to live-stock diseases. It is true that there is an army of "vets," office-seekers, who are personally interested, sounding false alarms in order to increase their prospects for sinecure offices; but there is still a greater army of manipulators who are concerned in suppressing the truth when the diseases actually break out. The reports from different parts of the United States, especially from the Union Stock Yards in Chicago, are extremely conflicting, but there is no doubt that pleuro-pneumonia exists at some points to an alarming extent. The latest reports mention the slaughter of a large number of affected animals. Our governments and our farmers cannot act too cautiously.

We quote the following from the "Agricultural Gazette":

Although pleuro-pneumonia has prevailed more or less in the United Kingdom for upwards of forty years, and imposed the loss of many valuable herds, yet its treacherous and contagious nature does not appear to be generally understood. It cannot be too widely known that the period of incubation varies from a fortnight to three or even four months, that it is extremely contagious and very fatal, it rarely happening that animals recover; but sometimes the attack is not very severe, and they do recover. Even then it is not safe to

place them with other cattle, as they have been known to convey the disease to healthy animals for twelve months or more after their apparent recovery. This fact may account for the mystery which is sometimes considered to overhang an outbreak of the disease.

Dominion Experimental Farms.

Our esteemed fellow citizen, Prof. W. Saunders, F. R. S. C., has been appointed Director of the Experimental Farm Stations to be established by the Dominion Government.

Agriculturally, the appointment is a very important one. Prof. Saunders is an eminent authority in horticulture, chemistry and entomology, very important sciences connected with agriculture.

We have not favored the establishment of these stations, believing that their cost would be too burdensome, and that their tendency to partizanship would take precedence to the interests of the agriculturist. We are informed, however, that Prof. Saunders refused to accept the position unless he received complete control. If he can display sufficient moral courage to resist party designs, appointing the members of his staff entirely upon their merits, there still remains some hope for the accomplishment of good. All we can now do is to criticize the misdoings, and use our influence to make them as useful as possible.

It is consoling to find that the concern is not hydra-headed, like our Model Farm, Prof. Saunders having accepted the entire responsibility. The public now know to whom the blame, as well as the praise, is to be attached.

The breeders of draught horses have had a busy and profitable season, no fewer than 600 Clydesdales having been shipped from Glasgow for Canada, United States, Brazil, Australia, and New Zealand; while to the same countries, but particularly to the United States, over 100 Shire horses have been taken. A demand has also begun in America for Suffolk horses.

A French writer says:—"Few colts are born with defective hoofs, and if, in riper years, such appear, the cause must be attributed to the farrier's vicious handiwork. It may arise from his ignorance in this respect. The first shoeing ought to be done by an experienced farrier, one not likely to coerce or torture the colt, and so have an unhappy influence on its temperament forever."

At the milking tests conducted at the Bristol show, the highest number of points was won by an Ayrshire cow, and the next highest by a Shorthorn. The percentage of butter fat, as shown by analyses, varied from 5.68 to 2.83, the former figures being from a Guernsey cow, and the latter from a Shorthorn. The Ayrshire cow, which won the highest points, gave a fat percentage of 3.73.

At a meeting of the leading milk purchasers in the Vale of Berkeley, held lately at the Lady-mead Dairy, it was resolved unanimously: "That the system of purchasing milk according to its value, estimated either by total solids or butter fat, is the only fair one in the interests alike of the purchaser, the seller, the public, and of dairying generally, and that this meeting recommends its adoption to all purchasers of milk."

Farmers' Clubs.

Dominion Farmers' Council.

[This Council meets on the third Saturday of every month at 2 o'clock p. m. All communications should be addressed to the Secretary, W. A. Macdonald, London, Ont. The Council has now on hand pamphlets containing its Constitution and By-laws, with an account of its origin, also pamphlets containing a form of Constitution and By-laws suitable for Farmers Clubs, which will, on application to the Secretary, be distributed free to all parties having in contemplation the organization of clubs.]

The regular monthly meeting of this Council was held on the 16th ult., President Leitch in the chair. This being the first regular meeting since the adjournment last June, and there being no special programme prepared, the attendance was small.

Several communications were read from farmers and others asking for copies of the pamphlets containing Constitution and By-laws recently published by the Council.

THE COUNCIL AND THE GRANGE.

The following communication was read, which created a good deal of discussion:

Sombra, Ont., Oct. 7th, 1886.

W. A. Macdonald, Esq., Secretary Dominion Farmers' Council, London, Ont:

DEAR SIR.—Your letter of Sept. 28th and Constitutions came, for which accept thanks. A question came up since, viz: What fees are each of the Farmers' Clubs to pay to the Council?

A Grange is in good working order about three miles from this place, and the question was asked me, if the proposed clubs were calculated to supersede the Grange, or if a Grange could occupy the position of a Farmers' Club so as to co-operate with the Farmers' Council in the manner intended.

I have just read on page 163 of the *ADVOCATE*, your article on registration of unregistered stock, which pleases me very much indeed, as I have been advocating the same for some few years. My standard is not so high as yours: 20 lbs. daily for 275 days (about 9 months), equal to 5,500 pounds of a good standard quality in the first book or of third grade; 24 lbs. daily—6,600 lbs. in 275 days—of standard quality in the second book or of second grade, and a greater quantity to be agreed to upon further consideration for the first grade, the books to be called A, B, C, for the 1st, 2nd and 3rd grades respectively; also a register of their issue to be kept, graded D, until they prove themselves worthy of registration in the higher grades. I cannot give more than this crude outline on the subject. What think you of it?

Yours truly, W. S. HOWELL.

PRESIDENT LEITCH.—I don't think it has ever entered into the head of any member of the Council to interfere with the Grange in any respect. There is nothing in our Constitution or By-laws to prevent the Grange from forming themselves into a Farmers' Club and amalgamate with us, so long as it subscribes to our objects. With regard to the payment of fees, it would not be judicious for us to impose any, and besides we do not stand in need of such fees; on the contrary, we have funds which we might advantageously spend amongst amalgamated clubs for the purpose of carrying out objects of agricultural importance. The only one of these objects which we have as yet proposed is the presentation of a lactoscope to each club upon condition of receiving reports of the best cows in the respective localities, it being the object of the Council to keep a record of such cows.

This question was discussed at length by other members of the Council, but the views of the President were in general concurred in. The question was raised as to whether the

Dominion Grange would permit local Granges to amalgamate with the Council. In order to avoid future complications in the organization of Farmers' Clubs, a resolution was passed directing the Secretary of the Council to communicate with the Secretary of the Dominion Grange, at the same time forwarding him copies of the pamphlets containing the Constitution and By-laws, asking an expression of his opinion on the subject.

REGISTRATION OF NATIVES AND GRADES.

W. A. MACDONALD.—With reference to establishing a register for recording unpedigreed cows which come up to a certain standard of merit, Mr. Howell's plan resembles mine in some particulars, but I think his standards are rather low. It would be very cumbersome and expensive to make a record of even one-tenth of all the cows that came up to these standards. My proposition was to record meanwhile in one book all the cows that produced not less than four percent of butter fat; in another book all the cows that produced an average of 25 lbs. a day for nine months, or say 6,875 lbs. in a season, and in another book the cost of production would be kept. Since making this proposition, however, I tested a large number of cows in this vicinity, also President Leitch's herd of 20 cows, consisting of natives and Shorthorn grades, and a quantity of milk delivered at the President's factory. These investigations caused me to modify my standard somewhat. The average milk delivered at the President's factory contains 3½ percent of butter fat, the variations in the patrons' cans being from 3 to 4½ percent. The milk of Mr. Leitch's cows varied from 3½ percent of butter fat to 5½, the average being nearly 4½. According to my proposed standard, Mr. Leitch could record, in the quality register, all his 20 cows excepting two. On examining his factory books, I found that the average yield per cow for the past six months was 3½ lbs. per day. From these figures, Mr. Leitch and I came to the conclusion that 4½ percent of butter fat and 6,800 lbs. per season would be a more desirable standard for registration, but I think it would be well to leave the matter over for further discussion. What I mean by the quality register is a record of the quality with an approximate estimate of the quantity entered in the first book until the quantity be accurately ascertained, the entry then being made in the second book, and finally into the third book, when the cost of production is tested. Mr. Howell signs himself a school teacher. I am convinced that, if teachers could be induced to take an interest in these matters, our cause would receive an immense impetus.

PRESIDENT LEITCH.—There is a very large number of cows whose milk would yield 4½ percent of butter fat or over; fully one half of my herd would come up to this standard and I have four or five cows yielding five percent or over; but very few of those which produce such high standards of quality would give the required standard of quantity. I think it would not be advisable to register the quality until tests were made in different seasons, and an account also kept of the quantity. The quality as well as the quantity varies with the season. I have been experimenting with common stock and Shorthorn grades for over twenty years, and I have failed to find, except in very few instances, that the dairy properties of my herd have been improved by the introduction of Short-

horn blood. But you must bear in mind that I have been breeding up my common stock, and I feed them as well as I do the grades. I feed liberally in all cases. I help milk the cows myself, so that I always know my best cows, and I raise my bulls from the best cows. It is all nonsense to say that big grades are easier kept than smaller cows; animals in normal condition eat in proportion to their weight almost without exception, and the cost of production is very material to the issue. Of course a half starved scrub will consume more than a gorged grade, but these are not normal conditions. At this season of the year, when farmers are busy and the nights are beginning to turn cold, there is a great advantage in hardiness, and it does not pay to house high graded stock from every blast of October wind. The same advantage is found in spring, when light, hardy cows can be turned out to grass earlier than heavy grades. I accord with the plan of keeping a register based purely upon the merits of the stock.

W. A. MACDONALD.—Mr. Leitch's bull—a yearling—is certainly a credit to any herd, and proves what can be accomplished by the exercise of judgment in breeding. He possesses the attractive points of a pure bred animal, and there is only about one-tenth or one-twelfth part of Shorthorn blood in him, the balance being native. The immediate advantage of the proposed records would be the obtaining of valuable bulls from the registered cows. The advance in price of such stock should induce every farmer to exert himself in making tests of his herd. I should like to know what the President thinks about introducing other dairy breeds to improve our herds.

PRESIDENT LEITCH.—If Jerseys be introduced, the owners of them or their grades would cheat themselves at the cheese factory, while the owner of Holsteins or Holstein grades would cheat the rest of the patrons. This arises from the fact that Jersey milk is richer and more valuable than average milk, while Holstein milk is poorer and less valuable. However, the Ayrshires, I think, could be introduced with advantage.

REPORT ON MILK TESTS.

JOHN WHEATON, chairman of the Committee appointed at the last meeting to report on milk tests, presented the Committee's report. The report recommended that no more lactoscopes be sold at present, that each member of the Council who is engaged in dairying receive a lactoscope free on condition that he exercises due diligence in finding out the best cows in his locality and make reports thereof to the Council, and that each Farmer's Club receive a lactoscope free on the same conditions. The report was adopted.

MUNICIPAL LITIGATION.

In selecting the programme for next meeting, it was decided that the Vice-President, Mr. Henry Anderson (who was absent), be requested to read a paper on "Municipal Litigation."

The municipality which Mr. Anderson has represented for a long series of years is noted for the number and variety of its law suits in which he has taken an active part. Such a paper should not fail to be read with interest on the eve of the municipal elections throughout the country. Mr. Anderson is one of our leading authorities on municipal matters.

The Council adjourned until the third Saturday in November (20th inst.)

The Dairy.

Testing Milk at the Cheese Factories.

A leading dairyman in Eastern Ontario recently informed us that there was some ado in his neighborhood about the introduction of a herd of Holstein cattle, it being contended that the milk from Holstein cows was much poorer than average milk, so that the owner of the herd was virtually cheating the other patrons in the factory at which the milk was delivered. The only remedy was supposed to be the total exclusion of this breed and their grades. In the same connection, we noted the remarks made by President Leitch, at the last meeting of the Dominion Farmers' Council, to the effect that Jerseys should not be introduced because the owner would be cheating himself, and Holsteins should not be tolerated because the owner would cheat the other patrons out of a portion of their legitimate profits.

Now, this has become a live issue and one of great practical importance. We take the liberty of joining issue with the authorities above quoted. The difficulty can be overcome in a more intelligent and business-like manner. The first question to be settled is this: What difference in the total solids of the milk will compensate for the expense in making tests? If one herd, for example—no matter what breeding—gives milk containing say 12 percent of solids, and another herd say 12½ percent, will this difference justify the making of tests?

No standard can be laid down which would be applicable to every factory, but every cheese-maker can make his own calculations. A set of testing instruments will cost about \$5 or \$6, but all this amount should not be charged to the new system, for under the present system instruments should be kept to detect adulterations. The next question to be decided is, How often should the milk be tested? If the tests are made once a week, the time lost may be calculated as follows: Count the services of an extra man during the time the milk delivered is being weighed. Where great accuracy is required, one man cannot make the tests as fast as the milk is weighed—about double this time will be required. The tester must be a painstaking man or boy and accurate with figures. Two systems may now be adopted: (1) Divide the milk into say three classes, good, medium and poor (two classes would do where great accuracy is not desired, and where the milk from the different cows is tolerably uniform in quality). (2) Credit each patron with the exact quality of his milk without classification. This system would give greater justice, but would make more labor.

The advantages of making tests would be manifold. Holsteins or Jerseys or any other breed may then be introduced without injustice to the owners or the other patrons. Patrons who water their milk receive no pay for the water, and would therefore abandon the practice as a fruitless undertaking. Farmers who paid attention to breeding and feeding would be remunerated for their intelligence and industry, and farmers who have a strong, rich soil, or those who feed their land liberally, would be justly compensated, while those who are negligent in these respects would suffer

loss, proportionately. The educational value of the system would be immense, as the progressive farmers would potentially wake up their slothful neighbors.

Cow's Milk for Infants.

Owing to the hurried strides which are being made in civilization, the milk of the cow is rapidly coming into extensive use for the use of infants, and the result is a large increase in infant mortality. From two-thirds to three-fourths of the infants in U. S. cities are nourished on cow's milk, but it is not positively known whether the alarming increase of mortality is to be attributed more to adulterations, to the unsuitableness of the milk of the cow, to the lack of knowledge in preparing it for infants, or to the milk as a carrier of contagious diseases. The qualities of the milk from our domestic herbivora vary materially, but, following the chemical composition, cow's milk is generally regarded as being best adapted for the purpose.

The following table shows the average percentage composition of milk from the various domestic animals:

Composition.	Cow.	Goat.	Sheep.	Mare.
Water	87.65	85.5	83.0	92.3
Butter-fat	3.40	4.8	5.3	0.6
Casein	3.00	3.8	4.6	1.2
Albuminoids	0.40	1.2	1.7	0.7
Milk Sugar	4.80	4.0	4.6	4.8
Salts	0.75	0.7	0.8	0.4
	100.00	100.00	100.00	100.00

Compare the above with the following table showing the minimum, maximum, and average composition of woman's milk:

	Minimum.	Maximum.	Average.
Water	83.21	89.08	86.73
Fat	2.11	6.89	4.13
Milk Sugar	5.40	7.92	6.94
Albuminoids	.85	4.86	2.00
Ash (Salts)	.13	.37	.30

With respect to normal cow's milk, the following variations in the chemical composition may occur: Water, 85 to 89 percent; fat, 2.5 to 7 percent (the ordinary variations are from 3 to 5 percent); milk sugar, 3 to 6 percent; casein and albumin (albuminoids), 2 to 5 percent; salts, 0.4 to 0.8 percent.

Now, with these figures before our eyes, it can be distinctly seen that cow's milk does not always come nearest to the chemical composition of human milk. It is the usual custom to add some sugar to the cow's milk in preparing it for infant food, and although this is the only rule which can be safely followed in every case, there are often other considerations of much greater importance. The great abundance of salts in the milk of our domestic animals, compared with those in human milk, is distinctly marked, and the salts are highly stimulating, these being the active principle of beef tea. This is probably one of the reasons why the watering of cow's milk for infants has been practiced.

Probably the most important consideration is the reaction produced by the different qualities of milk; the milk may be too acid or too alkaline. The test of alkaline and acid substances is litmus paper, acids turning blue litmus red, and alkalis turning red litmus blue; in neutral liquids, the blue litmus is not turned red, and the red is not turned blue. Different qualities of milk, even in their healthy condition, have not always the same reaction, so that this test cannot always be depended on, and authorities

are not yet decided upon the quality of milk based upon its reaction. It has been observed that if a strip of blue litmus paper be held in normal cow's milk about a minute, the milk either does not change the color of the paper, or at most changes it into a violet shade. If the blue litmus turns distinctly red, the milk is sour. If the color of the blue paper does not change, then hold a strip of red litmus in the milk, which should either remain unchanged or turn but slight red. The nature of the food consumed by the cow often changes the reaction, however, the milk sometimes being acid and sometimes alkaline; but woman's milk usually has a pronounced alkaline reaction. The safest rule is to obtain for infants milk from cows fed largely on hay or grass, the milk producing an alkaline reaction, while other foods, notably slops of all kinds, produce acid milk. It is not unreasonable to conclude that a potent cause of infant mortality is the feeding of milk from cows fed on distillery slops, it producing a strong acid reaction.

The chemical composition of the milk of carnivorous animals differs very widely from that of herbivorous, so that the milk of the former is very unsuitable for infants, while human milk closely coincides with that obtained from herbivorous animals. Does this fact tend to prove that man is an herbivorous animal by nature and that his carnivorous propensities are the result of habit?

Our Dairy Exhibit at the Colonial and Indian Exhibition.

To the Editor of the Farmer's Advocate:

SIR,—The Ontario dairy display at the Colonial and Indian Exhibition is the most noteworthy dairy event of the year in England." So writes an eminent authority on dairy matters, who is also agricultural editor of the *Morning Post*.

The press of London and England have been generous and just in their comments on the fine appearance of Ontario's exhibits, and have also noticed with satisfaction the favorable impression produced on the public mind. The Canadian agricultural trophy is in itself a most striking and artistic aggregation of our products, from raspberries and honey to sides of bacon and barrels of flour. Beside it fittingly stand the two pyramids of butter and cheese. In their bases are placed the monster 1,000 lb. cheese, which calls forth the most wondering and laudatory remarks. They are frequently, at first sight, taken for "dummies," on account of their huge size, but a close inspection satisfies the curious that they are for the mouth as well as the eye. The truckle cheese (12 lbs. size) have been very useful in setting off to advantage on the shelves the larger Cheddar sizes. Room has been found in the pyramids for nearly 300 cheese, large and small, besides the tubs and tins of butter.

The shelves have their edges decorated with colored strips, on which is printed information of the sources and character of the goods. Descriptive cards of all colors and shapes ornament their sides. These cards set forth such facts as—"Ontario has 752 cheese factories in operation;" "Ontario leads the world in cheese making;" "Our products are all from pure, whole milk only;" "Ontario makes no butterine, no oleomargarine, no imitations." Every-

where prominence is given to the advice: "Ask your grocer for Canadian cheese and butter."

At a side counter and at three other stands in the exhibition, a brisk trade is done in supplying 1d., 2d. and 4d. samples. Their fine quality is thus brought directly to the palates of thousands of consumers in a week. Each sample is neatly done up in an oil-paper wrapper printed in appropriate style.

The quality of our cheese is already well known to the trade, but the excellent condition and quality of the sample lots of butter surprise men in the business to whom they are shown. The splendid body, sweet, clean, rosy flavor, and uniform color and saltiness, commend it to all who examine.

I have it on the authority of business experts, who buy largely of Danish butter, that our finest Canadian creamery is quite equal to first Danish. Heretofore the Danish has led the Canadian in price by about 20 percent. If the Canadian creamery men will do their best next season, they will not only equal the Danes in the price realized, but will have more favorable standing in the market than any continental producers, since Canada neither manufactures nor exports oleomargarine nor any other spurious "dairy" goods.

Some of the September cheese of 1885, which came here for display at the opening, have been held over, and are doing excellent service. An article in the *Times* of yesterday, by an acknowledged and well known authority on cheese matters, says that their quality is so fine that had they been entered in the year-old class at the great F.ome show, the English cheese which was awarded first place would have made only a poor "second." And F.ome is the largest dairy show in all Britain. That I esteem an admission worth the winning from Englishmen. The ill-founded supposition that Canadian cheese would not keep fine flavored till old, because American would not keep is happily being exploded by the bringing to light of simple facts like the forementioned.

The arrival of a second shipment consisting of fancy September cheese, will permit the trophy to be renewed and the arrangements changed once or twice before the close of the exhibition. When exposed they soon take on a very uninviting appearance in this humid climate.

By the courtesy of the Royal Commission, and the efforts of Mr. C. C. Chipman, acting Canadian Commissioner, who has given every assistance in promoting the success of the display, a very suitable separate building has been secured in which to store surplus cheese and butter. At this latter building every facility is enjoyed for the sampling of both by dealers, who come to examine the quality closely.

Letters which I have sent to the leading London papers, and which have been published by the courtesy of such widely circulated journals as the *Daily Telegraph*, *Daily News*, *Morning Post*, *Standard*, *Manchester Guardian*, etc., etc., have helped to remove the prejudices of many, who thought Canadian butter would of necessity be old and musty in flavor, since it could not reach this market quite fresh. These articles excited a deal of interest throughout England, and have brought enquiries from many merchants desirous of making arrange-

ments for the handling of creamery butter next year. Already members of three strong firms have decided to visit Ontario next spring for that purpose. Then the full proof of the butter has been in the forcing of it, and right well has its quality backed up my strong statements of commendation.

I find English and Irish dairymen eager to learn all they can about our co-operative systems and methods. These notices in the press calling attention to the excellency of our butter and cheese and the suitability of Ontario for extensive and profitable dairying, if cut from all the copies of the different papers and joined into one strip, would measure over 300 miles long. All of which I hope will help to make dairying still more remunerative to the farmers who patronize cheese factories and creameries.

Your obedient servant,

JAS. W. ROBERTSON.

London, Eng., Oct. 19th.

Drying off Cows.

Ninety percent of the spoiled udders are destroyed by bad management in drying off cows at the close of the milking season. When they are giving so little milk that it is not deemed advisable to milk regularly to save it, they are pretty apt to be neglected and to go so long between milkings as to induce inflammation in one or more quarters of the udder, and when inflammation is once established there, it is a pretty difficult matter to counteract it. The milk thickens in the reservoirs of the udder, and as the curd cannot pass out through the small tubes leading into the teats, it remains there to irritate and keep up inflammation until the part of the udder involved is spoiled beyond remedy. Milk should, therefore, be drawn often enough to keep the bag limp and cool. The time between milkings may be more and more extended, but the watchfulness should be constant, and at the first indications of any extra warmth or thickening of any part of the bag, the milking had better be done daily, or twice or thrice daily, until all danger from an accumulation is past. Attention to no detail in the management of a herd is more essential than this item of care in drying off cows at the close of the milking season. Inflammation to any extent ought to be prevented, if possible, for if it is not severe enough to ruin any part of the udder entirely, it always impairs the activity of the inflamed part for the following season. A lack of proper care in this matter is often the mysterious cause which makes cows vary in their messes in different seasons, when food and other surroundings seem equally favorable. Better by far to keep up milking until the next calf is dropped than to allow any feverishness or swelling of the udder to occur from an accumulation of retained milk. It is well to keep this matter in mind just now, as the season for drying off cows which are to come in again in early spring is near at hand.

In Flanders the urine of cattle is saved separately from the solid excrement, and is sold to gardeners at the rate of \$10 per cow for a year.

The agricultural products of Germany, exclusive of wheat, amount to two-thirds as much as those of the United States, and yet we have single States whose area exceeds that of the German Empire. If this speaks well for the thoroughness of German farming, it is not flattering to the skill of the average American agriculturist.—[Philadelphia Press.

Poultry.

Scattered Hints in the Poultry Business.

We take the following notes from the able pen of Fanny Field, as appears in the *Prairie Farmer*:

ABOUT FOOD.—A few weeks ago a lady who is in the poultry business wrote me that out of 560 chickens hatched this season, she had lost but 13. After I read Mrs. King's experience, I wrote and asked this lady to tell me what she fed her chickens, and how often. Yesterday her answer came; here it is: "My regular feed is 2 parts of corn-meal, 1 part of good wheat middlings, and 1 part ground oats thoroughly mixed together when dry. To a bushel of this mixture I add 1 quart of ground raw bone. I cook it by pouring on boiling water enough to make what I call a dry dough—i. e., it is just wet enough to stick together; then I cover the bucket close and let the dough cool before feeding. At night I scald enough for the morning feed, and after breakfast I prepare enough to last through the day. Feed this dough three times a day, and cracked corn once (at night) a day, giving all they would eat up clean each time. The hens were placed in coops which were scattered around in the orchard in the garden, and in the edges of the potato and corn field. The chicks had full liberty in all kinds of weather to come out and go where they pleased. No gapes, no lice, no sickness of any kind. Those that died were weaklings from the beginning. Last year many of my chicks died of gapes. This year the coops, even the new ones, were whitewashed before the broods were put in, and any time they were moved a little lime was sprinkled over the ground. I think the lime prevented the gapes, for I have taken no other precautions.

WAS IT LICE?—Mr. Bogardus, did you examine the hens that the hens left 3 or 4 days before the chicks were due? In the early days of our chicken experience one of our hens left her nest and wouldn't go back. As the chicks were due in three or four days we thought we would finish the hatching in the house, but we didn't, for when we went to remove the eggs we found that the nest contained millions, yes millions of lice!

MORE LICE.—An Iowa beginner in poultry-keeping writes me that the chickens, which are now from half to two-thirds grown, don't do well at all. Says they eat pretty well, but do not grow as they ought in proportion to the food consumed, and they "look ragged"—don't seem to feather up nicely. Probably lice are at the bottom of the trouble. Chickens that are covered with lice "don't do well at all." Get rid of the lice, and your chicks will take a start and grow, unless they receive a hopeless set-back otherwise.

ABOUT "LUCK."—One man writes me that he has had "good luck" with his chickens this season; another man says that he has had "no luck at all," and a third declares that "this poultry business is all luck and chance any way." Now if there is one word that I fairly detest, that word is "luck." I don't believe in luck, and the less you believe in it, the better you will succeed in the poultry business. "Good luck" is simply the result of good management

and hard work; "bad luck" the result of neglect, and that's all there is about it. Yes, I know that sometimes failure and loss overtake the poultry keeper who has seemingly done everything necessary to insure success; but still there is a cause somewhere, and a strict investigation will generally bring it to light. Once upon a time a neighbor's chickens commenced dying off from some disease that appeared like cholera, but there was no cholera in the vicinity, and her fowls were well cared for in every respect. She was discouraged at her "poor luck." I told her that there was no luck about it—that there was some cause for that sickness. "But where?" A search revealed the "where" and the "why," in the shape of the putrid carcass of a pig, which the fowls had scratched half out of its shallow grave in the corn field. But these fowls died after the cause was taken care of. When your poultry business does not prosper, don't sit down and with folded hands bewail your "poor luck," but form yourself into an investigating committee, and search out the cause of failure, then try to remedy it.

ABOUT CHOLERA.—The tobacco mixed with raw meal which cured Mrs. King's chickens of "cholera, or some other ailments," didn't cure a New Mexico lady's chickens of a disease which I think was genuine cholera. And it is just so with all the "cholera cures;" remedies which cure fowls in one locality fail entirely in other localities. The cold fact is that not one person in fifty who has cured fowls of disease knows whether that disease was "cholera or some other ailment." Their fowls were sick, some died; they doctored the sick ones and some got well, and on the strength of that they rushed into print with another "sure cure" for cholera. Take no stock in such "cures."

The lime process for preserving eggs is as follows:—Take salt one pint, lime one quart, and water sufficient. Slake with hot water and add water enough to make four gallons. After it has settled, pour the clear liquid off into a pan or some suitable vessel, and add eggs as desired, being careful not to crack the shells or they will spoil. You can add fresh eggs at any time. Keep the vessel in a dark, cool place.—Ex.

It is said that near Louisville, Kentucky, a novel mode of mulching strawberries has been adopted, and that is by sowing the space between the rows with rye, which if sowed in season grows so as to be a sufficient protection for the plants during the winter, and then in the spring, as it attains to some size, by cutting or pulling and placing between the rows, serves as a suitable and very clean summer mulch. It is very evident that moisture is an important factor in strawberry culture, and all that can be stirred by means of mulching will tend to improve the crops.

People and Patroit, of New Hampshire, gives a compost as a substitute for stable manure, as follows: "With a cord of seasoned meadow muck, or some substitute, mix sixty-five pounds of crude nitrate of soda, two bushels of wood ashes, one peck of common salt, ten pounds of fine bone meal, two quarts of plaster and ten pounds of epsom salts." No doubt this compost would serve a most excellent purpose and prove fully equal, if not superior, to many commercial fertilizers. It must be observed that in one respect it largely resembles stable manure, in the large proportion of organic matter in the meadow muck, which is so important in the soil.

The Farm.

A Successful Farmer and Dairyman.

About a year and a half ago, when advised to take part in the establishment of a farmers' council, we applied to the East Middlesex Agricultural Society and to the Council of the County of Middlesex, asking each of these bodies to name three of the "most honorable, independent, successful, and progressive farmers" within their knowledge. Our request having been granted, Mr. Dougald Leitch, an engraving of whom we present herewith, was appointed chairman of the committee of the three farmers named by the County Council, and Mr. Henry Anderson chairman of those named by the East Middlesex Agricultural Society. These gentlemen conferred with us, the result of the conference being the organization of the DOMINION FARMERS' COUNCIL. Mr. Leitch was elected President, and Mr. Anderson (now Vice-President) was elected Secretary. Mr. John Kennedy (one of the three farmers named by the East Middlesex Agricultural Society), Treasurer.

Presuming that those of our readers who have been reading the reports of the Dominion Farmers' Council, which appear in the ADVOCATE, will be interested in knowing something about the man whom the farmers of the County of Middlesex, through their municipal and agricultural representatives, have declared to be their *most honorable, independent, successful and progressive farmer*, we recently paid him a visit for the purpose of ascertaining some facts about his personal history and about his system of farming. We need not go into detail about his views on agriculture, for he has given expression to many of them in his speeches delivered, and his papers read, before the Council of which he has the honor of being President.

Dougald Leitch was born in Argyle-shire, Scotland, in 1826. He is the son of a fisherman, and was left an orphan at the age of four years. Having to push his own way through the world, his education in youth was very limited, being confined to three winters' attendance at school in his native country. While still very young, he was employed in herding cows, having to work from six o'clock in the morning till dark, with no companion except his faithful dog. At the age of 16 years he set sail for America, and spent about six years fishing on the lakes, mainly between Oswego and Chicago, during which time he saved about \$500, with which he purchased the homestead on which he still resides, situated in the township of Caradoc, about four miles from Strathroy.

Commencing operations in the wilderness without any knowledge of farming, he devoted himself studiously to the reading of agricultural journals and books, and he declares that he attributes his success to the perusal of agricultural papers. Neither did he neglect a general education, for he has also spent many of his long winter evenings in other branches of learning, and now, through his own exertions, he is ready with the pen and quite expert at

figures. Last winter we met him at a Farmers' Institute, and he astonished the gathering by engaging in a scientific dissertation in opposition to one of the Professors of the Ontario Agricultural College. The question under discussion gave rise to a demand for a scientific explanation of some vexed problems in dairying and stock feeding. Although not much accustomed to speaking in public, he speaks fluently and forcibly.

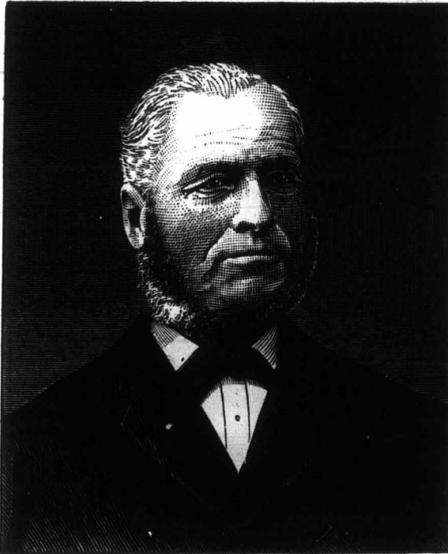
He is addicted to tart sayings. For example, when we asked him whether he was a believer in scientific farming, or followed those who farmed by the exercise of "common sense," he replied: "No farmer can have common sense to exercise unless he understands the first principles of his profession; it is a knowledge of these principles that furnishes scope for his judgment and common sense."

This being the foundation on which he built his system of farming, it will be interesting to inquire what success he has achieved. He owns 200 acres of land, but the old homestead,

at his home factory. Basing a calculation upon these figures, he sustains the following loss: He delivered this season about 76,000 lbs. of milk to the factory, which if it were of the average quality, would represent about 7,600 lbs. of cheese, allowing 10 lbs. of milk for a pound of cheese; and the value at 12c. a pound would be \$912. But his milk being richer by 1.5 percent of solids, would make about 8,740 lbs. of cheese, valued at \$1,048. Thus we find that he loses \$136, which sum is distributed amongst his patrons. But as the cost of manufacture and sale should be subtracted from this sum, the loss, in round numbers, may be set down as \$120. It cannot therefore be said that he is unmindful of his neighbors.

His method of reckoning the profits of the farm should be studied by every practical farmer. Hundred acre farms in his neighborhood sell for about \$6,000. His books show that his annual profits from his land are equal to 12 to 14 percent on the market price of his 200 acres, stock, etc. Many speculating farmers may have exceeded his profit for a time; but many farms during the past few years have paid no dividends, and the average is less than four percent. His plan is to have neither debts nor money. He puts all his spare profits back on the farm. If he had converted his profits into more farms instead of increasing the products of the land he has, he would now have more farms, and would be regarded by his neighbors as being wealthier, but his profits would be much less. He regards those farmers who hoard money up in the bank, their farms paying a small dividend, as having neither science nor common sense. His ideal of a successful farmer is one who *knows how* to make an extra percent or two every year on the amount of capital sunk in his farm, and the way to do so is to increase its productive capacity. He regards his orchard as the most profitable branch of his business. From 3½ acres he sells between \$200 and \$300 worth of apples every year, besides what he keeps for family use, making cider, etc. After the first of November, he commences butter-making, and as he makes butter on scientific principles, he commands the highest market price. He sells about \$50 worth of butter before the end of the year, besides keeping sufficient to support a large family and the hired men. His wheat brings about the same sum as his apples, and his hogs and calves bring in a similar amount yearly. He places the sales of poultry and eggs against the grocery bills.

He hewed his home out of the wilderness, commencing 33 years ago, and now everything has the appearance of substantiality and comfort, although he makes no pretensions to display. He regards his 50 acres of uncleared land—containing the finest beech and maple timber we ever saw—as equal in value to any average portion of the farm, acre for acre. The soil is a sandy loam, which consumes large quantities of home-made and commercial manures, but he has this advantage that the land is not greatly in need of drainage. The soil has the same mechanical texture to a great depth, and as the sand is fine, the supply of moisture comes up from far below during dry seasons.



DOUGALD LEITCH, ESQ.,
President of the Dominion Farmers' Council.

containing 100 acres, is the main source of his profit, the other farm having been badly worn out before he purchased it, 50 acres ten years ago, and the other 50 he has had about five years. There are 150 acres cleared. He also owns a cheese factory on the farm, where he manufactures this year 61 tons of cheese; he has another factory in Glencoe, the property being worth \$3,000, the make this year being 100 tons, and also a factory in South Caradoc making 67 tons. In addition to these, he manages a rented factory west of Strathroy having a capacity of 45 tons; total number of tons manufactured by him this season, 273. His factories are not a speculative business, as he manufactures by the pound, and he is salesman for all his patrons as well as for himself. He thoroughly understands the science of cheese-making, and never fails to procure the highest market price for his goods. Owing to his superior skill in breeding, his cows produce a quality of milk which is over 1½ percent richer in total solids than the average milk delivered

Mr. Leitch, although now 60 years of age, keeps his head and his hands as busy as they have ever been, and there are no signs of deterioration in him, mental or physical. He is a practical, scientific and business farmer all combined. He is methodical in business, studious in agricultural science, and practical in the adaptation of his acquired knowledge to profitable ends. All the good he has accomplished has not been for self. He has made his influence felt as director of the West Middlesex Agricultural Society, and as county councillor. He has never sought office, but cheerfully performed the work his friends have forced into his hands, and has shown therein the same executive ability which has characterized him in his private business.

Another Word about the Salt Question.

Since commenting on the salt frauds in our August issue, we wrote to the Commissioner of Agriculture asking for the names of the manufacturers of the brands of salt analyzed at the "Ontario Agricultural College and Experimental Farm," and have received the following reply:

Department of Agriculture, Toronto, 1st Sept., 1886.

Wm. Weld, Esq., London:

DEAR SIR, —After an absence of some days I am just to-day in receipt of your letter of 24th ult., asking for the names of manufacturers whose salt has been analyzed at the Model Farm. I beg to say that the Department is not in possession of the names of the manufacturers, and, therefore, I cannot furnish you with them.

I am, dear sir, yours truly,

A. M. Ross, Commissioner.

We could not make out from the above letter whether or not it was possible to obtain the names of the manufacturers, especially those who have been guilty of adulterating their salt; we still labored under the impression that the names might still be in the hands of the Model Farm authorities, for we could not believe that the Department could be so faithless in the discharge of their duty as to collect and analyze samples of salt without knowing the sources from which they were derived. If the Commissioner, or those acting under him, had no suspicion as to the quality of the brands of salt, why was it analyzed, we should like to know? If it was for the purpose of comparing Canadian with English brands, why should the Canadian farmer not know where our best salt is to be found?

However, since the receipt of the above letter, we met the Commissioner at the Provincial Exhibition and interviewed him on the subject. He protested against publishing the names of the manufacturers, contending that they would use the results of the analysis as an advertising medium. The frauds exposed by our correspondents would have had a satisfactory ending, if these names had been published. We are always ready and willing to give any amount of free advertising to the unscrupulous vendors of fraudulent goods, and to tell our farmers where they can get the best articles in the market, but the Government appear to be afraid to do so. In other language, they are afraid to do what they have been engaged to do, and what they are paid for doing. The result is that our farmers must continue to buy adulterated salt—vile stuff which, even if consumed in rational quantities, must be regarded

as poisonous. It makes no difference to the farmer whether the salt is badly adulterated by nature, or whether it has been tampered with by the manufacturers—he wants to know where the filthy stuff comes from, and who manipulates it. This is, forsooth, the very self-same Model Farm which has been established in our farmers' interests! Possibly, however, the Commissioner's Advisory Board is responsible for this piece of advice. This Board being a mixture of "Grits" and "Tories," we are led to the belief that one independent farmer could pronounce a sounder judgment than the whole batch.

Several years ago, a scientific test of the different portable threshing engines manufactured in the Province was made, with the result that each manufacturer analyzed the table of tests for his patrons, and proved, or rather attempted to prove, that his engine was the best, although the tests proved that there was a great difference in the relative efficiencies of the engines. Probably the same thing might occur in the salt business; each manufacturer might attempt to prove by the analysis that his salt was the purest, and many, we have no doubt, would succeed in accomplishing their designs. This proves the necessity of a better education amongst our farmers.

A Valuable Invention for Sharpening Reaper Knives.

The accompanying illustration represents a newly patented sharpener for mower, reaper



and binder knives. We carefully examined it at our leading exhibitions, and found it to be one of the most useful of the new inventions in the line of agricultural implements. Mr. John M. Ross, Blyth, Ont., is the inventor, patentee and manufacturer. He is a practical farmer and deserves encouragement for his ingenuity.

It is so constructed that the person sits down while grinding, the seat being attached to the machine. It is operated by a double crank attached to the same axle as the stone; for that reason you lose no power by gear, and you can press weight on the sections in order to grind rapidly. There is a foot lever which by pressing you put weight on the knives. You can give different lengths of stroke for grinding different lengths of knives in order that the sections may be ground from point to heel; by doing this the stone must keep in the same shape. It grinds two sides of a section at once, or you can change it in a moment to grind

one side. It will grind a gap out of a knife without touching any other part, or grind the heel of a section without the point, or point without the heel. There is a water trough attached, and the stone turns in water so that it will not spoil the temper of the knives. The knives are held on to the stone by a knife-holder and lever clamp, and one turn of a screw tightens or slackens the knife in order to move from the sections that have been ground to another. There is a knife holder and pulley attached which runs on a pivot-rod and supports the heavy end of the knife. It is self-working, so that when you attach it to the knife it takes its place as the knife moves from one section to another. There is a water-guard which keeps the water from splashing out on the operator.

Enriching the Soil by Cultivation and by Growing Crops.

One of the most difficult problems in agriculture—and at the same time one which is of the greatest practical importance—is the relation of atmospheric nitrogen to the soil and to growing crops. This is the most costly element in manures and fertilizers, as well as the most easily wasted element in the soil; hence it becomes a matter of great importance how it may be conserved as much as possible.

It is well known that nitrogen comprises four-fifths of the bulk of the air, and that, in combination with hydrogen, forming ammonia, and in combination with hydrogen and oxygen, forming nitric acid, it also exists in the air in small quantities; but the part which atmospheric nitrogen plays in enriching the soil, and so furnishing food for plants, has not been well understood. The following are the latest conclusions arrived at by German investigators:

(1) Every soil takes in nitrogen from the atmosphere in appreciable quantities by rain, dew, and absorption of ammonia, and gives off considerable quantities, presumably in the form of free nitrogen. (2) On a bare soil, the loss is greater than the gain; but the loss becomes less when the soil is kept stirred, caused by the taking in of greater quantities from the atmosphere, and the loss becomes still less, and may cease altogether, when the soil is cropped: the more nitrogen the cultivated plants take from the soil, the more they can utilize atmospheric nitrogen. (3) If a soil is poor in nitrogen (decaying vegetable matter is the source of soil nitrogen), and if the cultivated plants are able to appropriate the smallest quantity existing at the time, it is then possible that the plants may subsist wholly on the atmospheric supply, in which case, if the roots and stubble remain, the soil becomes richer in nitrogen by the quantity contained in the roots and stubble. In other cases, the soil, as a rule, becomes poorer in nitrogen.

Judged by these conclusions, it is not surprising that the application of nitrogenous fertilizers has so often produced precarious results. The effects upon summer fallowing should also be noted, a loss taking place by the escape of nitrogen into the air, as well as the loss of nitrates by drainage in wet seasons. The conservation of nitrogen is now a live question in practical agriculture, and the effects should be studied in connection with all classes of soil. The question as to the absorption of nitrogen through the leaves of plants is of much less practical importance, but it is likely to be fully solved before long, as there are many eminent investigators in the field.

The Future of Canadian Agriculture.

Our readers cannot peruse the elaborate and painstaking report of Prof. Fream, which we publish in another column, without coming to the conclusion that the days of our old system of farming are numbered. The rapid increase of wheat imports into Great Britain from Australasia and India must ultimately, if not in the near future, shut Canada, excepting Manitoba and our Northwest, from the British wheat markets. Indeed, it is questionable if we can export any more wheat at a profit, except in case of a disastrous war in Europe, or a failure of the wheat crop in a majority of these countries; and yet it is a deplorable fact that many of our farmers, purely out of habit, will continue wheat-growing after it ceases to be a profitable business, and after it has been fully demonstrated that other branches of farming are in a flourishing condition. The wheat-producing capabilities of Australasia, India and our Northwest are almost illimitable, and it is therefore quite likely that the quantity imported into Britain will increase as rapidly in the future as in the past.

It is instructive to inquire into the causes of this disaster—if disaster it may be called. Our mind first reverts to the American policy of exclusion. The high tariffs, ostensibly for the protection of agriculture and other industries, have created an industrial war which drove Britain into other wheat fields amongst a more sympathetic and congenial people, and Canada was forced to participate in the consequences. Thus we see that our agriculture and our commerce are built upon the shallow head of the American politician, whose petty freaks are our agricultural and commercial barometer. The same policy of exclusion has been faithfully imitated by our own Government, so that the head of our politician forms one of the cornerstones of our agricultural structure—that, too, under the most corrupt system of Government by party.

With our illimitable phosphate resources, we might have successfully continued wheat-growing for an unlimited period of time, and controlled the British markets. The skill and labor required would be less than those in the industries that are to supplant the growing of this article of universal consumption. The blow is too sudden; we are compelled to open up new agricultural industries while we are quarreling about agricultural education, and the best methods of drilling our farmers into an appreciation of their altered conditions. It is true that, under natural conditions, the best wheat-growing countries in the world would have been ultimately discovered; but in this case our farmers would be educated gradually into a realization of their agricultural and commercial position; but if they unite and become resolved to cope with their present situation, the changes may be regarded more as a blessing than as a disaster.

In this issue we present the situation in such a manner that it may be taken in at a glance. What we can do in horse-raising is pertinently set forth in the article by Col. Ravenhill and the illustrations connected therewith. Our dairying situation is put into a nut-shell by the pen of Mr. J. W. Robertson. Mr. Robertson is professor of dairying at our Model Farm, and we are pleased to learn that this institution

has at last produced something worthy of publication in the *ADVOCATE*. We have not seen the Professor's reports, but, so far as we can judge, we believe the Government has made a good appointment. Prof. Saunders has fully demonstrated what he can do in the exportation of fruits, and this bids fair to become one of our leading industries. The future success of our beef-growing industry is yet to be demonstrated, if we wish to persist in it on a comprehensive scale. Much depends upon the progress made in the refrigerator process in shipping fresh meat. Recent reports from Europe furnish us with the details of a new process of preserving meat to be shipped long distances, which process, if the reports are true, will bring us into competition with Australasian meat in the British markets.

The Moral of Exhibitions.

Now that the leading exhibitions are over, it would be well to reflect on what they have accomplished. We have only to deal with their agricultural aspect, and to observe their moral and industrial tendencies, as well as their financial successes.

The financial success of an exhibition is frequently the main source of its failure. In no case do the prizes bear any relation to the objects which deserve encouragement; on the contrary, things which should be entirely suppressed often receive the highest prizes; such things, in their turn, draw the largest crowd, and the financial success of the show thus becomes assured. If these remarks only applied to the hippodrome department, the condition of affairs would not be so deplorable, and there would be hope for the future. A condition equally appalling has crept into our agricultural departments. The stockman, knowing that obesity and monstrosity are the secret of success in the show ring, prefers to ruin his scrubs by high stuffing than to bring his high-toned stock into the competition. In the dairy department, a laudable attempt was made to base the awards on the merits of the cows, but this standard threatened the trade of the manipulators so seriously, as well as the financial success of the show, that the plan had to be completely abandoned, or developed into a gigantic farce. In the agricultural and horticultural displays, the selection of the varieties is often the whims and fancies of one man, so that little can be learned from the choices made.

The show managers are beginning to feel the weight of the opposition to their schemes, and, in heartfelt sympathy with the demand, are showing indications of their desire for reforms. They seek to impress upon the minds of the public that a change in the system of judging would remove all the ills that the fair is heir to. They propound the one-judge system as a remedy for the incapacity and tyranny of the Czarish trio—in the hope that the discussion of this question will divert the public mind from the glaring iniquities of the real issue, and thus build confidence in their righteousness and sincerity. We accept their logic—that one head is wiser than three—providing they carry the principle to its logical conclusions, viz., that no head is better than one. Indeed, this is sound doctrine; for it is better to annihilate the whole business than to waste time in discussing such childish philosophy. Any

decision is useless—and worse than useless, for it also misleads—which fails to approximate the real, practical, money making value of the animal judged, the awarding of prizes based upon fancy points which fill the eye and empty the pocket being a relic of barbarism in a practical age. No attempt has been made to compare the judges' decisions with the intrinsic merits of the prize animals. If pedigree is to be the supreme court of appeal, why not send the pedigrees into the ring, and leave the animals at home? The truth is that a judge's decision is just as false as the pedigree, and the standard of the one is as hurtful to our breeding interests as that of the other. If pedigree were to be made the standard, is there a judge on earth who could correctly decide what herds possessed the highest merit? Seeing that our existing judges cannot agree, ignorance and petty prejudices awaying their minds to such an appalling extent, it has been proposed to establish a standard of points. Who will guarantee that a scrutiny of these points will approximate the true standard—that of individual merit? For example, our Model Farm professors contend that a mature steer should be a year old or thereabout, that each end should fit into a rectilinear figure vulgarly known as a square, and that each side should exemplify a rectangular parallelogram. All this may be very satisfying to the consciences of those who receive public funds in consideration for talking; but who will maintain that these vagaries have anything to do with the truth? Besides, it has yet to be proved that straight lines are more beautiful than curves, and add flavor or profit to the carcass or to the dairy products. The abolition of two of the three judges would be a hop, step and jump in the right direction, but we will never be on the straight road to perfection until the other judge be also dismissed, and until we make a fresh start, basing our standards on intrinsic merits alone, and educating a class of judges who, by casting their eye and placing their finger upon an animal, can approximate the amount of profit to be obtained, and give substantial reasons for their decrees.

The Western Fair recently held in this city must have opened the eyes of the public to the enormity of our show imperfections. The prizes in the live-stock were insignificant, the result being that the display was very meagre, while the exhibit in agricultural implements surpassed any we have ever seen in the Province. Why was this thus? Farmers require good stock as well as good implements, and why should the former require encouragement in the form of prizes, the latter being utterly disregarded in this respect? Are our farmers blind to their live-stock interests? Do they not meet the class of animals they desire for profit, as they do in the class of implements? or do our stockmen not understand how to push their business as the manufacturers of implements do? The fact of the matter is that our farmers have lost confidence in our live-stock manipulators, who have pushed their business for more than it is worth, and have gone beyond the paying basis. As soon as the time arrives when our stockmen can exhibit on a business basis, regardless of prize inducements, their industry will begin to flourish, and success will be positively assured; but before that time arrives confidence must be established in

the system of judging, and a prize or an award must be some assurance of individual merit. Then will also be the time when agricultural exhibitions will flourish, being also established on the standard of merit, and the most attractive part in the performance will be that where the eye can distinctly see where the greatest profits reside.

Relative Profits in Permanent Pastures and Barley Growing.

To the Editor of the Farmer's Advocate:

SIR,—In your October issue I see a letter on permanent pastures by Prof. L. B. Arnold, setting forth his opinions of its uses or uselessness, and giving his reasons all from theory and hearsay, but nothing from actual test.

In the first place he starts off with the assertion that "permanent pastures are appropriate only for three classes of farmers, viz:—Those who have land not arable, those who have too much land, those who are too lazy to work what they do have." Now, sir, I propose to prove by actual test that permanent pastures do pay, not only where land is not arable, but where it is worth \$100 per acre. I have a field containing twenty acres in the rear of my farm, watered by a living spring, which I seeded to permanent pastures four years ago, and consequently have had three seasons' pastures from it. The land would sell for about \$50 per acre; the Prof. has been over the farm and knows something about its quality. It has never had any manure except the droppings from cattle pastured on it. The seed cost me \$5 per acre, or a total of \$120. It grew so rank the first season that I was obliged to pasture in the fall to keep from smothering during winter. The following season I got from it 4,370 days pasturing of beefing cattle, consisting of large steers, heifers and cows, about 7½ months' feed. The following year I pastured 20 milch cows constantly day and night from May 13th till July 11th; then I mowed it and obtained 11 loads of good hay, containing about 10 tons, after which I received 1,830 days' feed for beefing cattle, making a total of 2,970 days' pasture, or about five months' feed and half ton of hay per acre; this season I turned 16 cattle and 4 horses on it on May 19th, and they have never been off it, and are still on it, and you are aware this has been a trying season for pasture of all description; also the hay crops were light with us.

Now let us figure up the results, and see whether it has paid us, even putting the land at twice its market value, and the pasture at \$2 per month, which also leaves a margin of profit in cattle as well.

ACCOUNT WITH TWENTY-ACRE FIELD.	
Dr.	
To capital, 20 acres land @ \$100 per acre.....	\$2000
Interest on same @ 6 percent per annum for 4 years.....	480
Cost of seed.....	120
Sowing and fitting land.....	80
Repairs of fence and taxes.....	40
Total debit.....	\$2720
Cr.	
By 40 months feed, first season.....	\$ 80
150 " second season.....	300
100 " third season.....	\$200
10 tons hay @ \$10, 100.....	390
110 months' feed, fourth season.....	220
Value of seed catch.....	50
Capital invested.....	2000
Total credit.....	\$2950
Deduct debit.....	2720
Actual profit above interest.....	\$ 230

If the land were taken at its value, a still further profit of \$240 is obtained in interest,

leaving a total profit of \$710 from a capital outlay of \$1000 in four years, or \$177.50 interest on \$1000 worth of farm property per year.

Now, sir, I submit that if all the land in Ontario could make as good returns as the above (and I believe all ordinary land can), the Professor is a long way astray when he says "Pasture land in its best state generally pays the poorest of any of the arable part of the farm, and permanent pasture poorest of all." If the results I have obtained from my permanent pasture are the effects of being "lazy or shiftless, or having too much land," then all I have to say is, we should have more lazy and land-impoorished farmers in Canada to pay off the now existing mortgages on the soil, and I am not alone in this matter.

As I see the Professor names certain men to back up his theory of soiling, I will name some men of prominence who have experience with permanent pasture and are satisfied with the results, viz:—Hon. Robt. Read, of Belleville; Prof. Brown, Ontario Experimental Farm, Guelph; Prof. Roberts, of Cornell University, Ithaca, N. Y., and F. W. Stone, of Guelph, all practical stock men.

I not only submit that permanent pasture pays, but that it pays better than my plowed land, and will prove it by results obtained, of which I have kept a record. I will take the barley crop, as that is the most grown in this section and said to be the most profitable, and will take the four years parallel with permanent pasture above quoted, all from my own farm, and the barley ground was by far the best soil, as I enter it in my books at \$100 per acre.

BARLEY CROP—1883.

Had 23½ acres in barley, which yielded 700 bushels, and which I sold at 60 cts. per bushel, leaving as total receipts for barley, \$420; straw, \$25; total, \$445.

Dr.	
To 1 gang plowing.....	\$23 50
" 1 single.....	47 00
" harrowing, sowing, etc.....	21 00
" 47 bushels seed.....	28 25
" harvesting.....	42 00
" threshing, cleaning and hauling.....	70 00
" interest @ 6 percent on \$2,350.....	149 00
" taxes and fences.....	32 01
" insurance and buildings.....	20 00
By receipts (as above).....	\$445 00
Total profit.....	\$41 30

BARLEY CROP—1884.

Had 25 acres in barley; yielded 680 bushels; sold at 65 cts. = \$442; straw, \$28; total, \$470. Debit without going into details, which I can give if necessary.....\$271 50

Interest on \$2,500 at 6 percent.....	150 00
Total debit.....	\$421 50
Total receipts (as above).....	470 00
Profit.....	\$48 50

BARLEY CROP—1885.

Had 43 acres in barley; yielded 1,872 bush., which realized \$1,023 36; value of straw, \$84; total, \$1,107 36. Cost (by actual book reference, which I can give if needed).....\$26 33

Interest on \$4,300 at 6 percent.....	258 00
Total receipts (as above).....	\$1084 33
Total profits.....	\$23 03

BARLEY CROP—1886.

Had 61 acres in barley; yielded 2,265 bush.; netted \$1,265.75; value of straw, \$90; total, \$1,355.75. Cost (figured as in the former

cases).....	\$995 30
Interest on \$6,100 at 6 percent....	366 00
Total receipts (as above).....	\$1361 30
Total loss.....	\$5 55
RECAPITULATION.	
Profits, 1883.....	\$41 30
" 1884.....	48 50
" 1885.....	23 03
Less loss, 1886.....	5 55
Profits.....	\$112 83
23½ acres, 1883, interest.....	\$107 28
25 " 1884, ".....	\$140 00
43 " 1885, ".....	150 00
61 " 1886, ".....	258 00
152½ ".....	366 00
Profits.....	\$914 00
152½ acres realized in 4 years.....	\$1021 28
Or 38 acres per year left.....	255 32

Compare this with 20 acres permanent pasture:
 20 acres realized in 4 years..... \$710 00
 Or 20 acres per year left..... 177 50
 Or 1 acre in barley per year for 4 years, left..... \$6 72
 1 acre in pasture per year for 4 years, left..... \$8 87

These figures show that the barley left 6½ percent on the investment in land @ \$100 per acre, and the permanent pasture left 8½ percent in investment in land @ \$100 per acre.

Now, sir, I leave the public to judge between pasture and grain and the method of testing, and the grain certainly impoverished the soil more than the pasture. As to the Professor's theory of soiling, all I have to say is this, that during the months of August and September I have found it has paid me to have some green crop to help up the pasture in dry seasons, as milch cows, if allowed to shrink on their milk, can almost possibly be brought up again; but cows will not give as much nor as good milk from soiling as on permanent pasture. But whether I am "to be pitied for my stupidity, or whether I employ "common sense" in my management, or "get what little I do easily and lazily," I would like the Professor or any one else to show me where I can "realize six or eight times as much with absolute certainty."

R. J. GRAHAM, Belleville, Ont.

Notes from Prince Edward Island.

[By a P. E. Island Farmer.]

As I do not often see anything from this "Isle of the Sea" in the ADVOCATE, I thought a few items regarding our doings in this pre-eminently agricultural Province might be of some little interest to your readers in other parts of our Dominion. Though our Island is small, it is by no means unimportant. We have soil and climate admirably adapted to the production of roots and all the cereals produced in the Dominion, except corn. With proper cultivation, wheat succeeds well; this year it is an excellent crop, the season being dry and therefore suitable to the growth of that cereal.

Oats, which is our staple crop, is rather light in the straw this year, but is well filled and turns out well on the scales. The price of oats has been low for some years; it is selling now for 28 cents per bushel of 34 pounds, but it mostly sells readily for cash.

Wheat is difficult to sell in any quantity for cash in this country. Our millers are content to grind custom grain for the farmers, and do

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not barrel up any of the product of their flour mills for the market. Flour is brought down here so cheaply from Ontario during the summer months, that our farmers who have a surplus of wheat find it difficult to dispose of it at remunerative prices.

Barley is not cultivated nearly so extensively as it was 15 or 20 years ago. We have no market for it in St. John and Halifax now, as we had then. Ontario has got ahead of us by sending down their malt, which seems to be preferred by the brewers to our barley. There is not much brewing done on the Island now. We never were much of a beer-drinking people, the English element of our population not being large, and you know the Scotchman and Irishman prefer the whisky. The most of the barley grown now is used for fattening cattle and hogs. A great many farmers are getting into the way of sowing it mixed with oats, and they claim that they get more feed per acre than when sown separately.

Our potato crop, which is a very important one, is very good this year, except in some few instances where those late planted missed. We raise large quantities of potatoes, of which we ship considerable to Newfoundland and the Eastern States when the prices will warrant our doing so. These last few years there has been very poor demand for them and prices have been from 14 cents to 16 cents per bushel; they are now (Oct. 15th) worth about 14 cents for the American market. When they are so cheap as this the bulk of them are fed to stock. We find that in feeding them alternately with turnips to our fattening stock, that we get better results than by feeding either alone.

Though the first of the summer was so dry, the latter part of July and the first of August were very wet, and as this is our haying season, the consequence was that a great part of our hay has been saved in poor condition. The hay crop is considerably less than an average one this year, and this, with a light crop of oat straw, will make fodder pretty scarce with us this winter. Reports from some sections towards the eastern part of the Island are to the effect that farmers will have to shorten their stock before winter in order to avoid serious loss through want of fodder.

We are paying more attention to stock raising than we formerly did. The old scrub is giving place to the pedigree or high-grade animal. There are to be found throughout the country, and especially in the vicinity of Charlottetown, quite large herds of Shorthorn, Ayrshire, Holstein and Jersey cattle, eligible for registration in herd books of their respective classes, and the cattle all over the country are being graded up by the use of the pedigree bulls distributed from the Government Stock Farm. It would be well worth your while, Mr. Editor, to visit our Provincial Exhibition which is held in Charlottetown in the early part of Oct. each year. I think that we might even surprise an agricultural editor from the great Province of Ontario by our show of stock, especially horses, which last mentioned stock has improved very much of late years by the importation of stallions of the best blood from Great Britain and United States, and by crossing those with the descendants of the good blooded stock imported by the Government years ago, which gives us a class of horses suitable for the English and American markets.

Some seven or eight years ago our Government imported a cart horse from Scotland, named Barrister, which has given great satisfaction; he is considered by competent judges to be the best cart horse on the Island; colts sired by him always take first prize at our exhibitions and frequently weigh at six months old from 650 to 750 pounds. Such colts sell readily for \$100. Private enterprise is doing a great deal towards the improvement of our horses. Mr. Heartz, who has started a stock farm in the vicinity of Charlottetown, has a Percheron horse that weighs about 2,000 pounds, which he selected from an importation made by M. W. Dunham, of Illinois. He is a very fine specimen of the Percheron breed; in color he is a beautiful dapple grey. Mr. Heartz also owns two very fine Percheron mares from which he has been raising stock for the last few years. He is at present in Kentucky for the purpose of purchasing two standard bred stallions for his stock farm.

Messrs. McRae & Robins, of Bedeque, imported a Shire horse from Ontario two years ago (Sunk Island Hero). He is a fine specimen of the English Shire horse, and is a very valuable addition to the stock of the country. The same firm have brought down a blood horse from your Province this fall (Rysdick Jr.), which they showed at our exhibitions, where he was highly spoken of by those qualified to judge. We have quite a number of standard bred horses in the country, which have been brought here by private parties. Foremost among them are All Right and Hernando, which were imported from the United States; the first was purchased from Rev. W. H. Murray some seven or eight years ago; the other is of the celebrated Almont family and was brought here from Kentucky. The stock from these horses is in great demand and they sell for big prices; some of them have turned out very fast and have their record in the 220 class. The latest importation is a Shire horse two years old weighing 1,700 pounds, brought here from England and landed about a fortnight ago. He is an immense animal for his age and stood the long sea voyage well. He was shown at our Provincial Exhibition two days after he landed from the steamer, and stepped round as actively as if he had just come out of the pasture.

Colonial Agriculture and its Influence on British Farming.

We select the following paragraphs from a paper read before the British Association by Prof. W. Fream, B. Sc., F. L. S., F. G. S.:-

In Australasia, the Provinces of South Australia, Victoria and New Zealand are exporters of wheat, though till within a few years ago Victoria imported wheat, and had a protective duty. During the three years 1881-3 the import of wheat from Australasia into the United Kingdom was between 2 and 3 million cwt. annually. In 1884 it reached nearly 5 million, and in 1885 over 5 1/2 million cwt. From Canada the import in 1881 and 1882 was over 2 1/2 million cwt. per annum, whereas during the last three years it has been about 1 1/2 million annually; nevertheless, the rapid settlement of the wheat lands of Manitoba and the Northwest is likely to again place this import in the ascending scale. Meanwhile, the import of wheat from the United States, though still our chief one, is declining, even if the import of wheat meal and flour from the same source be also taken into account. Viewing the subject from an imperial standpoint, British India has during the last five years sent us annually much more wheat than Australasia and Canada together. The ratio of the import of wheat from all parts of the empire (Australasia, Canada, India) to the total import into the United Kingdom has, during the last five years (1881-5) shown the following increase: 0.23, 0.21, 0.25, 0.31, 0.31. Simultaneously, the ratio of the import of wheat from the United States to the total import into the United Kingdom has declined thus: 0.63, 0.55, 0.49, 0.48, 0.40.

Australasia is too far away, and is on the wrong side of the equator, to compete in the traffic in living animals. As in the case of wheat, our largest supply of horned cattle

comes from the United States, which sends us nearly two-fifths of the total number imported. Denmark ranks next, and Canada third. It is significant however, that whereas in 1885 our import of cattle from all other sources fell off, the import from Canada nevertheless increased fully one-eighth on that of the previous year. Future years will probably bring about further developments in the same direction. In 1885 about one-half (68,556) of the cattle exported from Canada were landed at British ports.

The fresh meat trade, with which the name of Australian mutton has become so closely identified, is of recent but rapid growth. Excluding Australasia, Holland is the only country which has hitherto sent fresh mutton in any quantity into the United Kingdom; but the import from Holland last year was less than one-fourth of that from Australasia. Taking the last four years (1882-5), the ratio of the import of fresh mutton from Australasia to the total import from all sources exhibits the following rapid increase: 0.19, 0.40, 0.60, 0.59. Australasia, therefore, now sends us more than half the total import, and the actual quantity derived from this source last year was 336,495 cwt., the total import being 571,616 cwt. Most of the Australasian export is from New Zealand.

Passing on to dairy produce, nearly the whole of the cheese, and more than three-fourths of the butter, exported from Canada enter the markets of the United Kingdom. Cheese also comes in large quantity from the United States and Holland, and butter from Holland, France, Denmark, the United States, and Belgium, in the order named. Canada, however, has taken a firm hold on our cheese markets, and, owing to the superior and uniform quality of her produce, is likely to maintain and even to increase it. Were the Canadian butter as well manufactured and as reliable a product as the Canadian cheese, our imports of butter from Canada would probably be far larger than they are. Canadian dairy farmers are looking into this matter; but they must not delay, for a new competitor in this industry is arising in the southern seas. The enterprising colony of Victoria, encouraged by the satisfactory results flowing from the British trade in fresh meat, is bent on tempting the English markets with fresh Australian butter. It is argued that the system of refrigeration, by means of which meat is kept fresh during the long voyage to England, will serve equally well in the case of butter, and it is pointed out that butter produced during the antipodean summer would reach the English markets in time to command a ready sale during mid-winter.

Coming lastly to wool, many English farmers who are now struggling with adversity can remember the time when the wool of their sheep would pay the rent. Those palmy days have gone, never to return, for the United Kingdom now imports over 500 million lbs. of wool per annum, most of which comes from Australasia and Cape Colony. The quantity exported from Australasia in 1883 was 414,532,562 lbs., and by Cape Colony 38,029,495 lbs., and the total value was upwards of 23 millions sterling. How very important to the colonial farmer in the southern hemisphere is the price of wool on the English market, may be judged from the fact that a difference of only one farthing per lb. in the selling value of the wool exported in a single year (1883), would make a difference amounting to nearly half a million sterling in the aggregate value. The total value of the wool imported into the United Kingdom from our colonies of Australasia and the Cape since 1831, estimated at the average selling price in London of the last 25 years, is £421,121,192, of which £77,416,721 represents the South African exports. This splendid creation of wealth can be better appreciated when it is stated that the total value of all the gold found in Australasia has not yet reached 300 millions sterling.

Cobs are good for smoking meat, as they give a good flavor. Keeping a small fire a longer time is better than quick smoking, as too much heat gives the meat a strong taste and injures its sweetness.—[Germantown Telegraph.

PRIZE ESSAY.

How can Greater Economy be Exercised in the Use of Fences.

BY JOS. MOUNTAIN, AVONBANK, ONT.

It would not be well for any one writing on this subject to lay down any particular plan of fence and say that it would suit all localities, as the cost of a fence must always depend a great deal on the prices and the easiness of access of the material required in its construction.

In erecting a fence the farmer should consider not only the cost of the fence at the present time, but its efficiency and durability, for, as a general thing, the best is the cheapest in the end. Another item which should be taken into consideration is the amount of land the fence is going to occupy, and the time and labor required in its construction. Any person going through the country will notice that the old rail fences are gradually disappearing, and are being replaced by wire, iron and sometimes a board fence, but a new rail fence is seldom seen.

No doubt the rail fence has answered a good purpose, so far, and may still in some localities; but its usefulness is gone in places where the timber is getting thin, and even in parts where timber is abundant; if it be within easy access to a railroad, it will hardly pay to use rails, as the only kinds of wood which are fit for fencing (such as oak, cedar, cherry, etc.) command prices for other purposes which would make it very expensive fencing.

At the present time there appears to be nothing which will equal barb wire as a permanent fence, not only on account of its cheapness and durability, but also because of the very little space which it occupies in the field in comparison to the rail or stone fences, which harbor so much thistles, burrs and other noxious weeds, besides occupying land which might be put to a better purpose.

Red cedar posts are what the majority of people recommend for a wire fence as being the most durable, but in some sections of country it is not to be had; in such case oak or white cedar might answer almost as well if treated with some of the methods adopted to preserve wood, such as charring, painting, etc.

Five wires properly spaced are all that is required for all ordinary purposes, and sometimes, where it is not expected that swine will run, four might be sufficient, which would lessen the cost. The posts should not be more than fifteen feet apart; if more than this, upright wires should be woven in at intervals between the posts to keep the wire from sagging.

To make a wire fence complete it should always be well banked up with soil beneath the wires. Not only does a good bank improve the appearance of the fence, but also make it more effective against stock; for it is not generally out of mere wantonness which makes stock receive injuries from the barbs, but it is rather out of ignorance of the nature of the obstruction, and as the bank is easily seen, they are not apt to go at it with such force as they might otherwise. After the fence has been completed in every other way, the simplest way to make a bank is to plow three furrows along each side, leaving the first as it is and throwing the other two above it, and beneath the wire. The hollow where the dirt has been taken from answers for a course to take off any water which

might lay about the posts. Keeping the bed of the posts dry is a good preventative from heaving with the frost. Wire fences are so common that everyone knows the best modes of erecting, so that it will be unnecessary to explain further.

Where cedar posts are not easy of access, some of the patented iron posts might be used, but their cost will be considerably greater.

Some advise farmers to plant trees, which will in time come in for fence posts. The Lombardy poplar is highly recommended for this purpose. But it is rather doubtful whether they will answer as well as posts, for every one knows that the efficiency of a wire fence greatly depends on the tension of the wire, which if nailed to trees would become strained and slackened by the swaying of the tree in the wind.

Economy in fencing depends a great deal on the manner in which the farm is divided. The farmer at the outset should try and lay out his fields in sizes which will be most suitable for the work which he intends to engage in. For a hundred acre farm fifteen acre fields are probably most convenient for most purposes, that is, if there is also an amount of portable fence used to divide it up, if necessary.

A very simple and convenient portable fence is used by some, a description of which might not be out of place.

The material used is elm, ash, cherry, etc., or whatever is handiest and best, cut into inch lumber 3 or 4 inches wide, nailed together into hurdles. These may be 12 or 14 feet long, and 4 feet 8 inches or 5 feet high. There should be five boards in them, the spaces to be 6, 7, 8 and 10 inches wide, the narrow spaces for bottom of hurdle. An upright strip 4 inches wide is nailed on both sides at each end and one or two between to strengthen it. Use wrought nails, which should be well clinched and a light carriage bolt at each corner. A man by making a pattern on the barn floor or any other level place, can easily make enough of this fence to do 40 rods in two days. After the hurdles are made, all that is required are the posts, which may be elm, oak or cedar, which are to be pointed to drive into the ground, and some straight elm pins one inch in thickness and a foot and a half long. In erecting it, one man goes first with a light pole the same length as the hurdle, and a crow-bar which is pointed at one end, with which he makes a hole for the post, while the other comes after with the posts in a wagon, drops one into each hole, and then drives them with a commander from the wagon. All that is now required to finish it is to draw along the hurdles and put the pins through the posts to hang them on. Two men can erect 40 rods of this fence in half a day. With the posts driven say 2½ feet, it will resist any storm. To remove, drive out the pins, load the hurdles on to a wagon and take them where they are wanted next. The post can be easily drawn with a short chain and hand-spike.

The points to be considered in this fence over other portable fences are:—There are no patent rights to pay for, the material is easily had and not a great quantity required. It is useful to fence stock yards, etc. When it is not in use it can be piled up in a small space. Will last 15 or 20 years if taken care of. Occupies no more space than a wire fence, and a gate may be made in any part of the fence by driving out two pins.

But the greatest advantage in connection with this fence is that it may be made indoors in winter, or on wet days the farmer is not busy. While a rail fence costs 75c. a rod and wire 65c., this fence can be put up for 55c. or 60c. per rod.

In conclusion I would say that there is no occupation in which so much leakage may occur as farming, and no part adds more to it than inefficient fences.

Stock.**Horses for the British Army.**

Col. Ravenhill, who, with two other officers of the Imperial army, have been visiting Canada for the purpose of reporting upon the horse producing capabilities of this country, and also of sending home such specimens as they could procure at the prices fixed by the Imperial Government for cavalry and artillery, favors us with the following statements, which cannot fail to be of great interest to every farmer in Canada:

As some of your readers may not be aware of the prices paid, or the class of horse required, they are as follows, viz:—For cavalry horses up to \$150, and for artillery horses up to \$175; geldings preferred. Color—bay, brown, black or chestnut, with a few riding greys. Age—between four and eight years. Weight—riding horses, for the light, medium and heavy cavalry between 1,000 and 1,150 lbs. For artillery or engineer horses for riding, between 1,100 and 1,250 lbs. For draught between 1,200 and 1,400 lbs. These horses must be sound, fresh unblemished stock, and may be in the rough straight from the plow or farmer's yard, so long as they are the right shape, make and action. Now as regards soundness, I would draw attention to the two principal causes of the many cases of unsoundness that must be only too apparent to even any casual observer of the horses bred in this country. 1st—A great deal of it is hereditary, and caused by breeding from unsound sires and mares. 2nd—The habit of driving three and four year old horses long distances and at a rapid rate, as is done by the farmers in this country in their buggies and wagons, is a certain way of producing premature unsoundness among the horses. If the farmers of this country are alive to their own interests, a large market is open in Europe for well bred horses, independent of the requirements of the Imperial army; 17,000 are yearly imported into Great Britain from other countries, and Canada supplies none. What is required to produce the riding and driving horses, always in great demand all over Europe, is the importation to this country of thoroughbred sires, horses with plenty of bone, good deep shoulders, long rein, powerful quarters, and good back and loins, and short legs. Nothing requires more care and attention than horse breeding, that is, to produce the animals that command prices in the European market ranging from \$500 to \$4,000.

A great injury is being done to the horse-breeding of this country by crossing the small mares with the large Clyde, Shire and Percheron sires. The produce is often an impossible brute fit for nothing, and if the Imperial army is to be supplied it can only be done from the produce of thoroughbred sires and three-parts bred mare. Each year must show farmers how precarious a living is that which depends solely on grain, and if only the same attention be paid to the rearing of good horses as is being paid to other stock, the result will be beyond all expectation; every day the class of vessels carrying cattle to Europe is improving, and horses can be landed as safe and sound in Liverpool and London, as in New York, with this difference, that for every dollar paid by American dealers, the dealers in Europe can afford to give a pound sterling.

Hints on the Winter Care of Stock.

The motto guiding the winter care of stock should be: "Cleanliness, ventilation, dryness and light." The advocates of high-bred stock make "warmth" the guiding idea, but this depends upon the class of stock you wish to breed. Hardiness being a leading essential in our climate, it is better to keep the stables at a moderate temperature than to keep them warm. For the same reason, it is not desirable to make a practice of feeding warm food or giving warm water to breeding stock; what they gain in flesh or milk yield, they lose in health and hardiness. Be moderate.

Ventilation and temperature go hand in hand. If the stable is properly ventilated, the temperature can be easily regulated. The exhalations from the lungs and bodies of the animals create warmth, but these foul gases should be kept in a state of constant motion out through the ventilators, and the ingress of fresh air should be equally constant. Not only should the surroundings be kept dry by thorough drainage, suitable elevation, location, etc., but the interior of the stable should be kept free from dampness from the excrements. The foul gases from the excrements should be kept down by sufficient dry straw or other absorbents. If this is not attended to, the stable cannot be properly ventilated without being kept too cold.

Domestic animals, especially growing stock, do not thrive without a copious supply of light. Fattening stock put on plenty of weight in darkness, but this is not thrift; it is cruelty, and their flesh is not fit for human consumption. Cleanliness may be observed (1) by keeping the stalls clean, and (2) by cleaning the animals themselves. Animals breathe, as it were, through the pores of the skin, as well as by means of their lungs. Dirt stops up these pores, and throws greater burdens upon the lungs, promoting disease and acting prejudicially to the products as food for human consumption. There should be free and constant communication between the air and the pores, which is prevented by dirt on the skin, and for this reason also the air in the stable should be pure. Rubbing and grooming promotes this kind of healthfulness, and the cows' udders should be washed occasionally and rubbed with a woolen cloth till thoroughly dry.

In old fashioned farming, it is the practice to winter the whole herd, sell as much food as possible, and keep the stock on starvation allowances. By this system the herd weighs several tons less in the spring than in the fall, and is proportionably less valuable, so that it must take a large portion of the following summer for them to recover their lost condition. This is a losing game, no matter how low the price of beef or dairy products may be. Another practice is to sell off the surplus stock in the fall, and feed the balance liberally. Other farmers keep all the stock they have room for, and if they have not food enough, they purchase the deficient quantity. The latter method is business farming, barring exceptional seasons in which stock-keeping doesn't pay. There is no disgrace in buying food for stock, so long as there is money in the enterprise. Even when the farmer has abundance of food, it is very frequently desirable to exchange one class for another in order to secure properly balanced rations. If it is found necessary to feed large quantities of straw, bran or oilcake should be purchased to compensate for superior bulk and inferior nutritive properties. The business farmer will buy or sell stock or food according to the condition of the markets.

Caution should be exercised when taking the stock from the pastures and putting them on dry feed. Don't make sudden changes from green to dry feed, and don't give wiry, indigestible food just yet. The condition of the bowels is one of the safest barometers of health. If you followed the advice previously given in the *ADVOCATE*, you will now give early-cut hay, this being more nutritious and digestible, to the milking cows and the growing stock, and such other animals as you wish to thrive well. If you have late-cut hay, it should be treated like straw—cut and mixed with nutritious and highly concentrated grains. Horses having small stomachs cannot utilize much bulky food, but if they are idle, it may be profitably fed in considerable quantities in connection with rich foods. Bear in mind that clover is richer and more concentrated than timothy, and so, if cut early and cured well, has high feeding qualities.

Punctuality in feeding, cleaning, milking, etc., is probably nearly as great a virtue as any of those we have mentioned, but farmers, as a rule, do not sin so glaringly against this virtue. Gentle treatment is another of the cardinal virtues—one which is very frequently sinned against. Animals are more contented, and consequently thrive better, when they are attended to at regular intervals. It costs a lot of food to support worry and disappointed expectations.

The stock may be annoyed by other methods than by the reckless attendant. Dogs, hogs, hens, bad boys, etc., bolting through the yards and stables, are frequently a source of annoyance to stock, and stock to them. Stock cannot be easily made gentle under these circumstances, and gentleness is an important condition of thrift. A gentle and punctual attendant will save many a pound of feed, and give the owner a great deal of pleasure and satisfaction in his live stock business. Do not fail to give the stock plenty of exercise, except on very cold and stormy days. This is conducive to their health and thrift, and to your profit.

Manitoba Affairs.

[By Our Winnipeg Correspondent.]

The eleventh Provincial Exhibition has come and gone, beginning Sept 28th and ending Oct. 1st. Although Manitoba has had an exhibition for the past ten or eleven years, with the exception of 1884, under the patronage of the Government, until last year it could not be said to have been established on a sound permanent footing. All these exhibitions have been held in Winnipeg, with the exception of one held in Portage-la-Prairie in 1883, which, turning out unsuccessfully, put an end to the idea of making the exhibition a perambulating one. Accordingly, last year grounds were procured in the town of St. Boniface and buildings erected thereon, the town donating a bonus of \$10,000. Winnipeg lost the exhibition by being too niggardly in regard to terms. However, the grounds are very suitable, well laid out, and well shaded. Long cattle sheds run along one side of them, while horse stables are built on the opposite side. The main building is in the centre of the grounds and is built in the form of a circle. There are separate buildings for grain, poultry, dogs and flowers. It is two miles to the grounds from the bridge which connects Winnipeg with St. Boniface.

The entries this year were about fifty per cent in excess of last year, but the attendance was scarcely as large owing to bad weather. In

point of gate receipts the show was not a success. There were about two-thirds more horses than last year, although in some classes there was a poor show. The exhibit of stallions was very creditable both in numbers and quality, the Percheron class being better represented than any other. In this class D. McQuaig's famous Black Duke, weighing 2,200, was again on the grounds. This horse carried off the 1st prize and sweepstake last year, but at this exhibition the judges gave him second place, and a dark grey of Mr. Mollard, of Stonewall, first. There was a good deal of dissatisfaction in regard to this decision, and justly, I think, for beyond doubt Black Duke is one of the finest animals of his class that has ever been imported to Canada. It would appear from this fair that the Percheron class is the favorite with Manitobans. The carriage class was not very well represented. On the whole the exhibit of stallions was the best thing in the line of horse flesh on the ground. In a few years these stallions ought to produce a lot of fine horses in this country. Horse breeding is as yet carried on on a very small scale here.

In cattle, Durhams make 64 entries; Herefords, 26; Ayrshire, 17; Grades, 70; Galloways and Polled Angus, no entries. In Durhams the Binscarth Herd makes the largest and best display on the ground. This herd comes from near Virden and is owned by a joint stock company. The herd of Sharman & Sharman, Souris, comes next. We miss this year the fine herd of Greig Bros., Otterbourne. I had the pleasure of seeing this herd last summer. They have an excellent stock, but they do not think it pays to feed cattle for exhibition. The Binscarth bull, Prince Arthur, carries off the highest award. He is said to be the bull of the North-west. He is bred by John Hunter, Alma, Ont. A year-old bull of the same herd, bred by John Dryden, is also an excellent animal, and takes first in his class. Sharman & Sharman take first for two-year-old bull Springwood Prince, bred by W. G. Pettit, Burlington, and also first for aged cow. Mr. J. E. Smith, of the Beresford Stock Farm, a short distance south of Brandon, has an excellent exhibit, including a yearling, Sunrise. He was bred by J. & W. B. Watt, Salem, Ont., and has already taken seventeen first prizes, eight gold medals and two diplomas. He also captured the Eglington shield, valued at \$250, at the Toronto exhibition. He is alluded to as the "Bull King of Canada." For herd, bull and four females, the Binscarth takes first, Sharman & Sharman second. In Herefords, Sir Donald A. Smith and A. M. H. Walrond (who is the son of another knight, Sir John Walrond) draw swords with each other. The two knights carry off all the prizes, Sir Donald taking first for herd. In Ayrshires, J. W. Kastner takes all the prizes but one taken by J. D. Baskerville, Dominion City, which was for an aged cow. Mr. Alex. MacArthur shows a herd of Holsteins, four cows and two calves, one of the cows imported from Holland and the others from Southern Minnesota a short time ago. One of the greatest attractions of the exhibition is a herd of sixteen Highland cattle shown by Sir Donald A. Smith, imported from Scotland, amongst which may be noted the bull Alistair Raich, bred by E. S. Finlay, of Castle Forward, Scotland. These cattle are remarkable for their long shaggy hair, and Sir Donald's idea of importing them to this country was to

see what could be done in supplying the place of the now rapidly becoming extinct buffalo. They were imported two years ago.

The exhibit of grain, the great staple of Manitoba—although I was informed by a farmer on the ground that this was no great wheat country; the frosts and the dry season had discouraged him, and he expressed regret that he ever left Ontario, as he was certain he would have been worth a great deal more money had he remained there—naturally attracted great attention. One sample of the wheat weighed as high as sixty-seven pounds per bushel. It is rather noteworthy that the best variety of hard wheat was grown within fifteen miles of Winnipeg, Mr. Andrew Dawson, Headingly, taking the four first prizes for Red Fife, aggregating \$176. Souris district comes second. For White Fife Marquette takes first, and for White Russian South Dufferin shows up. The exhibit of vegetables was large, but scarcely up to last year. For best collection Donald A. Smith takes the diploma. The dairy products show a marked improvement over last year.

Army Horses for the British Market.

When Col. Ravenhill, whose article appears on page 332, was in this city buying up horses for the Imperial army, we asked him if he had procured any good specimens in this locality, and he replied that he had succeeded in getting a few of the very finest of the three classes suited for his purposes. We went to the stables and found some of the finest looking horses we had ever seen. We sent our artist to photograph them, and the accompanying outlines of the horses were taken from the photographs. The cavalry and the riding artillery horses having nearly the same outline, the difference being almost entirely in the weight, we only present the outline of the former.

The farmer should not think that these horses are only adapted for army purposes. Fig. 2 is as fine a specimen of a general purpose horse as we have ever seen, combining action and strength in marvellous harmony. The body is exceedingly compact, great weight being compressed into a small bulk, and the legs are clean-boned, muscular, and of medium length. Fig. 1, the cavalry horse, is an excellent specimen of a roadster, and, as will be seen by the illustration, has the proper build for action. The outlines are distinctly and cleanly marked, and the bone fine, but clean and strong.

Farmers who fix these illustrations in their eye, cannot fail to breed horses which will distinguish themselves in the show ring, and command remunerative prices in the leading markets of the world, as well as in the British market for military purposes.

In our next issue we will give illustrations of stallions by which the breeding of these classes of horses can be greatly facilitated.

It is to be deeply regretted that only five to ten percent of the horses in this Province examined by Col. Ravenhill and his associates have come up to the standard for army purposes. This fact proves that our scope for improve-

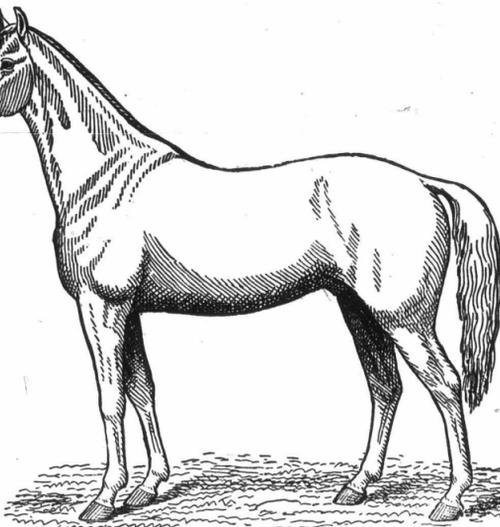
ment is very great. There is scarcely a limit to the demand in Britain for these classes of horses, and Canadians, if they study their true interests, can supply the market as cheaply and profitably as any country in the world. Our climate and our soil are specially well adapted to the breeding of all classes of horses.

The Herd Book Swindle.

Now that the recently amalgamated Shorthorn Herd Book has been proved, even by the confession of the manipulators, to be a "shame"

this standard, and large numbers of scrubs were registered in this book as well as in the Government herd book. The breeders, having resolved to live up to the standard in the Dominion Herd Book, were naturally compelled to reject large numbers of Shorthorns which were registered in the other books, and the loss sustained by many of our most honorable breeders may be very heavy unless they can elicit the sympathy of our farmers in their behalf.

The Dominion Shorthorn Herd Book is under the control of five members of the Board of Agriculture and Arts, united with the committee of sixteen members of the late Shorthorn Breeders' Association, so that the breeders have the controlling voice, but the new book is virtually controlled by the same influences as the old books, the secretary of the old Government book being the secretary of the new, and the secretary of the breeders' old book being the registrar of the new. The manipulators themselves attributed the cause of their disgrace to the lack of funds, and they still labor under the same difficulty. It is the history of all herd books that lax rules have been taken advantage of, and it is therefore considered by level headed farmers and breeders that the new herd book will be a refuge for all the scrub stock imported from Britain, a four cross Shorthorn grade being eligible for registration in the English herd book. It is urged the Dominion Herd Book will not accept



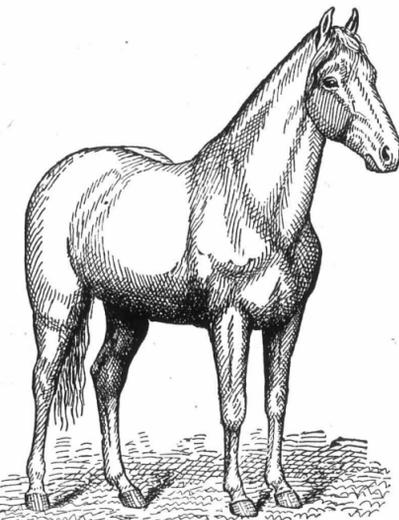
1—CAVALRY HORSE.

and a "disgrace," it is a timely question to consider what effects and tendencies these frauds will produce on our live-stock industry.

First, let us recapitulate the condition of affairs. The two herd books, the one under the

the short pedigrees, but we doubt if they can enforce the distinction, or will even attempt to do so. No importer of superior stock can compete with the importer of scrubs, for the price is regulated more by the pedigree than by the individual merit. In this manner it is quite possible that the Dominion Shorthorn Herd Book may be placed on a paying basis. A fifty cross, or any other number of crosses, will not be eligible for registration, if the animal is bred in Canada, no matter how good its individual merits may be. This, then, is the plan on which our Shorthorn breeders intend to establish "the purest Shorthorn herd book in the world."

Now we will yield to no authority in our appreciation of pedigree within the limits of its real worth, but there have been such grand opportunities for enhancing the price of stock by exaggerating the merits of pedigree, that the time has come when we should pause and reflect. Let the question be asked, Which is the more profitable, the pedigree animal without individual merit, or the unpedigreed animal with individual merit? Certainly everybody prefers the pedigree with the merit, but the class of animals which, as a rule, have been thrust upon our farmers has been the unmerited one, a large number of our farmers having been educated to the idea that the pedigree was all that was required for profit and for the obtaining of a passport to boom prices. A pedigree without merit is worse than useless, for the animal will be sure to breed its kind. When, in connection with these facts, it is considered that many of the best animals which have been distributed amongst our farmers have had spurious pedi-



2—ARTILLERY HORSE.

control of the Government and the one under the control of the Shorthorn breeders, amalgamated under the name and style of the Dominion Shorthorn Herd Book, adopting the standard that all stock eligible for registration must be imported or traced to imported stock. This was the standard of the breeders' herd book before the amalgamation, but they did not live up to

grees, it is time for them to take alarm. We have observed recent movements in the right direction, and we pledge ourselves to support them in the interests of our farmers and all other honorable men. At the recent exhibition of the Royal Agricultural Society in England, we saw "backs" which utterly astonished us—their build and their action surpassed anything we had ever seen—and on inquiry as to their breeding, we were told that they were of mixed blood, and that the Society had already published two stud books. These animals can only be registered on their individual merits; each must come up to a certain standard before it is entitled to be recorded.

In our own Province, a stud book for heavy draft grade horses has already been established on the same principle. We have seen numerous specimens of the stallions registered in this book, and a finer class of horses is hard to be found. If their offspring does not come up to the standard, it can not be registered.

Finally, we come to the action taken by the DOMINION FARMERS' COUNCIL in establishing a register for grade and native cows, based entirely upon individual merit. By this action many farmers who have paid fancy prices for spurious stock will find that they have superior stock in their old herds, and when these animals become known, their price will rise in proportion to their merits, and the buyer as well as the seller will be benefited by the increased price, while under the old method the fancy prices have gone too often into the pockets of the manipulators. The fact should now be recognized that the pedigreed bull must not be so much depended upon to build up the herd; the best cows should also be known, and the true principle is to raise bull calves from the best cows, one or more of the worst cows being weeded out every year. Under the principles adopted by the Council, the artificial distinction between milk, butter, and cheese cows is abolished, the cow that is superior in any one of these qualities being also superior in the other two.

With reference to beefing stock, a great difficulty is yet to be overcome. At present there is no satisfactory standard for judging the individual merits. The tendency to judge by fancy points, instead of judging for profit, has become too strong, and it will be difficult to remove this prejudice. It won't do to make the block the "crucial test," as is so much talked about, for this encourages the cruel and disgusting practice of "baby-beef" making. The points of any standard should be compatible with flesh fit for human consumption.

Pork Packing.

Col. F. D. Curtis, in the Rural New Yorker, has the following pithy article on this subject: There are special and rigid rules in force in connection with the slaughtering, curing and packing of all pork products. Every animal is inspected before slaughter, to detect any unsoundness or disease, as such unsoundness or disease would make it unfit for packing. The packer's own interest would not allow of his using any animal of doubtful soundness, as one piece of the same would spoil a whole cask or box in which it might be packed.

For the same reasons the hog must be perfectly cooled before slaughter, and so must the meat before packing. Each piece of meat is

inspected before packing and each shoulder and ham. Hogs are watered at the slaughter-yards, as it helps to keep them cool, and they are also fed. By being fed they are more quiet and not so liable to get heated. There are enough selfish reasons to insure care and comfort for hogs in the yards and at the slaughter houses, aside from all sanitary reasons. If hogs are not fed they consume themselves, or, in other words, draw for support on the internal stores of flesh and fat which support life. It is cheaper to give them food and so keep them from becoming wasted on the one hand and peevish on the other. The slaughtering is done rapidly and so is the dressing, with all the appliances to make haste and to do the work well. There are rules for cutting to conform to the demands of the trade, and some localities, like Cincinnati, have special forms.

The following are the different forms in which pork is cut and barreled. The most common form is called "mess pork." All of the others are made from a closer selection of the meat and more particular trimming and packing.

STANDARD MESS PORK should be made from the sides of well-fatted hogs, split through or on one side of the back-bone, an equal proportion being on each side, cut into strips of reasonably uniform width, properly flanked and not back-strapped. One hundred and ninety pounds of green meat, and, between March 1st and November 1st, 200 pounds, numbering not over 16 pieces, including the regular proportion of flank and shoulder cuts, placed four layers on edge without excessive crowding or bruising, shall be packed in each barrel, with not less than 30 pounds of coarse salt, the barrel to be filled with brine of full strength; or 30 pounds of coarse salt, and in addition thereto fifteen pounds of salt, the barrel to be filled with cold water.

PRIME MESS PORK should be made from the shoulders and sides of hogs weighing from 100 to 175 pounds net, to be cut as nearly as practicable into square pieces of four pounds each, the shank of the shoulder to be cut off close to the breast. One hundred and ninety pounds of green meat in the proportion of 20 pieces of shoulder cuts to 30 pieces of side cuts shall be properly packed in each barrel, with not less than 20 pounds of coarse salt, the barrel to be filled with brine of full strength; or 20 pounds of coarse salt, and in addition thereto, 15 pounds of salt, the barrel to be filled with cold water. There shall also be put into each barrel 12 pounds of saltpetre.

EXTRA PRIME PORK should be made from heavy, untrimmed shoulders, cut into three pieces; the leg to be cut off close to the breast, and in all other respects to be cut, selected and packed as mess pork.

LIGHT MESS PORK should be made from sides of reasonably well-fatted hogs; and in all other respects be cut, selected and packed the same as mess pork, except that as many as 22 pieces may be put in each barrel.

BACK PORK should be made from backs of hogs after the bellies have been taken off, cut into pieces of about six pounds each, and in all other respects to be cut, selected and packed in the same manner as mess pork.

EXTRA SHOULDER PORK should be made from heavy trimmed shoulders, cut in three pieces; the leg to be cut off close to the breast, and in all other respects to be cut, selected and packed in the same manner as mess pork.

EXTRA CLEAR PORK should be made from the sides of extra heavy, well-fatted hogs, the back-bone and ribs to be taken out, the number of pieces in each barrel not to exceed 14. In all other respects to be cut, selected, and packed in the same manner as mess pork.

CLEAR PORK should be made from the sides of extra heavy, well-fatted hogs, the back-bone and half the rib next the back bone to be taken out, the number of pieces in each barrel not to exceed fourteen, and in all other respects to be cut, selected and packed in the same manner as mess pork.

CLEAR BACK PORK should be made from the backs of heavy, well-fatted hogs, after the bellies have been taken off and the back-bone and ribs taken out, cut into pieces of about six pounds each, and in all other respects to be packed in the same manner as mess pork.

RUMPS should be trimmed with only enough taken off to make them neat and smooth; the tails to be cut off close, and in all other respects to be cut, selected and packed in the same manner as mess pork.

A correspondent of the Sentinel says: A Leominster farmer recently broke his horse of a "balky" freak in a very quiet and, as he claims, not a cruel manner. His horse is in excellent flesh and shows no signs of neglect on the part of his master. He drove him, attached to a rack-wagon, to the wood-lot for a small load of wood. The animal would not pull a pound. He did not beat him with a club, but tied him to a tree and "let him stand." He went to the lot at sunset and asked him to draw, but he would not straighten a tug. "I made up my mind," said the farmer, "when that horse went to the barn he would take that load of wood. The night was not cold. I went to the barn, got blankets and covered the horse warm, and he stood until morning. Then he refused to draw. At noon I went down and he was probably hungry and lonesome. He drew that load of wood the first time I asked him. I returned, and got another load before I fed him. I then rewarded him with a good dinner, which he eagerly devoured. I have drawn several loads since. Once he refused to draw, but as soon as he saw me start for the house he started after me with the load. A horse becomes lonesome and discontented when left alone, as much so as a person, and I claim this method, if rightly used, is far less cruel and is better for both horse and man than to beat the animal with a club.

In the way of ripening and preserving fruits the Hon. Marshall P. Wilder, president of the American Pomological Society, has experimented for many years, both with and without ice. He has adopted a house built in a cool, shady aspect, with the door on the north, and with a thoroughly drained and cemented cellar with small double windows that may be opened or closed at pleasure. In this way he is enabled to keep his late fall and winter pears until February or March in good condition. His late fall and winter fruits intended for long keeping are allowed to remain on the trees until frost is apprehended. They are then gathered with great care into bushel boxes and placed on the north side of his fruit house in tiers of boxes six or seven feet high, and covered with boards, where they are kept until the ground begins to freeze. They are then removed to the cellar, piled up in the same manner, with thin strips of boards or shingles between the boxes, until wanted for use, when the boxes are looked over and the most mature are from time to time taken out. In this way he keeps pears until March or April in perfect condition.

Garden and Orchard.

The Government and Our Forestry Interests.

Mr. R. W. Phipps, chief of the Ontario Bureau of Forestry, sends us a copy of his report for 1885, asking us to make extracts therefrom, to comment thereon, and to announce through our columns that it will be sent free to all who make application for the same.

Since receiving his letter, we called at his office, 233 Richmond street, Toronto, in order to interview him on the forestry question. We wished to ascertain what we had left undone in furnishing our farmers with the necessary information. We informed him that we had travelled over Canada and the United States, selected such trees as would flourish in our climate, and given illustrations of them accompanied by the necessary descriptions; that we had secured, at a great cost, the ablest and most practical writers on forestry; that we had made such selections from other sources as were practical and reasonable, and that we had even collected seedlings and nuts and distributed them far and wide. We informed him, moreover, that his best writers had been engaged by us, that his reports were void of illustrations, and did not reach one-fifth as many farmers as the *ADVOCATE*. All this we had accomplished at our own expense, and we could not see why our farmers should be taxed for having the same work repeated by the Government. Our writings, as a rule, had appeared in the right seasons, and had been impressed still more forcibly upon the minds of our readers by copious and expensive illustrations, and as they had made less impression upon the minds of our farmers than should have been expected, what prospect of success could he have looked for? If our writings had made no impression whatever upon the Government and their officials, could they expect that we should have been able to give the farmers a very terrible waking up?

We have never depended upon Government blue-book literature as a source of our inspiration, and we hope that the *ADVOCATE* will never fall so low as to yield to such a necessity. We shall always continue to resist every effort made by politicians to force farmers, by legislative enactments, to look after their interests in order to make place for office seekers.

However, Mr. Phipps is an enthusiastic forester, and has collected a vast fund of useful information; he administers his department much more economically than any other Government office with which we are acquainted, and his report is worthy of diligent perusal. He is painstaking in his investigations, writes a vigorous style, and exhibits a degree of conscientiousness only found amongst writers who are earnest in their work more through the love of it than through the love of gain.

We do not approve of the course the Government have taken in the administration of our forestry affairs. They attempt to prevail upon the farmers to do what they obstinately refuse to do with their own lands. They own many farms in Ontario on which they might carry out their own policy, and show a practical example of their sincerity, and there are many thousands of acres of waste lands in the Province which, if their own calculations in any

way approximate the truth, should be reforested for the benefit of future generations. Their neglect to do so may be laid to the charge of party politics. Our timber is a great source of revenue; when there is a slacking off in the sales of timber limits, our revenue suffers, and politicians attempt to make political capital out of the fact. Millions of dollars have been sunk in political corruption, and our farmers regard the fact with comparative indifference; whereas, if one-tenth of the sum were spent in the planting of trees in waste places for the benefit of succeeding generations, the political howl of extravagance would resound throughout the length and breadth of our land.

Cider Making.

October and November, according to climate, or when light frosts are occurring and the fruit is in all the perfection of ripeness, is the time to make a choice article of cider. Cider from late apples is of better quality and possesses more body than from early apples. It will also keep much longer. Cider varies in character, not only with the season in which it is made, but also with the quality of the apples. The best is made from apples which are somewhat astringent in their properties, the juice containing the largest percentage of alcohol. The strongest, as a rule, comes from apples which contain the least amount of juice. The different crab varieties, such as the Virginia, Hessian, Canfield and others, are chiefly esteemed as cider apples, as also are the Russet and Pippin varieties, although almost any sort of fairly-developed late apples makes a very good article. The general opinion seems to be that the best cider that reaches the larger markets is made at steam mills, where the fruit is crushed in large bulk, it being thought that, other things being equal, cider made in a large press keeps better than that made in the common sized country presses. But however that may be, one thing is certain, that a richer, fuller-flavored and better-colored cider is obtained when the pomace is allowed to remain in the vat a few hours to become a little fermented before expressing the juice. The color of the juice is influenced more or less by the management of the pulp. Different varieties of apples impart different flavors, but from any one variety two distinct flavors may be produced—one by expressing the juice before any change of color takes place consequent upon the pomace being longer exposed to the atmosphere, and the other before such exposure. In making what is called champagne cider, or where a light color is desired, the juice should be expressed immediately after grinding, and strained through a cloth in the barrel—whisky barrels being best. When these cannot be obtained, care must be observed to thoroughly cleanse the barrel with lime or wood ashes and hot water, after which, for greater security, the barrel should be well fumigated with rags dipped in melted sulphur, and, after igniting, dropped into the same.

If it is desired that the cider should be kept sweet, place the same into a kettle and bring to a boil, skimming off all scum as it rises. Then, while the cider is still warm, bottle it as you would fruit to preserve it, sealing the bottles with corks dipped in a composition of equal parts melted tallow and resin—the main thing in its preservation being to entirely exclude the air.—[Baltimore Sun.

The Apiary.

Wintering Bees.

BY W. H. WESTON.

The great apicultural problem is how to winter bees successfully? This is the principal question at almost every bee convention, and the problem still remains unsolved, many prominent beekeepers admitting that they know nothing about it, and are "all at sea" in reference to this critical period in the history of a colony of bees. Many beekeepers winter from one to two hundred colonies of bees, and some winter as many as a thousand, and have little or no loss, while others are not successful with less than half that number. Some of our most successful apiarists attribute their success to the feed they give their bees in the fall. Others, again, say that they have very little loss by wintering them in a cellar; while a large percentage of beekeepers all over the land winter out-of-doors in clamps. A cellar, to be a safe repository for bees, should be cool and dark; the thermometer should never register higher than 50°, nor lower than 40°, about 43° or 44° being the right temperature. The cellar should be well ventilated and the hives should be raised about as high as an ordinary flour barrel, so as to avoid bad gases or water should any appear.

To winter out of doors requires considerable trouble in the fall, but any trouble given is well repaid by the advantages gained in the spring. Some farmers leave the hives on the summer stands without any protection whatever, and should any of the colonies die, they are sure to say "they never have luck with bees" when a few days in the fall would have saved them from loss by protecting them from the weather. The best way to pack bees out of doors is to group the hives as much as possible, which can be done by moving them a foot or two each day till they are close together and in front of where you propose to build the clamp. Start by making a platform about six inches from the ground, which should be packed with straw or sawdust as tight as possible; leave space on the platform sufficient for the number of hives, also leaving two feet on each side of the end hives and the wall of the clamp, and the same space above the hives and the roof. Place the hives about six inches apart, and pack between them and all around the hives; before doing so, however, place a small strip of wood from the hive to the front wall of the clamp on each side of the entrances, and lay a board across so as to form a covered entrance from the outside clamp to the inside hive. The board must fit snugly, so that none of the packing can sift down and close the entrance. Do this on some warm day in the fall after the honey gathering has ceased. When the snow comes, it is advisable to slant a board over the entrances to keep the snow from closing them. Your bees will then be in good trim to stand a winter as cold as any we have had lately in Ontario.

An Illinois farmer sent a quantity of honey to a Chicago commission merchant, and in order to test the latter's honesty, visited the city and bought his own honey, paying 14 cents a pound for it. When the returns from the consignment came back it was represented that the honey had been sold for 12 cents a pound.

Mailing Queen Bees.

The trade between the United States and Canada in queen bees has grown to an enormous extent. Many beekeepers in Canada who are anxious to improve their stock purchase queens in the United States from specialists who make a living by raising queen bees for sale, and some of them do a very extensive trade. Canada also has some very large queen breeders, and some of the handsomest as well as best queens are produced in this Province. Many queens are therefore mailed both from Canada and the United States.

For the last six or seven years it has been the custom for postmasters at the lines to pass them without delay, but last May the custom was changed, and postmasters were ordered not to allow bees to pass through the mails to Canada, thus interfering with the regular trade. Mr. G. M. Doolittle, with other prominent beekeepers, at once set to work to see what could be done in the matter, and have succeeded admirably through the exertions and influence of the Beekeepers' Union, which body deserves great praise for the able manner in which they have handled the case. Queens with their attendants can in future be mailed without any danger of delay.

Marketing Honey.

A few hints in regard to marketing honey will not be amiss at this season. For the home market have everything clean and handy, so that when you bring it to market your customers can handle the packages without getting their hands sticky. If it is extracted honey, put it in glass bottles with a neat label, so that they can see what they are buying; it is also more attractive in that shape. Explain to your customers that the honey will granulate in cold weather, and explain at the same time that granulation is a proof of purity. Some beekeepers have been in the habit of shipping honey in barrels containing from 150 to 300 lbs. These packages are too large to be handled easily. The best thing for the purpose is pine kegs holding not less than 50 lbs. or more than 120 lbs. Dealers can often dispose of a small package where they could not touch a large barrel. Always be sure that you are dealing with responsible merchants when it is necessary to ship your honey away.

Prof. A. J. Cook, of the Michigan Agricultural College, has been making some very interesting investigations, and has proven that a queen bee will, at times, lay in a single day enough eggs to overbalance her own weight.

Honey is an excellent palliation in coughs, colds, sore throat, baby sore mouth, and early stages of diphtheria.

A correspondent of the Bee Journal writes that a brood of chickens were in the habit of frequenting the shed in which he kept his bees. The bees stung all the dark colored ones to death yet did not molest the light colored chicks. Why the preference? The editor writes that he has frequently spoken of the advantage of wearing light clothes among the bees. We wear black bee veils because we cannot see clearly through any other color. Woolly, fuzzy and dark materials are objected to by bees. A man with a plug hat on rarely gets stung unless by a bee that is trying to "shoot the hat," aims too low and hits the face by mistake, while a companion at a suitable distance is perfectly safe.

Veterinary.

Training Horses to the Saddle.

The constantly increasing demand for trained saddle horses will cause the following directions for training to be read with interest by a large majority of our readers. The selection is from a work on the subject by the noted expert rider and trainer, Mr. E. L. Anderson:

Nearly every horse finds certain forms of resistance easier than others, and this is due in a great measure to the conformation of the animal. A horse with a stiff, unyielding jaw, and a horse with a tender mouth, will be apt to rear; the first because it opposes the hand until the bit hurts it, the second because even a slight pressure of the bit is disagreeable. A horse with a "roach back" is more likely to plunge than one that has a depression between the withers and the croup. As a rule, the horse with a "dished" face is nervous, the horse with a Roman nose is headstrong, and the horse with a small protuberant eye is suspicious and excitable. Horses that are high and strong in the fore-hand are more apt to rear or grow restive than horses which are high and strong in the hind-quarters. The latter will usually resist control by bolting or by kicking. The reason for these kinds of misconduct is that in the horses first described the weights and forces of the fore-hand are thrown back, and that part is made lighter; while, in the case of horses with high and strong hind-quarters, the weights and forces are thrown forward, and the fore-hand is hampered while the croup is lightened. The disposition of the horse will usually be influenced by its conformation; certainly its resistance will in most cases be governed by its conformation.

A well balanced horse, that can obey the demands of its rider with more ease and comfort than an ill formed one, is less likely to show vice, and generally has a better temper than the horse that is ill balanced. The first duty of the trainer, then, should be to direct his work with reference to the conformation of the animal he has in hand, and by changing the carriage of the horse, to correct in effect its faults of form, so that it may not find difficulty in obeying the hand and heel of its rider.

Whatever may be the form of a horse, it must be supplied in the neck and jaw, so that it will answer to the bit at the lightest pressure upon the bars of the mouth, and will raise or depress the head at the demands of the hand. It must also be taught to answer the pressure of the rider's heels without reluctance or struggling. The horse that is too high in the fore-hand can then be taught to move with its head so lowered, and its hind-quarters so well brought up, that the weights and forces may be brought to a point of balance under the rider, so that the movements of the animal can easily be directed. As long as the jaw yields to the bit, and the croup answers to the heels, the horse will neither rear nor grow restive; and it is a mere question of time and patience to confirm the horse in this obedience, for, as I shall show, the impulses of the horse are cultivated in the direction of this obedience, and it answers to bit and spur instinctively.

The horse that is low in front and strong and high in the hind-quarters will be made to move with its head carried up, by which means the weights and forces of the fore-hand are carried back, while the hind legs will be brought under the body to lower the croup, until the weights and forces of the extremities are brought to a point of union and balance under the rider, and the horse will have no difficulty in answering the demands of its rider. It would be impossible for a horse so trained to bolt or to kick, for the rider can bring the hind legs of the horse under the mass, and with the hand throw back the forces of the fore-hand, and so bring it to an instantaneous halt from any pace.

I wish, in a few words, to explain what I mean by cultivating the impulses of the horse in the direction of obedience, for in that lies the whole success of the school method. The first impulse of the horse upon feeling the pressure of the bit against the jaw is to yield; the second

is to oppose the pressure. The first impulse of the horse on feeling the touch of the spur is to draw forward the hind legs; the second is to extend the flexed hind legs. By carefully-conducted lessons these first impulses, the instinctive muscular actions of the animal, are cultivated, until the hand controls and directs the fore-hand, and measures the propulsion from the hind-quarters. In ordinary training, as must occur to any reader, the second impulses are unwittingly cultivated to the detriment of the first impulses, for most horses wait for a more or less forcible reminder from the bit, and spring forward at the touch of the spurs.

Doubtless the greater number of horses that are in daily work were trained without reference to "the point of balance of the forces," but all causes that can be ridden, whether intentionally or not, are to a greater or less extent taught obedience through their instinctive yielding to the aids; and it can not be contended that those broken by rough and crude modes are under the same control as that exhibited by horses which are prepared by discipline and an acquired equilibrium to instinctively obey every demand of their riders.

One is often called upon to ride a difficult horse before he has had an opportunity of training it sufficiently to compel its obedience, and under such circumstances I think the following suggestions may be of value. It is of the first importance in riding a vicious horse to keep it moving, never permitting it, when showing signs of temper, to come to a stop. If a "fresh" horse makes a few curvets or leaps, the rider should not at once confine the head too closely, but, holding the reins so that the animal can not get its head down, make it advance, and then gently bring it back to a quiet pace, and afterwards increase the speed if it be desirable. To check or to punish the horse at the moment it is restless will induce the animal to rear or to plunge. If a horse rear, the rider should release the tension of the reins and press his legs against the animal's sides at the moment the fore-hand comes down, to drive it forward; but the spurs should not be applied with severity, for that will not cure the horse of rearing, and may add plunging to its vices. A horse can be cured of the vice of rearing only by the suppling of the jaw. If a young horse rears without malice, as many do in their early lessons, a light tap on the neck and a harsh word from its master will often prevent a repetition of its action, but a horse should never be punished for vice. For many years I have kept my horses at riding-schools where the masters undertook to break the horses of their patrons from bad habits. I have seen all kinds of methods employed, and I have myself tried all, and I never knew severity to succeed; but I have often seen horses that were dangerous to ride made safe and quiet by a kind and strict discipline. A really vicious horse works itself up into a rage, and punishment can do nothing more than to increase the violence of its madness. If the horse can not be brought to know that the rider will not hurt it, the animal must remain incurably vicious. If the rider can obtain the confidence of his horse, he may then cultivate its obedience, until to yield to bit and spur becomes instinctive; but I believe that there are some horses which can not be broken from bad habits, and any of them are liable to relapse into vice through injudicious treatment.

Most young horses plunge, more or less violently, for the first three or four times they are mounted. If at this time the animal is not carefully ridden, plunging may become a vice. When a horse plunges it must be driven forward in any pace or action that it will take, the rider giving it a loose rein, but taking care that it does not get its head down, for the horse will then stop in spite of all the man can do, and probably unseat him. I mean by giving the horse a loose rein, that it should not feel the restraint of the bit, but if the animal lowers its head, the rider should give one or two sharp pulls upward to elevate it. When the horse goes forward for a few strides, the rider should take a light tension upon the reins and gently regulate the pace and the direction. Many horses will plunge if mounted immediately after being saddled, and it is a good rule to have all

horses saddled at least half an hour before they are used. In winter the bit should be warmed before being put on the horse, and it would be an excellent plan to have all bits covered with hard rubber or some other non-conductor of cold. If a horse kick, its head should be elevated by short, sharp pulls upon the rein, from below upward, and the animal driven forward, the rider correcting the fault by speaking harshly. Whip blows will almost invariably confirm the horse in the vice, and will teach the animal to cringe and start at any movement of the rider. A bolting horse may be prevented from indulging in its vice by the rider applying both spurs, leaning back his body, and raising his bridle hand. I believe that any horse may be brought from moderate speed to a halt without any previous special training, by this method. When a horse has broken away from all control, and madly gallops on with his unwilling rider, there is nothing to be done but to make occasional efforts to recover command of the horse's mouth, for by a steady pull the rider would too soon exhaust himself. If there be a "rough-and-ready" cure for a runaway horse, which I doubt, it consists in riding it to a stand-still. But a determined rider prevents the horse getting away with him by using the spurs as I have directed. If a horse "ahies" at an object, the most injudicious thing a rider can do is to make the animal face it. By turning the horse's head away from the object, and pressing in his opposite heel, the rider can compel the horse to pass anything, and the bent position in which the horse is placed will prevent it going in the direction it wishes—that is, away from that of which it is afraid. After the animal has been made to go by the object, the rider should calm it by caresses and kind words, and in time it will lose all fear of strange sights, for, having retained confidence in respect to one thing that has caused it fear, it will be less shy of others that are strange and terrifying. A horse may be taught in a few lessons to face flying paper, banners, etc., if it be fed on carrots laid upon a piece of paper, and be gradually accustomed to have the paper afterwards flourished in its face, and then placed upon the ground for it to walk over. I may say here that an unwilling horse may be led almost anywhere if the man will walk quietly forward with his back to the animal.

Canadian Fruit at South Kensington.

One of the most comprehensive displays of Canadian fruit ever made in Europe is now on view in the conservatory of the Colonial and Indian Exhibition. Contributions are made by every province of Canada, from Nova Scotia and New Brunswick to Quebec and Ontario, and even by Manitoba and British Columbia, the greater part of the exhibits having been collected, under the direction of the Canadian Government, by Professor William Saunders, of the Western University, London, Ontario. From Ontario and Quebec excellent specimens are shown of the varieties of apples mostly shipped to British markets, and the body, texture, and flavor of these must command general admiration. The pears are specially noteworthy for size and color; while an excellent display of vegetables, and even Canadian outdoor grapes, is made. The Nova Scotian display comprises some fifty varieties. The British Columbia and Manitoba varieties are also interesting as coming from parts of the Dominion but little known in England for their fruit growing capabilities. It is, moreover, important to note that the shipment of many of the early soft varieties of fruits now shown was made from Canada in refrigerators, and the perfect condition in which they arrived is considered to fully establish the value of this means of transit.—[Farmer's Gazette, Eng.]

Correspondence.

NOTICE TO CORRESPONDENTS.—1. Please write on one side of the paper only. 2. Give full name, Post Office and Province, not necessarily for publication, but as guarantee of good faith and to enable us to answer by mail when, for any reason, that course seems desirable. If an answer is specially requested by mail, a stamp must be enclosed. Unless of general interest, no questions will be answered through the ADVOCATE, as our space is very limited. 3. Do not expect anonymous communications to be noticed. 4. Matter for publication should be marked "Printers' MS." on the cover, the ends being open, in which case the postage will only be 1c per 4 ounces. 5. Non-subscribers should not expect their communications to be noticed. 6. No questions will be answered except those pertaining purely to agriculture or agricultural matters.

Correspondents wanting reliable information relating to diseases of stock must not only give the symptoms as fully as possible, but also how the animal has been fed and otherwise treated or managed. In case of suspicion of hereditary diseases, it is necessary also to state whether or not the ancestors of the affected animal have had the disease or any predisposition to it.

In asking questions relating to manures, it is necessary to describe the nature of the soil on which the intended manures are to be applied; also the nature of the crop.

We do not hold ourselves responsible for the views of correspondents.

Remarkable Specimens of the Niagara Grape.—It has been often said that Lindsay is too far north to grow grapes. I herewith send you a few clusters of "Niagara" as a sample of what can be done here. Please accept the same with the compliments and kindest regards of the grower.—THOS. BEALL, Lindsay, Ont.

[Accept our thanks for your specimens; they are really delicious; the appearance is highly attractive; some of the clusters weigh nearly a pound, and we counted 17 grapes on one bunch—which must dispel all doubt as to the adaptability of your part of the Province for grape growing. This season has proved, in many parts of the Province, that the Niagara grape has come to stay. We wish you success.]

Permanent Pasture Hobbyists.—No one can read Prof. L. B. Arnold's article on permanent pastures in the October number of the "ADVOCATE" without coming to the conclusion that there is a great deal of exaggeration in Prof. Brown's permanent pasture hobby. As a dairyman depending on the quantity of cream from the farmers, and knowing the loss sustained by factorymen through want of pasture in dry weather, I hope the farmers will not be carried away with the idea that permanent pastures will do away with the necessity of providing some kind of a fall crop for the cows. One of my patrons has a piece of permanent pasture which did remarkably well last year when we had frequent rains, and pastures of all kinds were abundant. This year it just kept at par with others and no better, notwithstanding the extraordinary report from the Government Farm. At one time I put implicit confidence in anything that came from that institution, but my faith is materially impaired since I became more acquainted with some of its workings. Last winter, among the other peculiarities, Prof. Brown preached over the country in connection with dairying (a business in which he has yet to serve his apprenticeship); he condemned the tin lined tubs as not a fit package to put butter in. This year I heard him recommend them to some farmers. I asked him how it came that he condemned them last year and is now so thoroughly converted to them. Well (to use his own words), "it all came from Teeswater," they were misrepresented to him. Now if we keep the Prof. in that institution for the purpose of spreading tattle-tales over the country, we would be far better served by employing some old woman who could do that work more effectually than Prof. Brown. His ideas about selling milk were also from hear-say, and his mistake in this respect he must now also acknowledge. At one of his meetings last winter, when criticized, he answered that he was not peddling patent medicines, but solid facts. Well, if these are solid facts, I pity the man that believes them.—M. MOYER, Georgetown, Ont.

[We have also no faith in Prof. Brown's reports, but it sometimes appears from Mr. Moyer's style as if he has a spite against the Model Farm, and is not therefore in a position to criticize it fairly. We often write critically, but not spitefully. Prof. Brown himself must acknowledge that he is neither a practical nor a scientific dairyman, and should be pitied rather than abused. The government would

deserve credit for appointing practical men amongst our own people as professors, even if they were not scientifically capable, providing they manifested a determination to master the details of their departments. We believe the government has made an excellent choice in the appointment of Mr. Robertson as professor of dairying, but we will not commit ourselves until we see his reports. His system is quite different to Prof. Brown's, so that those who have learned the Prof. Brown's system will now have the pleasure of unlearning it.]

Interesting Notes from Manitoba.—We have had up to the time of writing an exceptionally dry season, and as a rule the crops are very light, the best that I have heard of in this locality being fourteen bushels of wheat to the acre from the threshing machine, other crops varying from nothing up to that. Very many have no oats or barley at all; there was not even moisture enough in the soil to cause the seeds to germinate; roots and garden stuff generally are very scarce. My own experience has been that I spent three dollars in garden seeds in the spring, and have not grown even a cabbage. The hay crop too was very light; in places where during others years the grass has been abundant, this year you could chase a mouse over the almost barren prairie. And to make bad worse the prairie fires have been more numerous and destructive this year than usual, very many farmers losing very heavily in buildings, stock, grain and hay. I see from our papers here that in different parts of the country hundreds of tons of hay have been devoured by the greedy flames. Prices on our local market are as follows: Wheat, No. 1, 52 cents; barley, no quotation; oats, 20 cents; potatoes, 25 cents per bushel; hogs, 3 and 3/4 cents per lb., live weight; beef about the same price, and difficult to sell at that for cash. Would you kindly inform me where, and at what price I could get a good book on the horse, also containing some practical advice as to treatment in case of accident or diseases? Skilled advice is very expensive and not always obtainable.—R. C. B., Stodderville, Man.

[We had the books you need in our sale list, but we have none on hand at present. We will advise in our next issue.]

Kentucky Blue Grass.—Please to let me know how Kentucky Blue Grass would do in Ontario. Is there any grown here? Is it better for hay or pasture?—J. M., Bond Head.

[This grass, also known as Blue Grass, June Grass etc., is our native grass, and is well known all over the Province. You must have seen it on your own farm. It is best adapted for pasture.]

A Meritorious Breed of Cattle.

SIR.—In your October issue you mention with approbation the black Welsh cattle, which are a hardy, short-legged, low built, heavy fleshed breed, in color mostly black, sometimes intermixed with white; but we also find dun, grey, red, and brindled red and white prevalent. Though not so tall and noble looking as the Shorthorn, yet many steers have been fed which at three and three-quarter years weighed over a ton (English weight).

Major Platt, of Bangor, N. W., exhibited one at the various fat stock exhibitions a few years ago, which weighed, at 4 years, over 2,600 lbs., and was sold to kill for \$120. This gentleman frequently exhibits animals which run Shorthorns closely for first place.

The cows are good milkers, giving a good quantity of milk of superior butter producing quality; it is not uncommon to find one giving from 18 to 24 quarts a day for 8 months after calving. I have known instances of 2 year heifers producing 14 to 18 quarts daily until within six weeks from second calf, and this without any feed but grass in summer and hay and roots in winter.

We find the steers feed equally as well as Shorthorns when stalled, while they will show far better results on pasture. They are far hardier; you will find them grazing away peacefully when the Shorthorn or the Hereford will be crouching in the fence corner. Neither does the heat of the sun produce the same effect on the dull, cold colors, and thick, rather warm hide of the Blacks, as on the other finer skinned and brighter colored cattle. It seems rather remarkable that a breed possessing characteristics apparently unusually adapted to the requirements of this climate have not been imported here long ago. But Welshmen are a home staying, home loving race, rarely wandering far from their birthplace, though persevering and industrious.

A YOUNG WELSHMAN, Brantford, Ont.

The Household.

Take Care.

1. Take care of your health. A sound mind depends largely on a sound and healthy body; and without good health you are not likely to have vigor or cheerfulness, or courage for duty, or success in life. Do all in your power, then, to have and keep good health.
2. Take care of your time. It is one of the most precious of God's gifts. Misimproved, it is loss, injury, ruin; rightly used it is success, character, influence, life to the intellect, life to the soul. Know, then, and constantly remember the value of time. Seize and improve every moment as it passes. No idleness, no waste, no procrastination. Never put off to the future what may be done now. Count as lost the day in which you have made no improvement or done no good.
3. Take care as to your associates. Not only will you be known by the company you keep, but you will soon become like it. "He that walketh with wise men shall be wise, but the companions of fools shall be destroyed." Not only, then, shun the society of the idle, the profligate, the abandoned, the vicious, the Sabbath-breaker, the profane, the sneerer at sacred things, but seek the society of the wise and good.

Several Things Worth Remembering

It is said that salt should be eaten with nuts to aid digestion. That milk which stands too long makes bitter butter. That rusty flat-irons should be rubbed over with beeswax and lard. That it roasts you in sewing to change your position frequently. That a hot strong lemonade taken at bedtime will break up a bad cold. That tough beef is made tender by lying in vinegar water. That a little soda will relieve sick headache caused by indigestion. That a cup of strong coffee will remove the odor of onions from the breath. That a cup of hot water drunk before meals will prevent nausea and dyspepsia. That well ventilated bedrooms will prevent morning headaches and lassitude. That one in a faint should be laid on the flat of his back, then loosen his clothes and let him alone. That consumptive night sweats may be arrested by sponging the body nightly in salt water. That a fever patient can be made cool and comfortable by frequent sponging off with soda water. That to beat eggs quickly add a pinch of salt; salt cools and cold eggs froth rapidly. That the hair may be kept from falling out after illness by a frequent application to the scalp of sage tea. That you can take out spots from wash goods by rubbing them with the yolk of eggs before washing. The white spots upon varnished furniture will disappear if you hold a hot plate over them.

The growth of the personal character is largely moulded by the gradual recognition of moral laws, by the sense of the mystery evolved in the inevitable struggle between duty and pleasure.

Infinite toil would not enable you to sweep away a mist; but, by ascending a little, you may often overlook it altogether. So it is with our moral improvements; we wrestle fiercely with a vicious habit, which could have no hold upon us if we ascend into a higher atmosphere.

Family Circle.

COURT BEAUCOURT'S TREASURE.

A Story in two Chapters.

BY THE AUTHOR OF "ONE SPRIG OF EDELWEISS."
CHAPTER THE FIRST.

To begin with, Charlie and I married for love. I was the youngest of six sisters, and though papa had a comfortable income, it required the whole of it to feed, clothe, and educate six girls; and though we lived handsomely, we certainly lived up to the last half penny of our *rentes*, as the French say. Consequently there was not much left for marriage portions, particularly as I, though the youngest, was the first to marry; and every spare penny was required for the demands of five girls all of whom were out in society, and rather verging upon the "sere and yellow."

So I came to Charlie without a possession in the world, beyond my trousseau, with which to bless myself: while he, dear fellow, the last of all the Beaucourts, was, as he expressed it, "rather better than a beggar," the worldly goods with which he had endowed me consisting of the utterly neglected estate and mouldering old house of Court Beaucourt, and an income of rather more than two hundred a year.

For the first eighteen months we lived in a sort of paradise. "Taking no thought," like the birds; finding quite sufficient occupation in roaming all day in the wild park, or exploring the gloomy old rooms of the Court, perfectly happy and engrossed in each other.

But at last there came a day when I awoke to the fact that people could not live on nothing, and that that was about the state of our finances; also that the butcher and baker at Holme Beaucourt did not seem particularly anxious to supply us with bread and meat without remuneration, and were even so inconsiderate as to hint about the payment of past debts. I think I had an idea that pretty dresses and rich food, and all that sort of thing, came spontaneously; at all events I had no experience of the want of money, nor much knowledge of the world, for I was only eighteen (Charlie, looking over my shoulder, remarks that I need hardly write that so contemptuously, since it all happened "only" two years ago; but I dare say I was innocent even beyond my years); and Charlie was not much better; so the awakening was a great shock, and for two or three weeks we were plunged into the deepest despair, mourned over the supine behaviour of Charlie's guardians in never having had him taught the means whereby to earn his bread, and made ourselves altogether wretched; after which, feeling that a few weeks more such misery would shorten our lives and consign us to an early grave—or *two* early graves, as Charlie more correctly expressed it—we began to grow more resigned to the inevitable, and to keep up our spirits in spite of everything—a much more easy and agreeable proceeding than yielding to despair when one is eighteen, and one's husband twenty-three.

And here I must just pause to say that the poor dear fellow added a good deal to the unhappiness of those miserable weeks by his own self-reproaches. He had suddenly become aware of the rather crushing fact that he had married a wife without the means of keeping her, and was divided between denunciations of his own beastly selfishness (as he was pleased to call it) and wonder that papa could ever have been so blind as to trust me and my happiness to the keeping of a zeuteel pauper. To tell the truth, I have privately thought that my respect ed father was only too glad to get one of his six daughters married off at any price, and perhaps thought my lot as Charlie's wife could hardly be more precarious than it already was as sixth daughter of a half-pay major-general with no private income whatever. However, be this as it may, I was only thankful he had never thrown any obstacle in the way of our happiness; and I at last succeeded in convincing Master Charlie that I would far, far rather starve with him than live in luxury without him, and after that money troubles seemed comparatively easy to bear.

Attached to the Court there were two old servants whose ages were commonly reported to be something fabulous, and whose presence about the place dated far back beyond the memory of man—"man" being Charlie. For beings so ancient they were remarkably hale and vigorous; they had served Charlie's great-grandfather, and were simple enough to fancy that the honour of serving a Beaucourt far outweighed any such paltry considerations as wages—which indeed they could not have enjoyed for the last twenty years—and so had clung to the Court through all its reverses, and now ruled it and us. Steven, the old man, acted as butler, gardener, and general factotum; while Mrs. Susan—who I suppose never had a surname, as I never had the pleasure of hearing it—was housekeeper, cook, housemaid, and general domestic; for to have allowed a Beaucourt to do the lightest piece of work would, in her eyes, have been the crowning stroke of humiliation. She never wearied of telling me long tales of the splendours of departed Beaucourts—though I very often wearied of hearing them—and seemed so *au fait* with all their doings and sayings that I sometimes inclined to believe in the popular report of her age, and think she must have served the first Dame Beaucourt of them all.

This same Mrs. Susan came upon me one gloomy afternoon in November, as I stood in the picture-gallery wondering whether any of those great grand-mamas of Charlie's were ever so worried about their day bread as was. I had just informed them wraithfully that they were a set of simpering idiots

to stare down at me in that smirking, imbecile way, when I heard a step, and turning, rather startled lest my impolite remarks had brought one of them down out of her frame to avenge the insult, I saw Mrs. Susan.

"Ah, Mrs. Charles, they're a grand family, the Beaucourts," said she, nodding her grim old head at the rows of pictures, and causing thereby the border of her mob-cap to flutter in a ghostly manner.

"Were they, Mrs. Susan?" I answered calmly, not particularly affected by a fact which I had heard some fifteen times a day since I made her acquaintance.

"They are, as you were pleased to remark," she retorted, with additional grimness.

I was rather provoked, as I had not remarked anything of the sort, and could not very well see in what the grandeur of the present Beaucourts consisted; so I said, rather mockingly—

"To be sure, Mrs. Susan! we Beaucourts of to-day are overpoweringly grand, I admit. The only pity is, our grandeur does not appear to strike the vulgar public."

"I was speaking of the Beaucourts, Mrs. Charles," said she, with dignity; "not of those persons who are only Beaucourts by alliance."

And as this unexpected home-thrust quite rendered me dumb, she continued severely—

"And if they are under a cloud just now—and I must say you should be the last person to taunt them with that, Mrs. Charles—they are a grand family still, and will hold up their heads with the proudest in the land when once the Treasure is found."

"What treasure?" I cried, forgetting in my excitement that this odious old woman had dared to say I was not a Beaucourt. But she was gone before I could stop her; and going down-stairs in high dudgeon, I found dinner ready and Charlie waiting.

Out of the dozen public rooms at the Court, we had chosen this little faded boudoir for a dining-room and drawing-room combined, partly because it was in better repair and less ghostly than the others, and partly because—oh, poverty-stricken Beaucourts!—it was smaller and required less fuel to warm it.

The fire-light and candle-light danced together over the damask hangings that had once been blue, and flashed on the carved furniture that was black and shining with age; it lit up Charlie's brown moustache as he sat by the fire, and rested with a cheerful glow on the dinner-table, with its fine old damask cloth, its old-fashioned silver, and delicate old china—a bit of which would have rejoiced the heart of a modern aesthete—which we used every day, because we were too poor to buy another set.

The table certainly needed all its china and silver, for it held very little else indeed. I looked longingly at the two small mutton chops on the great dish, from which Steven took the cover with as grand a flourish as if it had contained a boar's head at the very least.

"The smallest chop for me, dearest," I said quickly. "I am not hungry to-night, and—I don't think mutton agrees with me."

Charlie looked at me with a vain attempt at sternness. "You wicked child!" said he in a voice which tried to be severe and failed utterly. "Where do you expect to go if you tell such fibs? Don't you suppose I can see through you?" and immediately put the largest chop on my plate.

"Do you know," I said, "I am beginning to think that perhaps excursions through wet grass, and over sharp rocks, and all that sort of thing are not conducive to the preservation of one's wardrobe. I haven't a decent dress left of my trousseau; they're all gone to rags but this one, and it's doing the best it can to follow their example; while that coat and it's your last, as I very well know—is more comfortable than it was, but less elegant. However, I've one comfort: when these things go we have a last resource. Do you know there are wardrobes, and cupboards, and chests upstairs filled with the faded vanities of your male and female ancestors? And upon those we can fall when our present garments are no more. I assure you I am most anxious to begin. You never saw anything like the velvets and brocades!—and such lace! yellow as saffron!"

"Perhaps you might wash it clean again," suggested Monsieur Charles.

"Perhaps I might! Did anyone ever hear the like of that? How like a man! No, my dear sir, I shall not wash it clean again, since its dirtiness is its especial charm. Have you finished your chop? That's right, for I've something to impart which I would not tell you before lest it should spoil your appetite. Did you enjoy that chop, dear? I hope so, for I fear much it's the last you will ever eat."

Charlie laid down his knife and fork, and regarded me attentively.

"Because," I continued, "Mrs. Susan came to me this morning with those very chops off which we have just dined, and said, with her usual severity, 'If you please, Mrs. Charles, Mr. Jones has brought these, and says they're the last you'll have from him till his bill's paid, and that pretty quick.'"

"And what did you say?"

"I said, 'That is very rude of Mr. Jones, Mrs. Susan, and you may tell him so for me; and also that until he much improves his present style of address, I must deny myself the pleasure of receiving his messages.'"

"No! did you really?—How jolly of you! What did Mrs. Susan say to that?"

"She said nothing at all, but she walked off with such a delighted face. Horrid Mr. Jones!"

"Brute! What a pity it isn't a few hundred years ago, and I could have called my faithful band together and ridden down to my village of Holme Beaucourt to chastise him for his impudence. Ah! those were jolly times!"

"Holme Beaucourt used to belong to the Beaucourts, didn't it, Charlie?"

"Yes and all the country round, as far as you can see; but an ancestor of mine—that beggar with the

scarred face in the picture-gallery—broke the entail and sold all but the house and park, and the next heir but one entailed what was left. I believe I would sell the whole place to-morrow and emigrate, but my heir, who is about my fifty-second cousin, you know, won't hear of smashing the entail; so there's no way, that I can see, of raising a farthing, and what we are to do Heaven only knows."

"Yes, but if that rambling ancestor of mine had not sold his paternal acres, we should be vastly better off to-day. The soil has run out, but it only needs a little doctoring to be as good as any in the kingdom; and if I had it now, and a few thousands to lay out on it, I should make my fortune in a few years. However, it's no use speculating what I would do." And my poor boy stifled a sigh.

Steven entered and removed the dinner-things, with a pomp and dignity which were truly ludicrous; Charlie sat over the fire, deep in meditation; and I wandered around the room, looking at the faded old "Books of Beauty," with their pictures of simpering females in décolleté dresses; and stopping to draw my hand over the yellow keys of the old spinnet, on which Charlie's great-great-grandmamma might have performed her prime pieces of music to the admiration of some attendant cavalier, who probably did not laugh disrespectfully as I did at the faint jingle.

Presently I grew tired, and wandering to the fireplace, I threw myself down by Charlie's feet. He put his arm around me, and we stared together into the red coals.

"Charlie," I said, at last, resting my head against the brow velvet sleeve that was growing so very shabby, "Charlie, Mrs. Susan made rather an odd remark to-day. She said the Beaucourts would hold up their heads again when once the Treasure was found. What in the world did she mean?"

CHAPTER THE SECOND.

Charlie absently ruffled his hair with his hand. "I suppose she meant the old tradition that she and most of the people about here believe in, that there is treasure hidden somewhere," said he, rather indifferently, for he was busy slipping my wedding-ring—the only ring I had—up and down my finger.

"A tradition!" I cried, starting up, "oh, do tell me, that's a dear good boy; you know I love stories."

"Very well," said he: "but you must not expect anything romantic: it is only an old tale. The story runs that Charles de Beaucourt, when he went to join the Royalist army under Charles the First—"

"De Beaucourt, Charlie?" I asked.

"Oh, yes; didn't you know we were De Beaucourts till the Civil Wars, and only lost the "De" in the Commonwealth? Well, this fellow went to join the Cavaliers, and before he went he hid all his immense wealth—there had been some freebooting with the Spaniards a generation or two back; where, I forgot, I'm sure—and the family jewels in a secret hiding-place known only to father and son, and getting killed at Edge Hill, and the estates passing to another branch of the family, it has remained hidden ever since. They say that we Beaucourts will never prosper, and that there will never be a direct succession, until the Treasure is found; and certainly we have come down-hill at a gallop, and the place has never gone from father to son, but skipped about wildly. It came to me from my great-uncle, and it's going, as far as I see at present, to my fifty-second cousin, my dear."

"Then you believe the story," said I, in great haste, "you believe it, Charlie?"

"Not I! I believe it's only a delicate way of saying that he melted it all down and sent it to whatever was the equivalent of his 'uncle' in those benighted days, particularly as the great punch-bowl which Edward the Third bestowed upon Brabant de Beaucourt, and which he holds in his picture, disappeared about the same time. There is an idea among the people, however, that Cavalier Charles hid the treasure in one of the rooms at the Court."

"Oh, Charlie, which room? I have never seen it, have I?"

"No, because it is a room in the old part of the Court—the oldest part of all, where the Norman keep was. It is shut up now, and falling to bits for want of the repair we can't give it."

"Oh, my dearest boy! why has nobody ever looked for it?"

"Ah! but they have; scores of times. Everybody looked, and the furniture in the room was half smashed, and lately that part has been said to be haunted, and so is shut up. I don't think it's been open these twenty years. I never remember to have seen it, and I've been here every holiday time since I was born."

"But we might find it. Do let us look, anyway. Promise that you'll show me the room to-morrow—promise, Charlie, do promise."

"Very well, if you like. I have known where the key has been kept ever since I knew anything; though I don't know what good it will do you."

"If we only could find it!" I sighed, pressing my hot cheek against his knee. "What wouldn't we do with it? We'd buy back Holme Beaucourt and all the old lands."

"And repair the Court, and do it all up swell."

"Yes, and travel, and have no end of servants, and horses, and everything jolly. Is there no clue to the place where it is hid?—no papers or anything?"

"Not the least thing, except an old rhyme that may have something to do with it; it's certainly very circular—"

"When the doe and the wolf shall come together, Then shall be found Court Beaucourt's Treasure."

"What do you suppose that means? It's a very bad rhyme, 'together' and 'treasure.' I should think

the ancestor who invented that must have pronounced it 'together.'"

"I always looked upon it as a bit of the severest sarcasm, the doe and the wolf coming together being like the lion lying down with the lamb of the stars falling—in other words, never. I fancy the wolf may have something to do with the wolf's head being the Beaucourt crest."

"And oh, Charlie! you must remember that a white doe is one of the charges on papa's coat-of-arms—the Aslington coat-of-arms. Doesn't it seem to mean that we are fated to find it? The doe and the wolf have come together, don't you see? I am sure it is predestination."

"If you put it like that," said Charlie, "I quite agree with you and believe in it at last. The doe and the wolf have come together, and the stooping of Court Beaucourt has been found," and the young arms, down he gathered up, and he whispered that he was a silly boy, and for a little while we forgot even "the Treasure."

But as we slowly climbed the great oaken stairs on our way to bed I looked down and saw Mrs. Susan in the hall beneath, followed by Steven, who bore a farthing candle over his head, as I leaned over the banisters and shouted—

"Wish me good luck, Mrs. Susan, I'm going to look for the Treasure!"

She looked up, startled. Then all the sternness died out of her old face, and an eager flush made it look almost young. She clasped her hands together, and cried out, "Mrs. Charles, dear! Heaven bless ye!"—then actually burst into tears, and fled.

"Now, Charlie," said I the next morning, directly breakfast was over, "remember what you promised. I'm quite ready to begin hunting for the Treasure."

"Oh, you insatiable child! getting up from his chair, "will you never be satisfied? Come along."

And opening the carved desk in the corner, he took a key from one of its drawers, and led the way, through halls and corridors and up staircases, to the oldest part of the house: led the way at first, but only at first, for when we got into the regions that were new to me, he was amazed by the eerie look of heavy doors and glimpses of disused rooms; so that I was not content with following, but preferred clinging to the sleeve of the brown velvet coat, and thereby retarding its owner's movements.

At last we stopped before a low arched door, heavily studded with great clumsy nails, and crossed with bands of rusty iron. Charlie looked at me with a smile, but said not a word, and began fitting his key into the huge lock.

I left his arm, to stare with fascinated eyes at the wonderful door which, unused for so long to be swung on its hinges, resisted all efforts to open it.

All at once, however, it gave way and flew open, almost flinging Charlie headlong into the room. He gave a little cry, and rushed in after him; then stopped short, and gazed about me. I saw a low, rather large room, the walls and ceiling of oak, worm eaten and dusty; the floor of uneven stones. The walls were panelled, and carved with rude representations of beasts, birds, and flowers. The furniture, which was of the roughest and most commonplace, a low oaken bedstead, also carved, three or four wooden settles, a broken table, and an open oak chest, all of quaint and antique workmanship, very much the worse for age and hard usage, and brown with accumulated dust, which rose up in a cloud at our abrupt entrance.

Charlie, with an exclamation of disgust, rushed to the little arched window, flung open its casement of leaded panes, and thrust out his head and shoulders, vowing that he was on the verge of suffocation; while I pounced upon the furniture, which had so evidently been thoroughly examined over and over again in years gone by, and pulled it about till I was tired. Certainly the search did not take till I was and by the time the dust had settled again I had arrived at the conclusion that nothing bigger than a sixpence could be hidden in that room, far less Cavalier Charles's immense treasure.

"I might have known somebody would have found it long ago if it had been hidden here, where every one has looked for it so often," I said, at last, sinking exhausted on the edge of the bedstead—in which Charles de Beaucourt's whole family might have slept, it was so big—and sighing bitterly. "Come along, Charlie; it's a horrid sell! I mean to ask Mrs. Susan where she thinks it is—she'll be sure to know. I vote we go down again. Come, Charlie."

But Charlie had just espied a hare crossing the wild tangle—which was once the pleasure garden—and was still boy enough to find such a sight completely engrossing. So I began to study the carved panels and admire the remarkable figures.

"What a lot of wolves and wolves' heads there are on the walls, Charlie!" I said, speaking much more to myself than to him, however, as his head being far out of the window, he could not possibly hear me; "and what fierce creatures they are! How ghastly to sleep in a room with so many wolves about, isn't it? or rather wasn't it? I wish you'd come, Charlie, dear. And here are snakes and eagles—a perfect 'Zoo' of wild beasts and reptiles—and here's a wolf, an immense one, on the panel, just ready to spring on an unfortunate creature in the wreath of leaves on the next—a pig, I think; but they really carved so peculiarly in those days that I won't be certain. No, I fancy it's meant for a stag; but it is not a correct likeness, it has no horns; it must be a doe!—yes, that's it, a doe. Why, Charlie!"—and my words died away on my lips as, with a shock like a thunderbolt, there flashed through my mind the words of the quaint old rhyme—

"When the doe and the wolf shall come together, Then shall be found Court Beaucourt's Treasure!"

And the truth burst upon me with a sudden rush that took away my breath.

I gave one frightened gasp, and flung myself against the wall, with both hands outstretched, and then—I don't know how, for it all happened in a moment—the two panels seemed to slide together, and the figures carved on them to meet, leaving a great deep cupboard in the wall, where I could see dimly through the darkness the outlines of bulky forms, and then—then I gave one choking cry of "Charlie!" and as my young husband, startled, drew in his head and turned hastily, I dropped down on the dusty floor at his very feet!

I opened my eyes again by-and-by, to find myself in his arms, and his dear anxious face close to mine. But joy does not kill, whatever people may say, and before long I was able to stand up and cry on my dear boy's shoulder the happiest tears I ever shed in all my life.

Presently I grew calmer, and we looked in at the secret hiding-place that had kept its treasures so faithfully all these years; at the great iron-bound chests and the worn old bags, some of which had burst and showered their golden contents out upon the floor; at the small iron box which Charlie said must hold the renowned old family jewels; and, wonderful to relate, at something that lay near the entrance, black with age, but round and bulky as ever—nothing less than Brabant de Beaucourt's silver punch-bowl! We looked at them in silence, and then, without a word, we looked at each other, and still clasped in each other's arms, we knelt down on the dust-carpeted floor and thanked God humbly and earnestly that it had pleased Him, after so many years, to reveal to us its hiding-place, and to grant to us—the last of all the race—at last, in our dire need, to find Court Beaucourt's Treasure.

That was two years ago—two such happy, beautiful years as seldom fall to any woman's lot; and it is just six months since my baby, my bonny wee boy, was born. Such a boy as he is!—exactly like his father (though his father vows he can't see it) and the best little thing that ever filled a cradle. He lies there beside me now, while Mrs. Susan, promoted from maid-of-all-work to head-nurse, is singing to him softly some endless ballad of a somebody de Beaucourt who fought and bled at Pottery.

I am writing by a fire in the old blue boudoir, which is so dear to me from its memories of the time when Charlie and I were poor, that when the Court was being done up my dear boy had it renovated and improved for my morning-room. We are fonder of it even now than of any of the grander rooms, and I like best to sit here alone with Charlie and talk of those past days, so hard and yet so dear. As I look from my window the whole country round as far as I can see is once more Beaucourt estate. Once more the Beaucourts hold up their heads with the proudest in the land, "as Mrs. Susan used to say when she exasperated me by telling me I was not one of them."

There is Charlie's step on the stairs; he is coming to sit with me till the dressing-bell rings. This is our cosy half-hour together—the happiest half-hour in the day. "Take baby to the nursery, Mrs. Susan, please; and, Charlie dear, let Charles the younger go, and don't smother him beforehand. No, I didn't say you might look over my shoulder, you rascal boy! I'll come directly; I have only half a dozen more words to write to finish the true, complete, authentic history of Court Beaucourt's Treasure, and how it was lost and found."

THE CARE OF THE HANDS.—With cool weather comes the liability to chapped hands, and the discomfort of these is more trying than their unsightliness. With care the hands may be kept smooth even by those who handle the dish-cloth. For cleansing the hands use oatmeal, instead of soap, or a little ammonia or borax in the water they are washed in. Be careful to dry them thoroughly every time they are washed, and then to apply a little vaseline or cold cream, wiping the hands after the application. Oxalic acid in a weak solution will remove stains, or what is better, a bit of lemon, for oxalic acid is poison and must not be permitted to touch an abraded part of the skin. At night rub oatmeal over the hands and wear a pair of kid gloves a size or two too large. This is especially for those who, after their housework is done, sit down to the piano, or occupy themselves with fine sewing or silk embroidery.

Pearls of Thought.

The greatest evils in life have had their rise from something which was thought of too little importance to be attended to.

Many persons fancy themselves friendly when they are only officious. They counsel not so much that you should become wise as that they should be recognized as teachers of wisdom.

Minnie May's Department.

MY DEAR NIECES.—As some time has elapsed since our last prize competition, we purpose this month offering something new. The subject—of which we saw the idea in the Girls' Own Paper, and consider it a good one for our readers to try—is to be, "Sayings of the Wise on Conduct and Character," or, in other words, a collection of quotations, illustrative of conduct and character, drawn from various authors and arranged under the different headings given below.

We hope our readers may see many advantages to be derived from the competition, for as Tillotson says: "The little and short sayings of wise and excellent men are of great value, like the dust of gold or the least spark of diamonds," so will each one engaged in this competition prove, as they turn over book after book, and page after page in search of wise sayings, which "cannot but have a good, wholesome and improving effect on their own conduct and character."

As we cannot expect our young readers to be able to compete with the older ones, and yet wish them each to derive their share of benefit, we have decided to make *three divisions or classes*, with a prize for the best in each, as follows:

1ST CLASS.—For all those ranging in age from fourteen to seventeen. A cash prize of \$1.50.

2ND CLASS.—For ages ranging from seventeen to twenty-three. Prize, \$2.50.

3RD CLASS.—For those over twenty-three years of age. Prize, \$3.

The following are a few of the rules which must be adhered to:

1st.—That although we give *fifty* headings under which the quotations are to be arranged (in alphabetical order), yet only the first twenty-six (to the end of "H") are to be competed for at present. The remaining ones we will call for a little later on.

2nd.—Quotations from either prose or poetry may be given, but *must be worth copying and worth remembering.*

3rd.—The collection of quotations *must be solely the work and in the handwriting of the competitor.*

4th.—The meaning must in all cases be complete—that is to say, it must never be necessary for anyone reading the quotations to turn to the author to complete the sense.

5th.—The length of each separate quotation, as also the number of quotations under each separate heading, is left to the judgment and industry of the competitors. (We will here suggest that *quality* and not *quantity* is of greatest importance. "That it is better to do little well, than a great deal carelessly.")

6th.—The competitor must give, at the end of each quotation, an exact reference to the source from whence it is obtained. This reference must state the author, the work, the edition of the work and the page, except in the case of the Scriptures, when the book, chapter and verse will do. The edition is to be indicated by giving the date, or if no date, the publisher's name. A quotation followed only by the author's name will not count for very much.

7th.—Quotation books may be made use of,

but a reference to the page of a quotation book will not secure so many marks as a reference to the page of the original author.

As an example of what is required, take the following:

FAITH.

Faith and devotion naturally grow in the mind of every reasonable man who sees the impressions of divine power and wisdom in every object on which he casts his eye.—Addison. *The Spectator*, London, 1812, vol. vi., p. 327.

Faith builds a bridge from this world to the next.—Dr. Young ("Night" viii., line 717.) J. C. Grocott, *Familiar Quotations*, Liverpool, 1871, p. 139.

HUMILITY.

Knowledge is proud that he has learned so much. Wisdom is humble that he knows no more.—Cowper, *The Task*. "Winter Walk at Noon," Dr. Mackey. "Thousand and One Gems of English Poetry," London, 1867, p. 217.

8th.—Four marks will be allowed for every quotation given correctly and according to our rules, with extra marks for spelling, neatness and variety of authors consulted, and the one gaining the greatest number of marks in each class will be awarded the prize.

9th.—Competitors must write on one side of the paper only, and fasten all neatly and securely together at the left hand top corner.

10th.—The full name, age and address of the competitor must be written upon the back of the last page of each collection of quotations.

11th.—The papers must be sent in by Dec. 25th, in order that the result may be published in the January number.

12th.—Send the papers (without letter) for a one cent stamp, marking "Printers' Manuscript" on the upper left hand corner of the wrapper.

The following are the headings:—

- | | |
|---------------|-----------------|
| Affectation. | Hypocrisy. |
| Ambition. | Idleness. |
| Amiability. | Ignorance. |
| Anger. | Independence. |
| Bashfulness. | Innocence. |
| Benevolence. | Jealousy. |
| Cheerfulness. | Kindness. |
| Conceit. | Modesty. |
| Consistency. | Perseverance. |
| Contentment. | Piety. |
| Courage. | Pride. |
| Courtesy. | Prudence. |
| Covetousness. | Punctuality. |
| Cunning. | Purity. |
| Economy. | Revenge. |
| Education. | Self-control. |
| Egotism. | Self-knowledge. |
| Envy. | Self-love. |
| Falsehood. | Selfishness. |
| Fidelity. | Simplicity. |
| Friendship. | Suspicion. |
| Gentleness. | Truthfulness. |
| Gratitude. | Vanity. |
| Honesty. | Virtue. |
| Hopefulness. | Wisdom. |

We hope to receive a large number of papers from our readers for this competition, and feel confident in saying that although it requires considerable patient searching on the part of those engaged in it, yet it will be looked back upon as a decided pleasure, as well as profit. Let us see what all, whether young or old, can do.

MINNIE MAY.

Work Basket.

WASTE PAPER BASKET.—An economical basket may be made of pasteboard or old boxes. Cut in the shape of an antique urn or pitcher,

and cover with plain wall paper or pretty cretonne.

CROCHET COTTON TIDY.—Make a chain of 20 stitches, miss 1 stitch, 18 short (double) crochet in next 18 stitches, 3 short crochet in last stitch, 16 short crochet in the sixteen stitches on other side of foundation chain; turn work (a) 1 chain, 17 short in next 17 stitches, taking the back part of the stitch, 3 short in next stitch, 16 short in next 16 stitches. Repeat from (a) 6 times, 1 chain 17 short in next 17 stitches; break thread and fasten securely. Make three more leaves in the same way; but before breaking the thread of the fourth leaf, work 1 chain, 1 short crochet, in last stitch of leaf, 1 chain, 1 short in last stitch of another leaf, 1 chain, 1 short in last stitch of remaining leaf, 1 chain, 1 short in last stitch of fourth leaf; break thread. For the figures in the corner of the square, make a chain of four stitches, join in a circle.

First Row.—Two short crochet in each stitch of foundation.

Second Row.—Two short in each stitch of last row.

Third Row.—Eight chain, miss 1 stitch (b), 1 long (treble) crochet in next stitch, 5 chain, miss 1 stitch. Repeat from (b) 6 times; join on third chain in beginning of row.

Fourth Row.—Three chain, 1 long crochet in middle stitch of next 5 chain in last row, 1 picot formed by five chain, 1 short crochet in long crochet, 2 more picots, in same stitch, 3 chain, 1 short in next long crochet of last row; break thread and fasten securely.

Now you have to work a row of picots around the four leaves, and at the same time join with the four corner figures (c), 1 short crochet in thirteenth stitch; on right hand side of one leaf begin to count from last stitch of leaf (""); 1 chain, 1 picot formed by 5 chain, 1 short in first chain; 1 chain, 1 short in next to th of leaf, 1 chain, 1 picot, 1 chain, 1 short in next tooth of leaf, 4 chain; fasten on middle picot, made one stitch of little figure, 2 chain, 1 short in second stitch of the fourth chain, 1 chain, 1 short in next tooth of leaf, 1 chain, 1 picot, 1 chain, 1 short in next tooth, 1 chain, 1 picot, 1 chain (""), 1 short on top of leaf, 1 chain, 1 picot, 1 chain in same stitch. Repeat from ("") to ("") once; miss two stitches, 1 short in next stitch, 4 chain; join in middle of next three picots, made in one stitch of same figure, 2 chain, 1 short in second stitch of the fourth chain, 1 chain, and repeat from (c) around the other three leaves.

This forms one square of a very pretty tidy.

KNITTED AFGAN.—This afgan is made of alternate stripes in different patterns and contrasting colors, say red and white, and is finished with a border of knitted lace.

For the Red Stripes.—Cast on 27 stitches, knit across plain.

First Row.—Slip 1, purl 3, knit 8, purl 3, knit 8, purl 4. For the second row, reverse directions, putting plain for purl and vice versa, that forward and back rows may be alike on right side; knit 6 rows.

Seventh Row.—Slip 1, purl 3, knit the first 4 stitches of your rib of eight upon a temporary needle; knit the second 4 stitches on the first needle next to the purling, then bring the 4 from the temporary needle upon the first needle, thus twisting the second half of the rib

of eight in the place of the first. This produces a spiral design; purl 3. Repeat the operation with the second rib of eight, purl 4. Repeat from second row. For the white stripes.—Cast on 16 stitches; knit the first 10 rows garter stitch, always slipping the first stitch.

Eleventh Row.—Slip 1, * knit 1, bring wool in front as for purling, slip next stitch as in purling. Repeat from * to end of row.

Twelfth to Twenty-Second Rows.—Slip 1, * knit the next stitch together with the wool over the needles, bring wool in front and slip stitch as in purling. Repeat from *. Repeat 10 rows garter stitch, one row like the eleventh and tenth rows as twelve to twenty-two.

For the Border.—Cast on 9 stitches, knit across plain.

First Row.—Slip 1, knit 2, thread over twice, knit 6.

Second Row.—Slip 1, knit 6, purl 1, knit 3.

Third Row.—Slip 1, knit 10.

Fourth Row.—Like third row.

Fifth Row.—Slip 1, knit 2, thread over twice, narrow, thread over twice, knit 6.

Sixth Row.—Slip 1, knit 6, purl 1, knit 2, purl 1, knit 3.

Seventh Row.—Slip 1, knit 13.

Eighth Row.—Bind off 5 stitches, knit 8. Repeat from first row.

INFANT'S SACQUE IN STAR STITCH.—Supposing you understand star stitch, begin at the bottom with chain of one hundred and eighty-two stitches, and work ten times across, keeping the edges straight, of course. In the eleventh row, narrow in the centre of the back, then work eight times across, narrowing in the centre each time. To make the armhole, crochet ten stars, and break off the wool. Omit one and proceed to the centre of the back. Narrow when within eleven stars of the other edge. Break the wool and omit one star as on the other side; go even times across, after this manner, and you have a slot for the sleeve. Crochet across four times, narrowing on each shoulder, and in the centre of the back. For the sleeve, set up a chain of fifty-four stitches, and crochet round and round, not breaking the wool until you reach the top of the sleeve. Eighteen times round will be sufficient. Crochet nearly round, omitting two stars. Break the wool, and crochet three times across, omitting one star at the beginning, and dropping one at the end of each row. This will round up the top of the sleeve. Finish with an edge of blue or pink, in any pattern that pleases you. A cord run in the neck with balls of white and pink or blue, and tied at the back, completes the sacque. One skein each of white and colored Shetland wool or split zephyr is material enough for a sacque for a child twelve months old.

LOUNGE COVER.—A serviceable cover to throw over a lounge or couch in the sitting-room is made by taking a broad, bright stripe of cretonne; on each side of this put a stripe of black or dark brown cloth (line to give body to it); on each edge put a row of fancy stitches in silk or crewel; the ends may be finished with fringe or not as you choose. Another cover is made of the drab Aida canvas, with the ends worked in loose overcast stitches. The canvas may be fringed out to any length desired if you take the precaution to overcast the edge where you stop raveling, to prevent its fraying out to a greater depth than you care to have it.

Answers to Enquirers.

KATIE M.—1. You can make a very good scouring soap by adding to one pound of brown soap, two pounds of white sand. Put them in a vessel and heat together. Mold in small cakes. 2. We advise you to try and be more philosophical. Worry kills more people than work. Do what you can and leave the rest; for none can work more than all the time.

MARGERY DAW.—You can drape your mirror very prettily with any of the cheap curtains in cotton, wool or soft silk, scrim or fancy tinted gauzes. Those with a little tinsel introduced are especially effective. If one curtain is long enough, divide the length in half, and form the centre in a sort of knot; if two are needed, make the same effects with the ends of the two united. Place this at the top, over the centre of the glass, allow it to form a festoon on either side, and then catch that back to the side of the glass towards the top and again lower down, the ends falling below.

VANITY.—1. It is perfectly proper to use sealing wax on any letter that is to be closed, and it is a custom much in vogue just now. 2. A bridal-veil may be worn with a short costume, provided the costume be full dress. 3. By careful selections one or two hats may be adapted to all your dresses.

HOPE.—Pronounce the name "guinevere" as if written "guin-ne-veer."

Recipes.

PUMPKIN PIES WITHOUT EGGS.—Cut up a good dry pumpkin, stew dry as for ordinary pies; mash and beat lightly with a fork. For each cupful use one and a half pints of milk, and pour boiling hot water over the pumpkin, stirring briskly all the time. Add three tablespoons each of sugar and good molasses, and a tablespoon each of cinnamon, allspice, cloves and ginger. Bake slowly.

CORN STARCH CAKE.—Whites three eggs, half cup butter, half cup milk, one cup flour, three quarters cup corn starch, and one teaspoonful baking powder. Cream your sugar, butter and corn starch, add milk, egg beaten stiff, then flour and baking powder, and flavor with teaspoonful almond.

BEEF FRITTERS.—Cut slices of underdone beef into oblongs three inches long by half the width; squeeze half a teaspoonful of lemon juice over each, pepper and salt, then sprinkle lightly with nutmeg. Have ready a batter made by beating two eggs light with half a cup of milk and the same quantity of prepared flour salted. Dip each "collop" of beef in this and fry to a good brown in boiling dripping.

SCALLOPED FISH.—Pick any cold fish carefully from the bones, and moisten with milk and an egg. Place in a deep dish the fish with bread crumbs, a teaspoonful of anchovy sauce, one blade of pounded mace, two tablespoonfuls butter, and salt to taste. Put the crumbs on the top, with butter, and brown in the oven. Serve very hot.

SCALLOPED OYSTERS.—Butter a pudding dish, roll crackers very fine; put a layer of crackers, then a layer of oysters, season with salt and pepper, put small bits of butter over the oyster, fill the dish nearly full, having crackers on top; pour in sweet milk enough to soak the crackers; bake nearly an hour. If too dry when baking, add a little more milk and butter.

BAKED APPLES.—Are "a dainty dish to set before a king" if you bake them in the right way. Take sour, sound apples and core but do not peel them. Fill the cavities with sugar and stick into each a clove, a bit of cinnamon or lemon peel as preferred. Put the apples into the oven with a little water in the bottom of the baking pan, and bake until a straw will pierce them. Eat cold with cream. Pears served in the same way are even better than apples.

APPLE PUFF.—Take 6 or 7 fine, juicy apples, 1 cup fine bread crumbs, 4 eggs, 1 cup sugar, 2 tablespoonfuls butter, nutmeg and a little grated lemon peel. Pare, core and slice the apples, and stew in a covered double saucepan, without a drop of water, until they are tender. Mash to a smooth pulp, and, while hot, stir in the butter and sugar. Let it get quite cold, and whip in first the yolks of the eggs, then the whites—beaten very stiff—alternately with the bread crumbs. Flavor, beat quickly three minutes, until all the ingredients are reduced to a creamy batter, and bake in a buttered dish in a moderate oven. It will take about an hour to cook properly. Keep covered until ten minutes before you take it out. This will retain the juices and prevent the formation of a crust on the top.

ENGLISH MUFFINS.—One quart of flour, 1 teaspoonful of salt, $\frac{1}{2}$ of a cake of compressed yeast, $\frac{1}{2}$ of a cupful of liquid yeast 1 cupful and a half of water. Have the water blood warm. Dissolve the yeast in one-third of a cupful of cold water. Add it and the salt to the warm water, and gradually stir into the flour. Beat the dough thoroughly, cover, and let it rise in a warm place about five hours. Sprinkle the bread board with flour. Shape the dough into balls about twice the size of an egg, and drop them on the floured board. When all the dough has been shaped, roll the balls into cakes about one-third of an inch thick. Lay these on a warm griddle, which has been lightly greased, and put the griddle on the back of the stove, where there is not much heat. When the cakes have risen a little, draw the griddle forward and cook them slowly, turning often to keep the flat shape. It will take about twenty minutes for them to rise on the griddle, and fifteen to cook. Tear them apart, butter them and serve.

DEAR MINNIE MAY.—My cousin Tom says he does not think you are an aunt at all, but only the Editor. He wouldn't wonder if you were a man, for he says women don't know so much about affairs. We have had a quarrel about it, and I made up my mind to ask you. Papa says, "Always go to headquarters when you want information." **BESSIE T.**

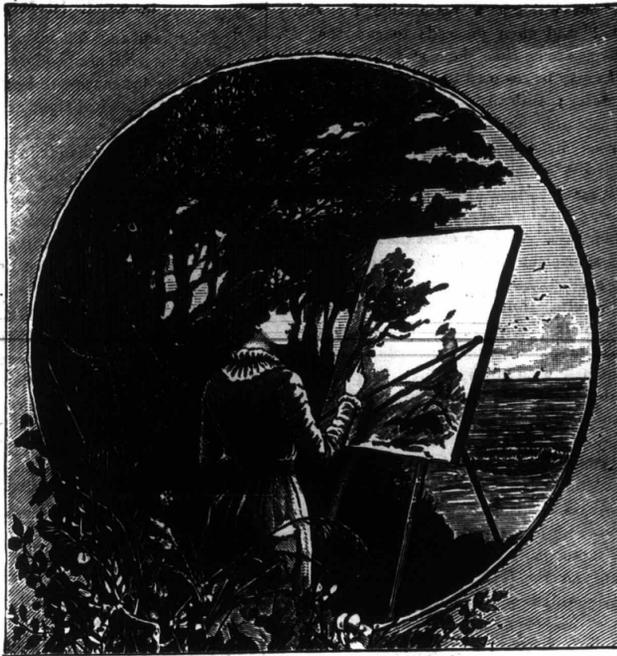
[Your cousin Tom is complimentary. Only the Editor! And he thinks I am a man! I wish he could see the great basket of stockings I darn every week of my life, and taste the nice muffins and corn bread I sometimes make after reading a bagful of letters from my nieces. As for his disdain of women and their knowledge of affairs, I beg his pardon, and hope he is not related to a certain old fellow named Rip Van Winkle, who once fell asleep, and slept ever so many years, while the world went rolling on. Your papa is a sensible man. I am sure he did not agree with Tom.—MINNIE MAY.]

The Art of Water-Color Landscape Painting.

In painting a picture, the first thing is to draw a perfect sketch. A pencil outline should first be put in correctly, and at the same time delicately, as hard pencil marks are difficult to obliterate. When clouds are marked in—and it is only necessary during learning that they should be—the faintest lines should indicate their forms, but whenever possible they should be represented by the brush simply. Though to make a correct sketch takes up time, and the student is doubtless longing to commence coloring, yet the advisability of doing so will be sufficiently apparent later on. Now, if we take a lake scene, with a soft, warm sunset lighting up the mountains that surround the water's edge, we may work somewhat as follows; first, a wash of yellow ochre, warmed with the least amount of rose madder, is passed over the sky and mountains, and graduated off until all color is lost, but the whole paper is to be washed; it will be easy to understand that the wash must not be strong, or the lighter portions of the sky will be too dark in tone. This is allowed to dry. Then pass the brush, filled with the clean water only, over the sky near the horizon, and while still wet, wash in vermilion and bring it over the picture in the same manner as the former wash. Dry it and wash the whole with water. When again dry, wet the part that requires the introduction of blue with water first, then place the blue in its position in the upper part of the sky, leaving any clouds clear on the light side, and shading off—while the blue is still damp—with soft grey on the shadowed side; now touch up the light side of the clouds with color, and leave to dry. The whole is then washed again with water. Next put in the shadows of the mountains, and soften them off with a grey tint—a mixture of cobalt and pink madder produces a soft grey; at the same time wash in the shadows in the water.

A wash of raw sienna is most desirable for water. Vandyke brown, indigo, and Indian yellow will also be required for waters of various depths and shadows. When water is very clear, washes should be most carefully laid, that the transparency may be preserved. Wash over the foreground with Vandyke brown, and work out any rocks and stones that stand up from the water's edge; but the darkest markings and strongest touches must be left for the finishing process. Now increase the strength of the mountain tints; warm those that are tinged with rosy sunset hues, and darken those that need it; but let no blackness or heaviness mar the picture. The foliage of the trees is added after the washes are concluded. Those in the middle distance require to be a bluish-

grey tint, and the foliage to be laid in with washes rather than decided touches; the form of the trees must determine the species, as they will appear too near if much worked up with the point. Venetian red, added to the blue and yellow, will produce the grey tint; more or less of blue or yellow can be mixed in, according as either color predominates. Never complete one part of a picture before the rest, but keep all the parts as far as possible equally forward. In working, a mountain or rock, if more finished than its surroundings, will often appear too prominent, and the student will feel disposed to wash it out as faulty, but when the remainder of the drawing is worked into as finished a state, he will find that the offending mountain has resumed its right position. The rocks and stones require greys; brown and blue will give some shades; yellow ochre and sepia others. The strong markings and touches that give force and character to the whole conception are put in last of all with freedom and decision, and on these, to a great extent, the worth of the picture depends. Tints are lightened, and high lights taken out in various ways—experience will teach which is most suitable to carry out a desired effect. The



artist should invariably work at a distance from his picture, and when putting in those parts that require him to work more closely, he should rise now and again, and view it from some distance. Ruskin, in his "Modern Painters," says: "From young artists in landscape, nothing ought to be tolerated but simple bona fide imitation of nature. They have no business to ape the execution of masters, to utter weak and disjointed repetitions of other men's words, and mimic the gestures of the preacher, without understanding his meaning or sharing his emotions. Their duty is neither to choose, nor compose, nor imagine, nor experimentalize; but to be humble and earnest in following the steps of nature and tracing the finger of God."

Conquer thyself. Till thou hast done that, thou art a slave; for it is almost as well for thee to be in subjection to another's appetite as thy own.

Activity, like zeal, is only valuable as it is applied; but most people bestow their praise on the quality, and give little heed to the purposes to which it is directed.

Methodical Dish Washing.

I have thought for a long time I would send my way of washing dishes for the benefit of ladies who have to economise in the use of water. Three things are indispensable—very hot water, a good drainage place, and rapid work. A board two feet long and one foot wide, one end resting on the front side of the sink, and the other upon something a little lower than the back side of the sink, makes an excellent place to drain dishes, the water all flows into the sink so readily. First I wash the silver in a little hot water without soap and lay it on the board, then put cups and saucers in the dish-pan and pour over them hot water enough to wash them nicely, adding soap while they are heating and the water cooling; of course I wipe the silver; then I wash the cups and saucers, turning them bottom upwards on the board, and plunge a pile of plates into the pan, pour more hot water on the top of them, for the first water rapidly cools and must be

replenished, or the dishes will not shine when completed; while the plates are soaking I wipe the cups and saucers; the water is by that time cool enough to bear the hand. I then wash the plates and put them on the board with a cup or broken egg-glass under the edges to help the water run rapidly off from them and not have them get cool before wiping, which is so important toward having dishes clean and smooth to the touch. I next put bowls, tins, etc., into the pan and

wipe the plates, then I wash whatever tins, etc., remains, putting them on the board to drain, but do not wipe them at present. After the dish-water is thrown out I take more clean water, wash the goblets, and wipe on a clean towel; the same water will do to again wash the tins, etc., when they also will be ready to wipe. In this way one person can "do up" a quantity of dishes almost as quickly as two can, when one washes and rinses and the other wipes; besides, it will not take as many wiping towels. I will add, in closing, that an iron sink can easily be kept in nice condition by washing in water in which potatoes have been boiled; it should be used hot, and can be applied with an old whisk broom without soap. One who has never tried it will be surprised to see how like magic the grease and rust will vanish.

MARY LIZ, Brattleboro, Vt.

—[The Housekeeper,

On the Wing.

(Continued.)

WALES.

In no part of our recent journey in Great Britain were we more astonished and pleased with the grand scenery, the gigantic works of men of the present age and past ages, than in Wales—probably because so little has been said about Wales, while England, Ireland and Scotland are daily brought to our notice.

Hollyhead is where the American mail is placed on the cars for distribution through England, Scotland and Wales. Here we hire a carriage to drive to South Stack, a place we had never heard mentioned. It is four miles from Hollyhead. The drive out of Hollyhead is most circuitous; short twisting curves and corners are turned; stone walls skirt the road about 4 feet high. The houses are the most ancient looking and peculiarly constructed buildings we have ever seen. Small houses, small windows with little diamond-shaped glass on leaden frames, low ceilings almost close to one's head, but a great attempt at cleanliness, neatness and comfort, amid the evident struggle for existence. We passed one new comfortable-looking stone house enclosed with a wall. The locality surrounding appears all worthless, rugged tottering rocks. A small piece of this useless land had been leased for a term of years; the man had built the house and the walls; his wife had picked up the stones and carried the material to him. It took them many years of toil to make this little barren spot productive and tenable, to pay for such a privilege, and then to have only a temporary right to it, appeared strange to us, where good land is so easily obtained. We reach the approach to South Stack and descend 300 steps to bridge. The descent is by the side of a rugged rock twisting in many directions; but a wall breast high gives the traveller a feeling of security as he looks over the wall to the deep abyss of water below him. At one spot the sea birds had hatched their young on the crevices and ledges of the rock, and every possible foothold appeared when we were there to be literally covered with young birds; thousands must have been here. The old birds were constantly coming and going, almost darkening the air. They were so near that one could almost catch them with a long landing net. Should any bird drop from its nest it appeared as if it would drop about 400 feet direct into the water. The birds were of various kinds. This novel sight and the peculiar cry of the birds were pleasing to us. After descending to the bridge we ring a bell, were allowed to enter through a door, crossed the bridge and ascended the rock on the opposite side. Here is located the South Stack lighthouse, one of the best in the world. The immense reflectors, the care, order, cleanliness and solidity were all very interesting, and would take too long a space to describe. In this rock a few scattering spots of grass might be seen between the rock and the sea birds that were on it; but here, to our surprise, were two donkeys. We enquired how they got there and what they were for, as there was no other approach except by these long steps, in some places but slightly off the perpendicular. We asked the lighthouse-keeper, and he said he kept them to ride into town on. How they

could get up and down these steps without breaking their necks, caused us to wonder.

On our return we called at a farm house; the farmer—a Welshman—took great pains in showing his farm, his buildings and garden. Here we first learned why the gardens are so frequently surrounded by brick or stone walls throughout Great Britain. He said the wind was so bad that they could not raise an apple there without it. We formerly thought that the walls had been erected to keep thieves out. That marks one more for our climate and one less for the British climate, which had descended pretty low in our estimation, when we found it necessary to go bed three times last May to get warm. Their damp, east winds are far more trying to one than our severest dry frosts.

(To be continued.)

Hot-Water Cure for Sickly Plants.

The London *Florist* asks: "Has any one tried hot water as a restorative for sickly plants?" and then proceeds to say that M. Willermoz some time since stated that plants in pots may be restored to health by means of hot water; ill-health, he maintains, ensues from acid substances in the soil, which, being absorbed by the roots, act as poison. The small roots wither and cease to act, and the upper and younger shoots consequently turn yellow, or become spotted, indicative of their morbid state. In such cases the usual remedy is to transplant into fresh soil, in clean pots with good drainage, and this often with the best results. But his experience of several years has proved the unfailing efficacy of the simpler treatment, which consists in watering abundantly with hot water at a temperature of 145 degrees Fahr., having previously stirred the soil of the pots so far as may be done without injury to the roots. Water is then given until it runs freely from the pots. In his experiments, the water at first came out clear; afterwards it was sensibly tinged with brown, and gave an appreciable acid reaction. After this thorough washing, the pots were kept warm, and the plants very soon made new roots, immediately followed by vigorous growth.

Fashion Notes.

White feathers and white pompons are shown in the greatest abundance.

One of the new materials for millinery and trimming purposes is Jersey plush.

Ostrich plumes and tips are the leading garniture of imported bonnets and hats.

Mohair braids with applique figures of silk and bead edgings are novelties for trimming.

Jet trimmings are richer than ever. Beads cut en cabochon are novelties and are very large.

Browns of all shades, from seal to tan, as well as all of the variations of gold color, are favorites for tailor-made costumes.

The long wing drapery is used in the back of many new dresses, with the double apron upon the front of the skirt.

Narrow gathered ruffles either bias or straight are to supercede the knife pleated flounces which have been popular so long.

Perpendicular bands of ribbon, at regular intervals, terminating in a loop and end, trim the plain skirts of some of the new Paris dresses,

A Group of Threes.

Lines written in a lady's album, which are worthy of a place in one's memory:

1. Three things to admire—intellectual power, dignity and gracefulness.
2. Three things to love—courage, gentleness and affection.
3. Three things to hate—cruelty, arrogance and ingratitude.
4. Three things to delight in—frankness, freedom and beauty.
5. Three things to wish for—health, friends and a cheerful spirit.
6. Three things to avoid—idleness, loquacity and flippant jesting.
7. Three things to pray for—faith, peace and purity of heart.
8. Three things to contend for—honor, country and friends.
9. Three things to govern—temper, tongue and conduct.

Household Hints.

Dried orange and lemon peel burned on a coal in a sick room are good deodorizers.

It is said mint sauce will keep any length of time if bottled, corked tight and kept in a cool place.

After having your hands in soapy water, wet them in vinegar and spirits of camphor; it kills the alkali and keeps your hands soft.

When you make a custard or other pie with a "stand-up crust" if you will pin a narrow strip of cloth around it, it will not bake so hard and will keep in better shape.

Keep large squares of thick pasteboard hung where convenient to slip under pots, kettles and spiders whenever you have occasion to set them down. Cut a small hole in one corner to hang them up by, and when very much soiled, burn them up and make new ones; pieces of heavy oilcloth are also good, and can be washed.

ODDS AND ENDS OF SOAP.—All probably know the inconvenience of using small pieces of toilet soap in washing hands; but here is an economical way of disposing of them. Lay aside all the small pieces as they collect, and when the number is sufficient, boil them in a little water till all are melted, then pour into a mold and when cool you have a nice cake of soap.

APPLE DESSERT.—Pare smooth half a dozen good sized tart apples; scrape out the cores; boil the apples in sugar and water until they are soft enough to be pierced with a brown splint, but be careful to have them keep their shape; when you cut out the cores, cut out a little less than one-third of the apple, separate it from the cores and after stewing it mix it with some cold boiled rice, the yolks of two eggs and sugar and spice to taste. When the apples are done fill the centres with the rice, etc., beat the whites of two eggs to a stiff froth, adding two tablespoons of powdered sugar as you beat them; put a spoonful of this on the top of each apple and send to the table. These are delicious either warm or cold.

KNIT PORTIERS are made from strips of silk dresses that have outlived their usefulness, or such other pieces of silk as might be at hand can be utilized. These portieres have quite the effect of ornamental stuffs.

Uncle Tom's Department.

MY DEAR NEPHEWS AND NIECES.—November has come, with its cold rains and dull days. Our rambles in October woods are over. I must tell you about a nice walk I had, and the mysterious voices which whispered to me, teaching me wondrous lessons. Do you remember one holy, calm day in the month just past away? Well, that day, as I rambled leisurely through the woods, I picked up several beautifully painted leaves. Oh, how lovely they were! The tints of crimson and green were so delicately blended, the shape so graceful, and the millions of tinted veins so perfect, that I repeated aloud the words of a poet who has written one of the most musical poems in our language. I would tell you his name, but I want you to have the pleasure of finding it out for yourselves: "Full many a flower (leaf) is born to blush unseen, And waste its sweetness on the desert air." As I uttered these words, the little leaves trembled, and then I heard a strange murmuring sound above me as of far-away music, which, when you grow older, will make you think of the happy days of childhood—those sweet, careless days when you as merry boys and girls played together in the dear old homestead.

The murmuring sound grew louder, and I heard a chorus of tiny voices say: "We have heard your words, and we are sorry for your ignorance.

We have much work to do. The first and earliest work our Father gives us is to make the world beautiful. Would you not miss the tender green of May, the richer verdure of the summer months, and the gorgeous tints of autumn? But we are useful as well as beautiful; we provide shade for man and beast; hundreds of little birds find homes in our bowers; troops of merry girls carry us to their pleasant homes to make them even more beautiful; artists try in vain to paint our glowing colors. Even in death we are useful; we enrich the earth which gives us a grave, and out of our ashes spring the sweet violets. O blind mortal, do you still say we blush unseen and that our sweetness is wasted?" I opened my lips to answer, "No, a thousand times, no." The voices died away, and I found myself lying on the ground, looking up at the beautiful blue sky which I could see through the trees above me. People may say I dreamt it, but I shall always believe that I found "tongues in trees." The poet who studied nature in every aspect most, said there were tongues in trees; indeed the lines are so beautiful I think I must give you them: "Tongues in trees, books in the running brooks; Sermons in stones, and good in everything."

And now, my dear boys and girls, can you not find out for me who wrote the beautiful words I have quoted? If you begin now to learn the noble thoughts of others, you will find in them much that will give you pure and true pleasure, and make you better boys and girls, nobler men and women. You will find voices in the woods you never dreamt were there, and every one of these will speak to you of the work of your Heavenly Father's hand, and of His love for you.

UNCLE TOM.

Puzzles.

- 1. LOGOGRIPH. My whole, dear cousins, means to retain; Behead and transpose and I will cause you pain; Behead me now and I mean to obey; Transpose and I mean to divide or take away. ADA ARMAND.
2. HIDDEN FRUIT. 1.—I shall take a nap, please do not disturb me. 2.—See what a beautiful plumage the bird of Paradise has. 3.—I cannot think you have been lame longer than I have. 4.—One day I looked in a deep hole and saw at the bottom a load. 5.—I will show you a nice trick if you bring me a pea, Charlie. LOUISA F. REDMOND.

THE DUCK AND THE FOX.



"Certainly, I am handsome," said the duck, looking into the water.

"Very," said the fox, carrying her off for his dinner.

- 3. HALF-SQUARE WORD PUZZLE. A consonant; a verb; a kind of meat; an animal; a lord; a substance for sticking. LOUISA F. REDMOND.
4. HEXAGON. 1.—A body of water. 2.—An open space of ground. 3.—A kitchen utensil. 4.—To give a right to. 5.—A plant. 6.—Chosen. 7.—Corrodes.



- 5. ILLUSTRATED REBUS. 6. ANAGRAM. Anagrams we've often had, But never any like this, lad; The answer you may now disclose, If the letters in italics you transpose. A pretty maid did one day sigh, "My heart is full of woe, And if I ever get the chance To the United States I'll go."

No truer words did she ever speak, For e'er the year was spent, She packed her trunks and said good-bye, And into my arm she went." ADA ARMAND.

7.—CHAIR PUZZLE.

Diagram. * Letters forming back of chair form the name of a lady beloved by us all. * Letters in seat of chair, read from right to left, is what she wishes us to be with regard to our studies. * Letters in rung of chair, from right to left, is what she does not wish any of us to be. * Behead and curtail letters in front of chair and you will get name of sender.

8.—CHARADE (Numerical). If an equal you would see, It is when placed at 1, 2, 3.

Place my 4, 5, 6 in your mind, A Spanish title you will find.

And now reverse, take a 6, 5, 4, But be careful that you do not more.

Or else, perhaps, some friend in fun May give to you a 3, 2, 1.

And now your 1, 2, 3, 4, 5, 6 I ask, For I have finished my task.

FAIR BROTHER.

9.—TRIPLE LETTER ENIGMA.

IN SCHOONER, but not in TUG. IN TERRAPIN, but not in BUG. IN MORALIST, but not in WISE. IN GORMAND, but not in SIZE.

IN KINE, but not in COW.

Three wading birds, please find out now.

FAIR BROTHER.

10.—TRANSPOSITION.

Ni hte dworl's drboa dell fo ettlba, Ni eth ovaucib fo lfel, Eb tno kile budm drevin etlca, Eb a oher ni teh fierst.

BELLAURI R. ARMES.

Answers to Oct. Puzzles.

- 1.—Re-draw. 2.—M OF MONITOR FIGURE TUNIC ORIOLE RECLINE EN 3.—Not to go back is somewhat to advance. 4.—Friendship. 5.—Rural. 6.—Martingale.

- 7.—Liverpool—Edinburgh. 8.—The world is a looking-glass, frown at it and it will frown back at you; smile at it and it will give you smiles in return. 9.—O, well for the fisherman's boy That he shouts with his sister at play, O, well for the sailor lad That he sings in his boat on the bay. 10.—Derby, Hereford, Longford.

Table with 3 columns: Word, Anagram, and Answer. Words include Carve, Raise, Farce, State, Root, Tract, Genius, Hoop, House, Mast. Anagrams include Cave, Base, Fare, Safe, Rot, Tact, Genus, Hop, Hose, Mat. Answers include V, I, C, T, O, R, I, O, U, S.

Names of those who have sent Correct Answers to October Puzzles.

Louisa F. Redmond, Charles E. Smith, Ada Armand, Emma Dennee, Robert Wilson, E. Manning, Arthur T. Reeve, Wm. Boynton, Robert J. Risk, Mary Morrison, Thos Moorhead, Minnie Cousins, Edna Simpson, Charlie Johnson, M. O. Webb, Frank E. Ferguson, Bessie Sexton.

Two sons of Erin, shovelling sand on a hot day, stopped to rest and exchange views on the labor question. "Pat, this is mighty hard work we're at." "It is, indade, Jimmy; but what kind of work is it you would like if you could get it?" "Well," said the other, leaning reflectively on his shovel and wiping the perspiration with the back of his hand, "for a nice, aisy, clane business, I think I would like to be a bishop."

Mendelssohn's Wooing.

A pretty story is told of Moses Mendelssohn, the founder of the family whose name has a sound of music in it. He was a hunchback, and a young Hamburg maiden rejected him because he was misshapen. He went to bid her good-bye, and, while he was making a last supreme effort at persuasion, she did not lift her eyes from her sewing. "Do you really think marriages are made in heaven?" she asked. "Yes, indeed," he replied, "and something especially wonderful happened to me. At the birth of a child proclamation is made in heaven that he or she shall marry such and such a one. When I was born my future wife was also named, but at the same time it was also said—'Alas, she will have a dreadful hump on her back!' 'Oh, God,' I said then; 'a deformed girl will become embittered and unhappy, whereas she should be beautiful. Dear Lord, give me the hump, and let the maid be well-favored and agreeable!'" The girl could not resist such wooing as that, and threw her arms around his neck.

After Sweeping.

As soon as sweeping is done, open all the windows wide to let as much dust blow out as may be, but keep the doors closed which lead to rest of the house. While waiting for the dust to settle, go over the furniture in the hall or on the porch, using the stiff brush or whisk on all upholstery, brushing crevices and tufts thoroughly, and beating the cushions with the flat rattan bat sold for the purpose in fancy shops. Use the soft brush or cloth only on wood, but don't go over things with a feather duster and imagine you leave them clean. The dust flies and settles elsewhere for you to breathe, and streaks are left in unlikely places. Use a slightly damp cloth to wipe off the dust, and carry it from the room. Read Miss Nightingale's "Notes on Nursing" if you want to know why a damp cloth is preferable to a flirring brush when dusting a room is in question.

The stiff brush comes in play for dusting window frames and baseboards after you have wiped the frames and swept the skirting with clean brush or broom into the dustpan. Try to dust so that your cloth or brush leaves no soiled streak on paint or wall—a sort of shading not uncommon in easygoing homes. White spots on varnished furniture can be rubbed off with alcohol, kerosene, or a little wet ashes. Ink can be scoured off with sapollo, or, if the wood is deeply stained, dilute vitriol and wash the spot many times, letting the liquid, which is dangerously caustic, soak in. Put a few drops of furniture polish on a woollen cloth and rub the chairs, first washing smears off with kerosene, which also improves varnished wood.

"How did you like the lecture?" "Oh, it was beautiful." "What did he say?" "Oh, he said so many beautiful things!" "Tell me some." "Oh, he said—he said—but I can't tell it to you as he said them." "Tell them as you understand them." "Well, he said—he said—oh, I can't!" "Tell us one thing he said." "Well, he said that the æsthetics of existence enabled us to—oh, I can't!" "Tell us what you think he meant." "Oh, go along! Why didn't you go and hear him yourself?"—*Exchange.*

November's Party.

November gave a party,
The leaves by hundreds came,—
The Chestnuts, Oaks, and Maples,
And leaves of every name,
The sunshine spread a carpet,
And everything was grand;
Miss Weather led the dancing,
Professor Wind, the band.

The Chestnuts came in yellow,
The Oaks in crimson drest;
The lovely Misses Maple
In scarlet looked the best.
All balanced to their partners,
And gayly fluttered by;
The slight was like a rainbow,
New fallen from the sky.

Then, in the rusty hollows,
At hide-and-seek they played;
The party closed at sundown,
And everybody stayed.
Professor Wind played louder,
They flew along the ground,
And there the party ended
In "hands across, all round."

Increasing Love of Flowers.

It is a source of great satisfaction to the generous lovers of beauty to see that the cultivation of flowers is yearly progressing, and with increasing interest. It takes but little outlay of time or money to procure a perennial vine or plant, or give it the small amount of cultivation it requires for healthful growth, and proper pruning and training to insure symmetry and beauty. The scarlet trumpet honey-suckle, is exceedingly beautiful as well as constant in bloom, rampant grower, and enduring the severest extremes of heat or cold, giving us from early spring until late autumn clusters of bright scarlet blossoms in abundance. While the foliage of this is a grayish green, that of the bignonia vine is very dark and glossy, with more of a clinging, twining habit than the honey-suckle.

"The Hand that Rocks the Cradle."

They say that man is mighty,
He governs land and sea,
He wields a mighty sceptre
O'er lesser powers that be;
But a power mightier, stronger,
Man from his throne has hurled,
"For the hand that rocks the cradle
Is the hand that rules the world."

In deep, mysterious conclave,
'Mid philosophic minds,
Unravelling knotty problems,
His native forte man finds;
Yet all his "isms" and "isms"
To heaven's four winds are hurled,
"For the hand that rocks the cradle
Is the hand that rules the world."

Behold the brave commander,
Stanch 'mid the carnage stand,
Behold the guidon dying,
With the colors in his hand.
Braven men they be, yet craven,
When this banner is unfurled:
"The hand that rocks the cradle
Is the hand that rules the world."

Great statesmen govern nations,
Kings mold a people's fate,
But the unseen hand of velvet
These giants regulate.
The iron arm of fortune
With woman's charm is purled,
"For the hand that rocks the cradle
Is the hand that rules the world."

Ald. O'Flannelmouth—"Be keerful, Mrs. O'Toole, an' don't lit any won see me, fur it's all the prominent-people what's getting shot at."

You would like to know how to make your sitting room look cosey and "livable" and want some hints for the arrangement of furniture. A family room needs certain things to be inviting, one of which is a long lounge, not the wretched little parlor lounge, that is neither good to sit or lie on, but a generous home-made one, with pillows, for tired people. Doctors say one can rest more lying down ten minutes than sitting down an hour. Next you want easy-chairs, Shaker, cane seat, rattan, wood or upholstered, it matters not, so there is a comfortable seat for each of the family. A wide, round table where all can find room for work or books is desirable, for it gives all an equal chance, and is more inviting than other shapes. A cloth is in the way for an evening table. A book-shelf, not book-case which takes room, wide, plain brackets and broad window seats for flowers, a clock, and clear glasses for bouquets, will be furnishing strictly needed.

Scrupulous neatness is to be the first charm of your rooms, which in showy upholstery or bare plainness is distinct and attractive as the scent of lavender. Besides this, the secret of a pleasant room lies in what Aunt Jane would call "having things correspond," or what an artist would call the unity of things—what old Caleb, who "chores round," would say, unhesitatingly, was the keeping of things. You want a room mostly in one color or shades of a color. Perhaps you can't do much more in this way than to avoid green and red tidies and lamp-mats, or purple mats and pale blue tidies and deep blue vases, with bouquets on the front, to go with a scarlet and wood-color carpet. You can't get over the carpet, as you can't afford a new one, unless you take the bold step introduced by modern taste, and have it dyed deep red, brown, or deep blue, when the most obnoxious colors come out in different shades, making a fair artistic carpet. If I had an ugly carpet, I would treat it to a bath of madder dye, laid on scalding hot with a brush, before giving up the question. Dreadful, many-colored mats and cushion covers can certainly be dyed, and ten dollars on paint and dyeing will go farther toward making a really agreeable room than a hundred in common furnishings. A coat of pinky white or pinky drab paint mixed with varnish, laid over doors and common furniture, would harmonize with your madder red or brown or deep blue carpet, and when you "do up" shades and curtains next, try a few drops of cochineal in the starch, to give them a pleasing tinge. You don't begin to know the resources of simple things.

The commercial traveller of a Philadelphia house, while in Tennessee, approached a stranger as the train was about to start, and said:—"Are you going on this train?" "I am." "Have you any baggage?" "No." "Well, my friend you can do me a favor and it won't cost you anything. You see, I've got two rousing big trunks, and they always make me pay extra for one of them. You can get one checked on your ticket and we'll eucher them. See?" "Yes, I see, but I haven't any ticket." "But I thought you said you were going on this train?" "So I am; I'm the conductor." "Oh!" He paid extra as usual.

I would not be without your paper on any account, as I consider it a most valuable acquisition to any man's library.—REGINALD GEORGE ROGERS, Headingly, Man.

City Visiting.

"Do you know how city folks goes visitin'?"
 "No; how?"
 "Well, they rig up in their best, with long trailin' dresses an' diamond buzzum-pins an' year-rings, and bracelets clear to their elbows, an' no sleeves to their dresses, an' they're all finified from head to foot till they're a sight to see. Then they go an' ring door-bells, an' the folks they visit aint perlitte enough to come to the door themselves. No, they send a servant to open the door, an' you go into the spare room an' set awhile, an' the folks finally come in an' then they bow an' scrape an' put on airs for five minutes, an' that's all they is of it."
 "An' they don't stay for dinner?"
 "They don't even take off their things."
 "Well, sich visitin' as that is now!"
 "I say as much. I'd ruther stay to home an' sew carpet-rags."

Did not Like to Change the Gold.

In Dublin the legal charge for a short ride in a public carriage is sixpence, but Pat expects you to give him more, and, if you ask him his fare, he invariably "laves it to your honor;" but when you have paid him, no matter how many times the lawful amount, he is never satisfied. Two American gentlemen in Dublin made a bet, one holding that he would give the driver such a fee that he would ask no more. This his friend declared was impossible. They took a car, the first they met, and rode a distance of about two miles. "How much do I owe you?" enquired the gentleman at the end of the journey. "Sure, an' your honor can give me whatever you like," said the driver. "But I would rather you would name your charge." "Indeed, an' I won't. It's not for me to say what a foine gentleman like you will give me." Thus put to the test the "foine gentleman" handed him over half a sovereign in gold for a ride that should have cost a sixpence at most. The driver looked at the coin, and then at the gentleman, as if doubting the evidence of his own senses at this unexpected munificence; but soon recovering from his surprise, he put his hand to his hat in respectful acknowledgment of his gratitude. "You have lost your bet," whispered the friend, as they turned away. But, before he and his companion had walked half a dozen steps, the driver, leaving the horse and vehicle to take care of themselves, was by their side, hat in hand. "Well, what do you want now? Haven't you got your fare?" "So I have," said the driver, with an insinuating smile; "an' it's yourself is the gutleman that gave me a foine one this blessed day; but, yer honor, haven't you got a spare sixpence in your pocket? I don't like to change the goold."

AN HONEST BOY.—A boy walked into an office yesterday with a pocketbook in his hand, and enquired if Mr. Blank was in. "That's my name," replied one of the gentlemen. "Well, here's a wallet with your name in it." "Yes, I lost it this morning." He received it, and the boy started down stairs, but was halted by the call, "Say, boy, what's your name?" "O, that's all right," replied the boy, as he backed down. "Tain't worth you saying I'm an honest boy and offering me ten cents for my trouble, for there was only fifty cents in the wallet, and ma used that to buy some soap and a new clothes line."

Little Ones' Column.

Piccola and the Sparrow.

CELIA THAXTER.
 Poor, sweet Piccola! Did you hear
 What happened to Piccola, children dear?
 'Tis seldom Fortune such favor grants
 As fell to this little maid of France.
 'Twas Christmas-time, and her parent poor
 Could hardly drive the wolf from the door,
 Striving with poverty's patient pain
 Only to live till summer again.
 No gifts for Piccola! Sad were they
 When dawned the morning of Christmas Day;
 Their little darling no joy might stir,
 St. Nicholas nothing would bring to her!
 But Piccola never doubted at all
 That something beautiful must befall
 Every child upon Christmas Day,
 And so she slept till the dawn was gray.
 And, full of faith, when at last she woke,
 She stole to her shoe as the morning broke;
 Such sounds of gladness filled all the air,
 'Twas plain St. Nicholas had been there!
 In rushed Piccola sweet, half wild:
 Never was seen such a joyful child.
 "See what the good saint brought!" she cried,
 And mother and father must peep inside.
 Now such a story who ever heard?
 There was a little shivering bird!
 A sparrow, that in at the window flew,
 Had crept into Piccola's tiny shoe!
 "How good Piccola must have been!"
 She cried as happy as any queen.
 While the starving sparrow she fed and warmed,
 And danced with rapture, she was so charmed.
 Children, this story I tell to you,
 Of Piccola sweet and her bird, is true.
 In the far off land of France, they say,
 Shall do they live to this very day.

Notices.

The Forest City Business College, of this city, is rapidly growing in popular favor. The work is carried on in three large and finely equipped rooms, and all the teachers perform their duties ably and with untiring energy. Every one interested in a business education—especially farmers' sons—should make it a point to visit this College and see its unusual facilities for teaching business in a business-like manner. The proprietors are reliable men and spare no pains to keep their institution abreast of the times.

Every one who has had occasion to drive any distance in a carriage, must be aware of the inconvenience arising from the binding of the wheels when insufficient oil has been used. By the use of the "Adjustable Sand-Box" all such trouble can be avoided; and we especially recommend our readers to peruse the advertisement of A. F. Miles, which appears in another column.

The frequent appearance of the Knabe piano in our concert rooms is not at all surprising to those acquainted with the history of the firm or the character of the instrument itself.—*Boston Home Journal.*

It may be worth our readers' while to look into the advertisement of the Ontario Tea Corporation, which appears in this issue.

Commercial.

THE FARMER'S ADVOCATE OFFICE,
 London, Ont., Nov 1. 1886.

The autumn we are now passing through has been an exceptional one in its favorableness for good pasturage for stock and fine warm weather. All through the States they have enjoyed the same fine weather, which has wrought wonders in bringing out the corn crop, ripening it up and facilitating the husking and cribbing of same. These facts have brought the price down from 44 cents in August to 35 cents in October. The weather could not be more favorable for facilitating farm work of all kinds. Roads are in fine condition, but farmers are not disposed to use them for marketing their produce from the fact that prices are so low.

WHEAT.

It is quite likely that the visible stocks of wheat may continue to enlarge for some weeks to come, but the highest point of the year will probably be reached before January, and until then it will be unlikely that we may count upon much of an advance in prices. But that the situation at home and abroad is steadily shaping toward conditions justifying an improving tendency in wheat values, seems quite apparent, aside from anything that may possibly be developed later by anything unfavorable to this season's crop of winter wheat.

The following figures will give our readers some idea of the volume of grain in sight, or what is termed the visible supply for the past ten years. A glance at these figures will show the immense increase in the wheat trade in ten years.

	BUSHELS.
Visible supply October 1, 1886.....	51,220,000
" " " 1, 1885.....	45,141,000
" " " 1, 1884.....	26,373,000
" " " 1, 1883.....	26,964,000
" " " 1, 1882.....	18,149,000
" " " 1, 1881.....	19,497,000
" " " 1, 1880.....	11,361,000
" " " 1, 1879.....	17,180,000
" " " 1, 1878.....	11,480,000
" " " 1, 1877.....	8,959,000

We find in the London Miller an interesting review of the world's wheat production and requirements for the present cereal year. The nine groups of countries into which the wheat growing and consuming portion of the world is divided, show the following comparisons of estimated production and requirements for the current year, in quarters of eight bushels each:

FIRST DIVISION—NORTHWESTERN EUROPE.		
	Yield, qrs.	Wants, qrs.
United Kingdom.....	7,920,000	28,000,000
Belgium and Holland.....	3,500,000	5,750,000
France (two thirds).....	21,863,800	27,000,000
Totals.....	33,283,800	58,750,000
SECOND DIVISION—MEDITERRANEAN EUROPE.		
	Yield, qrs.	Wants, qrs.
France (one third).....	10,915,400	13,000,000
Spain and Portugal.....	16,000,000	16,500,000
Italy and Sicily.....	19,000,000	19,250,000
Turkey and Old Provinces.....	14,500,000	12,500,000
Totals.....	60,415,400	61,250,000
THIRD DIVISION—CENTRAL EUROPE.		
	Yield, qrs.	Wants, qrs.
The German Empire.....	12,000,000	15,250,000
Switzerland.....	200,000	1,350,000
Austria-Hungary.....	15,000,000	14,000,000
Roumania.....	2,500,000	2,000,000
Total.....	29,700,000	32,600,000
FOURTH DIVISION—RUSSIA.		
	Yield, qrs.	Wants, qrs.
Total.....	33,000,000	27,500,000
FIFTH DIVISION—ASIATIC COUNTRIES.		
	Yield, qrs.	Wants, qrs.
Asia Minor.....	5,250,000	4,500,000
Syria.....	2,000,000	1,750,000
Persia.....	3,250,000	2,750,000
India.....	36,000,000	31,000,000
S. E. Asia, including Burma, Siam, and Tonquin.....	7,000,000	6,500,000
Total.....	53,500,000	46,500,000

SIXTH DIVISION—AUSTRALASIA.
Without estimating the yield and requirements, the Miller says: "An export surplus of half a million quarters is the largest figure that we feel justified in taking for the whole Australasian group."

SEVENTH DIVISION—UNITED STATES, ETC.

	Yield, qrs.	Wants, qrs.
United States	44,921,000	40,000,000
Mexico	500,000	550,000
West Indies	50,000	1,000,000
Central America	50,000	1,000,000
Total	55,521,000	42,550,000

EIGHTH DIVISION—CANADA.
Without giving details of estimated production and wants, the Miller gives 700,000 quarters as the probable exportable surplus for Canada, including Manitoba.

NINTH DIVISION—SOUTH AMERICA.
Chill is estimated at 600,000 qrs. surplus, La Plata 300,000 qrs. surplus, Brazil and Columbia, 250,000 qrs. required, Peru and Bolivia 100,000 qrs. required—making a net surplus of 550,000 qrs.

Analyzing the estimates on the lines of political or national divisions, the Miller submits the following table of approximations of requirements and surplus of wheat for the current year, in quarters:

	Requirements, quarters.	Surplus, quarters.
The United Kingdom	18,039,110	
France	7,252,800	
Belgium and Holland	2,251,000	
Spain and Portugal	500,000	
Italy and Sicily	250,000	
Ottoman Empire		3,000,000
Germany	3,950,000	
Switzerland	1,100,000	
Austria-Hungary		1,000,000
Roumania	500,000	
Russia	5,500,000	
Persia	500,000	
India, etc.	5,500,000	
Australasia		500,000
United States		14,921,695
Mexico	50,000	
West Indies	950,000	
Central America	950,000	
Canada and Manitoba		700,000
Chill		600,000
La Plata		300,000
Brazil and Columbia	250,000	
Peru and Bolivia	100,000	
South Africa	400,000	
China	25,000	
Egypt		250,000
Total	35,632,910	33,271,695

From this it will be seen that the apparent requirements of importing countries are 2,361,215 quarters, or 13,883,720 bushels in excess of the surplus stocks of exporting countries.

The English millers are feeling very keenly the competition of the flour milling industries of the United States and Canada. The Mark Lane Express says:

"The flour trade is very much depressed by the large arrivals of American brands, which have been sold at unprecedentedly low rates, and it has been stated that not a few country millers have shut down rather than persist in the hopeless attempt to make flour which can compete with the produce of the United States. The future of the British country milling trade is a problem which appears likely to be solved by the American millers simply crushing our native milling industry out of existence. And that is not all, for the entire agricultural interests of this country are being degraded, demoralized, and destroyed by an overwhelming foreign competition."

LIVE STOCK.

A short time ago there was some promise that the British cattle markets were about to brighten up, but of late they have taken a turn for the worse and the late cables are very discouraging, and indicate that a trying season for exporters is getting worse toward its close. Our special cables of to-day's date report weak and lower markets everywhere, Glasgow, London and Liverpool being alike depressed. The

supplies have continued to run heavy, glutting the markets and compelling salesmen to accept lower prices, which are the lowest of the season. Receipts from Canada and the United States have been fair, with the arrivals from elsewhere excessive. At Liverpool to-day the market was weak and depressed, trade dragging miserably. Values were half a cent per pound lower than a week ago and prime Canadian steers were let go at 10½c, which is an extremely low figure. Fair to choice grades were quoted on the basis of 10c, poor to medium at 9c.

The following table shows the prices of prime Canadian steers in Liverpool on the dates mentioned:—

	1886, per lb., cents.	1885, per lb., cents.	1884, per lb., cents.
October 25	10½	10	13½
October 18	11	11	13½
October 11	11	11	14½
October 4	11	11½	15
September 27	11	12½	15
September 20	11½	12	15
September 13	11½	13	15
September 6	11½	14	15½
August 30	11½	14	15½
August 23	11½	13½	15½
August 16	12	13	..

APPLES.

There is a good demand for apples this fall at moderate prices. But farmers complain that the buyers are culling very closely, in fact they are leaving every apple that has the least imperfection. The Montreal markets are reported as follows:—

Moderate sales of apples have been made to exporters at \$2@2.25 per barrel as to quality. A Liverpool cable reports good fruit in demand, Baldwins, Hubbards and Greenings at 10s@12s., Russets 12s@14s. The Glasgow market is cabled firm with good fruit in demand. Baldwins 11s@13s, Greenings 10s@12s.

CHEESE.

The trade in cheese has been extremely dull the past three weeks, and buyers and sellers are apart in their views. Buyers talk 11½c., and factorymen are asking 12 to 12½c. One or other will have to give way soon, and we shall not be surprised to see a compromise, and factorymen accept 11½ to 12c. Even should they have to take 11½, they will then be getting a good long price for their goods. The fact is, there is no other farm product that is paying better.

BUTTER.

The following is from the Montreal Gazette of Oct. 30th:

The market for butter, although not active, has a firm and healthy look for all fine goods, at least, as such are scarce. Choice, late made creamery has sold at 24c., but few shippers would care to pay that figure. Fine fall dairy has a fair sale to the jobbing trade, while selected packages command high prices. Western has been taken for shipment to Lower ports at 14½c. The export movement this week has been light. The total exports to date are 45,023 packages, of which 14,284 packages were on through shipment—a decrease of 13,975 packages from 1885, of 43,502 from 1884, of 30,684 from 1883, an increase of 2,557 over 1882, a decrease of 113,591 from 1880, and of 40,310 from 1878. The Waterloo, P. Q., Advertiser says: "The butter market remains firm and active. The ruling price for all good fall stuff is 20c., and 21c. is paid for exceptionally choice packages. A local buyer has taken in about 200 tubs the past week, at within the range of 15c.@20c. as to quality and date of make. The summer butter in this section has

been sold up pretty close and there are not many long dairies left in first hands. There promises to be a brisk demand for fall goods till the end of the season."

	c.	c.
Creamery, choice	23	@24
" good	21	@22
" lower grades	18	@20
Townships, selected	00	@21
" finest	19	@20
" fair to good	18	@18
Morrisburg finest	0	@19
" fair to good	14	@18
Brockville, finest	18	@19
" fair to good	13	@17
Western, finest	14½	@15
" fair to good	13	@14
Low grades	10	@11

Live Stock Markets.

Buffalo, Nov. 1, 1886.

CATTLE.

Receipts 10,727, against 10,151 the previous week. The cattle market opened up on Monday with 287 head on sale. For the best grades prices ranged about the same as on the previous Monday, while common sold a shade lower. The best steers on sale brought \$4 00@4 90, fair to good shippers, \$4 @4 00, and butchers' steers of 1,000@1,100 lbs., \$3 50 @4. Mixed butchers' stock common to good sold at \$3@3 50, and stockers at \$2 50@3. The receipts were very light on Tuesday and Wednesday, only 7 loads being received. The market ruled dull and slow without any change in prices. The following were the closing

QUOTATIONS:

Extra Beeves—Graded steers weighing 1,300 to 1,450 lbs.	\$4 75	@5 00
Choice Beeves—Fine, fat, well formed steers, weighing 1,300 to 1,400 lbs.	4 30	@4 60
Good Beeves—Well-fattened steers weighing 1,200 to 1,350 lbs.	4 00	@4 25
Medium Grades—Steers in fine flesh, weighing 1,100 to 1,200 lbs.	3 75	@4 00
Light Butchers'—Steers averaging 850 to 1,100 lbs., of fair to good quality.	3 25	@3 75
Butchers' Stock—inferior to common steers and heifers, for city slaughter, weighing 900 to 1,000 lbs.	2 75	@3 25
Michigan stock cattle, common to choice.	2 80	@3 00
Michigan feeders, fair to choice.	3 25	@3 65
Fat bulls, fair to extra.	2 25	@2 75

SHEEP.

Receipts 39,600, against 39,200 the previous week. The offering of sheep on Monday was made up of 75 car loads. The market was flat for all grades of butchering sheep, at a decline of 45@25 cents from the rates ruling the previous Monday. There was no improvement in the market on Tuesday and Wednesday. At the close common to fair sheep were quoted at \$2 75@3 40, and good to choice \$3 50 @4; a few selected feeders brought \$4@4 25; common to fair western lambs, \$4 25@4 50; good to choice, \$4 75@5.

HOGS.

Receipts 93,000, against 90,362 the previous week. The supply of hogs on Monday numbered 14,976. The market opened up fairly active at prices 10@15 cents lower than those of the previous Monday, advanced 5@10 cents on Tuesday, but fell back again on Wednesday, closing with pigs to good light mixed selling at \$3 50@4; good to choice selected medium weights, \$4 15@4 20, but with sales of a few extra at \$4 25; heavy ends, \$3 25@3 60; stags, \$3@3 25.

The "Farmer's Advocate."

The following extract from the St. Mary's Journal, Perth Co., of Nov. 4th, 1886, is a fair specimen of the many remarks which are constantly appearing in the press of the present day:—

"This fine Home Magazine, published by Mr. Wm. Weld, at London, Ont., is decidedly the best agricultural paper in America. Mr. Weld is himself a practical agriculturist, and therefore competent to give reliable advice to his brother farmers; and while its agricultural department is conducted with energy and an evident thorough knowledge of the whole subject, its literary department is unexceptional, and the ladies will find that they are not forgotten in its pages. It should find a place in every farmer's household in Ontario. As the FARMER'S ADVOCATE is a purely Canadian enterprise, it should be freely patronized by Ontario farmers."

NEW ADVERTISEMENTS.

ADVERTISING RATES.

The regular rate for ordinary advertisements is 25c. per line, nonpariel, or \$3 per inch. No advertisement inserted for less than \$1. Special contracts for definite time and space made on application. Advertisements unaccompanied by specific instructions inserted until ordered out, and charged at regular rates. The FARMER'S ADVOCATE is the unrivalled advertising medium to reach the farmers of Canada, exceeding in circulation the combined issues of all the other agricultural publications in the Dominion. Send for an advertising circular and an estimate.

SPECIAL NOTICE.

THE FARMER'S ADVOCATE refuses hundreds of dollars offered for advertisements suspected of being of a swindling character. Nevertheless, we cannot undertake to relieve our readers from the need of exercising common prudence on their own behalf. They must judge for themselves whether the goods advertised can, in the nature of things, be furnished for the price asked. They will find it a good rule to be careful about extraordinary bargains, and they can always find safety in doubtful cases by paying for goods only upon their delivery.

IMPORTANT AUCTION SALE

SHORTHORN CATTLE

Wednesday, Dec. 15th, 1886.

(Same day as the Woodstock Fat Stock Show.) Sale to take place at 1.30 p.m., on the Market Square, in the Town of Woodstock.

About 20 head of Durham Cows, Heifers, Bulls and Bull Calves, all registered in the Dominion Herd Book. Terms, 12 months' credit on approved notes. For catalogues and further particulars address

JOHN HART, Woodstock, Ont.

F. J. RAMSEY,

Dunnville, Ont., county of Haldimand, on G. T. Ry., breeder of

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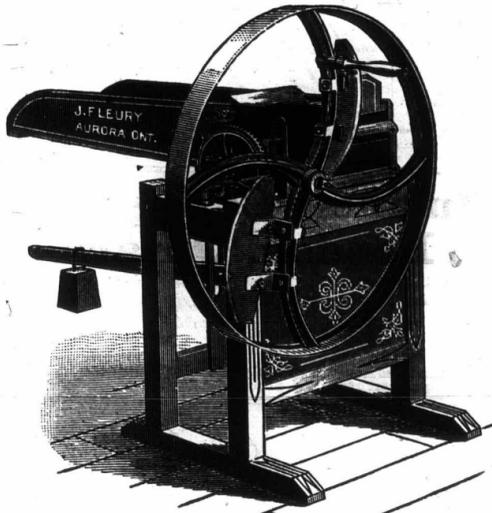
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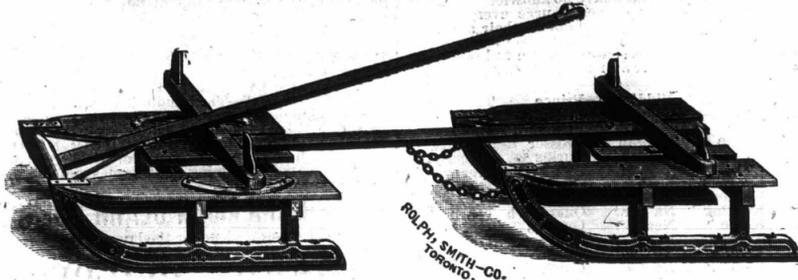


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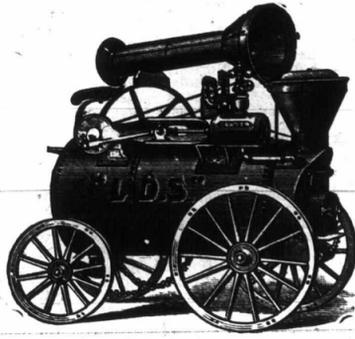
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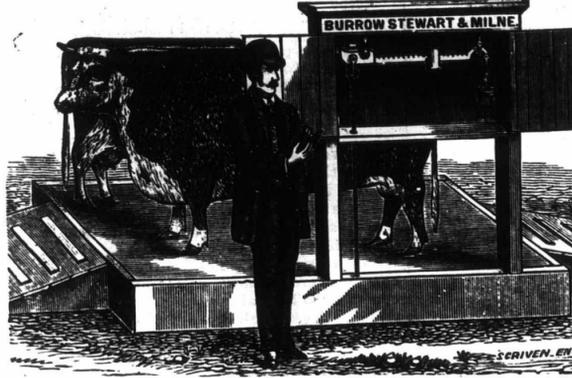
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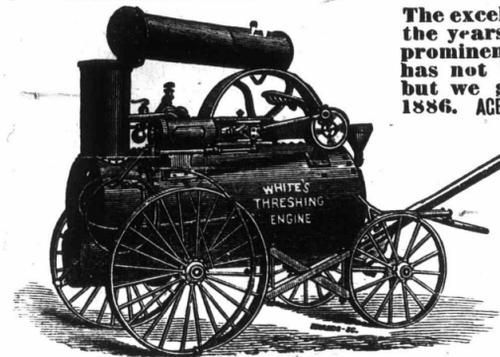
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