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## FOUNDED 1866

The Farmer's Advocate HOME MAGAZINE.
william weld, Editor and Proprietor.
The Fanurg's ADvocark $\overline{\text { is published on or about the } 1 \text { st of }}$ norms and furnishes the minst profitable, practical and relian
formation for dairymen, for farmers, , yardeners or stock men, ot any publication in ocanada.
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ADVERTISING RATES:
Will be furnished on application, and manufacturers, seeds
nen,
nisock breeders and others will find this journal an unTivaled arvertising medum.
The Anvocare has the largest circulation among the be
people in Canada. Its advertisements are reliable and art readd
Addres


## Business Notice.

Subscribers need not expect to see their remit forward before the 24th; but if they they do no orward before the 24th; but if they are not pro
perly credited on the March No., be sure and re port immediately, and state date of mailing thei remittance.
Carefully observe rules 3, 4 and 5 , above. With
our addressed leble sary or sent. a subscriber, and send along two or three new sub scribers at least.

## New Subscribers.

During the past month we have been muchgrati Drovince in the ominew subscribers fro been greater than ever, and this abundant proo of confidence in THE ADvocate and desire to in crease its strength, forces us to ask all our sub
scribers to continue their efforts during February scribers to
and March.
You can surely think of some person who ought
to take your paper who will benefit by its col to take your paper, who will benefit by its columns,
scribe. Speak a good word, show your paper, an we have a most useful and attractive Premium List from which you can select your reward. A single hour will on an average secure
scriber to you, as well as the premium.
This leisure month is an excellent season;" there is plenty of room. Try a little. We are sure you will be amply satisfied with your success. Every subscriber should win
Vegetable and Flowection of Slow Seeds. Read our grand colle ettion in January issue. Only one new sub. scriber for each.
Send for sample copies, and make a start imme
diately after reading this month's number
"THE FARMER'S ADVOCATE" PRIZE

## OF \$100

iven annually by Wm. Weld, Editor and Proprie or of this paper, will bo awarded at the next Provincial Exhibition, to be held at Guelph, Ont., rom the 24th to the 29th of September, inclusive, or the best samples of wheat.
The prize will be divided as follows: Two prizes of $\$ 30$ and two of $\$ 20$ each. The first prize of $\$ 30$ to e given for the best variety of fall or winter wheat est variety of fall or winter wheat. $\$ 30$ for the best variety of spring wheat, and $\$ 20$ for the econd best variety of spring wheat
rules.
Two bushels or 120 pounds of she wheat to with a written description, to be given, stating where the wheat was procured, how originated or introduced, as far as can be asceraich, a doscrip ertilizer used, and general history of cultivation. The wheat must have been grown in the country or at least three years.) Also a report as to it to be one of the judges.
The prizes will be given to four distinct vari furnished to the Association before the bags are opened, the reports of all competitors to be the property of The farmer's Advocate. It is no necessary that the finest sample of wheat should
any way effect the award of the prize except tha ny way effect the award of the prize except tha object being to decide the most valuable variety

## Our Monthly Prize Essay

Our prize of $\$ 3.00$, given for the best method of Cadicating and preventing the growth of Ray
Weed, has been won by E. Yorke, Wardsville Unt., whose essay appears in the usual column.
We will give a prize of $\$ 5.10$ for the best essay
on the advantages and best results to farmers from planting forest trees, The essay to be handed in by the 20th of February next.
We will give a prize of $\$ 0.00$ for the best essay on the following suid Canala, and which are best ulapted to the soil and climate. The essay to be rom the actual experience of the writer, and mus be han
next.

Our subscribers who have been so generous in peaking of the merits of THE ADVOCATE, will no their friend or neighbor who is still in want of a eliable Canadian agricultural paper
To help your canvass send for a sample copy for a friend, or a few for your own use, and carefully
cad our Premium List, and have one of our Illus read our Premium List in a conspicuous place.
trated Posters put up in a

"After not taking The advocate for nin years, and again renewing my subscription, 1 fee I purpose making a permanent friend as long as can raise one dollar. No enterprising farmer can | profitably get along without it "-D. DriscoLl, |  |
| :--- | :--- |
| Watson, Cass Co., Dakota Territory, U. S. |  |

Railway Rates of Freight and Transportation Monopolies
The following resolution, passed by the Elgin County Council, carries out suggestions repeatedly made in this paper. It would be well if all the other County Councils promptly followed this example: "That this Council co-operate with the other
counties of the Province in petitioning the Dominion Government for the following purposes, viz. :-
To create a Railway Commission, with power to settle all disputes between individuals, corpora. tions or companies, and all railways doing busi-
ness, or who may hereafter do business in the Do . ness, or who may hereater such railway companies
minion. Also to compel such to so arrange their tariff as to do justice to all parties, and abolish all discriminations in favor of individuals, and to so arrange their trains as to give
all possible accommodation to the publio." all possible accommodation to the pubin.
Farmers must remember that just in pro.
portion as the railways charge excessive freigl.t portion as the railways charge excessive freigl.t
rates, so much more they have to rates, so much more they have to pay for of produce they sell. As an instance we
may here mention that if the same through may here. mention that if the same through
rate of freight could be procured to-day that shippers were getting this time last year, wheat would be worth from 12 to 15 cents per
bushel more money than it now brings on any marbushel more money than it now brings on any market in the country. price of the products of the country. Especially is this the case with all kinds of grain,
stock, \&c. which the farmer is interested in seeing carried as cheaply as possible.
One thing we wish to call the attention of our farmand find out what the feelings of your representa. tives at Ottawa and Toronto are on the subject. Give them to understand that you think the time is coming when legislation wit be necessary on
this question. In England the rates of frei, ht and all claims are controlled by a commission appointed by the Government. The Legislature of New York State has also passed a law providing
for the nomination by the Governor of three railroad commissioners. Now we think it would be well for our own Government to take this matter into consideration, and appoint a similar commis-
sion. The object of this Board of Commissioness would be to act as a sort of court of equity and arbitration between the railroads of the Dominion discriminations of the railways, and adjudicating, within certain limits, upon the complaints of the public. This arrangement would do away with competing points Rates would be arranged on a mileage basis, and all kinds of merchandise and produce would pay a rate of freight just in propor-
tion to the number of miles it was carried by the railway To some points and large centres this arrangement would be an advantage, and to others the whole, it would be a benefit to the community, as a whole, but should be discussed and viewed in all its bearings before any decided ar:tion is taken. W. R., would make a good commissioner, another chosen by the Dominion Board of Trade, and the hird by the Board of Agriculture and Arts, or each of the five largest inland cities of the Dominion.

## On the Wing.

## manitoba.

(Continued from vol. 17, page 251.)
The extreme wet season at the time of our first visit to Manitoba prevented us from seeing as much of the country as we wished ; and the rapid, hurried manner of our fight last summer, pre-
cluded us from observing as much as we conl wish of the agricultural capabilities, prospects and progress of the farmers themselves. The most convincing testimony we had was a drive of four miles into the country in the vicinity of Portage La Prairie. Here we noticed abundance of good grain-milch cows and young cattle running on the prairies, looking quite as sleek, fat and com fortable as they appear in Ontario or in England.
In fact, we never saw such abundance of feed and the cattle appearing more comfortable or in and condition on grass. Of course, this was the best time to see them, namely, in August, as both the cold and hot weather had passed, and the flies had ceased annoying them. The rapidity with whicl the cattle accumulated fat at this season was per fectly astonishing. Self-binding reapers were a work in every direction in the large, even fields of wheat, with heads well filled, without the leas ign of Hessian fly, midge or chinch bug to be when upon frequently soint delighted us, especially and examining the straw, not a speck of rust or mildew was to be seen a standing and heary crop. The straw, but al brightest and cleanest, and stool the stiff of we had ever seen, and we have seen a good deal, both on this continent and in Europe.
We had formerly some grave doubts about the country and its capabilities. We know many one ided and over-alluring statements have been made y enthusiasts and interested parties; but this sight inspired us with such confidence that we felt that, if youth was on our side, and the knowledge Europe, have of the difficulties that exist in Europe, we should no longer hesitate about makManitoba. But in every pans to make a start in to overcome and dangers to ere are obstacles worst of these in Manitoba are the scarcity and the length of the winter, which is far mel to be dreaded than its severity.
Between Portage La Prairie and Brandon there is considerable poor land; in fact, much that we consider worthless. At Brandon the land is not so rich as at Portage La Prairie. Settlers have favored the Qu'Appelle Valley, in which section one of our sons selected a location, on which he has had his hous and commencent breaking. He he found timber, land, and appears well being four miles from Grenfell Sita location, siders his land ten times more valuable the cond he had seen. The further we went by mil throus this Qu'Appelle Valley, the better the land a peared. We hear the land near Fort Qu'Appell has many advantages not to be found in much of the prairie country, there being wooll and water good drainage, and fine scenery in this locality Deer, rabbits, grouse, partridge, prairie hens, fish and water fowl are fonud here in considerable quantities.
On page 44 we give a sketch of Fort Qu'Appelle give some idea of that locality. Mus, which will valley is owned by the Qu'Appel'e Lind this fine who are rapidly disposing of it to settlers Cany, rapidity-with which improvements are made The arms, villages and towns that spring up in this vast and distant part of our Dominion, is altogether
beyond what we could have ever believed, had we not personally seen the changes. The improve ments are so great that it is not to be wondered at that so miny are flocking into and taking possession of this valley. We should be sorry to disturb the minds of the contented farmers in our older Provinees; and would by no means advise one of them fore first examining for thith a wife or family, be well all the disadvantages befles and weighing comfortable home. Still there parting with dissatisfied with their lot, particularly young som To those we would also say that without a sufficien sum of money to start with and keep themselves for about two years, or unless they have friends to go to, then they had better try and earn money enough in Ontario before going, so that if they were not fully satisfied they could come back

## Herd Books.

Herd books are of value for the facility they afford in tracing the genealogy of any animal. here have been and still are numerous herd books ngland registers, kept by careful farmers. In o keep a body of farmers united and consented horn cattle. It geral one for the Durham Short ble principles, and now stands pre-eminent as the most reliable record in existence. There have been numerous herd books established on this continent, most of which are in the United tates. The Shorthorn breeders in the States Large sums are being subscribed interests in one. horn men in the States appear almost the Short its favor, and it is our impression they will bad it a success. A great many of the wealthy breed ers of the States are subscribing $\$ 500$ each in loans to complete the purchase of the Allen \& Bailey books. Some Canadians are also subscribing linerally towards it. The Government of the States in no way interferes with the work of the farmers in this, one of the great means of developing the wealth of their country, and we believe they are acting judiciously, as in England, that is, to leave this thing entirely in the hands of the of the Candion hard controlled the Board of at least, they entirely under whose management the herd loo and Arts have made and altered laws to maintain and herd book was and both act as one. tation on this continent. But for the personal aggrandisement of a powerful combination of mem hers of the Board, the high standard of the Canadian herd book was lowered without the con ent of many extensive breeders. The consequence has been a general dissatisfaction, and such an outery raised foth iu Canada and in thie States against it that the breeders of Shorthorns found it necessary Government make amends and now to late, attempted to herd books. Many farmers have paicl into the in hard cash for the registration of storents sums recent act, very large quantities of the stock that had thus been paid for was struck out of the herd book, giving great dissatisfaction to many of the farmers who have been duped ly the oht herd book It is now a difficult matior for means of felherss. decide where to register thei: stock. sume of on with the book that they will have nothing to do with it,
and will register only in the American herd book, and subscribe willingly $\$ 500$ towards the same Others are uniting their efforts to abolish the new Canadian herd book established by the breeders, which book is called the British American Short horn herd book. These two new herd books, a the present time, take the place of the old ne. The Americans, and some Canadians, are in favor of supporting only one, namely, the Ameri can; but we would strongly advise every loyal Canadian to maintain our own herd book. More articularly is the necessity of this impressed on our mind since attending the great fat stock ex. Americans saw the great injustice done to Conany Americans saw the great injustice done to Canada by not awarding the justly and fairly earned
sweepstake prizes to Canadian stock. This should show to every one the great necessity of maintain. ing our own herd book. It is our opinion that the old herd book will be abandoned by the Govern. ment. Why should we maintain two? We do not think that Government money should be expended to oppose the private enterprise of farmers.

## Unitel States Letter

[prow orr own moparpondert
Washington, D. C., Jan. 20, 1883. The increased and increasing interest manifested in agricultural topics by legislature and the publio press, within the past two years, is a healthful wise political advanced thinkers, statesmen and this subject on thists their attention to the prosperity of the nation din progress of which pect to see many thousan citions way ex teachings and examp'e from thizens led by their of our great cities, to the more healthful nol calling of the agriculturist. These reflections ap plicable alike to Canada as to the United States are suggested by two things: First, the showing of the recent census of this country, from which it appears that the cities have increased in populatio ten-fold more than the rural districts, and that the ercse the number of farmers is far below tho percentage of other callings in the increased population. Secondly, in Congress more speeches have een the duties of agriculture ind mormen, and in the interest griculturists, woun or prominen heen held is these go lock have or heard before in twenty yous ar been seen At the Shorthom B Wool-Growers' Associationd Association, the and Swine Breeders' Association whican Sheep Columbus, Ohio, a few days aro a arious subjects were delivered by men who not only practical Shorthorn breeders and wool growers, but who are among the leading men in the country. Pref. N. S. Townshend, of the Ohio State University, in his address on the "sheep as a farm nimal," spoke of the sheep in early farm life as being pastured on the common and driven to farm. g spaces ground, where they were kept over this wa the ground. systematic enriching the ground was carried on in f sheep graded to the quatity, and the number discussed the modern relation of land. He then ure, and the necessity of wool to thagriculacts were presented showing the the U . produced about two-thirds the wool its people only Wool, he said, at 35 and 40 cents a pound, in this mintry, is not as good as wheat and corn as a crop. Nese latter, and the growth of dairy products that mutton that of wool raising. He stated that mutton was growing in demand, as compared
with pork, that mutton is more healthy, and that
only about 5 per cent. died from disease, while about 20 per cent. of hogs died.
Hon. L. B. Wing, President of the Shorthorn Breeders' Association, delivered an interesting ad dress before the Association. Among other things of interest he said, that about 3,500 Shorthorn public sale in the West, and the the last year at age of about $\$ 200$ per head. In Great Britain 1,600 head were sold at thirty-five different sales, at an average of $\$ 175$ per head. The demand for young bulls for the great cattle ranches of the Territories is.greater than the supply, and it is likely that all other beef breeds will find there a ready market for their breeding animals, for a long time to come. He said that while a believer in and a breeder of the Shorthorn, he would welcome the breeder of every improved grade. He ventured to suggest that the present is an excellent time for a beginner to invest in the shorthorns. Beef is high and likely to remain so, and the producer that which the greatest pronts to the producer, that which is in greatest
demand for export and for home markets, is that which requires the pure Shorthorn to produce. For many years after the first importation of Shorthorns, those of the largest size, even when rather coarsely made up, were preferred. Experience,
however, has taught that those of more compact form and finer points mature earlier, have less
waste and are in every way more desirable To waste and are in every way more desirable. To suggests that it would be a wise policy to provide
thoroughbred steer calves each year, to be raised for future exhibition, or fat animals; something that would exemplify the capacity of their stock in the way of excellent beef and early maturity. A
few such steers about their farms of increased pride in their herds, and would be a most excellent advertisement of their breeding animals. Often a prospective purchaser, hesitating
and doubtful of his own judgment as to what best for his use, would buy at once upon view the sort of beef animals the herd does actually produce. I have made reference, so far, to the Shortforget that, for the general purposes of the farm the Shorthorn cow is as much superior to those of any other breed as she is for beef.
The U. S. Agricultural Society th
country, will meet in this city on the 23rd inst. This Society was organized nany years before the war, and includect then, as it does now, many leal-
ing men in this country among its members. The
war suspended their war suspended their meetings and labors, but after
many years they re-assembled with new zeal and energy. Among the interesting and practical adshall hereafter give you a synopsis:
"The Manual Labor System for th Prof. T. C. Abbott, Mich. Agricultural College Swine," by T. B. Curtis, of N. J. and Ezra Befe," hy John Scott, of IIowa; "The Trausport-
ation of Cattle and its Relation to the Prop ation of Catte and
of Contagious Diseases,", by Prof. Jas Law, Cornell
University, N. Y.; Cattle Husbandry and the DeUniversity, N. Y.; Cattle Husbandry and' the De-
mand for Beef,"' by Hon. J. B. Grinnell, Iowa ; mand for Beef," by Hon. J. B. Grimell, Iowa An siculltural Eductation,", by Prof. Conrad, of Va.
The Entomological division of the U. S. Department of Agriculture reports that the introduction is a success. These were known to have great value as insect destroyers, and the powder from which is variously sold mider "the name of "Persian Insec certained by experiment that preparations of this plant might be used successfully in the field against
several of our worst insect pests and its over as wide an area as possible was therefore sirable. A circular giving information about the two species having this virtue was sent out with
seed that had been imported from Russia aud the Caucasus. Reports, received from those to whou the seeds were ssbmitted for experiment, siow
that they flower profusely in this country, and give a powder equal ini its in ecticide qualities to any
previonsly tested
It i is adapted to the latitule of Canada, and would doubtless be equally useful against some of the insect pests of its fields, Lort

## Sints and Selps.

## Feed Rack for Stock.

Feed racks are indispensable articles of the furture of the sheds and yards. We give a cut of ers. It is designed especially for sheep, but it m beused for larger stock. The dimensions are 30 together four boards, 8 or 9 incles wide, in the

shape of two troughs, or the letter W., resting on
the crosspiece B. The novel feature, perhaps the crosspiece B. The novel feature, perhaps, is
the cant-boards A A, which are hingedd and thas cant-boards A A, which are hinged, and the
fastened to movable braces. These boards serve as partial shelter to sheep, both from snow and
chaff from fodder, and by moving the braces they assume a vertical, position, and thus keep out the
sheep while one is filling in the grin

## An Improved Gultivator

An improvement in cultivators, by which the shovels, when is to so adjust his cultivator that he shovels, when brought close together, will no annexed engraving. The wheels, the archerl axie tongue, plowbeans, and the shovels are of the or linary construction. Couplings, which are made
in the form of wide hooks and with flanges at the upper side of the openings, are placell upon the couplings are fler sides of its arch. Cpon thes

har, which crosses the lower part of the arch o secured coiplings attached to the forward cands of the plowbeams. The couplings are so secured to
the crossbar that they may be adjusted to ary de the crossbar that they may be arjusted to any de-
sired width. With this improvement the slovels can be brought close together for cultivating small plants, and will be in proper position for throwing
the soil around the plants.

## PRIRE ESSAY.

How Shall We best Eradicate and Pre vent the Growth of Ragweed

Such is the question proposed by the Fakmer'; avocate for discussion by its reaters, and while deem it either advisable or necessary we do no a full and minute history of the plant itself, but will rather assume in the outset, either that it is now an inh
Many of the readers of the Advocate may be quite ignorant both of the appearance and annoy ing habits of Ragweed, in which case we say ejoice and clap your hands on account of the want of such information, and pray to he deliveced from any future practical experience with its pestiferousness. Past experience inn fagncerlcads us to regary her, and o cold weather weed as well an nhabitant and"late tonant of the soil. Under
favorable conditions, and in good soil, it will grow to an enormous size, and mature millions of seeds emphatically to be the home of the Ragweed. Here in 1872 , it grew so very rank that while viewing the land preparatory to a purchase, we were forced to the conclusion that the land must be first-class, and that when rid of thispest it would certainly produce something that would prove more satis actory and useful, and we were not disappointed either. Why, sir, after that season's crop of corn had been harvestec it was a puzzler to find even no ox in some portions of the field, so thick and fine had this weel grown. Here, indeed, we had minating in no evolve the method itself. Hat occasioned us esolved to summer fallow this particular field but since the previous season's crop of seeds was chiefly upon the surface, and the ground otherwise in favorable condition, we decided to utilize the proceeds of their growth as a fertilizer ; therefore the plowing was delayed until the weeds had obtained such growth as to form an excellent coat green manure. This was then carefuly turned mider, and the surface subsequently kept clean. y this means we got rid of the seeds in two sides tha soin. Wencowed that there were two tining foul seed, with a view of ending iz., first to keen the surface as mellow and horoughly stirred as practicable so as to permit the air, light heat and moisture to enter and perneate it as fully as possible, so as to encourage the ermination of the largest conceivable number of seeds in one season ; and secondly, to prevent all e-seeding. Having secured these conditions as nearly as convemient, we at the proper time seeded a portion of the field to fall wheat and timothy, and the balance to timothy only, and followed in the spring with a liberal sprinking of clover. The followng summerwe reaped a magnacent crop of wheat, with long, , hright straw and free from Ragweed, early, so as to prevent whaterer Pepwed might put in an appearance, from maturing seeds, and the sheep then effectually disposed of the after. frowth. The same treatment of the hay and land, riz: early cutting and after pasturing with sheep, was observed year after year, and no further rouble was experienced with the Ragweed on that field. Hat we been pasturing that particular held, and hat the Ragweed gotten any ad vantage of the black-laces, which wotnd be, in a manner, implossible, untess they were too feir in number, we would, turing the season, have run the mower ince preventing the ene gromna, so as to assist them Lut me rowark, ance for all, that, while any sheep are good for this purpose, the Southdowns are pre-eminently the hulprates of man in eradicating weeds, since they are much less exacting in the kind and quality of their food than the long wools are. The sante season our outs yietted handsomely, and having been cut somewhat early, all reseeding was preventect on that ground. Our next
tield came under the three course system of oats, wheat and grass treated as lefore. We do not, by any means, recommend this as the best method
of securing a large yield of wheat of securing a large yield of wheat, but it is most certainly a very elfective mote of dispensing with
foul w eells. The next season we were enabled to chter upon a full coursc of co n, oats, wheat, grass,
together with the shive, and the work was alvangateouscerop in this regard, but allow mo to warn then against trusting too implicitly to the
smoticing power of peas for the destruction of smbotiee ing power of peas for the destruction of
Ragweal. Reanse we tried them the first season pear almost inceredible, it is a fact all the same,
clean, we aotually had to hand mow the Ragweed
upon the peas upon the pea ground before we could trust the pigs
to find the uncut peas. peas, and those kinds which grow an abundance
of straw might do somewhat better, and we would even advise a trial of them in those sections where corn will not do well. Yet, even, with such an and render the cutting very disagreeable, as well as mature (unless cut suticiently early to prevent ripening) a large crop of seeds to go into the ma-
nure heap. And this brings us directly to the question, how to prevent the growth of Ragweed?
Manifestly the satest method of preventing its growth will be to prevent it from getting into the soil, either through the agency of the manne, or
from being sown with field seeds. habit of o own foul clover.sed has hitherto been the chal means by which Ragweed has become so
generally distributed over the country, thoug gonem farmers have un wittingly incorporated it in
their soil by their soil by securing manure from others.
As already hinted, the thest method of geting
rid of any foul seed is by securing its germination and then preventing it from arriving at maturity.
But having it in the manure we may no doubt effec But having it in the manure we may no doubt effec
tually destroy it through the agency of the ocm
post heap, when this poss
may not always be convenient, as the manure may be required for the next springs crop, when there
will not be time to compost it. Though had the manure been properly heaped when removed from
the stable this disad vante avoided, so far as at that mantage coure coal concered bee
it would
have gone on worke it would have gone on working during the when as
winter, and would, consequently have been in much better condition for the spring use, and com. paratively free from frul seed possessing any
vitality
 as oy easily and properaly be done upon all, excep perhaps the hoed crops, in which case the foul see. dormant in the soil to to be brought ung uand and destroyed by the rotation to follow, which will somerewhat
lengthen the time consumed in lengthen the time consumed in clearing a field o
Ragweeds. But when the manure has been a plied as a top dressing, the foul seed, beinn apon
the surface, will in all likelihood germinate the same season and come to grief throuph the agene
of the reaper or mower and the after pasturay Care in all cases moust be and thercised to prop prevent the maturity of weeds along efencesed where there are
crowing crops. In such cases the weeds growing crops. In such cases the weed most in.
variaby be eut with the seythe, so oas to prevent
any ripening of the seeds. any ripening of the seedss Now that stock
growing is attaining such dimensions, we profer
 being in the way of the mower and horse.rake, but source. The writer has of for yearaub t een using this
thus whe thus, whole corn stalks and all, , , hy han lin in it out
when there is frost and snow enouyh to do the work when there is frost and snow enough to do the work
with the sleigh, thus avoiding much extra labor, and saving valuables time ind ing the murry extra tabor, and saving viaube tutine of the land by wheels,
work, also the ough the latter difficulty, including much of the
the
 been early and properly applied in the spring, and
the land thorounhly rolled, no dificulty need be te land thoroughty rolled, no dififculty need be
experien cod while hanaling the subsequent crop
 would dotherwise have been. The same mode of
application may be practiced on wheat, only care mustbe taken to spread the manure properly from in heaps, or it will smother the wheat. We are now carrying out these suggestions on our second farm,
which has been thoroughly over-run with the Rag. weed, and with the addition of permanent trasse the system is giving entire satisfacation. we are willing to guarantee that if the foregoing ins arery few years we siall phomptly acted upon,
inh phest upon our lands.
"For many yers
For many yearg 8 have been a subscriber to
ome of the best agricultural journals, and I $I$ can say that the reading of them gave me no more clea.
sure and profit than the FARMER's A Avocurp is the only one I continue to sulscribe to, though $T$ have no more direct interest in agricultural pur. suits since $I$ have sold $m y$ for
L. H. B., Montmagny, P. Q.

## Cattle Barns.

The rapid strides which the Canadian live stoc tic proportions it is now assuming, render a first class cattle barn an indispensabhe, necessity wit the enterprising and thrifty farmer. These, to
secure the greatest possible convenience and utility setare the greatest possible convenience and utilit
at moderate outlay, have been, and are bein constructed upon a variety of plans. But he di
mensions suggested in the proposition mensions suggested in the proposition submitted
for discussion in this essay are auite out of portion, being entirely too narrow to admit of the best results being attained. Cattle barns should
always always be sufficiently wide to allow of two tiers or
rows of cattle to stand facing each other with gangway betweerr them wide enough to permit a ceam and load to pass along it. The plan adopted
by the writer by the writer is as follows, iz . : The building is
to be not less than thirty-six feet wide wit least sixteen feet siding, standing upon a brick stone or concrete wall, eight fest high, and of suf
ficient length to it is proposed to keep say sixty feet Such it is proposed for keep, say sixty feet. Such a
building will furnish ample room for thirty -ight or forty head of average size, together with a large
amount of storage for fodder being so laid out as to give a ganceaver story feet wide, this will bring the cattle mangers just
nid the en under the edges of the upper floor, to permit the
feeding being done from above. The upper floor proper being bote ten feet wide, with a appor spoor
long each side throuth which to foed along each side through which to feed. These
feed spaces being fitted with portable trap dors which, when closed, form practically a twelve oot lioor. Thus on the lower floor we have abont along each side of the building, which will give alf teand floor for the cattle from four to five and a ccommodated, to to the size of the cattle to be Sighten to toenty tinches wide a and a walter or behop
the cattle the catle. A good idea in to nake the standing
flor at one ond of the stable longer than at the
other other, so as to accommodate larger cattle as well is smaller ones, as there is no likelihood of all
being the same length. This may be accomplishe by runuing the gutter slightly angling with the nuter wall. The liotom of the drop should not be
level, but rather should evel, but rather should have an inclination from
each end towards the centre and should be don enough to prevent the cantle, from stand stand beep hre object of this incline towards the centre is to the drop at this point, and leading under ground and out of the reach of the frost, to a urinarium, a tew rods distant, constructed for receiving and re-
taining the same. The pront taining the eame. The propriety and utility of
this arrangement will at once be seen by those of tuds arrangement will at once be seen by those who
undersand the value of liquid manure. The bot. tom of the manger shonld be at least four inches
higher than the standing loor, and should be
 betwen the two bullocks in the same stall and and by
the stalls between each pair of bullocks, and tight enough to feed meal in without waste. This par
tition will not materially interfere with the feed ing of hay, and yet will form an efficient division
between the meal rations of bewwen the meal rations of the cattle. The floo
should be made secure and firm. acoidents from breaking through, and should fall
and a little towards the gutter or drop so as to effec
tively carry hively carry of all surplus moisture and afford
dry comfortable bed to lis used for flooring, a good idea is to carry the slee ers of brick, stone, or concrete, to the desired
height and then or brickbats and muck, or other suem with stone all to be well packed in and made level material permanent sleepers and the planks then laid on
top. This ter and cool in summer, much more so than win tised some distance above the ground, besides
security from breakage. A block cement floor breakage. A block pavement or
Good stals
Good satisfaction
 studd, will permit of a greater number being accom
modlated modad
stanchions, besides enablinn the caretaker the the easily to feed any given animal or animals separ-
ately for ripening off purmes atey for ripening off purposes. But stanchions
ane not to be thought of, owing to the cruel ans unnatural position in which they compel the cattl
to remain to reman, whether lying or standing. Stand ed
cottle should always be sufficiently at liberty to
and liek themselves and rub certain portions of the
body with their horns. A stable sixty fee
divided into two or more departments by means
of firm partitions with a door the width of the walk behind the cattle attached, so as to permit the movenent of abeast from oone depart-
ment to the other, as well as other convenien ment to the other, as well as other conveniences
which would be realized from said door. Such
 risk from danger by a stronger animal be-
coming loosened during the absence be keeper. And adjoining such a partition should be placed a narrow door forming parto the enclosure at the front part of the manger, so an to oermitosure
attendant to easily pass from the stable to gangway in front of the cattle, and vice verse The space between the front part of the manger,
which should not be too high, so as to allow of the which should not be too high, so as to allow of the casy passage of roots and other provender into the
manger from the gangway, should be closed un tightly to the upper floor, but teaving a horizontal
passage passage from twenty to twenty-four inches wide,
through which to feed, and which passeg should be furnished with doors opening upwards so that'they may be closed in whole or in part as may be desiral. Ie for ventilation. The object of
this complete enclosure il tront cais complepe enclosure in front and above the
catte is to prevent the air, when warmed by the heat radiating from the cattle's bodies, passing out
in front and und in front and upwards, to be replaced by boolor air,
thus necessitating the warminy of all the thus necessitating the warming of all the air in the
building before the cattle can beoone comforth'ea Moreover, when open spaces are left either in
front or iust above front or just above the heads of the animals,
a current is formed by a current is formed by the upward movement
of the warm air, and this current naturally draws the foul fumes with it, thus compelling the cattle to breathe impure air, which, in itself, fis extremely
deleterious to their health, besides the noxious fumes passing to the loft above would damage the feed to a very serious extent. A Again, the over-lays
or beams just above the nat or beams just above the cattle should incline sev
eral inches towards the centre of the bild eral inches towards the centre of the building, an
the floor on them should be laid with stron tongued and grooved stuff. The object of such
arrangement is to form arrangement is to form a perfectly tight enclosure
about the cattle, which, when the trap doors feed spaces along the upper floor are closed, will be secured. Thus all dratts towards the heads of th animals will be corrected, and all waste of natural
warmhth, together with the ascent into the lot noxious funes to foul the fodder, will he avoided Then, again, the elevation of the ceiling tow ard
the outer wall will feik of the foul emanations to further ward movemen of bor vents or shations to further escape by mean
on and extending upwards along the wall and out
through the roof as see throghn the har as seen in the profile. Thes
shafts should have placed in them check that the caretaker can easily regulate the ventil
ation ation. In this manner good and efficient ventil-
atlon can be secured full control of the operator Furthermorer the
fit the loft floor has been laid as above, and the
fod fodder, which has by this means been protected
from injury, has been removed either rom injury, has been removed either during the
winter or early spring, all cold drafts from are obviated, and the uniform temperature of the
table can still he min stable can still be maintained; and upon this con
sideration alone may depend the suc sideration alone may depend the success or failure
of the feeder. It may already have been observe that according to this plan the loft above the ani mals on each side of the upper drive floor aill
constitute a bay with a lureast high and above these breast beams and about dight feet above the floor, should be another iimber similar in size to the breast beam and sup. ported by means of $4 \times 4$ studding placed four or
ive feet apart, across which portable beaus stringers may he placed so as to of orm a temporary
loft over the drive oft over the drive floor. By this means, after the
two bays have been filled to th woo mays have been filled to the greatest extent
oossibe, and after the temporary loft has been eerected, all the availabl espace arbore the floor and
to the tor o the roof can be utilized. This may be best
accomplished by erecting the temporary incomplished by erecting the temporary scaffolding
in sections, say
nom
ne whe por purliee post to the next one, when, sayn from one purlize post to the next
horse fork is resported ing the tore. ©uthe if the
 room for the thad tomporary scaflold, only leaving
loaded the enter the barn. When un oaded the empty wagon can pass on through.
The writer, this last season. room that all was covered but about fowr fed for pitch up through. In this way all space is untilized, nd space, with the least outlay for roof, etc.,. is an thpotant item of economy in building. Should hien he may omit the over-lays and stalls on one side of the barn and permit the hay to extend to
the stable floo be
space for several tons more. Should this course be
adopted there need be no difficulty experienced in
the profle, it can be protected from leaching, and
the urine can be pumped nuon it as occasion may
 upper floor. On the contrary, when it has been
fed to a level with, or a litte below the floor, the balance can be removed through the gangway in the
lower story. This last season the writer filled one stable as above, up to a little above the upper floor,
and then placed the over-logs, and so constructed and then placed the over.togs, and so constructed
a temporary loft over the stable and roceeded to fill
the the loft vorer the floor, and found no difificulty
in feeding the hay from the stable through the in feeding the hay from the stable through the
lower gangway. In this manner the stable was lower gangway. In this manier tho sthe sheep.
olear by the time it was required for the she
In In addition to such a cattle stable as has been grain barn standing sidegeways to, and joining with, profile No. 4 , so that the drive floo of the one is po a level with that of the other, and a stairs here connects the upper and lower stories. The lower
story is no used for towing awoy the implements.
which is far superior to a wooden room as is iso so effectually shuts off the wind and dust; but when required it may be used for stabling purposes, or
hospitals for sick or breeding animals ; or une hasp of this story may bee used for a manure pit,
which would be decidedly better than to have such which would bo decidedlly better than to have such
pit just below the catle, sas some avvocate. When
the no possibility of kreping down the fumes arising therefrom, and which are sovery deleterious st theig
healtr ; indeell an animal kept constantly for foit tening purposes in a stable such as this arrange. ment would neeassitate, would, every pound of him. be sur harged and flavored with such fumes, and
the same would be the case with the milk of cows tept therein. With the esriter's plan, however, all fumes can be kept from the cattle, and with regard
to this particular we are now experimenting. ${ }_{\text {Just }}$ tot this particular we are now experimenting Sust
let a man pass a manure heapo on the opposite
lise let a man pass a manure heap on the opposite side
from the wind, when it is is inl fourse of deom-
position, and he will soon learn how extremely position, and, he will soon learn how extremely
noxious it is. How superlatively daugerous then must it be to the he health and thrift of the
nuimals who are compelled to breathe it animals who are compeled to breathe it
constantly I the there any wonder that lung
and kindred diseases are other great advantagese to be derived from such connection between the grain barn and cattle
lodges is the ease and facility with lodges is the ease and facility with which the
straw, at threshing time, can be conveyed to the loft and bays above the cattle, while the chaff can also go there or be stored upon the drive floor of the cattle department, or vo to the gangway be.
low. In this manner all the straw can be saly low. in tris mannerater, he straw can be safely Kor feediuig purposes, even if not worth more than while the chaff will be ready for use as a mixture for meal, to be fed in the early fall, before there is time for chaffing coarser feed, to be administered portion of the lower gangway. Moreover, when the time comes for chaffing the straw, it will be found in the most convenient position possible to will be downward. And when cut it will still be downward to the gangway below, from which it
can readily be passed into the mangers. This gangway may also, when not otherwise in use, be
converted into box stalls for breeding animals, or
calves, etc.
When feeding meal or chop either separately or se of small hoppers and spouts, reaching from the eed boxes to the upper floor. Thus, by feeding om above, all annoyance avoided.
ew, can be had where side hill springs are within each, or by reservoirs erected upon sufficiently
elevated spots and protected from frost, by means of pipes to convey the water to a receptacle just elow the manger or fed trough, and constructed
for this purpose, with access had to it for the catle for this purpose, with access had to it for the cattle
by means of trap doors in the bottom of the manger. But it is generally preferahle for the cattle to go
aut to water.
Lastly, but not least in importance, is the mode of disposing of the manure through sma 1 doors behind the cattle,to be washed by every rain and the eaves, is rather unsatisfactory
to those who can appreciate a good article of this to those who can appreciate a good article of this
kind. Nor yet is wheeling it out by hand a very pleasant job, though with a slight down srade from means of a shed near the urinarium, as shown in

winter, and come out in the spring as nicely as the
best "'Myrtle Navy." Such a barn may be erected best "'Myrtle Navy." Such a barn as may be erected as the
in a side hill, and the doors altered to suit high knoll, or the level, and be kept tidy by means
hill of under drains. Such a cattle barn erected upon
a brick wall would cost, providing the timbers
were furnished by the builder from his farm, in

this locality, from $\$ 1,000$ to $\$ 1,400$, according to upon the local conveniences for securing material, r, \&c.
key or explanations of drafts


FIG. III.
No. 1 shows the ground floor laid off in stalls and
the different parts marked with letters of the the different parts marked with letters of the
alphabet. In this draft AAA represent the mangers, $B$ B the centre gangway, C C the stalls ;
D D the doors opening from in centre partition, which effectually divides each


Fig. vv,
side of the barn
narrow harrow doors which permit the attendant to two
from stable F F represent or in indicate the drop or cattle, and
Profile or figure line.
the brick or stone wall with the foundation already also by letters; A A indicating the parts are shown the upper floor one foot wide ; B B B passage in brick pillars that support the timbers in the foun.
dation or upper dation or upper floor, and on which the purline us to do away with the cross beams, which enable sueh a nuisance when the hayrack is in use; CCC are the side doors to the stables, each side being the same ; D D D D mark four slide glass windows is the door leading to the gangway of the lower
loor ; $F$ is a glass window immediately above the door E; $G G G$ show the cross sills which receive the sleepers of upper floor; $\mathbf{H} \mathbf{H} H \mathbf{H}$ mark the
overlays or stringers supporting the loft floor just above the cattle, and II I I mark the sleepers in the floor of the upper gangway.
In figure No
In figure No. 3 we have a representation of the frame erected upon No. 2 figure or foundation
Number 4 figure represents the building a closed, except the doors and windous, together figure G' shows the door leading to the upper this way ; F a glass window in gable ; E upper gang. cupalo on roof; $\mathrm{H} H \mathrm{H}$ show the projecting end
of vent boxes or shafts coming through the of vent boxes or shafts coming through the roof; I
are the three timber stringers reaching from earth grade to upper gangway, supporting a bridge ; $J$ is the incline grade forming approach to to upper
floor ; K is a cap or roof over end doors. floor; K is a cap or roof over end doors; N N are
small doors in sides to admit air during haying,
and to let the dust escape and give air when and to let the dust escape and give air when
threshing in grain barn and straw is passing to cattle barn ; $L$ is the manure cover or shed; ; $M$ is the urinarium which receives the liquid manure
from the drop or gutter, per underground pipe.

## E. J. Yorke.

## The Blue Thistle

From various sources we learn that bee-keerers in the United States have been cultivating this pest for honey purposes. It is claimed that this plant is hardy and yields an abundance of firstclass honey. Hence it has been eagerly sought for by professional bee-men. The botanical name亚 have it Cirsium arvense; and again it is called med thisle. From the appearance of the plant, having no prickles, wo believe that those who planted weed. Therstand the pernicious character of this weed. The complaints mainly come from the other We have not seen it in Canada yet, heard through the large staff of our cor dents any complaints about its growth in Cop and we sincerely hope there will be none ; but to be forewarned is to be forearmed, and some farmers near London, Ont., have already taken the initiative, and at a meeting held last month; a unanimous resolution was passed condemning the dissenination of this blue thistle. From the report of the meeting, extracts from numerous letters from several States of the Union were read, showing the ity of eradicating this plant and the impossibil. Whether it has rot any foothold in in the soil, we do not know, but cetaidy we hil country our farmers to be on the alert for its appearance and uee all due caution to secure its extermination. We have already enough weeds in the shape o
rag weed, Canada thistles, \&c., to contend against without introducing any more, especially such angerous character as the blue thistle.
The Montreal Witness, conmenting on the charges made ayainst the management of the are true, " a a speedy investigation is in order," and the Farm "certainly needs remodelling."
"We think it suitable to every family and every member of a family; there is always something to
anuse and instruct both old and young and tirely agree with our subscription form, that it in published in Canala, and is eagriculturai journal pulbished in Canala, and is emphatically The
Farmer's Advocate. It would be hard for me to suggest any improvement." S. T., Halloway, Ont.

THE FAFMMEIR'S ADVOCATEE.
$=$ かoultry.

Mating Breeding Stock. Mr. H. H. Stoddard, in his Poultry Yarl, says
lt is astonishing to us, as it is doubtless to auy one who has been in a position to observe, how many
self-termed poultry fanciers there are who take no special pains in choosing to mate. As the season
for mating fowls for breeding for mating fowls for breeding approaches, a fer
words on that important subject are in order. If a cock is very alert, care should be taken allow him hens enough, so that he may not wor or injure them by two frequent attentions.
The male bird in very many cases ex. most influence over the color of the plumage an over the external points or marks in general, while
the hen governs most of the form, size, and uscful qualities of the progeny.
The poise of the boly upon the feet should also be observed. If the halitual carriage appears as
though the bird was lalanced firmly hut its tracks, then we will waraut that it is of symmetrical build all over
Excessive legginoss (which term we use because
it is expressive, if not elegant) in the breadin $\alpha$ stock is not to be tolerated, though in the cock it is not quite so objectionable as in the hen; pro-
rided the mother of the cock was all right in this respect. And we remark, in passing, that on all of the cock
There is one feature in fowls of no matter what scragginess and coarseness, and that is a long bach. Wew it often torerate it in either cock or hen. great size is desired, a tall, elongated wher chosen, simply becanse he pulls down the scales
surprisingly. It is no wonder that he balances heavy weiglits, so long as bone is heary stuff. Let us have squarenenss and depth of body in all the
heavy breeds, and width and rotundity of thenst heavy breeds, and width and rotundity of breast
in most of the lighter ones. In this way there will be room aftorded for the heart, lungs, and other vital organs, which will insure vigor and stamina, and yet there need be no coarseness. mating, as different laws sovern different varietie mating, as diferent laws govern different rarietie
as to markings and tho like. But the points we have noticed are imp or ut in the case of all breeds and should be taken into account when a breeding
pen is made up.

## Poultry in Winter.

This is a very critical time of the year in the
farmers' poultry yard, on account of the great farmers poultry yyrd, on account of the great
haphazard, slaughter that takies place on many
farms. The ous farms. The ones handiest by, or the easiest canght, and sometines the fattest, are taken, with no
thought of enquiring which would be thie most
useful to selcet to mate for lreecling stock, for the useful to oselcct to mate for lreeding stock, for the
ensuing year. manuing year
Many you
Many young cockrels, when half-grown aun half-
fledged, are ill specimens, yet whon full make the best hirds in the yard.
It is necessaly now to have sin
It is necessary now to have some melerstanding What whill be best appropriated for next seasons's or for tahle use. If the latter is desitred, clioose
Brahmas or Cochins: if for
 ed or gerat purposes, gool for laying sittin and table use, then try Plymouth Rocks, Tavas, of It is m
they pay better than grades; but if they cammot
loe got handy, try if you can get a pure hlood male
to to mate with your hens. If the farmers tha not just as well to breed from purefthel cocks say year from a prove hed colk, of that varioty which is best pullets to breed from, ani killing or or soling
the rest. Then, in a few yent, fiell with the great trifling experse. all is worth dloing well. Ahs that is worth doing at
care of them; pood stock and take care of them; pay attention to the selection of the
best for brecters, and it will pay any farme breed and maket poultry and eqys. Peopler must
not expect that to yet good stock is all that is $r$ e quived, and that it will take care of itself, is in
prove a horn of plonty.

## Poultry Breeding.

The breeding and rearing of poultry for pleasure or profit, when done on facts and principles, is a a systematic method of judicious mand in selecting the out-crosses for fresh blood, without deteriorating the high attainments of the stock
that has perhaps taken years of careful study to bring up to its present standard of excellence. Every breeder (whether of horses, cattle, sheep
or poultry) of merit, who breeds with sucess and or poultry) of merit, who breeds with success and
overcones every difficulty, enhances the value o his stock by the addition of fresh blood. But this must be done with knowledge, guess or chance
work will not do. If the family blood which is to be added is of minor importance, the result will be a shriukage in the attainments of your stock.
When one's flock is up to When one's flock is up to a successful standard,
and we look around to select a bird of superior exand we look around to select a bird of superior ex-
cellence and cannot find one in the locality that one is in, to get one from abroad is sometimes
too expensive, and even when this is done the new to expensive, and even when this is done the new
selection is too often made without seeing the ob election is too often made without seeing the ob-
ject that one is paying his money for, and when it arrives it is but one chance out of ten if you are
artisfied. Birds thus purchased are sometimes satisfied. Birds thus purchased are sometimes un-
satisfactory, and the breeder is denounced as a humbug and dishonest, when the fault is too aften with the purchaser, who writes that he wants a
bird of merit (or sometimes a pair); he wishes bird of merit' (or sometimes a pair); he wishes
them good and wants them for about a dollar a piece. The facts are, the birds are sent and fail to ive the satisfaction that it is expected they should.
When a breeder sends dollar birds, he is not When a breeder sends dollar birds, he is not going
to select the best in his flock to send at such prices. The best is always the cheapest. I have been most satisfied when either seeing before purchasing or
being very particular in describing the defects being very particular in describing the defects of
my stock that was to be mated. Then the seller had to send something good in the parts where mine were weak, and the result has givent best satisfactione.
Breeders often feel afraid to introduce fresh blood, and very justly so. But when one has aleady bred in to such an extent that he is afraid to eriorate, one does not risk venture in getting proluct will he stronger, larger and more product ve than either of their parentage. Now lay by for one charchase and resort to the old sire again I have observed that where the blood was pure the female produced size and weight in her off. spring and more so if the offspring were females;
and that the male produced liss like the mould or build -in fact the fancy points, and more so to males than to females; also that he governs the healthfulness of the offspring. If the
fanily from which the male descended liad some particular points of merit or demerit, the rule is that he will transmit such particular points to the
offspring. The flavor of the flesh is, I believe, in herited from the female to a greater extent than
from the male. A very remarkable merit of has prescnted itself to me at many different times,
and eacl time Take, for instance, two distinct families of color,
 hlood are nearly always thack, or more black thay anil a white, the If the matings are with a black the offypring. If the hlack and buff are colored of
the prolluct predominates in brown color. If black and rel are mated, the proluct is chestnut or dark
lonon. Howerer, I have olvervel these We are often al horees than in poultry. best. The rele ofle is, the thichen lyat of fowls pays解 livel, hint if not given the feed, water and attend well as a set of mongrels of the first water that so
given the lon the lit that can he rect and a tendance and every tidpoultry pay hetter than monsrels, as the pure bred iner pay well for erery attention siven them $B$, procuring yool fowls and taking oon care of themi,
cerery one who does so will le satisfich they will
tion has decidelto Assolltios.-The assoei Toronto from thi to 1.th Feli'y next and show in in holding the same.


The first and most important consideration in arge or as small as we please, and lay them as accurately as a railroad is graded, and even go to he expense of locating the lines ten feet apart, not be successful in all respects. The lack of good natural outlets is perhaps the $g$ catest difficulty rmers have to surmount in draining flat prairie. deepen the water-course ly making open ditches, even larger and deeper than the one previously escribed. In order that a tile drain may dis-
harge all the water that it is capable of carrying the water must flow away with perfect freedom.
ATIOS OF DRANS

- locatios of drains.

Mains, Having found the diffierence of elevation are prepared to fix upon the lines for the main gives opportunity for the exercise of much skill in the use of knowledge pertaining to drainage. It
will be assumed that sutficient to been taken assumed that sufficient level-notes have the fall per 100 feet between the particularermine be drained and its nearest the particular spot to nearly fla
direction.
The first melf of is, that which he can obtain sy thath avail tion in the sprity of the year, when the soil is found st with water. At such time water will be basins in the land, and also on flats which seem as hlaces and detrounding surface. Mark these water is held by a clay sub, soil, or lyy the quantity of water retained in the soil at the lower portions
of the field. In the first case the natural drainage will be very slow, even though the elevation be
sufficient; while sufficient; white in the latter, the natural drainage will go on rapidly if the surplus water is
removed from the lower portions of the field, there by giving the water an outlet through the soil. If
the whole field seens the whole field seems nearly flat, see if there are
not some spots which are wetter not some spots which are wetter than others,
thougl the contour of the surface does not indicate it. Upon examination it may be found that the canse of this is with the sul).-soil, as before noticed,
or with the soil itself, it being made up largely of
clay and clay and more retentive of water:
of meins is thearis of these observations on the location been mentioned, whicli are places, such as hare system of hranch drains. The nearer the mains of the branches to these the less will be the expense action. By these olswervations the farmer has an cculurate method of finding the lowest places
through which all main lines should pass. variation in the course of the main to suit particular cases is often prelucted by the slope of the
surface, and also lyy the extra expense a longer The general rule for the location of mains is $t$ let them follow the lowest land, or course of wards the drain, making looth natural and arti fill cases drage casy. The might say here that in all cases we shomin try anc take every advantage drainage is only completing the work which nature drainage is
has lhegun.
There are
tions to the cases which refuire us to make excep is possible the as free from angles and short turns a straight line other words, it should be laid on nected by long curves. A few words in explana curves will convince the straight lines and easy of fall that can be used in a miver of feet or inches shorter we can make that distance by bye can set, and the greater thie fall per 100 feet we an get, and consequent greater velocity of flow and
discharge of the drain. Then
slight, as is very often the case on land which suf
fers most severely for want of drainage, hat can be done to increase the velocity of flow is of prime importance.
of larger tiles than any other of the lines, and so cost much more per
foot. Crooks in the line increase its length and consequent expense.
Short curves decr
Short curves decrease the velocity of flow, so
that, if we wish to have parts of the drain, the grade must be increased at the bend, and as a consequence, the grade of the It will be seen leassened
culiar to each seen location to be considered in determining the proper course for mains. In making increase the fall, we may by a deep cat, made to
avoid some turn, increase the cost more than all avoid some turn, increase the cost more than all we save, or by so dong we may fail to drain some
land through which the drain should pass.
It is only by carefully weighing all those things which enter into tho expense and efficiency of the
work that the farmer or drainage enfineer can work that the farmer or drainage engineer can
arrive at the most desirable plan.
It must always be borne in mind that in smail ponds, drained by a single line of tile, the drain
should pass entirely through the pond, and thence to the outlet, instead of beginning at the edge of the pand as in the case of an open ditch. The reason for this is evident when we remember that
water from the land on either side of the drain water from the land on either side of the drain
enters it through the joints of the tile, while the enters it through the joints of the tile, while the
Iand at the end of the drain is drained but very ${ }^{\text {little. }}$ Sub.
Suab-mains and Branches.-It is often the case or hollow will afford a sufficient drainage for the purpose of the farmer. When we wish for the thorough drainage of flats, ponds or swamps, we
must have mains to give an outlet for the water when collected, and a system of sub-mains and branches to collect the water from the soil and dis-
charge it into the mains. There are different charge it into the mains. There are different sys-
tems for laying out branches, the value of each de pending upon the area to be drained.
If the main is of proper size it will of itself drain
the soil for a distance of from forty to fifty feet on either side
The junction of all branch drains with mains
and sub-mains should be at such da angle that the pipe will discharge as nearly as possible in the direction of the current of the main and larger
stream. Where it is necessary to have the drain connect at right or obtuse angles, the junction rent into which it discharges, and all cur avoided. When a change of direction is desired curves are used. The reasons for this will be dis
cussed more fully further on. We wish to urge upon all
undertake drainage that the application of corre principles to practice is what is most needed. W
can not always fully carry out a correct theory in practice, but the nearer we come to it the better will be our work.

## Practical Value of Artificial Foods.

The following is from a lecture delivered befor the Notts (England) Chamber of Agriculture, by
Mr. Bernard Dyer, F. C. S. F. I. C., Professor of Agricultural Science in the City of London Col-
lege: The practical value of a féeding material de-
pends firstly, upon its being in good, sound, and wholesome condition; secondly, upon the propor-
tion of albuminoids, starch, sugar, \&e., that' it contains, having regard to their feeding value thirdly, upon the value of the manure residue that
will be left on the land, or in the dung-heaps, atter the material has done its duty as food. Now the actual market prices of artificial foods are fixed en-
irely by the laws of supply and demand, and have no relation whatever to their practical value, eithe the money value of food, therefore, cannot be cal culated from its analitical composition-thougl with reference practical knowledge and considered which of various foods may be the most economical to use under given circumstances. Oil cakes have which they contain, which is account wof the oil half times its weight of starch or surgar as a fattenng material. Ten per cent. of oil in a cake may
therefore be regarded as equivalent to 25 per cent. of the starch in a farinacoous food.

## hinseed cake.

The most popular form of oilcake is, undoubt
edly, linseed cake. Linseed cake formerly usuall edly, linseed cake. Linseed cake formerly usually
contained 12 or 13 per cent of oil; and I recollect that some nine or ten years ago 11 per cent. was
considered low for an English-made cake, and 10 per cent. was looked upon as very low even i American cakes. I recoilect once analysing a
thick American linseed cake that yielded upward of 17 per cent. of oil; but samples like this are
now probably to be found now probably to be found only in museums. Seet
crushing machinery has much improved of late and the crusher naturally does his best to obtain the maximum yield of oil-since oil is worth three cake. Although, then, there are still mi ls in Eng land which turn out linseed cake with eleven to twelve per cent. of oil, there are others which re duce the percentage to eight or nine, and occasion-
ally even lower than this. American linseed cake now seldom give more than ten, eight or nine being $a$ more usual figue. Indeed, during the last te different samples of American cake containing no much more than 7 per cent. of oil. I am bound however, to say that, although hard pressed, the are usually sound, clean and of excellent guality and they have generally the advantage of being very ary, which gives them good keeping quali
ties. English linseed cakes, independently of the oil they may contain, vary greatly ir quality
There is , no doubt merly existed, and there is no difficulty now in although my experience shows that the word "pure" is still often branded upon cakes tha well screened minseed that has been anything bu ing of cakes branded and guaranteed as ""pure."
Of course, much adulterated rubbish is still sold a inseed cake of " mixed" or "second" quality, and its lower price and sometimes its equally good ap-
pearance hold out a temptation to the buyer, and in such cases, there being no pretensions of purity,
the buyer, even after analysis, has no remedy in the buyer, even after analysis, has no remedy in
his hands. The most wholesome advice that can qualities of cake which are guaranteed pure, and which can be depended upon both for quality and
for soundness. The best way to form a rough and or soundness. on a sest way to form a rough and
ready opinion on ample of linseed cake is to crush a few ounces to powder and to place half an sunce or so in a halr pint cup or tumber of water gain stirring it up. The odor while warm should be noticed, and then the mixture should be allowed
to cool. It should then set to a thick muci gruel of a rich, pleasant flavor. A few experigruel of a rich, pleasant flavor. A few experi
ments with good and lad cakes will soon enable one to form in this way a very fair rough opinion
of the quality of a cake. If some of the powder be munched between the teeth very little grit
hould be detected If much grit be detected the should be detected If much grit be detected the sample probably contains an undue proportion of
sand, showing that the linseed has been badly screened. An examination, moreover, with a
pocket lens should reveal very few fragments of pocket lens should reveal very few fragments of
husks of foreign seeds, though those will often wide any but a practical eye, owing to the hinch they are ground, and cannot then be
detected without the use of a proper microscope.

> decorticated cotton cake.

Decorticated cotton cake $I$ have already alluded to s possessing the highest nominal value of all pur-
chased foods. I might, perhaps, have excepted ecorticated carth-nut cake, but that does not, as believer in decorticated cotton cake, particularly or ft eding to sheep on pasture or in the turnip
field, and scientific experiment has proved its practical and economical value, when mixed with maize, sa a fool for cattle to be equal, or even superior,
to linseed cake. For milk cows, I believe it to be a most atmirable food, and in various dairy ex-
periments carried out jointly with me by Mr. Parury, of Horsham, it proved itself, from an economical point of view, superior to linseed cake. A
few years since, when decorticated cotton cake was worth $\$ 35$ or $\$ 40$ per ton, while linseed cake cost between the two foods, the cotton cake being out at the present time, when linseed cake is cheap and the money values of the two cakes are about equal, there are circumstances under which 1
should consider the linseed cake better. From a
numerical point of view, however, we have seen
that a ton of decorticated cotton cake is equal to 1 l that a ton on decorticated cotton cake is equal to $1 \frac{1}{3}$
tons of linseed cake, and this leaves a good balance in favor of the former. Doubtless, , decorticated
cotton cake, at first, is less liked by cotton cake, at first, is less liked by stock than lin-
seed cake, but when once they take to it they will seed cake, but when once they take to it they will
eat it with equal readiness. Many of my farming friends prefer to mix the tiwo cakes in equal pro-
portions both for cattle and for sheep-and this ommends itself as a judicious mode of adminislecorticated cotton cake is a highly concentrated food, and with it, therefore, should always be
mixed a more bulky food. Plenty of good hay is perhaps, the best material for this purpose ; but if hay is scarce an equal quantity of barley meal or cotton cake, plenty of chopped straw being mixed cotton cake, plenty of chopped straw being mixed
in with the daily allowance of pulped roots. Decorticated cotton cake should also be broken up into small pieces, which general experience ap.
pears to show to be preferable to actual grinding pears to show to be preferable to actual grinding.
For very young stock it should only be used with great caution, as it is liable to cause indigestion nd constipation, owing to its concentrated na-
ture; but, properly used, it is one of the best purchased foods in the markgt. Good, fresh decoricated cotton cake is the color of prepared mustard, nd has a palatabie taste. samples that are brown suspicion. A certain brownness of color may mean othing harmful; but there should be no rancildity 12 to 16 per cent. of oil. I have found 20 but nything above 16 is now rarely met with. Undeorticated cusully Egyptian seed - iffers from whole ticated cotton cake by containing a large decortion of woody fibre. As a feeding material it is less digestible, less nutritious, and less economical but the husks that it contains possess a somewhat tringent property, which is useful to counteract he tendency oo scour which orten occurs to beasts prises an excessive quantity of roots. Rape cake 3 a useiful food, though its peculiar flavor somemes renders it difficult to get animals to take to buying and selling rape cake to ascertain that it is ree from mustard seed, which renders it practically poisonous to stock. Much of such cake comes into into rape cake for manure, but occasionally by ome mischance a parcel finds its way into feeding not discovered. I say, mistake. because no sensi. ble cake merchant would fraudulently run the risk of the consequences which might be expected to
follow.

## Less Water-Deeper Wells.

Water was never so scarce within my memory as
it is now. Wells are usually dug too shallow, and hence fail in a dry time. For nearly a hundred years the barnyard well at Kerby Homestead sup.
plied all the water which was required for th. stock in winter, but of late years it would give the It was only fourteen feet deep, and a few years ago, tired of this annoyance in mid-winter, a new through the hardpan and blue clay until $a$ strata of gravel was reached, when an abundant supply
was obtai was obtained. This well now contains twenty feet
of water. It is evident that the same have reduced the volume of streams causes which
ened the amount of waso less. ened the amount of water in wells. It is evident
that if we are to keep up the supply of water in
wells the mest wells they must be dug deeper, in proportion as
the land is cleared and underdraind the land is cleared to reduce the supplies in thed, which have are the natural reservoirs which feed the sprin and wells The lower reservoirs must be reached. -LF. D. Curtis in N. Y. Tribune.

The crop of potatoes in Great Britian in 1882 is
less by 57,000 bushels than the less by Champions have suffered the previous year but among the Regents and Victorias great havco ,

The Agricultural Department at Washington
estimated the following per cent hogs in several States as compared with ast year In Ohio, 29 per cent; Indiana, 25 ; Illinois, 24 ;
Kentur
(See "On the Wing," p. 38.)
On the left-hand side of the accompanying illus tration may be seen the encampment of the Mounted Police. The enclosure in front is where ing to and crossing the w' is kept at one point and at the other A Aerry bridge is erected.

## Agricultural Affairs in Scotland

 from our own correspondent.The display of Scotch cattle at the last English Christmas Shows was such as to maintain the credit of our northern farmers as growers of prime beef For many years Aberdeenshire has taken the lead Ine from this county is ceeding, and the beef that four pence per stone of eight pounds higher than the rates for that produced in other parts of the country. When ABerdeenshire beef, the term may be taken to include beef that is produced in

Fort Qu'Appelle.
subjected to a deal of criticism. At the latter $\begin{aligned} & \text { averages refer to the cattle sold at the pubic sales } \\ & \text { in the north of Ncotland. I place the figures }\end{aligned}$ and character than at Birmingham, where utili
and tarian principles are more in vogue-that is, the best butcher's beast generally wins. A good deal could be said on either side of this question, but possibly a judicious blending of both systems would be best.
Scotch breeds were well represented, the majority of the cattle from this side of the border being wonderful specimens of early maturity, but often have I seen better "tops," than those which our north country farmers turned out at the recent shows. The fact is that many of their merica, while have been drafted off to America, while polled cattle are now too valuable for breeding purposes to be sent to the butcher. At the great Loudon Christally from the Northern well represented, especally from the Northern Counties. From the $\Varangle 70,000$ worth of stock was despatched duving the week of the market. The pricies obterind

Polled, 341.

 The total sum realized for 341 Polled cal
e21,458, and for 547 Shorthorns $\mathrm{£} 14,409$. Aberdeen, Jan. 12, 1883.

## Hedges.

Fences are of two kinds-live or dead. The live fence, or hedge, has some advantages and some in
conveniences, but on the whole it is probable that the latter are far less considerable than the former. A hedge is permanent, and once it is well established needs no repair, if it is kept in good con
dition by an annual pruning, and if it is made of hardy and pernanent timber. It requires a rap idly growing tree, one that is hardy ; that will grow upon any kind of soil; that will stand crowd
ing, and will bear close cutting. It should also be of easy growth, and preferably from cuttings. The principal objection urged against live fences
is that they occupy too much ground and exhaus is that they occupy too much ground and exhaust
the soil upon which they stand. This objection is the soil upon which they stand. This objection is
hardly serious enough to outweigh the advantages
of a good live fence. They take so little from the


most of the northern counties, such Moray, Ross, etc., where the system of feeding and the breed of cattle are practically the same as in Aberdeenshire. There was a lack of "plums" the champion animal at Birmingham nor being worthy of being compared with the wind several former years. The champion prize at Bir mingham went to a Hereford steer, belonging to Mr. Price, which had also the honor last year of having won similar distinctions in Bingley Hall. At Loudon "the blue ribbon" of the show went to a Shorthorn heifer belonging to Mr. Stratton, which was only highly commended in her class at Birmingham. She was an animal witk great fore end, and a true looking Shorthorn in respect to character, bat hat plain hind-quarters and was un evender at our two greatest exhibitions of how the judges at our two greatest exhibitions of fat stock in the showyard system in this country is the want of consistency and uniformity in the decisiona the different exhibitions; and this blemish has now been brought, liy the placing of the animals at Bir. mingham and London, into great prominence and
from 6s. to 6s. 4 l . peny lb . higher than last year; quality. These returns of eight pounds for top paid the actual feeder, but a large number of the cattle were in the hands of dealers who had to ray a long price for them at home, and I hear that these mid.llemen have, in several cases, suffered
heavy loss-as much as $f 5$ to market was overstocked, and a per head. The cattle were not sold the first day but many of the
chers and disposed of later on at considerably less prices than those quoted above It is a generally acknow ledged fact that stock farmers and dealers risk too much on the chances of this one market.
It is computed that in the course of
early 600 Polled that in the course of last year een exp Polled Aberdeen or Angus cattle have traordivorted from Scotland to America. The exthe effect demand for cattle of this breed has had ne could raising prices to an extent which no hore clearly ave anticipated. Nothing will show past twelve monthe rise catlle have within the to give the avas realized last year, along with the average price for Shorthrra cattle for the same averiod. 'I hese
soil that is not returned in the fallen leares that his tax upon the productive capacity of the farm well-and in many cases better, on account grow as protection afforded -within practicable distance of the hedge as in other parts of the field, and the plow can be run as close to it as to a post and rail ence that is still seen here and there, notwith-
standing its objectionable character. In bater the good and tad points of a hedge or live fence it is an unprejudiced one-in its favor judgment - that most desirable that live - fences its favor. It would be mon than they are. We are pestered beyond bearing with myrriads of injurious insects, and we
complain with bitterness when complain with bitterness when our friends the
birds harbor in our gardens and fruit trees. What other shelter have these useful lirds? Elsewhere they have no place to hide their heads. With re-
gard to these pests the harvest is teat gard to these pests the harvest is too great and the
laborers are too few ; their natural enemies the birds, have no abiding place in reach of their work, and are driven off or destroyed by other birds or mimals of prey, from whose attacks they have no
shelter, either for themselves, their young.
Compare our bare, silent, cold rail or board ences with the leafy, sheltering hedges of Eng.
land, filled with nests land, filled with nests of many varieties of birds.
for which we provide no home, and which, as com.
pared with the pared with the sparrow, are of inestimably greater
value and durability in every way, and the reason
for the overpowering numbers of our insect pests
seems to be plaines. Their farm consists of 900 acres, nearly
all of which is under a high state of cultivation, seems to be plain enough. And it seems to point growth of hedges in place of rail fences, for before we can have birds we must have proper shelter for them; food there is in great abundance, but no
homes for them and their little families, and the hedge is their home, and not the woods and the forests. There is not one va id reason that can be given in opposition to live fences that may not be
urged with equal force against rail, board or wire $\underset{\text { fences. }}{ }$

Yearling Shorthorn Steer, "Clarence kirklevington.
Our illustration is a perfect representation of the thoroughbred yearling Shorthorn steer, Clarence Kirklevington, exhibited by the Canada West Farm Stock Association, of Bow Park, Brantfort, Ont., at the late Fat Stock Show at Chicago, III.
and is beautifully sitnated, being nearly sur,
rounded by the Grand River. The soil is alluvial deposit, and is of the most fertile character. The buildings are commodious, and are constructed according to the latest improvements in farm archi
tecture, and ample accommodation is made for over 400 head of stock.

## ryfe Wheat.

its first importation and the origin of its name.
A popular idea exists that red Fyfe wheat, which has become the most favorite species for cultivation in Manitoba, took its name originally from
the fact of its having been grown in Fyfeshire, land. It appears, however, from correspondence between Sheriff Ferguson, of Kingston, Ont., and
the Deputy Minister of Agriculture and Statistics, that such is not the case. Sheriff Ferguson, who
thas taken a great interest in
matter that we gather in rural exchanges is nore eagerly read than the reports of local agricul
tural meetings and discussions-the freshest and best thoughts of practical men speaking before a
audience of equally well-versed audience of equally well-versed neighbors, an
therefore most carefully stated. Success to far mers' clubs, wherever instituted! They are sure to do good near at hand and often far away. Mr. Benjamin P. Ware is good authority for
the statement that, but for the $\$ 600$ appropriation for eauh eounty agricultural society in Massachy setts, two thirds of them wou d not now be i existence. The majority are entirely dependent o with equal force to three-fourths of our agricultural ocieties?
Mr. Henry Quimby, Rochester, N. Y., has use
8,000 bushels of leached ashes on of crops-grain, vegetahles and fruits and kind of crops-grain, vegetables and fruits-and alway
with good results. So he told the Western New
York Farmers' Club.


He won the first prize in his class. The sire $\mid$ all his life-time, and was the first president of the $\begin{aligned} & \text { of this magnificent young steer was their well }\end{aligned} \left\lvert\, \begin{aligned} & \text { Ontario Agricultrural and Arts } \\ & \text { known imported pure Duke bull, 4th Duke of }\end{aligned}\right.$ known imported pure Duke bull, 4th Duke of "A family named Fyfe resided near Kingston in of Horton. The object in selecting this steer for stonc-cutters year 1837, and the men worked a the exhibit was to show the value of high breeding atel at Kingston. They soon after or about that for high profit This animal fully demonstrated time left here and settled on land between that proposition, weighing 1,620 pounds at 645 a letter from their friends in Scotland coutaivin days, showing a daily gain of $2 \overline{5} 1$ pounds, and is a some grains of the above wheat, which they had marvelously symmetricaland attractive animal, not- taken from a vessel that then had arrived from the withstanding his great weight for age. He was $\begin{aligned} & \text { Black Sea, and was unloading at one of the docks } \\ & \text { at Glasgow. They cultivated the sample they had }\end{aligned}$ shown also in the sweepstakes ring for yearlings, thus procured, and found it good, and at the Procomposed of 26 entries. Our judgment, and that of
most of the best stockmen and hreeders in the Exhibition soon after held in Cobourg the show pointed to this steer as eminently the best tho soinshels exhinited took first prize as the best larly enough, thought differently, and gave the remark that you can also sow the same wheat in prize to a grade shorthorn weighing 20 pounds the fall as fall wheat without fail."
fess, and older by 70 days. It is intended to
feed him for the Fat Stock Show of 1883.3 .
Bow 1 ark farm was purchased by the C. W. F. "I would not be without the Advocate for five Bow ' ark farm was purchased by the C. W. F.S. times the amount of the subscription, and of the
Association from the late


A prominent orchardist of Iowa unhesitatingly
recommends the selection of northern slopes and a ree exposure of the trees to all the winds that how. He says that every orchard in his vicinity horth-east is growing remarkably well, while the protected ones are failing about in proportion to the completeness of the protection and the slope of the houm the belts to arrest the prairie wind sweep in general way, but the close hemming in of orchard ees by timb,er belts, and the selection of southern The Ensilaye Conyress at New with an enthusiasm for extreme views on the ad antages of compressed fodder which proves that
our warning against excesses in this, as in other di our warning against excesses in this, as in other di.
rections, is well-timed and needed. There was little or no disposition to question the most extravagant laims of interested persons. On the contrary, the aith that was exhibited in the qualities of ensilage
bordered on the sublime-or the ridiculous. One siloist, most of whose live stock, a horse and a mule, died after a winter's diet on the seductive most advanced sauerkraut creed was unchanged.

## The Dairy.

## Canadian Cheese.

bi l. b. ARNOLD.
The dairy products of Canada are every yea swelling into greater and greater importance. The production of butter is assuming new life and
vigor, apparently with an endeavor to overtake and equal the cheese interest in prominence, whil the latter, as if determined to maintain its fore most position, is rushing on with increasing strides. past year is beyond all precedent. The duing the past year is beyond all precedent. The shipments of cheese from Montreal, which have heretofore
been about half, or even less than half, of those from New York, have this past season sometimes equalled, and occasionally exceeded, those of the great metropolis of the States. Another year will see the scales protty evenly balanced between the States and the Dominion for the season, and very soon the latter will lead in the magnitude of her xports of cheese, and become the chief supply of that luxury for the cheese eating people of England. The steady gain of the Dominion over the Slates in the quantity of cheese yearly shipped is demoralization of the products to think, to the the introduction of lard cheese states, from suine or skim checse nor is it bean Ca cheese is any better than that from the States. It has its origin in other considerations. In all re spects Canada can compete with the States in the production of cheese. Both have the same market open to them on equal terms and are about equally distant from it. Both have similar soils from which to derive their goods and both have the same modes of manufacture. In the race for quality, the Canadiaus started behind, but by a persevering de termination to succeed they have caught squarely up with their old leaders, and are now rather in which has brest which has brought them to the front in respect to or can make it cheaper in the Dominion they have States, though it is true that they have a little ad vantage in this respect. Of the land in which cheese is made in the two countries, that in the Dominion bears a little the lower price, and labor and stock are also a little cheaper on the Canadian side. These are important items, and are sufficient to turn an evenly poised balance. But other circumstances have more influence in shaping the current of trade. One of these is the rapidly in creasing home consumption of cheese in the States. A dozen years ayo the amount per capita consump ion of cheese in the United States was four and a become reduced to three pouds later and it had ally. Now it is fully five pounds capita annu annum, with the rate of consumptioer hearl pe creasing. There are two leading causes for thi enlarged rate of consumption; one is an improve ment in the quality of cheese, which makes it more palatable and wholesome, and a second is the unparalleled prosperity of the great mass of citizens which makes them feel better able to pay a high price for such cheese as they like. Ten years ago ti was notorions and often complained of, that all the best cheese went abroad, the poorer sorts only boing to the American grocers. Such a course is the most expeditious one possible for reducing consumption, and the rate ran down fearfully. Reto large extent reversel The ions in tine cheese are for domestic ose thausactrade paying a higher price than shippers canc afford to. The consumptive demand is much greater in the States than in the Dominion, and
will be very likely to continue so, on account of the preponderance of cities and large villages. It ply them than in Canada, where the product is greater in proportion to then producing population. The same causes non are operating to increase consumption in the State are active in Canada, but for reasons just assigned hey will fall short of a parallel effect.' I feel con ident that it will not be many years before all the ne cheese in the States will be wanted for domes ic use, and the entire business of cheese exportaion from this side of the Atlantic will be left in Canadian hands, and they may as well be preparoffort should fortune which awaits them. Every irable as possible, the to make the quality as dekeeping quality, while the minor points of and ize, color and texture should points of shape, Nobody wants food that has not a good foror, and if they lack keeping qualities they will deprecite in price according to the danger of spoiling clean and full flavor, with a solid and compact but plastic texture, constitutes the leading requisite of a shipping cheese. To secure all this, more pains must be taken in the care of dairy stock and of the milk on the part of farmers. Cow not well supplied with good water, or fed on poo able, will not give mill that will way uncomfort abed whenese. Fancy cheese, that which give flav
ored first classe conancyers and and command chich the mosest
money, can only be made from cleani, sweet and money, can only be made from clean, sweet and
rich milk. It is not enough that a cheese maker
has milk " just as it comes from the has milk "just as it comes from the cow,", for it
may come in that condition and then be very poo stuff. Neither should cheese makers poison their
cheese cheese by using stinking, stale, sour, or musty
rennet, as many of them do, or soil it with nasty
hands or drops of sweat, or fumes of ther hands or drops of sweat, or fumes of tobacco
smoke, as is done in many a factory, if Canadian cheese is to aspire to distinction in the list of ac
ceptable human foods, and to lead in the mark of the Mother Country

## Betterments in the Dairy.

By John Gould, Agricultural Editor Cleveland Herald. It was a great pleasure for me to notice in the January Advocate that dairy schools were the butter product of Cands to the betterment of he butter product of Canada, and, even here in most desirable help. It is experience would be a apid strides in improverent that we are making our butter indicates, but it would also be price of not disguised) were we to in some way tach thos armers that are away from factories and crean eries, and where butter is yet made in the unskilled ways of the past, and with the rude aids of a former generation, and bring this now inferior proluct up to a standard of quality. \& It is not im. probable that a similarity of conditions exist in his respect between Canada and the United tates, and if I should make some suggestions that ould be of practical value here, it is not unlikely It is not at all prolicable across the lake. butter is made at the farm houses now, than was twenty years ago, nor that less skill is to be found hut, on the contrary, many things go to show that creameries and factories. The truth is the the reat mass of consumers are becoming thore di criminating in their tastes, and demand better but ter, and will have it, let the price go up as it may The very class who, a few years since, purchase poor butter and asked no questions, now call for reat an unquestionable flavor ; and so the ejectel, and its presence in the once eaten, is now ence that cannot be brooked, even by tha an of once purchand the brooked, even thy those who

Now, whence is the remedy? It can only com from two sources, education and the employmen improved apparatus, so that a uniform high grade of butter can be made at home, or, the still ceam gathering system, the over the states, the ceam gathering system, the one turning up side and substituting a scientific. plan, for the making, cabinet creamery is a scientific process of butter making. The other is yet more radical: the trans erring of the butter making from the house to a central point, where one man and an assistant make butter for fifty farms, and of one quality.
Here I may be permitted to say that I do hold that good, even fancy butter, cannot be made at the farm house ; on the contrary, the finest butter ever made has been the product of open tin pans, and a stone churn, guided by education and skill, so that in every case there was a corresponding series of relations that controlled the product and its quality. Good butter cannot be made by gfter-product buter min and cream and the aging influences. So it appers dith damfinds a high quality of butter thus produced, may be certain that back of it were system, wo intelligence, and adapting of methods to seen desired ends.
Before entering upon a why and wherefore of in proved mechanism for home butter making, it is indispensable to say that "patent rights" are not a But butter fit for the Queen can be made in a grea majority of the farm houses, if care and intelli ence are brought to bear in the operation. Good milk is the first indispensable, and "cows for the dairy" may furnish a chapter for future considera hon. A high grade butter cannot be made if the family live. he cook-room, or even where the of fresh, pure ir perature, one that for rom $60^{\circ}$ A uniform temperatur moch, if any or perfect cream rising and the ups and dowsing changing from heat to cold and back arain ins of eres with the natural specific gravities both of the cream globules, and the serums, and a perfect bringing of cream to the surface cannot be per.
formed. Milk, cleanly and wholésone, set in pans in pure air, will produce a cream that has no
in phete superior, and if this cream is removed before the before it has changed, or "lobbered," milk churned into a thickened mass, a fine grade butter must Yest, provided it is churned at a proper tempera-
ture, and not gatheled until the butter has been
washed washed free from butter-milk with weak brine
More butter is spoiled an acidity to appear before churning tox excessive any other cause; and when such higli authority as cream ker cleclares that "the system of sour that the casein is taken out of the cream or sutcer the better will be the flavor," it is time for us less cascin or cheesy matter odopt new methods. Thre curd by the development of acidity, and this ced to the butter, unscalded as is the case in cheese mak. ing, snon ferments, and developing gases, changes removed while it is in a flluid state, for it has be sarly chuntil acidity operates upon it, and by the butter ing brine, this casein, which in in reality has no affinity for butter fats, is readily alsorbed
hy the brine, and can the no aroount of work can be thins washed out, while he butter is worked, the more thorongh is the incor nore complete the injury to the butters, and the position is this, that the greatest inprovement yet cram system, and adopting in its stead the sour the cream at the first perceptible stage of acidity or "ripleness," and after thorough washing of the
ranulated lutter with brine, to fiee it ranulated luter with brine, to fo washing of th from th
casein, which is the destroying

## Cheese Vats

bi J. b. marris.
On visiting the butter and cheese Board of Trade little astonished at the prices at which butter was there bought and sold. There were about 350 tabs put nn the board and struck off to the highes nd some 42 gc c. As these figures are considerahly above the market price for ordinary butter I was lled with a curiosity to see the place, where an manufactured. Accordingly I took the North Western train for St. Charles, where the creamery slocated which is able to accomplish such a result Creamery Company is a plain brick structure, 2 torys high, 116 feet in length by 54 feet in width, miles from Elgin, and within a guarter of a mile of railroad communication. The building is a new ne and occupies the place upon which stood a similar factory, owned by this Company, which
was destroyed by fire in September, 1882. The building at the time of my visit was not com pleted, workmen being still engaged upon some
In giving a description of this factory I will begin with the ground floor. Acrossoneentireend of the building and occupying about one-ninth of the house, the dimensions of which $I$ am unable to give, but which I judge ere ample for all purooses of the establish.
nent. Next adjoining the ice house and occufingaboutr the length of the building on the
irst floor, is the refrigerator, of a capacity of Adjoining this, a third section of the ground flour is devoted to the reception and cooling
of milk, raising and separating the cream, and the churning, working and salting the butwas located the boiler of 35 horse-power and the the boiler being ated from the butter artitieese room by a tion of this section container tne apparatus and facture of cheese. On facture of cheese. On
the second floor was the office, the curing room, and a large room in which boxes were to be made up. The weigh can occupies a platform 9 feet from the ground floor. ing 4 feet lower than the scales. sThese vats are The $\overline{5}$ rats are each about 16 feet long by 5 feet in width, the compartments being of the same length
by 2 feet in width and 20 inches in depth These by 2 feet in width and 20 inches in depth These
compartments contain the milk, while the space around them is occupied by ice and water A f few
feet from these vats, in the corner of theice honse a feet from these vats, in the corner of the ice house, a
large tank supplies them with water. These are large tank supplies them with water. These are which the milk is drawn into 2 large circular vats
5 feet lower, where it is manufactured into cheese. 5 feet lower, where it is manufactured into cheese.
The cream is not skimmed, but the milk is drawn it is conducted into a tempering vat, also 5 feet Iower. Immediately below the vats I have de-
scribed are 4 pools, each 2 feet deep, about 16 feet long and 5 feet wide, built in the floor like tanners' vats. Each of these pools will contain about 100
cans. In warm weather these pools are used for cans. In warm weather these pools are used for
raising cream, the milk being drawn into cans made for the purpose, each holding a bont 30 lhs. The cans are placed in the pools and surrounded by
water. The tempering rat is about the size of an ordinary cheese vat, and is supplied with both
heating and cooling appliances If the tempera. ture of the cream is too high it is reduced, and if too low it is raised ; from 58 to 64 being the proper points, according to the season. From this vat
the creain is removed to the churn. The churn
consists of an oblong box about 15 feet long and
feet square, with. bearings at each end, and is feet square, with bearings at each end, and
turned at the rate of 45 revolutions per minute. remarked to the butter maker that 1 thouqhet this
motion too rapid, its tendency being to create heat motion too rapid, its tendency being to create heat.
He, however, informed me that this was the motion He, however, informed me that this was the motion
required, but gave no reasons, and I still hold to the opinion I expressed on that occasion. From 30 to 50 minutes, 1 was informed, was the time
occupied at a churning. When churned the butter was in a granular form, of the size of wheat. The buttermilk was then diawn and its place supplied
with water, in which the butter was washerl. It with water, in which the butter was washier. . It
was then removed from the churn to the power hutter worker, which consists of a table with an incline surface, over which two fluted conical
rollers revolved, the one following the other. The rollers revolved, the one following the other. The
butter was placed upon this worker, where it was drained, salted and worked, and then removed to trays, upon which it was allowed to remain muntil
the following morning. It was then the following morning. It was then reworked,
packed in Welsh tubs and sent to the refrigerator. cheese defartment.
Having given a brief and very imperfect descrip.
tion of the butter department of the establishment, I ask the reader's patience while I attempt to Collow the milk from which, as we have seen, the
cream has already been removed, through the various operations by which it is converted into cheese. If the reader will picture in his mind two
immense wash tubs, about $1: 2$ feet in diameter by immense wash tubs, about 12 feet in diameter by
20 inches in depth, constructed of staves and hoops,
hand in a direce ionn raliating from the centre al
around. The third cutting is trenfurmed by the aromed. The third cutting is performed by th
coller horizontally hy means of kuives proferi adjusted for that purpose. The process of cutting
completed, the second roller is removed and the first restored to its place, which proceeds with the hirst restored toits place, which proceeds
business of stirring. From the moment the pro cess of cutting culds and that of stirring beging,
this agitation performs the whole operation, in chis agitation performs he whole operation, in
cluding the salting of the curd and pieparing th same for the preses, in a neat and rery sati- factory
nanuer. The vats are so arranved may be loweral thus allowing the one side off through a fancet in the hottom, the tincline working if the anitator. The carac the least the
 my of Mr. T. B. Wire, of Geneva, Ohio, and ing vat in use, the superiorily consisting in the
eery effectum very efiectual manner in which they stir the cur
during the process of heating, airing and salting. From the description I have given any intelli gent cheesemaker will be able to see that the very arge quantity of milk I have named is worke
with a comparatively small outlay of nanual labor no other vat of which I have any knowledge doin the business of stirring the curd unassisted. will be seen that all the cheess manufactured at
his estalhishument are skims, the milk beinvellow this estalhishment are skims, the milk being allow-
ed to set albout 20 liours and each 100 lis. furnish-
ing to ing to the butter de partment cream for
about $3 \frac{1}{2}$ lbs. of butter. abont $3 \frac{1}{2}$ lbs. of butter.
In some particulars the ne some used in the the
methufacture of milk of
nate namufacture of milk o
thischaracterintochees differs from that emiist, morerennetshould this being the reason it
to dis sirable to have cheese
of this character to into consumption as soon as possible, and the process ot cuning is promoted et. Second, that the
dheese may be soft in cheese may be soft in
texture, less heat is re-
yuired than with whole Yuired than with whole
niilk $S 2$ being the point at which they added
the rennet at this factory, scalding being ac to 94. Third, unlike the whole milk method,
no delay is necessary
after scalding for the purpose of maturing, the
why
teing drawn imand resting upon blocks of sufficient thickness to $\mid$ mediately. Fourth, less salt is required. At this raise them to a convenient height, he will have
formed a pretty good idea of the appearance of the rats used at this factory. If he will then go a
step farther and conceive these tubs as lined with tin, a space being left between the tub and it lining of about $2 \frac{1}{2}$ inches for circulating steam or
water, he will have a still better idea of them. In water, he will have a still better idea of them. In
the centre of each of these vats arises a conical the centre of each of these vats arises a conical
shaped hollow turret, about 12 inches in dia ineter, and as high as the top of the vat, in the centre of
which there is a perpendicular shaft connected by Which there is a perpendicular shaft connected by gearing with a horizontal shaft under the vat.
This shaft supplies the motion to a roller, one end of which rests in a wheel which rolls around upon
the edge of the vat. This roller is surplied with the edge of the vat. This roller is supplied with
180 spokes, or paddles, of sufficient length to w ach 180 spokes, or paddles, of sufficient length to rach
nearly to the bottom of the vat. These padlles are arranged in rows winding about the roller like the thread of a screw. The roller has two motions,
one in which its outer end traverses the whole one in which its outer end traverses the whole
circumference of the vat, and another in whicl it revolves. The purpose of this roller is that of
agitating the milk in the vat while heating tis agitating the milk in the vat while heating, di
tributing the rennet and stirring the curd after is cut, operations which it performs very perfectly. After the rennet is sufficiently mixed, and before
coagulation begins, this roller is removed and ald coagulation begins, this roller is removed and an1-
other put in its place, upon which curd knives are other put in its place, upon which curd knives are
adjusted. These knives are so arranged on the roller that with each revolution around the vat a space of about 15 inches is cut perpendicular until
the whole surface is completed. t tis then cut by
 very moist condition, so I calculated that not more than 2 lbs. remained in the curd
The ordinary screw press was used, of which they har between 40 and j0. On the day of my
visit alout 12,000 lhs. of milk were made up, 32 cherse being produced, weighing almut 34 ilhs.
each. These cheese were 15 inchex induinet by ach. These checse were 15 inches in diameter by
alout 5 inches in thickness, and resembled Ohio Flats. An examination of the cheese in the curing roon convincel me that they were skimmed, but
very good, hein" soft and not too dry, and at same time firm. In concluying this article I would say that the
impressions I tomed, as the result of my visit to
ind this creamery, were, uph the whole, very favor-
athe to its methouls and app limecs in the manufacane to ts methons and applances in the manuac
ture of butter and cheese. Its arrangencuts from
the point when the wiks the point when the milk was taken into the places narket, all heing adminathy calculated to facility ant ease in the performance of every branch of paratus it seeme to me lecing masually well calcuatel to work in liarmony with that laws which
nature has chacted to govern the process by which hese two ver impor invern the process by which heinf. Its butter sells with the very lest on the
Elgin market, while its cheese is not inferior to
any of that variety manufactured anywhere. A
a proof that this method of working up milk a proofitable to those who engage in it, the superin
tendent informed me that dividends tendent informed me that dividends have been
declared by this Company as high as $\$ 1.80$ per 100 declared by this Company as high as $\$ 1.80$ per 100
lbs. of milk. Mr. S. S. Pembleton, the superintendent, is a gentleman of whose ability to manag He treated me politely and spared no pains i giving me a thorough insight into the whole busiAntwerp, New York.

## Stock

## The Feeding of Young Animals.

 A young and growing animal requires somewhatdifferent treatment from that needed by a mature one. A full grown animal is furnished with a complete skeleton, and while it is not adding to its
weight needs only to repair the waste caused by muscular exertion, by which muscular fibre and fat are used up. A young animal grows all over, as it
were ; its bones enlarge with great rapidity and its muscles are increasing in substance daily. It is therefore obvious that a sufficient supply of food
which contains in its elements those which are which contains in its elements those which are
contained in bone and muscular fibre should be furnished to a young and growing animal if we
desire it to thrive. For very young animals, nature desire it to thrive. For very young animals, nature provides in milk a food which supplies every re
quirement of the animal frame. It contains the phosphates, the lime, soda, albumen, and fat which are needed to supply the growth of bone and heat consumed by radiation and by respiration But milk is not sutficiently plentiful to feed a young animal to maturity, it is too valuable eve first ski med, and in many cases even skimme milk can be turned to more profitable uses than to support th ; calves. It is always a question for
consideration what foods are best for consideration what foods are best for young ani-
mals and which are the cheapest, considering a the same time effectiveness for the purposes re quired as an element of cheapness.
The great danger in feeding you
The great danger in feeding young animals is in
overdoing it. The writer has of late made the dis covery that young calves can very casily be kep
from growing and, indeed from growing, and, indeed, can be brought to less
weight, by overfeeding wi h warm skinmed milk weight, by overfeeding wi h warm skimmed mill under 4 monthe old. Overfeeding with young cal
nutritious and digestible most nutritious and digestible food unduly taxes the It does more and worse ; it loads the intestina canal with undigested and irritating matter which inflames the mucous membrane, causes disorder of
the vital functions, and draws upon the system for matter with which to supply the waste. Not only is no growth made, but previous growth is drawn The same effect occurs with full grown animals fed for fattening when the injudicious feeder supposes that if four quarts of feed will make a pound
weight of flesh and fat, eight cuarts should make two pounds, and acting upon his supposition lear that the rules of aritlimetic do not apply to the practice of feeding animals, and that aldition and
multiplication may at times becone subtraction So that not only must food be chosen in in referen to its nutritive qualities and its digestibility, bu the ration given must be apportioued to th
and healthtul requirements of the animal.
Sometimes it is necessary to feed a young anima
through the dam. This is the case with laml raised for the early market. These tender animal
cannot be fed with solid fool gestive organs, immature and fitted only for the digestion and assimilation of their mother's milk, meal, although these may contain the very elements which are required to increase their size
and add to their fat. But these fools may be given to the ewe, and by increasing the quantity
and enriching the quality of the milk indirectly nourish the famb more perfectly than the unaide milk would have done. But this, too, must be
done with caution and within bounds, herself, always subject at this period to injury by overfeeding, might become disordered in health,
her milk yield lessenel, or even completely stopped by an attact of inflammatory completely
udder, and the lamb entirely arrested in its growth.
made subject to two yocessary renis must be

 foods upon the bowels, as, for instance, their laxa-
tive or their costive tendency, for they vary very tive or their costive tendency, for they vary very
much in this respect. Linsed-meal has a tendency
to looseness of the enole to looseness of the bowels, but this being due to its
mucilaginous nature and not to any irritation mucilaginous nature and not to any irritation
caused by it, this effect is often healthful and /desirable, rather than otherwise. Cotton-seed-meal,
on the on the other hand, exerts a costive effect, but this
is not injurious either, only one must he cautious is not injurious either, only one must he cautiou
not to feed the foods to excess so as to intensify to an injurious extent their peculiar effects.
Bran is a food that is digestible and nutritious,
It contains nearly all the phosphates of the It containg nearly all the phosphates of the grain
and a large portion of its nitrogen. But if it is "scrubbing," by which the inner the process grain which adheres to it is removed and mixed with the bowels which irritates them and mal effec causes diarrhea. This is to be cautiously avoided with all young animals, as, indeed, should be cos
tiveness as animal it is best scalded, by which its hardnoss is softened and is rendered more easily soluble. The beneficial effects of a bran-mash upon an older animainge well known. Fine bran or coarse mid less rich in the needed phosphates.
Oats, either whole or ground, are an excellent colts. An ounce of crushed oats given calves and to a calf of 3 months or even less, and the quantity gradually increased up to a quarter of a pint, and hen to half a pint for a 6 -months old animal, will the nutriment that is needed and in a digestible orm. A young colt may safely take four times as while the young animal is running with be begun Peas are next to milk in nutritive value for a young nuimal, and also in digestibility. They contain which is identical in composition with the caseine niilk, and in some parts of the world this legumine in made into cheese that cannot be distinguished Pea-meal and bran scalded and made from milk gruel is an excellent substitute for milk for any food, being rich in Corn-meal is a very defectiv nitrogen and phosphates. It should be divent sparingly, but better not at all to a young animal when it hat become half-grown some corn may be a young animal needs. Bone and muscle are re to a very limited poduces neither of these, except ness of fowls fed chiefly on corn, and the effects its highly carbonaceous composition upon pigs fed
chiefly upon it are seen in the prevalent and chiefly upon it are seen in the prevalent and des
tructive "hog cholera"" or ant tructive "hog cholera," or anthrax fever. The
French name of this disease, "clarbon," distirctly characterizes it as the effect of the super-carbonata-
tion of the blood by too much carbonaceous or

The amount of the ration is equally important a little than too much. It is far better to give too hungry will grow healthfully and thriftily, but not
fast, but one that is horged will not On the contrary, it will go back and lose flesh, and
lecome diseased, perhaps permane hecome diseased, perhaps permanently. Not only
is food wasted by excessive feeding, but the animal
itself itself is wasted by excessive feeding, The ration should be beanimal
carefully to the capacity of thed carefully to the capacity of the animal. Beginning
with a amall and bafe quantity, this may be grad
nally increased ually increased so long as the appetite is vigorous.
Once an animal fails to consume its food complete. y, and leares part uneaten, it is overfed, and the Then food should be withheld altogether at once. two meals, for nothing so soon restores the tone or the stomach as a fast This is far better than
medicine. Food that is not appetitite. Fond creates loath is not eaten palls upon the
arhich is to be carefully a voided by one who desires to have thrifty
young stock. young stock.
Regularity in feeding and accuracy in the meas
ure of the ration are indispenslu feeding and the measure should never lee departed from. This is one of the maxims of the successful
feeder, and oneof the

American Shorthorn Ferd Book. The following rules of entry, as recently amended, SEcrion 1 erest to many readers sex, date of birth, name and address of breeder and owner, and full pedigree, with, when practicable volume and page on record of the last dam recorded its sire and dam, to imported English Shorthorns, or to pedigrees not false or spurious already of re-
cord in herd books published heretofore in the United States.
SEc. 3. Wh
are discovered in pedigrees of animals which hav been bred and recorded as Shorthorns, the des cen
dants shall be entitled to record in furwe provide females have five crosses of recorded or recordable bulls, and males six of such crosses, and that males with such pedigrees, which have been recorded
previous to the discovery of the error shall be de cained on record; and wherever the name and number of the bulls so erroneously recorded ap ear in any pedigree, the same shall be recorded
by an asterisk. Sec. 4. On and after January 1, 1884, imported animals must be of record themselves, or have sires and dams recorded in the English Herd Book.
SEc. 5 . On and after Jan. 1, 1885, except imported animals shall' be eligible whose ires and dams are not already of record.
SEc. 6. Pedigrees of bulls shall be SEC. ©. Pedigrees of bulls shall be printed in
full, uuless there be more than one of the pedigree in the same volume, to which reference pedigree made, and the pedigree abbreviated. Bulls
shatl be shall be recorded in alphabetical order, and
not be re-entered except to correct matl
noterial error not be re-entered except to correct material error number, to which reference shall always thereafter
be made. be made.
Sec. 7. owners' names in owners names in alphabetical order, and no change
shall be made for produce under dams, which shall
be furnished as far be furnished as far as known.
SEc. 8 . Pedigrees of females may be abbreviated
by reference to complete pedigrees owners' names and in the same volume, and any
cow having pred cow having produce since the last entry may be
it-entered with her produce. SEc. 9. All bulls appearin animals sent for record must be recorded in full,
with proper numbers, in the with proper numbers, in the American Herd Book,
and the pedigrees of all reference bulls corded must be sent in full, with the numbers by
which they hat Which they have been recorded in any other book. cal indices of females and of bulls entered alphabeti duce, and of breeders and owners, in each volume SEC. 11. Should any person or persons inten on the American Shorthorn Herd Bament pedigree be devoted in the succeeding volume to his or thei exposure, and he or they with never be allowed to Herd Book after they are convicted by the Board

Origin of Ensilage
An interesting contribution to the discussion of Kilcreggan, who, writing to the North British Agricuturtist upon the origin and practice of en-
silage, says: "Sauerkraut! Yes, that's it. What
is is good for man is goord for beast. I'll try it any how. So thought an old German farmer one wet season upwards of 80 years ago; only, instead of
cablage he used grass, clover and vetches, the pepper corns, and used a pit in the stead of the family barrel or crock (ivdene hayen)
Some years atter Some years after such words as 's salzfutter' ' (salted
fodder), 'sauerfutter ' (pickle ' sost' (cattle salad) might be heard among the ' viehers of Germany and East Prussia, where the prac-
tice first obtained tice first obtained a hold, thereafter beeing carried way among the Dutch and ard grench neally finding its
Alout 1850 it cane About 1850 , it came into notice in Scotland. The
Rev. John M. Wilsone on things agricultural, gave so full an anthority as to be well worthy reproduction." Mr. Muir
head to the quotes the lengthy description which answers silage. Referring to Mr. Sala's now known as en-
vord note on the wort ensilage in the Illustruted Neus, Mr. Muir
head says: "It bably a corruptions to be an Americanism, prowhickle, or the Spanish 'ensalada, 'enisalzen,' to salud pit for the receptable, pickling for the procesibly
and cow salad f is and cow salad for fodder would be more satisfactory
(Barden and (5)rchard. Grafting Fruit Trees.
Cleft grafting being the method most commonly
practiced, it may be performed in the following pranner:--Now is the time to get the cions: they should be cut from twigs of last year's growth, and
each sort should be cut separately and tied in

bundles, labelled, and afterwards put in boxes
with damp sawdust or moss, and kept in whace till hesed.
One of the most satisfactory labels is made of
acutely triangular pieces of waste zinc about threeacutely triangular pieces of waste zinc about threequarters of an ineh in width at one end, three or
four inches long, coming to a fine point. The small joint is bent around the cion or branch to
mark the variety.
The zinc will oxydize, while the oxide of lead
(of a lead pencil) will remain unchanged for years. The slender coil spreads as the branch grows, without injury to the circulation when neglected,
while a wire or cord tied around the tree will kill it if not loosened.
A fine saw, two good knives, one strong and
heavy, the other smaller, with a keen edge; a hard-

wood wedge, six inches long and half an inch
thick, and a small mallet, are the implements used in grafting. The wax may be easily made byy
melting together, beeswax 6 oze, rasin and tallow 4 oz each, over a moderate fire, stirring gradually
until all is melted. Rolls of waxed cloth may be until all is melted. Rolls of waxed cloth may be
formed from old cotton stuff made thin by wear formed from old cotton stuff made thin by wear,
and torn into strips two inches wide. Wind the strips upon a stick and dip them into the melted
wax ; when the cloth is thoroughly penetrated by wax; when the cloth is thoroughly penetrated by
the wax, remove, let drip, and put away from dust ready for use.
Grafting should be done as soon as the buds be-
gin to swell. Having determined upon the place
for the graft, saw off the branch, smooth the cut
surface and make a cleft with the knife and mallet. Cut the cion from the twig, leaving two or three
buds upon the piece, and sharpen the lower eni into a wedge. Open the cleft with the knife and place the cion in carefully so that the lower bud
comes at the top of the cleft. growing layer, of the cion and the stock should touch as much as possible. If the grafted branch
is small, a single cion is is small, a single cion is enough, otherwise put in
one on each side. Unroll enough waxed cloth to one on each side. Uroll enough waxed cloth to
cover the wound of both stock and cions, and pres it on carefully and closely. The quick application of this protection is only a matter of practice. It
is well for beginners to start with worthless lim. before doing regular grafting in the orchard. In possible find some one in the neighborhood famil ar with the process and learn the art from him.
The accompanying engravings show how to The accompanying engravings show how to cut
the cions, and the branch with the cions in their proper places in the cleft and the method of excluding the air and water.
as grafting wax if put on thick around the end the branch, over the clefts, and around the cions and carefully bound on with strips of cloth about
an inch wide and of several thicknesses n inch wide and of several thicknesses. Ninety
five per cent. of cions will grow in thrifty tree when the work is well done and the cions are right,
when either kind of wrapping is used. when either kind of wrapping is used. I can see
no difference, though the clay makes a little more work.

## Grafting Indoors.

by hortes.
February is the month for grafting indoors, and
to persons not accuainted with nursery work this oo persons not acquainted
operation presents a pleasing and norsel surprise To most people the work of grafting is generally


1
Fig. 1.

understood to be done in orchards on old trees, and
few, comparatively speaking of the pullic at lary know anything of the system pursued by nursery
men in propagating the many thousands of youn men in propagating the many thousands of young
fruit trees annually placed in the market for sale.
In preparing for this work the cions are gathered In preparing for this work the cions are gathere
in the fall during mild weather through the
winter, as convenience or urgency winter, as convenience or urgency demand. The
cion used is the wood of the last season's growth,
and is cut and tied into convenient bundles of four or five hundred each. These are stored in the cellar
for use. The roots or stocks are the young seed lings of strong one year's or two year's growth gathered and stored for use. Althongh pears,
plums and peaches are sometimes grafted in winter
yet the yet their general mode of propagation is by bud
ding; hut the apple is thus grafted by the million during the winter season by the various nursery the grafting shop of any of our leading pursery firms, and a busy scene presents itself to our gaze.
Seated at a bench are many workmen busy hand ling the grafting knife, and it is really interesting
how skillfully they work, for this operation requires
great nicety of judgment and lightness of hand he knives are always kept keen as rasors, hand as it is frequently an effort of strength to to cut out, nd as the pressure is brought to bear the rafter's thurub, just touching plump against the eutting it; you would naturally wonder it did not at the whole thumb off. It shows how surprisingly hops there is always a creditable all grafting ivalry going on amongst the men, as to wo can day's work shed businesses there is always more or less traperhaps dead past, of the skill of this man, now nother one done in a certain time. These old ing the business, who in turn, as they become useful knifesmen, will endeavor to graft a greater number than they ever heard of. In years past raft called for a strong and even paper around the system of tying with waxed thread has been adopted, the strong fitting graft is not necessary, And will those two things stick and grow together? is the wondering question asked by the stranger in the shops, as he watches the busy grafter deftly
sticking them together. Upon being assured upon that point he watches. with enquiring eyes the rest of the operation. It is explained to eyim the the great thing to be observed in grafting is, that the
bark edges of cion or root must fit evenly on one side, that the librer of both must come in conly on one there can be no union; also that it is not neecessary that the cion and root should fit evenly all round,
but only on one side or the other. This is the great secret of grafting, and all the art there is in it. This principle applies to the practice in graft.
ing old trees in the orchard. In cutting fit, the grafter makes a sloping in cutting cions to an oval shaper end on cion; then he turns it in his
hand splitting hand, splitting it in the centre of cut and then cuts
cion off, the length of the piece being regulated cion off, the length of the piece being regulated by
the distance of buds apart, the rule being to leave about three or four huds on cion, as shown in fig. 1. After cutting up some three or four hundred roots, which is done by squaring the top of root right at collar with neat cut, then making a
tongue-like cut on one side and splitting this in congue-like cut on one side and splitting this in
centre to correspond with cion; then are both fitted together and the graft is made like fig. 2, and passed to a boy who ties them. They are then gathered up and packed in boxes in sand and sawseason in May, when they are removed and dibbled into the ground, there to remain till they are fit
for sale after three or four years' or sale aiter three or four years' growth. I have
briefly given a description of this interesting work now going on in the nurseries, and I can assure the reader that the graft is made in far shorter time this system of propagating apple trees, but I know it is a valuable one for many reasons. To it we owe nearly all our great orchards, and the cheap
price apple trees can be sold a demand, and furnishing the supply ; and not the least pleasant feature is furnishing pleasant work in warm quarters to men and boys who would otherwise be idle at this season of the year. Just
fancy it-making orchards indoors by a warm stove when all outdoors is bleak, cold winter. Listen to the hum of voices, the click of knife as it
cuts in and out in the cion or root, the rattle of the reel as the string is unwound quickly in tying the graft, while outside is the silence and calm of winter, and you will agree with me it is a nice
class of work, and something every farmer should understand how to do. It is a pleasing thought to know that those little brown cions and roots, only about six inches in length, lying in heaps, would
some day make large, stately trees in the orchard In fancy you can see the green meadow, the pleasing shade and sunshine amongst the trees, the bending boughs and ripening fruit. These results
of skill, labor, time and cultivation call forth our arlmiration for the operation of grafting, and show that the nursery and farm are near related.

Watering is best done at night, but early in the day will do. Nature never waters plants while her. Neither does she often sprinkle with ice cold water. We should never forget to temper that
which we pour upon ours in pots.

The Chinese Primrose.
As a flowering plant, either for the witdow or the
conservatory, this plant is a very useful one. Its conservatory, this plant is a very useful one. It ly handled, and the various shades of color, from pure white to almost scarlet, with the numerou intermediate shalles, in both double and single ble plants one can lave, There is most valu white variety very pure in color whan be increased by cutiings, but is a plant can only repays the care bestowed on it This plant will come into flower in the early months of winter,
and continue until well into the spring months, and continue until well into the spring months,
and is much benetited by keeping the oll decaying lowers picked off
The sin $\mathrm{m}_{\mathrm{l}}$ le variety of Primula that once was hut purple, has now sported into a nuble flower, symmetrical in shape, often two inches in diamneter,
beautifully fringel, with varieties that will ofte, beautifully fringel, with varieties that will ofter
come reasonally true, semi-double, as well as single in their respecirve colors.
There are no home-grown seeds of these flowers equal to thuse imported. The best connes from
England and Germany, each count y haviny dis England and Germany, each country having dis-
tinct strains, that are so fixed that they come
nearly true fro nearly true from seed. One house in Gr many
clains to grow 30,000 plants of this flower for its seed alone. The best anl newest variety is quoted at as high as $\$ 20.00$ per 1,00 seeds. Seeds, o
course, of such value require some care in handling in their young stages, so as not to run any risk of losing them.
The first requisite is a loose, friable soil, and for with one-fourth a sharp sand, is a gool one. The slightly covered with soil; a goor plan is to cover the pot or box after souriug, with a pane of glass,
which helps to keep the moisture nuiform until which helps to keep the inoisture miniform until
the seeds have germinated, and pushed through the seeds have germinated, and pushed through
the soil, when thie glass may bee gradually talken away. When they show the ruagh leaf they
should be ifted ani transplanted into otier pots similarly prepared, and set in the soil up to the
young leatlets. The use of this is to young stem from danping off, which they are prone to do without this prepration. They may
stand in these puts until they have grown intio four or tive lexves, when they require transplanting
again into thumi, pots, where they may staul again into thumb pots, where they may stamil
until the pots becone full of routs, from which they are gradual ly shifted into pots a size or two given a six-inch pot, which is large enougli to grow
them to the best advantage. While in the wrentre.
within a foot of the ghass at all timequire to be in growing this plant to the lis hesi style from this simple precantion. Move palticmlarly is this true
with private greun-honses, or conservatorios which
are are often loity st motures de igned rather for
aroiitectural effect than for the atili: $y$ of growing plants.
Every encourngencut mast be iven in the
young stages of growth to prositure a ine develop
 ensuing fall) a strong flower stem well up a aove
the foliage and which will then furuish a perfect The hot sumners sun of this comptry is the try ing
time with this class of pauts, which are natives of They showh ahways have ahmanderce of room for can le, partiilly, shated in the no, n tary and kept As the conder fatl weat her appowes, there is
no difficulty with them,






## How to Grow Early Cabbage.

 I sow the seed of the kinds I wish to grow in in forcing pit, hot-bed, or if these are not to be had, a sunny window of the house will do. The boxes I use are eighteen by twenty-four inches, three inches deep; made of one-half inch boards. The kinds of early cabbage I generally raise areEarly Jersey Wakefield (hest if pur) Winning Tarly Jersey Wakefield (best if pure), Winning
talt, Early Summer and Fotler's Early Drumhead. The first two for early; the others for second arly I only treated the first two as above stated the 1 st to the 15 th of in common hot-beds from
March. After the seeds sown in boxes are up and about three inches high,
it is necessary to transplant them it is necessary to transplant them in otli.er boxes,
like those they were sown in, about one and a half to two inches apart every way; or, put one plant in each pot, and pots close together in boxes,
treating the same as if planted in hoxes. Pots are treating the same as if planted in hoxes. Pots are
hetter than boxes and I use them largely. Abot hetter than boxes and use them largely. About,
one week or ten days before planting in garden,
they must be hardced they must be hardcned off by exposing gradually, night and day, in the onen air I set out my
plants the end of A pril or beginning of plants which are in boxes are taken in the boxes to the part of the garden where the ground is ready and Early Summer the same ; the ither rows twenty-four inches. The rows should be thirty inches apart, so that a cultivator can be used, Early radish, lettuce, spinach, etc., can be sown cabbage needs all the room. After cabbage, celery can be be sown on the same ground. In this way nther vegetable plunts can be raised to alvan-
tase, In fact, I have raised all the following tave, In fact, Thave raised all the following
with sucess: Early canliflower, early lettnce
early kohlrabi, early kohlrabi, early savoy, early celery, early
leeet, early tomatoes, early cucumbers and early seet, early tomatoes, early cu
squashes. - [Gardeners' Monthly.

Destroyina Sprouts.-Sprouts of orchard trees Which spring from the roots are eaused by injuries
to the roots by plowing among them. Wherever root is broken, a sprout is likely to appear. Some
trees are noted for their habit of spronter silver maples, soft maples, locust, \&c spin a which spring from the base of the stem come from grow again they should be 80 that they will not close to the wood, removing even the bark so as to e sure no bud is left to produce another spront.
pprouts from the roots should be cut close to the root, and if they are cut as they appear during the
season they will disappear.

The ${ }^{2}$ friarn.

## Bee Notes for February.

## An exchange says:-

vork for the bee-keeper. Bees that are packed
ther in ther in chaff or in chaff hives need no other at to the hive does not become sealed with snow or
ice. It is sometimes well lead hees by use of a slender wire or twig out the If the bees in the cellar keep quiet, they should The left entirely alone. If they seem noisy and
restless, the temperature of the cellar should be looked atter to see that it be thot above should be
I mit : from $35^{\circ}$ to $40^{\circ} \mathrm{F}$. Ote safety mit: from $35^{\circ}$ to $40^{\circ} \mathrm{F}$. Often, by bringing the twiperature to the proper point, all uneasiness is
checked. If still disturbed, then on the first day
t that is warm onough for the bees to fly, they a their summer stands, and permitted to indulge cellar.
wintering in relation to dampness. An examination of the condition of the atmoscorts taken three times daily, for the accurate cars, shows that there is not the least evidence in
favor of the idea that excessive moser I ailsinge case the cause of the great losses of has in twing. severe cold was experiencens of liad winwinter, the when the cold occurred early in the the periol. If late, the bees did not appear an early
until near the end of the winter.

## Weterinary.

SIR,--Please give remedy for clover bloating
cattle, and oblige.
R. D. W., Ougal, Ont. [If the oblige. R. D. W., Ougal, Ont. If the case is taken in its early stages, a dose of
baking-powder or powdered charcoal, about a tablespoonful to a quart of water, will frequently give relief. If the case is a bad one, an instrument called the trochar shouid be inserted in the
left side of the animal above the last rib. In the left side of the animal above the last rib. In the
alsence of a trochar a hole can be made with a sharp penknife and a quill inserted, taking care
that the quill does not slip in, after all the gases have escaped ; stitch up the wound.

Sir,--I have a fine mare, six years old, that took
cold while on the grass last summer. She has cold while on the grass last summer. She has had
a rumning at the left nostril ever since. Please J. B., Anagance, N. [Apply tincture of iodine with a small brush to
the thyroid glands once every second day.] STr
SIR, -In the December number of 1879 , page
277 , you say sulphur and salt are good for shee and horses. Would you please state quantity of
dose for each, also how often to give and also what dose for each, also how often to give and also what S. B., Charlottetown, P. E. [For sheep about one-third sulphur to two-thirds
salt should be placed in the salt hoxes; for horses
 boiled oats, or other soft food.]
Sir,--I have a horse that rubs his forehead very
nuch, worst just about the root of the ear. nuch, worst just about the root of the ear. He
rubs the hair off. Would you be kind enongh to mention through your valuable paper what would
be good for it.
[From the descripti J. W. H., Hornby, Ont. ay what ails the horse Do you keep poultry in he stable? If so, remove them; or it may be the
nange. If it is the skin will be dry aud crackel nange. If it is the skin will be dry and cracked,
and the hair will come off. $W_{\text {ash }}$ well with soap suds, or it may be necessary to soften first with oil. Remove all scabs, then apply thoroughly whenol 1 the, and keep the animal well cleaned and fed. Don't use the same currycomb and brush to nother animal. Dress the harness and wood work here the horse has rubbed with a strong solution
of potassa and wash the blankets well.].

SIR, - White spots have come on my cattle this winter. Sone say it is ringworm. I would like some information through the Advocate how to ure it
T. C., Seagrave, Ont. [See answer to J. B. in the last number of this
aper, page 16.]

Sice, -My cattle are troubled with large blue remedy to dea tell me through your valuable paper Subscriber, Leamington, Ont ulphey may be easily treated by rubling with saturated withent, or whal oil. Clean oil, or with water and paint all cracks in woodwork with coas of or fresh pine shavings.]

Sir,- Will you give a cure for black tooth in [There is no such disease as black tooth in pigs.
Black or discolored teeth are caused ly an acid posit produced from a disordered stomach. To gunpowder, in the food.]

Parasitic Worms in Lambs.-Coughing, run ing and dullness ass of appetite, and general pinknown as verminons bronchitis which the disease the presence of small, thread-like worms in the of turpentine nith one dhan of can"phor, dissolv-
ing the latter, and add the solution to raw linseed-oil. Give a tallespoonful to each
lamb in the morning an hour befor day for a weols.
©arrespondence.
Notics тo Corr esspovidiss.-1. Please write on one side of
the paper only. 2. Give full name, Post-0ffice and Province the paper only. 2. Give full name, Post-Office and Province,
not neecessarily for publication, but as guarantee of good faith and to enable us to answer by mail when, for any reason, that course seems desirable. 3 . Do not expect anonymous com-
munications to be noticed. 4. Mark letters " Printers' Manuscript," leave open and postage will be only lc. per $\frac{1}{2}$ ounce. pondents.

## Keep More Stock.

SIR,-There is no better way to restore land to
fertility than by increasing the number of animals on it. The majority of the farms in this fair Can ada of ours (thn") do not maintain more than hal of the stock that they could carry over under a proper system of management. If we were to ask
the average farmer on one hundred acres of land and practising the almost universal system of
mixed husbandry-how many cows do you keep the answer would be from 4 to 6 . Is it not a fact that this is about the average? It should be
doubled, and in some instances, three times this number might be more profitable. We do not urge the keeping of more cows than can be well
fed. One cow well fed is better than two or thre indifferently attended. (One bushel of turnips and one gallon of chopped grain, oats; peas and barley mixed, is our daily winter ration for each cow-
with hay and straw). When a farm is once stocked to its full capacity, it is kept in good order by the manure made from the stock, and it is then, and then alone, that farming can be successfully
carried on for any length of time.
D. W. N., Holstein. D. W. N., Holstein

Sir, - I perfectly agree with J. C. S., in his re-
marks with regard to the above association. W marks with regard to the above association. We but, at the same time, we believe they have, and are, being put a stop to; and who is there amongst us
who have not made mistakes and sometimes been a little rash in his own private business? And but the farmers themselves. I think they should not grumble at the Governnent giving them a lit
tle of their own money back in the shape for I feel certain that if the farmers do not get the money the towns-people will, in some shape or
other. I would say, farmers get all you can from if you can only do it honestly; the towns-people are not grumbling. I be ieve we have got a lot o good men at the
the old Provincial, and make a grand success of it
yet, and, I think, if they can confine it more to purely agricultural exhibits than it has heretofore allowed to be exxhibited but that which conese
all is made strictly for agricultural purposes, it would be better for all concerned. Give it up? no, never.
W. L., Aurora, Ont.

SIR,, Having noticed an article headed "Farm
Notes" in the llecember number wish to say a few words concerning it. I think, this year, as there has been an exceedingly goor yield over last year's crop, although we realized at the rate of $\$ 1.30$ per bushel last year; still ther
was not nearly so great a yield as this year.

Sir,-Will you please give me through the columns of your very va uable paper some methoo
for raising both hops and broonn corn for market ing. I have never grown or seen either grow, but I think I have got ground that would grow them,
if I knew how. By giving me a few hints on the if knew how. By giving me a few hints on the
above subjects you will oblige. [Broom corn should be planted and treated in a like manner to ordinary corn, except that the hills
should be planted a little closer. To grow hops should be planted a little closer. To grow hops
suceessfully the land should be in good heart, well
tillee soil is at all wet You would have to obtain cut.
tings from some respectable nusseryman or hop rower, who would instruct you in the practical
method of cultivation.]

## Norman Horses

Sir,-Would you inform ns, through your widel circulated paper, whether Percheron and Norman question is a number of Percheron horses are bein imported into this section of country of differen
sizes and colors. To account for the difference of size and general appearance they call one. Percheron and the other Norman. Are they distinet breeds, or one and the same? By answering you
will oblige. A SUBSCRIBRR, Kimberly, Ont. [The Norman horse was the original Norse horse Ages. From this stock all the heary horses have sprung, and by selection and feeding they have names. For instance, in France the Brettagne Boullonais, Ardenais, Aujern and Percheron are all Norman stock; but the district of Perche claim ated there. They are bred in four different classes, namely the heavy draught, medium draught, saddle and coach horse. Therefore all horses imported
from France are Norman horses in the strict of the word. We have not space to go fully into the history of the Norman horse, and must refer ur correspondents to the "National Register of Chicago, or to the excellent catalogue of M. W. Dunham, of Oaklawn Stud Farm, Wayne, III. who has, done so much to popularize the breed on
this continent. This will also respondents.]
Sir,--Knowing that you are anxious to receive 100 plum trees, mostly of the of use, I have go seeing that the black knot was slightly making its vent my trees beang destroyed in trying to pre yent my trees being destroyed, and having by growth was a preventative of most diseases, I set o work manuring heavy with barnyard, both fall fom the roots After two years treatment this way, although it did not entirely disappear, I keep
it under way, finding them to work well. I tried it under way, finding them to work well. I tried on, giving them more vigor siil. I pruned one
row heavy, by way of cutting back, as well as ripping the bark on two sides of the trunk and up the nain limb, causing a wonderful growth of young
timber, and so far I cannot find one knot on this row, and the bark is smooth and free from cracks. feel strongly of the opinion that allowing trees tn
get hide bound is the surest way to invite black get hide bound is the surest way to invite black
knot, as the sap is sure to burst out in plum trees that are not ripped at least every third year. I have more faith now than I had in the beginning
in this way of treatment, as I notice where trees in this way of treatment, as I notice where trees affected, and some totally lost. I will report how my trees are getting alcng for the next season. as
I am anxious to learn from your paper all infor mation possible regarding the destruction of that disease.
T. H., Kintail, Out.

Sir,--In your next issue oblige by stating the earliest age a young entire horse should be allowed Z. Y. X., Lake Francis, Manitoba, Thoo many entire horses are used when young.
Three years old is plenty early enough, and even then they should not be allowed to serve a great are give too many mares; the consequence is and potence in middle age.]
Sir,- What kind of soil will the Russian mul
 [It will grow well on any good soil, but a light
sandy loam is preferable.]

Sir,-Can you or any of the
the farmer's Advocate tell how I can make a mare that is six years old, and what is called half ehicle. She is nervous, fidgety and terrified at a ailway train; in other respects she is a good beast. is there any remedy
[We are afraid that nothing, Stl. John, N. B. hine nervousness. Keep her away from any-
thing calculated to excite her, and treat her kindly. Harsh treatment will only make her

## Manitoba.

Sir,-Having read with great interest the sevoral remarks, during the year, by several parties,
on "The future prospects for farmers in this Pro. ince," and having been brought up on this Prothe Province of Quehec, it might be of interest to ou to have my opinion on the question. In have ider the soil and climate far superior to Quehec cor growing grain, if properly drained : and I have
early corn ripen here every year ; $I$ have grown a tobacco with success by growing the plants a hot-bed. The hay is everything I cenuld desive
or horned cattle, but I should think timothy was hetter for horses: and, to conclude, it is my firm
belief that the Province of Manitoba, at last is destined to become one of the richest in the $\mathrm{D}_{0}$. minion for agricultural purposes. S. K., St. Norbet, Man.

Can you tell me of any cure for the eye disease A. P., Middle Church P. O., Man, [It is not eye disease but malignant roup. Sep-
rate the affected birds and give them a mixture of hiskey and red pepper, alout a teaspoonful at a ose ; pour
nostrils once
very bad kil very bad kill off at once, to try and stamp out the
disease.]

Sir, -I am thinking of raising about 12 acres of white beans next summer; the field is on the after the wheat came off, and then in the fall I lowed it 8 inches deep, and it is very clean. the following: How should I sow them ? and how much seed to the acre? and the best way to har. est them, and the best way to thresh them? I hes some oats that have heated in the stack; will
hurt horses if $I$ feed them to theiu? I am eeding a few to the sheep; will it injure them in any way? By answering the ahove you will
oblige. A.J. E., Box 1013, Chatham, Ont. [The best way will be to sow them in drills a aout ree use of the horse hoe. Sow at rates of $1 \frac{1}{3}$ to 2 bushels to the acre; or they can be planted in per acre will then be sufficient. They should be hand pulled just before they are ripe, and threshed in the ordinary manner. Feediug mouldy oats
will certainly prove injurious. Scalding them will will certainly prove injurious.
remove a deal of the fungi.]

SIR,-My lease says I must buy twenty-five
dollars worth of manure yearly. Would superdollars worth of manure yearly. Would super-
phosphate stand law ? a Lancashire Farmer, Grantham, Ont. [We would consider $\$ 25$ spent in superphosphate the same as if spent on barn yard manure, the
former containing all the elements of the latter.]

Sir,-Is salt beneficial to onions and other vege tables, and how much per acre should I sow? As worms injure mine very much
try salt to extermine
[Salt is beneficial if judiciously Subscribrar. two barrels to the acre is about the quantity that should be used.]
Sir,- By answering a few questions you will greatly oblige. 1.-Are there any Holstein cattle
for sale in Canada? 2.-And, if not, could they or sale in Canada? 2. And, if not, could they
be imported from the U. S. free of duty? [We are not aware of any dealers of this class of cattle in the Dominion, but there are plenty in th brought into Canada duty free, if for breeding purposes.]

SIR,- I would like to know how to raise turnips; also, something about the application of manures where we farm for vegetables, grain and grass.
[The sulject is of such wide scope that justice take volumes to answer the questions. Nidy our
correspondent be more definite in asking quescorrespo
tions ?]

THE FARMER'S ADVOCATE

## Osage Hedge.

SIR, -Whatkindof hedge plant is best to grow for
fences in Ontario? The osage orange grows well in this county on the high land along Lake Erie but don't do so well where the land is low and heavy. [An osage orange hedge should be made of one be procured from a nurseryman for about $\$ 3$ a thousand. A furrow is made with a plough wher the hedge is to stand; the plants are set in the fur-
row and the roots covered with earth and pressed row and the roots covered with earth and presse
down by the foot. A furrow is then thrown to th plants on each side with the plough, and the
ground is kept clean and free from weeds. The or 4 inches from the back early in the spring to or 4 inches from the ground to procure side-shoots
from the bottom, and these are cut back the next
year to 1 foot, and so on until year to 1 foot, and so on until a thick bottom
growth is made. An old straggling hedge should be cut half through about six inchese from the ground and laid down about 45 degrees in the line
of the fence, one plant upon another, and the of the fence, one plant upon another, and the
branches should be trimmed into good shape New growth will then soon fill up the hedges and bind all together in a close mat The new growth should be kept pruned. The winter is the best
time to prune an osage orange fence or any other
kind when there is leisure to do it well. The b-st $A$ short a pair of hedge shears with long handles. handle or a stiff, sharp grass hook or sickle a a corn hook may be also handled so as to do the work well. If the bottom of the fence is too open the
clippings may be used to close it; but if a hedge clippings may be used to close it; but if a hedge
is properly kept it will be close, tight, and well-
formed.] ,
Sir,-Would yon please to tell me why my nature? I have plenty of buds but bey What shall I do for them? What is the cause? They are mostly geraniums and pelargonias.
Oblige an old subscriber. [It is difficult to hould say that the temperature of the room is not equitable, and probably the plants are not given moisture at regular interval

Sir, -1 noticed in one of your numbers of last year an article on girdling apple trees, but your
correspondent left us in the dark, as he did not say how deep we should cut. I have always under
stood that girdling a tree would kill it Whe would stood that girding a tree would kill it We would
like to hear something more about it before trying it. Perhaps your correspondent would favor us
again. We are trying to organize a farmer's again. We are trying to organize a farmer's club
Would you kindly give us some information as to how we should proceed. I notice that you do such things, therefore I have ventured to ask the faver.
H. C., Gananoque. [Removing an entire circle of the bark certainl
would kill the tree or branch. The object girdling is to suppress the superabundant flow of
wood-forming sap. Make two clean of an inch apart, and about three fourths roiud the of an inch apart, and about three-fourths roind the
limb, leaving the remainder of the bark uncut Remove the bark from between the cuts ; the uncut
portion of bark will allow sufficient sap to flow portion of bark will allow sufficient sap to flow
into the branch. For rules, \&c., for forming a
farmer's club, see December number of the farmer's club, see December number of the
ADvocate, page 319.]

Sir,--Please inform me through the Apvocat
of the best way of keeping cabluages through then winter, also how to destroy cableages throngh the
the root close to that eats off the root close to the surface just before cabbages
begin to heart. [A good method of keeping cabbage will be foun A handful of shorts mixed with litt, page 2.5A handinul of shorts mixed with a little salt, and
sprinkled thickly round the plants, is a good pri
ventative] ventative.]
SIR,-I wobld like to know in your next pape
which is the best way to feed in olts to eight years old, to feed oats to horses, fron should be very glad to know the best way. [For horses in first-class condition the best re
sults are obtained from feeding oats whole here is no rule without an exception, it would be advisable to feel the oats scalded, and mixed with
a little bran oc ionally.]

SIR,--I ask for some information in regard to hogs, as I am a new subscriber to your paper.
Will you be kind enough to inform me- through your valuable paper if there is a breed of hogs
called the white Berkshires, and if so where could I purchase a male pig with registered pedigree at a arrowed any time between the first of March and une next, 1883; or I would buy a thoroughbred sow, with pig, by a pedigree hog, at a reasonable
pric. If there is no such breed of hogs as the
white Berkshire, I would buy a thoroughbred uffolk pig, but must have a registered pedigre with any one I buy. By answering the above yo likely have to pay for a pig of the above descrip-
ion, or sow, with pig. P. S.-I have the blact tion, or sow, with pig. P. S.-I have the blac
Berkshire pigs, but want a clange. [There may be a breed called the white Berk country. These are not classed in any of the prin cipal fairs in this or any other country. For bree
ars of pigs see our advertising columns.]
-

SIR,--If I am not too troublesome I would thank corn, as I believe many of your readers, especially
this ind on this island, are quite inexperienced in its cul-
ture. I have a piece of sod it be fit for it, and how should I pres land. Would what quantity of seed to the acre and how it
should be cultivated and harvested, and if thi does not comprise the ensilage, what does? [Drilling is the best, if done with machin Take out every other tube; it may be sown broad cast. It would not be advisable to sow it upon
sod, as the land should be well cultivated. If you have no other land but the sod, plow it up and planhelse corn in every other furrow. Abou
bushels to the acre is the quantity of seed.]
had been -Having bought forty acres last year tha was thinking of summer-fallowing most of itnex year, and not haviug manure enough for all, how
would it do to sow small manuring? What time is best to sow the
buckwheat and how buckwheat and how much to the acre? I thought of ploughing just after seeding it (as it is all
ploughed now), and manuring and sowing the buckwheat so it would be big enough to plough
down to rot and then rig down to ret and hen rig up for fall wheat. As 1
have never done any, please give me your advice I believe in mixed farming, raising your advice.
cattle, grade cattle, keep them well from calves, not letting the
calves run down in the fall. Feed them on hay, chaff and roots the first winter, the second winter he next winter fatten them for and roots, and ket. By this process you have some cattle to eat rSough feed as well as your good. J. C., Clinton, Ont. bout two pecks to the ant the middle of June, when in full bloom.] $\qquad$
Sir,-I would like to know through your valu and number, or address, for ear rings with name there any place in Canada where I could get them
and what price?
[There are none P. W., Wilsonville, Ont. rocure them in the United States. See adver
isement on page 32 , January SIr,- Please let me know where I can get the er. $\quad$ mik stand pictured in your January num-
W. H., Reabon, Ont. [Any wheelwright or carpenter would be able to Su -
SIR,-I saw a eommunication in the January ont French wheat. 1 purchased three heads of the above wheat while at the Toronto Exhibi
tion in 1879. Now I have ten bushels plump grain, being proceeds from the three head with other varieties, $i$. . e., Redfern, it ithe sald Fyfe, and in every case it came out clean and
plump, while the other varieties rusted.
A. M., Bowmanville.

SIR,-Your journal comes to hand with great
regularity. I have not missed a copy since first
subscribing, and consider it ne plus ultra in the subscribing, and consider it ne plus ultra in the
agricultural class of publications, and therefore tol us dwellers by the sea, contending with the ad verse influences of a rugged soil and rigorou
climate indispensable It is climate, indispensable. It is pleasing to note that
the silo-ensilage business is becoming practicat to the average farmer; more so to us, from the fact that even in New Brunswick we have repeat cornstalks per acre as is claimed by ensilage writ ers for what we have been accustomed to regar as more favored parts of the llominion, at leas rom a corn-ucopia point of view. Duing the
summer of 1882 one of our go-ahead farmers built as an experiment, a silo of 30 or 40 tons capacity and in September filled and weighted in the usua
manner and about New Years was gratified to fond the contents tolerably wel preserved, and is since feeding with satisfactory results. He has also recent'y procured from Grea put in operation in March and it is reso will anticipate, from this new departure, beneficial re sults to our arming community in the near future will doubtless hear from him personally, and Mou Editor, if you could induce him to join destinie with one of your fair "bill of fare" essayists (par on me for suggesting No. 3), he would doubtles rodied in the couplet,
"Not for herself was woman first create
Nor yet to be man's idol, but his mate",
The fair essayist reciprocating, "That in the just and generous heart of man,
The place, she holds accords with heaven's high
plan."
Thus, your prize offerings would evolve the winners of inestimable prizes. In December's issue of the ical Farmer" evidently thinks there is too much muchness involved in fare essay No. 5, and after
dubbing it an "exquisite satire," also suggest bill, but so narrowed down that it reminds me of What a harvest hand said in my hearing, in the old quit service in contempt with his employer. Se had fare, and when pressed to itemize, said : "For breakfast we had pork and beans, ; we had pork
and beans for dinner and for Washington, we had pork and beans.", by George the objectionable item occupied the same relative of gravy" in the fare of "A Practical and lots of gravy" in the fare of "A Practical Farmer,"
and there is too much homo in both, to satisfy quondam correspondent.
D., Sussex, N. B.

SIR,-Will you be so kind as to answer the fol lowing questions, viz: When is the best time fol apply salt to fall wheat? Would you recommend putting a covering of straw on fall wheat during
the winter when it is covered with about what quantity of straw should be put on? [According to the season. wheaverton, Ont. Well commenced to grow, about 200 pounds to have
acre. If the wheat is covered not be advisable to mulch with straw, but if there are any bare spots, then cover with straw.
straw had been used before straw had been used before snow falling it would
have been beneficial.]

SIR,-I wish to know the
what is the matter with my chick the Advocat treat them. At first they curl up their toes, then
lose the use of their If you can tell me what to do for them finally die very much obliged, and am pleased to sign mysel
[From thê insufficient description Pre, U. S. toms we are unab?: to say what is the matter with
your fowls. Probably they ylare and not fed properly.]

SIr,--I enclose pedigree of a cow and bull, in
order to get the calf, which is six cosses tered. The printed regulations sent cosses, regis seven crosses. I have read your excellent article
in the May in the May number of the Advocate, page 124 As Mr. Wade is keeping the Government Herd
Book, I think my calf should be registered
 Itronte you to give me such information as yo
maxy think $I T$ require. [We have submitted your pedigree to the Seey.


 in the Canaala Shorthorn Herabook unlesser bred from
importad
cows
to



 $\underset{\substack{\text { thenow can } \\ \text { Books.] }}}{ }$




 [A correspondent to a contemporary gives the fol lowing exeellent plan for keeping farm accounts.
 keeping than in most callings\%: His sales are com.
 tance, or he deals with men who keeps books mor

 the moneg went, that her eecived for grain, beef,
wool or butter.
It would
also be be a satisfaction to


 ${ }^{2}$ simiar date in past winters.

 with difiront mothod, but like my preesnt way





 room enough to give every sal and every purchase
oven when I tetativ vegetables and buy broeeries in small quant titieas
As we open the bok we have the history of a
month beforere nes. The pages are rulece sot that two


 Some credits may not have the amounts arried
out. The monthe sacounts may in this way be be


 Sudt notel. book and pencicil may be in thaily hae
 Wimipeg, will supply yon with any forest tree


Siks, Pl lesese answer throunh y yorr ollamns of the
next month, if






SIR, -What is your opinion of the Russian white
B. F., Arran P. O., Ont.
 names for several beari backe there is nothing
verr remarkable aboutit, ither in production or very rem
quality.]
SIr,--In your next number I would like to know if lime will pay as a fertilizer at $\$ 1.75$ per cask, and how much to put on an acre of heavy clay
soil for oats, wheat and potatoes. My land is in
poor poor condition ; cuts from $\frac{1}{3}$ to 1 ton of hay per
acre.
A. M. N., Moncton, N. B. [It would not pay to lime your soil at the price
you name, as to do any good at all it would re you name, as to do any good at all it would re-
quire 60 bushels to the acre. We are inclined to thire 60 bushels to the acre. We are inclined to
think such a heavy clay as you mention would not require lime, any way. Give your cultivation, drainage and plenty of manure.]
Sir,--It is some time since you had any corresI ndence from this part of the Ottawa Valley, so
I thought I would try to send you a few lines Well, sir, I will begin by letting you and your our crops, as we are through threshing. Our wheat has far exceeded our expectation, giving about 25 bushels in many places. Coarse grain also done
well. Hay about $1 \frac{1}{2}$ tons, but prices being low, farmers, on the whole, will not make as much as last year. By the way, sir, I wish to tell you that
we have to thank the Advocate for the advice of selling as soon as ready after thresh ing. Now, sir I am a subscriber for I think ten years, and, sir I assure you I would not willing want its monthly
visits. I am now going to relate a little anedo visits. I am now going to relate a little aneedo way of warning to my brother farmers and a reconmend of the ADvocate. The man referred to
called to my place, represented himself as selling the best wheat thate, xepresented himself as selling saw. Well, sir, it was Egyptian ; I said, "what is
your price?" He said if 1 . your price? He said $\$ .0$ took 6 bushels he would wait till I saw what the ADvocate said about
it. He said : "I can tell you all about that. Mr. it. He said: "I can tell you all about that. Mr
Weld went to a man last year that had a quantit of the wheat he wanted- 500 bushels-the man would not give it to him, so he turned about and
wrote against it, so the same man came the net wrote against it, so the same man came the nex
fall and told him he could have a quantity for specu lation; then he turned and wrote in favor of it lation; , then he turned and wrote in favor of it.,
"Well," said $I$, "if that is the case he is no farmer, advocate at all.' Well, sir, in a few days I received
a copy of the ADvocate; it was the first note a copy of the Advocats; it was the first note
looked for. To my satisfaction, here was the warn ing verbatim: Beware of the Egytian wheat ; there are a great many agents handling it, and sharp ones
at that; it has done well north of Collingwood but no place else. I relate this story in hopes that it may encourage some brother farmer to subscribe, for I am certain it is worth twice its value to me of course a man may hang on to a farm, but there is a difference, and a great one, between the man that is farming intelligently and the man that is locality you can, in passing through, almost tell the farmer that takes the ADVocate. 1 see by the number of questions you receive and answer
monthly that you never tire. Please let me know in next number what it would cost to start $\frac{1}{\frac{1}{2} \text { acre }}$ of a hop garden, that is for roots and poles, say
you could get the poles within two miles. Please give all particulars, if you can, what sort of soil how far the poles would need to be apart, how many want to get a plan of a barn, say 40 x 75.5 to know whether on a hundred acre farm it would be better to build one $40 \times 80$ and have the cattle
stable beneath ; or $40 \times 75$ with cow hou stable beneath ; or 40x75 with cow house attached,

J M., Tanmeure. [We cannot answer your question about the cost | according to locality. ${ }^{2}$ The plants will have to be |
| :--- | placed $5 \frac{1}{\frac{1}{2}}$ feet apart each way $; 5$ plants are gener ased for each hill. It will take 720 plants for $\frac{1}{\frac{1}{2}}$ an acre, and 2,160 poles about 16 to 18 feet long.

They will require to be tied to the poles as they grow. The plants being male and female, one mate nust be planted to each 10 female plants. hend number of hands required will altogether de work as well as men. We would prefer having the ow stable under the barn-it would be warmer

SIr,-I have a horse five years old in the spring
that does not thrive as well as I would like; is growing well; has a good coat and spirits when flesh and makes him dull; is well cared for and not worked much ; is crazy for oats, but minces
over his hay; is tall and narrow, but round in the over his hay; is tall and narrow, but round in th
body. I feed timothy hay and 8 aurts of body. I feed timothy hay and 8 quarts of oats,
in three regular feeds, with about 2 quarts raw potatoes at night, 3 oin 4 times a week.
R. M. M., Moncton, N. B.
LGive a pint of raw linseed avery night, made sulphate iron two drachms, evertian two drachms
in some boiled barley, in some boiled barley, and leave off giving raw
potatoes.] SIR,-1 would like to get some of the Rouen
duck eggs; where could I get them I see in the
April number, 1881, that Charles Weld advertises Aprim; has he got them now? An answer would oblige. Would they come safe for setting by ex-
press. Get him to answer by post card if he has press. Get him to answer by post card if he ha
them, and how much they are per dozen. [See W. T. F., Cumminsville, Ont packed properly, will come safely by the express.] Sir,-I wish to ask the following questions: 1.
A man has a bull, thoroughbred, and advertise $\$ 4.00$ for the season, calf or no calf, and he allows
his bull to have 170 his boll to have 170 or 180 cows ; a large majority
of those cows have not held. Can the owner collect pay in full for all those cows? Also is there any pecified number of cows that a bull should have ringworm; he wishes to know how he may cureit ? S. K., Wingham.
[We are of opinion that you will have to pay un
less it was stipulated the number of cows to be served, For ringworm see answer to J. B. in last B Ablocate.]
A number of letters alre unavoidably crowded
out of this issue, but will appear in Farmers' Clubs.
the kings and westmoreland farmers' deubane africultural societies Peretrie
The Kings anl Witconac, N. B., Dee. 28. cieties' 'Farmers' Olub held their first meeting at státion. Mr. J. H. Morton acted as chairman and Andrew Smith as secretary. Mr. O. E. Flewell-
ing, the President, read the The next meeting will be held at the residence of Mr. Flewelling, Pleasant Grange, when all
farmers and others interested will be cordially re of Mr.
farmers
ceived.
" How
" how
to make agricultural societies most The object of our Farmers' Club is the greatest good to the greatest number, but how to grieasing it
about is the question. A wise provision of Government has placed in the hands of the farm. ers certain amounts of money to be used for the enefit of their calling, under certain restrictions, farmers will not, one and all, avail themselves of the opportunity, tō use for their exclusive benefit, least, a part of the moneys which are extracted
from them in the way of taxes? The should answer that question.
In dealing with my subject I will first examine the importation of horned cattle.
us, and see what results have, let us look about fforts; and whether Shortbe from previous Devons, Jerseys, etc., have given the Ayrshires, what effect climate has had upon pure individuals,
or crosses, and which breed bint percentage of useful animals.
In this given the greatest In this we must be guided by our wants, whethe for beef,
cordingly.
When
send our we have decided what breed we want send our best men-by this I mean men who under-
stand something of the various breeds and the peculiarities ; also, the laws of breeding, men who know what constitutes a yood Shorthorn, Ayr
shire, etc., to make the selection, and alth approving of economy and money saving, I do no think best to confine your committee to small
figures in buying, for eventually you will receive
more real good from one first class animal than two
or three inferior to medium sizes. of three inferior to medium sizes. 1 would say buy only pure sires. We frequently
notice that grades exceed the pure bred animals in production of both milk and beef, but by pure sires only can we get the grades.
When we have secured suit prove of selling, under certain restrictions, which may be varied according to locality, etc., and as a rule, I think that the man who is willing to pay
the highest price will take the best care of the the highest price will take the best care of the
animals. The same rule will apply in general to sheep, swine and horses.
be more particular in the selection of tars would be more particular in the selection of dams, w
would see more marked improvement, and thereby create a greater interest and stimulate our farmer to further efforts.
cultural societies should use their influence to intraduce new and improved seeds; also improved farm implements and machinery. It would b
within their province to suggest experiments in the Within their province to suggest experiments in the
several branches of farming and to encourage im provements in every reasonable way.
Our local exhibitions "
Our local exhibitions, "although in many in
stances laudable," fall farshort of what is intended Are the prizes always taken by the best farmers or is it some extraordinary growth, where the ave age is below par, that carries off the palm?
Would it not be better to husband the re say for two or three years, and offer good prizes fo first-class stock in each department, also for best acre potatoes, etc., etc., with clanses requiring the grower to give the manner of cultivation, amount of manure used per acre, quality of soil, cost of would tend to advance agriculture, extend our knowledge, increase the interest and make ou societies more nearly what we wish them.
An occasional plowing match would
An occasional plowing match would give many
valuable hints to the mass of our farmers, who only plow and not by any particular rule or system.
I fancy I hear some say that the poor man will be prohibited from competing at our shows; to a
certain extent he may be, but I ask will not the advantage in the end more than counterbalance the loss?
In our stock list we might require the competi-
tors to tell how the beef cattle and cows were fed the average yield per cow in the dairy, the cost o beef, mutton and pork
I would suggest that
to give prizes except to worthy animals and products.
Not to
hey paid all subscribers compete for prizes unles to the Board of Agriculture, so that we may avail ourselves of the quota from Government is, I think, udges be appointed in the stock department par jicularly.
I approve also of holding farmers' meetings occas sion of agricultural matters, to be under the auspices of the agricultural Societies, and the aust our eeble efforts may' be productive of much good.
An address on agricultural topics once or twice each year by a competent lecturer would, I think, influence some of the cold outside farmers to join
our ranks, would awaken them to the great neces sity for increased vigilance. Why will not every
farmer in the land come boldly to the front and oin our band and assist by all means to work ou his great problem? Don't stand aloof and throw fault because you did not get more prizes than your neighbor ; don't predict a downfall ; don't omplain of the workings, but when you see an rrill speak of in and suggest an inprovement; thus feeling.
There
There could not be a more reasonable subject of of the farmers' club, whose proceedings we publish There is no doubt whatever that many of the Agricultural Societies are not working to the bes
dvantage, and that with some of them the aim of the organization is more of a grab game than of an honest attempt to stimulate agriculture. Large
sums are given out in prizes, but you conld lay your hand on many a district in which these prizes are distributed, in which there is no corresponding The paper lately read thy
The paper latey read by Mr. Flewelling, him is a step in the right direction. There is scarcely oue of its suggestions that might not be adopted
with advantage. They speak for themselves, and
need not be recapitulated here. If every distric
in the Dominion would form clubs of some kind in the Dominion would form clubs of some kind, common fund of agricultural knowledge, then, in deed, intelligent farming would receive a mos valuable impulse.

## Oshawa Farmers' Club

The President, Mr. A. Annis, in opening th meeting, said he was very much pleased to see so
many of the intelligent farmers of the count present. He congratulated the club on the abund
ant crops during the past year. Prices had no anged so high, it was true, butt on the whole the rand crop had more than compensated the farmer
or his loss. He thought the club should ing or his loss. He thought the club should inquire
into the merits of the binding machine as nhought it a grand invention, and would pay every armer to have one. He advocated sowing barley arly, tending it weil, binding it at once as soo sible. He followed this plan closely, and found it paid him well. He remarked that there was a splendid representation of our best grain growers,
cattle breeders, horticulturists and dairy men present to give some good points. If we follow the advice of our club we need no governmen have great pleasure in calling on Col. McGill for a few remarks on horticulture.
Mr. McGill said he supposed this was a general was very little discussion on horticulture last year
was and he had nothing to review. He had been asked by a friend if he found horticulture a paying busihess quite so well as raising grain, but there was a great deal of pleasure and comfort in it. The elicious fruits were very tempting, and he thought very farmer should cultivate this branch to some
extent. With regard to the failure of the plum crop, there were two causes. One was the insect
which stung the blossom ; the larvæ of which as he plum grows, remains inside, and after a while nocking the fruit. The second was the fruit He did not think, however, that the clusters had experimented. With regard to ashes, he had heard a large fruit grower across the border say hat the best thing possible for fruit was ashes. manure, because they are extremely beneficial to the fruit.
A member asked Mr. Lick if he could account nothing more exhausting to the land than dairying. Mr. J. S. Lick said if he was to answer such a found that every farmer had to govern himself, he his arguments by the class of land he possessed. He fancied that dairying was not so exhaustive, because, for instance, there was nothing in butter exhausted the land went back on it again. It might be a little different with cheese. Take a piece of land and plaster it, raising cattle on the poverished. A friend boasted that we could not raise so good a crop to the front as they could
further back. That was a sign that the land an easy matter to allow your land to run down but you will find it very hard to bring it back to
its old standing again. His land was or dairying than for grain. He admitted that utter factory was a benefit to a few in its neigh. poor butter and run down a thendency to turn out material. He was still of the prinion that dairying improved the nature of the land.
Mr. Camplin, being called, said Great deal of nutriment by not cultivating our land a always found the more the soil was worked the larger and more productive were the crops. He hed
had a small piece of pasture where he kept his calves, and it neverer pasture where he kept his
turned like the other parts of his farm. He He said he placed a quantity of
bones under a mane the ones under a manure heap last summer to see if
they would rot, and the plan worked first rate they would rot, and the plan worked first rate. A
knock with a shovel would crumble them all to pieces. He said he placed about five tons of manure, bone dust, scrapings from his hen roost,
etc., on about eight acres of land. He had -xcellent crop of turnips, some of them as large as a pumpkin. He used Bartlett's Turnip Harvester
in taking them up, and he found it worked very
well, indeed, and gave him every satisfaction,
taking up the entire crop in one and a-half days. taking up the entire crop in one and a-half days
He would not be without the machine for anything now. He thonght his crop of turnips was over 60 bushels to the acre, and he had eight acre
It was asked iif there was any waste with th
Mr. Camplin said there was no need of waste His was done as well as if taken up by hand, and The tught the machine answered every purpose
The turnips were also topped very evenly, and without waste.
The President thought Mr. Camplin's testimony
to the turnip harvester a very good one, and he to the turnip harrester a very good one, and he
did not think there was a farmer in the county who was better able to judge of its merits, or Mr. D. Hinkson thaid last yore of
Mr. D. Hinkson said last year s crop could be Within a few days of cutting the grain that had no salt on it fell. It did not seem to be strong enough to stand up, while the crop that had the
salt stood up firmly and was easier to bind. He noticed fine-colored barley down east, and they, to man, said it was because it wass cocked up well on the same day that it was cut. He thought that we should work up to our principles with
regard to taking care of our land. Pastures will
run out and the grass die run out and the grass die out. He thought pas-
tures should be changed every three or four years and be turned up.
Mr. John T. Gould said there was great difficulty in getting farmers together. This.was unfortunate
for the farmer. If we paid strict attention to our affairs we would get together like the mechanics, lawyers, doctors and other bodies of men. He
thought feeding cattle paid. He thought if the farmers sold less of their rough feed, and fed it to cattle, it would be an advantage. Manure should oe taken care of and mixed with bonedust and
other ingredients. He thought raising cattle was the best way to improve land, and at the same time prove a remuneration to the farmers. Marwas a risk, as Liverpool butchers were as bad as wontreal butchers for clubbing together. He
would prefer going into raising sheep, if he could have a say in the matter. During the past year a large number of sheer in England have died from
diseased liver, and the demand will be large this year. We should look out for a good sheep suiting wool as well as mutton. So far as sheep rais-
ing is concerned, in the west it is very profitable, indeed, if you have a good man to look after them. He paid a good figure to a man to look after his
sheep. If he was a young man he would go there and raise sheep.
Mr. Grierson
best to raiesson wanted to know which he thought best to raise here-sheep or dogs.
Mr. Gould said he appreciated
sarcasm. He thought something shr. Grierson's save the sheep from being slaughtered. In $\mathrm{K}^{2}$ Mr. Grierson said our barley market is in the United States. Here, if they have a mind to run
down the market they can do so. If we can retain our barley in the Province and have can retain ket here, we can overcome the difficulty, and that is the only way we can do it. They take care to
send men to Canada to estimate the Canadian Our hundreds and millions of bushels are sent over the States. All our different grades of barley emanate from the United States. It is a practice only adopt a plan to keep the barley here instead of shipping it, we would reach our purpose, and he hoped a meeting would be called at an early day to
discuss the matter. He found that his land always yielded a good crop of turnips. He alwas put lots of salt on the land. He could always see
the spot where salt was sown. IIe always sowed the spot where salt was sown. He always sowed salt just as the grain came up - about one
ton to seven acres, and he paid $\$ 5.50$ a ton for it.
Mr. T. E. Washing Mr. T. E. Washington said he was strongly in
favor of a meeting to discuss barley He never saw salt make such a difference on barley as it did
the past season He did not think it always fected the land as it did this last year. He could not understand why the baeley market should be nearly ten cents difference during the past year.
He thought it would be difficult to follow out th. idea of Mr. Grierson, with regard to holding the barley in this Province, but he hoped it could be done.
It was decis. Club on Saturday afternoon next meeting of the Subject to be discussed, "The Raising, Cultivation
and Grading of Barley.

Stack 2Notes.
Messrs. Miller \& Beatie's stock sale took place 17 th Jan'y, and was well attended by breeders from all parts of the country. Among the company
present were Messs.
Haggar, M.P.P., of Plantagpenet, Ont.: John Hope, of Bow Park, ;', John Dry
ent
den, den, M.P.P.,', of Brooklin, Arthur 'Johnson, of
Greenwood, W. Mulock, M.P. of Newmarket
 Josn Holdernees, Russell, \&c., \&c. It is need-
less to say that the grat crowd was enter.
tained with the het.
 with the swine, which were in fine shape, 18 were
gold, averaging \$18 each, V. E. Fuller, of Hanil. tont, taking tha choocest. The sheep were next onerage of $\$ 45$ for all kinds Shropshires, Cots
aver wolds and Oxfords. The Galloways were the next and were disposed of at an average of 8300 The Sight in ins were whol at at an average and of $\$ 372$ emales,
sale of the oulls then began and sold sale of the bulls then began, and sold at an average
of $\$ 290$.
$M r$
 $\$ 600$ H. \& ${ }^{\&}$ I. Groff, of Elmira, took Lord Monteith
for \$400; D'Alton McCarthy, Q. C., M.P., Barrie sale was the disposal of the well-known colt "Strathbogie," winnor of the first prize for year lings at Toronto and Kingston in 1882. After very spirited bidding, he was knocked down to R. A
Roe of Freedom, Ill., for $\$ 1,610$. As the snow was falling heavily and the day closing in, it was
impossible to sell any more, so Mr. John Miller impossible to oell any more, so Mr. John Miller
 The sal of
 Ashburn, ont., on the 18 th ult., waas as, success,
although the prices realized were not as large ased to see, yet they were, upon the whole, very
satisfactory
An immense crowd all parts of the coummens. crowd gathered from present were noticed the Messrs. Groffe of Itraneris
Snider, of German Mills ; Shore, of London ; Bell, Snider, of German Mills; Shore, of London; Bell,
of Athelstane, Que ; Thompson, of St. Mary's
 ber of other American nentlemen, thosese names we
did not learn. 14 cows and heifers were sold ton average of $\$ 192$. The highest price paid for an
 Glloster 4th," cal ved Oct. 15 th, 1879 ; four bulls
were sold at an average of $\$ 151$. .
Henry Arkell, of Arkell, Ont.,
made the recently To $W$ m. Priestly, Greensburg, Ind:, 10 ewes and to Thomas Hume, Burnbrae, 2 imported ewed ewes,


 Yord Downs: 7 ewes and 1 ram to Henry Long
worth, Prince Edward Model Farm; 1 ram and 1 , ewe to Jno. Mackenzie, Presque Isle, Ont.; 1-ram and 2 ewes to H. W. Woods, Sarnia, Ont.; 1 ram and 1 ewe to J. F. Knapp, Philipssilles. 1 , rame to
J. S. Watt, Salem; do. to Smith Evans, Puslinch , $\mathrm{J}, \mathrm{S}$. Watt, Salem; do. to Sm
do. to A. Preston, Newboro.
James I. Davidson, of Balsam, whose card we
nsert, has been an inspector and breeder of Cruickshank battlle for the elast eleven years. Mr. Cruickshank's herd is one of the oldest in the
United Kingdom. The herd having been commenced in 1838, and the various tribes which are now at Sit tyton, are those which, after the experi-
ence of many years, having been retained on acence of many years, having been
count of their practical usefulness.
A detailed statement in the Banffisire Joorrnal
ayss that during last year 434 pedigreed Polled Angus and Aberdeen cattle were sold at auction for


Sh it quite evident the "Duchess" family of Duchess " bull "Eighth Duke of Frequenter" has 4,000 guineas). Not since the York Mills sale in such a price been realized for one of the family.

Several California horses lately died from th
effect of sand in the stomach, taken in feeding or very short grass. Mr. Edmond Forsey, Hingham, Mass, doubts if the silio, system will be "protitable to the common
farm andred bushels of corn could b taken from ground necessary to raise forty tons of
eneilage., enelage." Mr. Hugh Nelson, of James Nelson \& Sons
Liverpool, is now in the United States arranging Liverpoos, is now in the United States arranging
for the sale of his imported Polled-Angus cattle, in cennection with the Geary Bros., Bil Bro Farm
London, Ont. London, Ont.
The steamer Lord Clive, of the American Line on the last passage, had on board 100 head of cows
and heifers, consigned to A. M. Harkness $\&$ CO., Philadelphia. Several of these cost over \$500 each
and are English bred, of the blood of Coomassie and are angiish bred, of the blood of Comassie
Regina, FFromerers Glory, Lord Beaconsield, and oether fashionathe estrains The bulls are one of Coomassie blod, being a son of Si. George, which
realized $\$ 5,000$ in New York last summer, and the other a son of Forget-Me-Not, which was sold for
over $\$ 3,000$.
For the year ended Dec. $30, \mathrm{Mr}$.
 other shippers, 155 ; the grand total for the year,
ond $2,080$.
The
The British Quarterly Journal of Agriculure says :-"The horses of Normandy are a capital race.
for hard work and scanty fare. Have never else. where seen such horses at the collar. Under the ini ingence, poss-carriage, or cumbrous cabriolet, or beyond description. With their necks cut to the bone they finch not. They keep their condition
when other horses die of neglect and hard treat when other horses die of neglect and hard treat
nent." The superiority of Frrench stalions crossing on the common mares of America is estab.
lished. This fact has caused the devel opment lished. This fact has caused the development of
the largest importing and breeding establishment in thargest importing and breeding estabishmen.
in the world, M. W. Dunham, of Wayne, 111 ., aving imported and bred nearly 1,000 and has ow on hand some 400 .
We know of many well-to-do farmers, men who
have well-stocked farms, who do not heep during a twelvemonth, yet who kill a pig very month in the summer season and in the fall put down" pork enough to last every other mont
during the year. This is a nation of meat eaters but it confinesi itself too exclusively to pork and
beef. It is better to sandwich in a little more nutton. A few sheep for family consumption, ven when they are not kept for sale or for wool
vill be found $a$ most excellent investment on all will
farm.
Plen
Plenty of clean water is essential to all fattening
nimals, sheep no less than otherl eating snow is sufficient should never be tolerated $X$ large portion of the bodies of all animals is ater, and unless it is is supplied the constant waste attened, fat takes the place of water, and sheap will not drink so much, but what little they do need is a a important as if it was more Fity sheep
will empty $\begin{aligned} & \text { five-pail tub daily if allowed to un } \\ & \text { to it. The water soold be pace under shelter }\end{aligned}$ so that sheep can get it in stormy weather without exposure.
Sheep will endure severe coll if kept dry; but
xposure to storms either rain or hurtful. The water remanns in the wool and in an atmosphere little, if any, above freezing, it chills
the body a long time It is or this $r$, open winter is generally unfavorable for feeding aep. If kept housed they are too warm, their
apeite fails and they lose flesh no matier how of wet than the fine-woolled, the heavy oimpaty on the wool of the latter keeping the water from penetrating to the skin.
Them mutton of a well-fed sheep of every breed, woo ed Saxony, is palatable and healthful. None of the objections urged against the use of pork
can be brought
against
that of mutton. never has been known to impart scrofu a
trichine or sheep does not thrive in the mire nor doess it con
sume
 feeds from; but it is a dainty and a careful feeder,
and as cleanly as needs be in its habits. and as cleanly as needs be in its habits. Mutton
is more easily and cheaply just an nutritious, and may be be served in as as great a variety of forms. As a steady food it is far super

Breeders have frequently found some difficulty
in marking pedigree cattle, and in the absence of any reliabbe method, experierments in have beence oon.
ducted by the Rev. Jond Gill ducted by the Rev. John Gillespie of Mouswall,
editor of the Galloway Herd-book, and Mr. Cran. ston, Holestan. They recommend the tattooing
of numbers or letters, or both insid numbers or letters, or both, inside the ear of the This is done with a tattooing machine by which any number from 1 to 9,9999 an be be leaerly and permanently marked on the ear specified. The points. The formed by very small lancet-like machine. This is isplied to to the eart and anter the
incisions have been made Indian or other perma. ent ink is rubbed into the wound. After thesese are ent ink is rubbed into the wound. After thiese ar
healed over, the numbers are plain and legible. Montreal papers report a fair demand for de able horses on American as well as on local laccount. A number of American buyers are still in the mar-
ket, but they claim it is difficult to secure the quaity of animals desired. Sales were reported to-day at the College Street Market of three horaes
$\$ 395$ and one for $\$ 112$ Uther ported of a fine carriage mare siner yearaes were re ing 16 hands, and weighing 1,200 pounds, for 8200 a black mare for $\$ 1.0$, and two common workers
for $\$ 60$ and $\$ 75$ respectively or $\$ 80$ and $\$ 75$ respectively.
Wm. Rolph, of Glen Ronge Farm, Markham,
Ont., reports the following sales: To Lean Howard, Toronto, "Rioter's Beent" "'Mi ert's Sylvie", and "Sovereign Lady." These three
beantiftl that made 778 blios of butter in one year. "Lady
"Lady Frankland" to W. B. Heward, Toronto, one of the good butter cow, The bull "L yet," seen, and a calf to Hon. D. Reesor, Rosedale, and the follow. ing cows and heifers to same: "Minette", "Moes good ones. Heiterer calf, "Helen "Impt. Favorite", al the celebrated Rex and 'Rioter blood, also a Rioter bull calf. To Mr. Clure, Brampton, the young of rich milkp with', whose dam geave twenty quart mand for good Jerseys on the increne in Cend and is satisfied that the more they become known the greater the demand will be
(Continued on page 64.)

## Notices.


Ellwanger \& Barry, Rochester, N. Y., Dearrip.
tive Catalogue of ornamental trecs, shrubbe harray perennial plants, new revised edition, with a tiful colored frontispiece of Weigela candida. The paimp of all the mo 1 deeirable hand cear deascrip trees and shrubs, together with valuable direation for planting, pruning, and general treatment of
them. Our readers will find Mesars. Ellwanger Barry most reliable men.
Ho $!$ For $\mathrm{THP} \mathrm{W}_{\text {ssr }}$. -The Ontario and $\mathrm{Qu} \mathrm{A}^{\prime} \mathrm{Ap}$ pele manket over pany have decided on oplace upor
the
land in the
Qu' land in the Qu'Appelle District of the N. W. Ter
ritory. The terms are reasonable, and the distris. in which the land lies is one of the most favored in all that great territory. It is plentifully
watered; has a favorable climate, and is intersected by the Canadian Pacific Railway, with daily train each way, as well as the navigable water of the 76 hours, by rail. This is one of the finest wheat sections in the world, and no more opportune
chance to purchase land will occur to settlers going in this spring.-Com.
SVGAR CANE.-The Department of Agricultare
has received at Winnipeg a beatiful sample of syrup from a a sugar-ane raised in the Province.
It was raised by Mr Wi wile was shown at the annual exhibition of the North Dufferin Agricultural Society at Carman City. The Simooe Poultry Dog and Pet Stock Asecocia.
tion have announced their first exhibition for the 14th, 15th and 16 th of February

A few of our subscribers are atill in arrear for Almost applies to wrom quickly, gives twive, Some, we know, are rying for pour premiuma, and the regt will ouly need this hint.

The Sousehold.

## Home Training.

How shall it be conducted? The first, an indispensable requirement, is to obtain the confidence
and love of our children. Then they are ready to receive our teachings, and the mind becomes in-
delibly impressed with the truths furnished. We aust be the companions of our children-their that we rarely make our children better than we are ourselves. Our example is constantly before them, and they are ready imitators. Then, by exgovernment; not to yield to evil passions, not to speak evil of others, but to bear their fanlts with
patience and forgiveness. Honesty should be aaily impressed. It is an indispensable quality to success in any pursuit. The young are very apt not to see this at once, hence the greater ne-
cessity to show them clearly that a single dishoncessity to show them clearly that a single dishon-
est act may effectually debar them from a lucrative employment that would have made their fortunes. In buying and selling, nothing adds more
to success than a character for honesty. To know from the character of the vendor that the article is just what it is represented, and just what is a good price. The honest man has a decided ad vantage over the dishonest one in the market. Honesty has become the rarest quality of the presness is not wanting, but honesty is a rare article, and is of priceless value. The government is $i$ i want of honest officials. Corporations of every and farmers-every business is seeking her hones employes, and they are almost of priceless value Temperance must be taught with ceaseless care success. Intemperance is a sure destroyer. Itsodium must be presented in the strongest light day by duced by the use of what of is supnosed to inntly intro restoring bitters, or other medicines; too frequent ly by physicians, some of whom recommend it for demon has its sure clutches upon us. But we by no means propose an enumeration of all the vice and a means of -meeting them. The above have
been alluded to on account of their enormity and their too general prevalence. But we may, we of protection against all vices, and at the same We have already stated that the most importan part of one's education was that obtained at home and Ihere add that hhell is the greatest security ers at home? Home must be made attractive There should be neatness in all its arrangements, as well as convenience in its fixtures. Cleanliness
in the dwelling, and in the barns, adds the enjoyment of home. All can not have large buildings and llarge farms. and great herts, but
these are not necessary to make home attractive these are not necessary to make home attractive.
Some of the most attractive spots that we remember having seen were log cabins-made so ly thei
exquisite cleanliness and the judicious surround ings of trees and flowers. One such I remember to have seen in Kansas, and another, many years ago,
in our own country. These cheap elegancies are wherth more than gold; they beget a love of home where no pernicious vices ave been permitted to engender. But this is not quite sutficient
Children, as has been before hinted, are not to be
treated harshly, nor unduly burdened. Love i treated harshly, nor unduly burdenen. Love in
such a home should be conspicuous in every face How can home be attractive where there is no
love. Harshness and ill-nature make it repulsive A very common error, and one that tends to ren der home repulsive, is the over-burdening of ou
children with work. They are worked all lay an at the common hours of rest there are a dozen things thought of that they are ordered to run and
do. No rest is permitted until poor nature do. No rest is permitted until poor nature is
exhausted, and is willing at last to accept any other place than home, where rest may be ol
tained. tained.
amusements.
Children need amusements. "All work and no play makes Jack a dull boy." Nothing is more
amusing to children, aud especially those who are compelled to labor a great ppart of the d day, than
well selected newspapers. Each child should have well selected newspapers. Each child should have
tts own paper ; and it is astonishing how anxiously they await the time each week for the anrival of
their paper ; and nothing is more instructive than
well
dozen chected papers. I know a farmer with a dozen children, and he averages about fourteen
papers a week. This is no extravagne papers a week. money is laid out so profitably. These so com pletely occupy the attention that there is little de sire for company. And if the papers are wisely
selected, they are imparting the most useful les sons in history, biography, morals, and religion,
besides besides the current events of the day. But thisis is
not enough. Books should be added -history biography, etc., etc. But 1 am adarming some.
Perhaps this is thought to a much; that it it travagance. Too much cannot be done to educate and elevate our children. They are truly all we
have that is worth anything. They are also the country's ; its welfare depends upon them. These free institutions and their perpetuation is with
these children that we are training. They are our these children that we are t.
country's ; they are God's.

This is a great source of good or evil. If the company we permit is vicious, all other efforts will
be unavailing.' Carefully let us select that which at least, is virtuous, and let it be intelligent if pos and very profitable when well selected ; still too much becones a source of idleness. And just in
this connection we may allude to the dress of child ren. They should be well and genteelly clothed. It is highly embarrassing to the young to be poorly
clothed. Dress them -well and gentelly. Stil clothed. Dress them well and genteelly. Stil young. Knowledge is worth much more. Study oo appear genteel, but place the affections on higher objects-knowledge and the obligations that are
owed to God and man. Industrious habits should be carefully and perseveringly taught. We have alluded to over-work, but over-indulgences are much worse evil; it is the parent of every vice
Drunkenness, gambling, larceny and murder come of it. Let the too indulgent parent remember it. Teach to labor and to accumulate. There is propriety in making money fairly and honestly ;
it is good to do so. Too great a love for money is an evil; but to accumulate by industry and fair ealing is honorable and praiseworthy. No one power to remove it. It would extend our remarks nuch beyond the limits we have allowed ourselves to speak of that education for our children that is be regulated by the ability and inclination of warents. But I am happy to have lived to see in this
delightful country of ours a school system adopted by which every child may receive a respectable education-one that will fit him for any of the or dinary vocations of life. By a due attention to tion to home education, a very injurious attenwill be greatly arrested, that is apparent with too hany ot our farmers' sons-the seeking of business
in our towns and villages. It is quite a mistaken notion to suppose that a clerkship for a dry goods rocer, is mo be a "runner" for some wholesale cultivated farm the farm. He who has a neat ings, tasteful grounds, flocks of Leicesters and Cotsolds, Berksinres and Shorthorns, may well be enin city or village life; and those are subsistence each of every farmer's son. There are other duties Ve allude to the deserve at least a passing notice. armers now witnessed in almost every part of the ountry. Is it real, or is it imaginary? Is this tumut for real canse, or is it for nothing? If east to make proper inquiries to ascertain the fact These associations being formed for the purpose of
ascertaining the evils from which we suffer, and of scertaining the evils from which we suffer, and of
remedying the same, differ in their organizations but seem to aim at the same objects.--[Dr. Steven-
son.
Conversation is che dacyutur of reasoning, the
nother of knowledge, the breath commerce of hearts, the bond of friendship, the of wit.
A Philadelphia boy was asked if he ever prayed
church, and answered: "Oh, I always say a pra
"Iore the sermon begins." "Indeed," "esponded the rest do, just "Now I liay me down to sleep."

Family ©ircle.
A SOCIAL FAILURE.
It is disastrous thing for a a me man to be a social failure.
Worse, ladies, than for one of yourselves. Hear my con.
lossion.









 mulate. The mere sight of his mirror stuñ me to trine tray. the
dinn

 Travorte of Fortune, I cried envi
earth or a prince charming like you
He is He is a fool who complains to a o handsome and popular fel-
loov hat he is neither one nor the other. But passiouate long-
ing bore down self-respect. ing bore own self-respect.
Franis twirled his back $m$
surprise,
II 'Wats wrong with you, Johnnie?


 an? Are not our families on a par?
I spoke generously, for my tather

 good teat
ginner.
irrum
acted lik



 est gown.
Ining- the villain!
In. oter rellows would fall back on low ked Barry,


 in savaegly. 'They will put up with blockheads' like me
because enine fellows like you detest them.'



 Co go and see the and" and her club ": I exclaimed, striding
out in a rase, asand I heard the scoundrol laughing behind me.
out


 in good earrest.' I enteresty. 'III I stay here, I shall cut my throat



















 Who itgoing to leoture us upon them by and by.







-irt Victoria virian, the every best authority on diseases of
the braint.
${ }^{\text {is ? }}$ ? Lady Crookshanks, president of the Ladies' Athenexum Who is sh

 ane never yet experiencod
simplyat is
That is Beatrice Arna.'
 MMss, M , she e stare
Rahi, sha paid then you kiow abut her, and how he Soo protesorsomioniur rush het, her. she ish it hear of tit


 an interioction. Trembling watened her: tor I knew if ith



 that the Ladiest theneum, tives salted ices! our enenien

You can nothing? I stammered, touched by her distress


Chanse soard sinine hady had appealed io me, or fiven men
 assandra Rooms by mistake. We arrived with tus thent the wer

 ng warnly,
Thanks
Ith thousand times
Itherghther beantitul tor






 other at somen paperen on the tale in itumbed atone, and pored
 $\underset{\substack{\text { Hen...andid. } \\ \text { tawoke }}}{ }$
 and etaro metings. The ine ist of members was appabetien Canere ifa leeture to-morrow night, said disss Hale 'd











 Macting notioe, or or cutting up their neighbors. Attentio





 an miy anail inside a glass sylinder was handed round, that
 Conautifll she murmured looking earnestly 1 mee





 arater I the frist ' 1 askel mournfululy, to discover her ex-







 Then she remaraced per inentlysid have any sturt with Mis






























Eppine fididesticics : Are you mad



 any poot or over of heumbers

 made some interesting obserrations which 1 monemged wass in in





















 spiders



 iviny thel, And as westand thus, hand in hand, hada viun


 Cor iti is inone noupht for that, she eiphed gentlyy

















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Io sirt Jomn ogie,



















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 and

 At torrrent of playtul recriminations followed. I taxed her
with encoragng Baryt She protested that the idea that
could be in earuest never had entered her brain till of their ambition.
Men, as a rule, are far more impressed and in luenced by order or its reverse than is generally sapposed. Even when personally untidy they ike neatness and regularity in oth. rs. When basiness man returns home clace, he begins before ngy to feel out of place too, and seeks some more ongenial atmosphere in which to spend his evenings. Disorder has driven many men to destruc tion, for the masculine is essentially a well regulated, methodical, systematic mind, though often an intolerant one. Man makes few allowances for the multitude of little things a woman has to see to, and of which he really knows nothing. Love, no matter how devoted, cannot without order nake any home really happy, and order without ove makes home into a sort of prison
When we find merry voices, shining faces, ring ing laughter, or gentle, hushed, still not suppressed enjoyment, when parents and children, when we find the head of a family don his slippers and curl himself cosily up in his easy chair when he comes home from business, when we see his sons, if he has any, gathered eagerly about him, or en gaged in some intellectual pursuit, when we find the fireside supply amusement enough for a winter's evening, we may rest assured that we have seen a happy home.
But how all these things are to be obtained is a serious question with many an anxious and weary
mother. "Only by order and the most rigid economy of time," by good management, resolution and good humor; go right to work with a will, perform
if possible the most disagreeable duties first, get. ting them out of the way. As a general thing, if you work all day you can afford to rest in the evening. Do not attempt to work all the time,
devote a few hours to cheerful conversation, music, or some innocent amusement with your children; you will feel morally and physically better, though you may have to work extra hard th
next morning to make up for it. Or if there be no children; devote yourself to your hushand, study to interest, amuse, and make him happy, and you attempt will not be lost on him
Sons: she conforms more readily than man to cir cumstances of all sorts, is more observant, too, an tastes, habits and disposition.
Now let me say a few words to the husband Do not fair to give a kindle encouragement to that loving wife, by a kindly word, a pleasant speech,
a cheerful or sympathetic look, a touch of the hand in the old tender fashion of the courting days, stroking of the cheek, and the soft movement o the palm over the hair. All these some may con-
sider very foolish tricks, but she alone can tell how they spur her on and brighten her many irksome duties; and they cost you nothing. Once you
did not think them foolish tricks, and you were wiser then than you are now that you have dropped them. A little more courting in married life would keep. married life what courtship is. The more foolsh you are
The above remarks are just as suitable for sons
and brothers Your mother and sisters are as well and brothers Your mother and sisters are as we able to appreciate your little attentions as a wife,
and a good son or brother is sure to make a good husband.
It is a very singular thing that, in all our idea of home life, man is a yery prominent feature,
Women, no doubt, can get on very comfortably together ; but there is a want of stimulant and energy, a sort of easy calm-pleasant, but apt to
grow a little monotonous where the household i entirely composed of ladies. Let the husband father, or brother, come bat once in a week o looked forward to and prepared for. There is nothing in the whole world better to see than the anxious, busy, careful preparations of a loving wis loves. How many final glances are given round his room to be sure that nothing is forgotten ; how many final touches are given to her own hair or
mirror to convince herself that she is looking he very best. It is indeed good to see how sh
watches for his arrival, remembers all his favorit dishes, anticipates his wants, and waits upon him with a graceful air of proprietorship. This letter is just as much for my younger
nieces as for the married ones, for they are equally nieces as for the married ones, for they are equally
important in the home, and there is no end to the ways in which you can add to the happiness of tha home, if you only try, and every one of you may a
some time have one of your own. Therefore, you should know how to preside over it as a good, lov ing wife and mother. So begin earily in your child
hood's home to form the habits of love and order Minnie May.

## Answers to Enquirers.

H. A. W.-Certainly you are entitled to com pete
CATE.
KIrTY.-A proper trimming for a mourning dol-
man is tape fringe, or if preferred, folds of crape may be used.
A. V. M.-When growing hyacinths or other plants in wa J. M. - How Avs.- - Wash the skin with buttermilk, rubbing it well in, then wash with pure soap and water, and
rub with a coarse towel for five minutes. Do this every day, until the skin is clear. Or take on drachm of caustic potash, and dissolve it in one quart of water, add one ounce of pure almond 0 some soft water, and wash the face with it. Al these remedies act by dissolving the surface of the
skin, and so removing the coloring pigment whic skin, and so removing the coloring pigment whic
causes the freckles. This exists only in the sur face skins under which are two other layers. When the surface skin-the epidermis-is re-
moved, it may be free from the fine freckles-and then it may not; it is only a chance.
John Perry asks :- "Can you tell me of any John Perry asks :- "Can you tell me of any
dressing for clothing that will make them turn the rain ?" We know of nothing. Perhaps some o our readers can tell John of something.
E. L. W.-1. We think that to take a teaspoon-
ful of powdered charcoal with water, half an hour before dinner, is a good prescription for those suf fering from taint in the breath. 2 . An inexpensiv piece of jewelery like a scarf-pin would be in goo
taste to give an intimate gentleman friend. Moustain Ash.-In congratulating a newly
married couple, it is customary to speak to the bride first There is no need for congratulation to be given to the united fanily. As the bride
would not wear her wrap during the ceremony, she would not wear her wrap during the ceremony, sh
might assume any she liked afterwards. A wed ding present is usially sent with the card of the
giver accompanying it. iver accompanying it
Forget-me-vor. - i. When a gentleman has
specified a certain hour for the drive, the greatest specified a certain hour for the drive, the greatest
politeness is shown by your being entirely ready when he calls, so that he may not be left waiting. Costumes of cloth or flannel should never re
ceive elaborate decorations. Machine stitched edges or braid garnitures are in much better taste or their finishings.
SUbsCRIBER.- 1. If you are so ill at ease in com-
pany, the more reason for your accepting in pany, the more reason for your accepting invita-
tions. Try to forget your own presence and study ions. Try to forget your own presence and study
the ease and grace of some one of the guests, and ye ease and grace of some one of the guests, and
you will soon become less embarrassed. 2 . Trim your wine colored cashmere either with chenelle
fringe or silk embroidery of the same shade fringe or silk embroidery of the same shade
White kid gloves are not in good taste for either street or church wear.

Oh, that world of thought within us! That turOh, that world of thought wh hoil of beneath the
moil of restess activity which boil
calm calm surface of every day life! We sit and we
talk; we walk and we drive; we lie down to sleep nd we rise up aghin the next day as if life offered nothing to rouse the utmost passions of the soul, the earth; as if fears we scarcely dare to define were not hovering near our hearts, and resolutions
were not formed in silence and abandoned in de spair; as if the spirit of darkness were not prompt ing the soul to deeds of evil, and the hand of God was not stretched out
gulf of destruction.


Of bake for oupp of miaheded potatoes, throe oups
 itt oupain thoronghly. Drop by spoo
hot lard and fyy the same as donghunts.
miss molute's cake.
 ler, wo tinktis oip of milk, thio whites of seven

 | lemon. Beat the biteter and sugar together till it |
| :--- |
| is oreamy ; add the lemon, end and aitite milk. |
| Beat |




 cioves, cimannon and nutmeg. You thue
nice loaf of plain, and a aloof of fruit alke.

The practice of smoking in the society of ladies malking, sailing or sitting, is an act of positive disrespect which no lady should tolerate. There
are preux chevaliers who would be honestly are preux chevaliers who would be honestly
amused if they were told they did not behave like amused if they were told they did not behave like
gentlemen, who, sitting with a lady on a piazza, gentlemen, who, stitting wing in a public park, take ont a cigar, light
or strolling in
it and puft as tranquilly as if they were alone in it, and puff as tranquilly as if they were alone in their rooms. Or a young man comes upon the
deck of a steamer and blows smoke in their faces without ereu remarking tobacco is disagreeable
to some people. A man, when he unconcernedly to some people, A man, when he unconcernedly
sings false, betrays that he has no ear for music and a man who smokes in this way shows that
is not a gentleman.-- Harper's Magazine.

## It is Well.

 Yes, it is violl : The evening shadows lengthen
Home's golden gates shine on our ravished sight;
And though the tender ties we strove to strengthen
Break one by one - at evening time 'tis light.
"Tis well ! The way was often dark and weary
The spirit fainted oft beneath its load : The spirit fainted oft beneath its load: : dreary,
No sumshine comes from skies all gray and
And yet our feet were bound to treal that road?
Tis well that not again our hearts shall shiver
Beneath old sorrows, once so harl to bear ; That not again beside Death's darksome river
Shall we deplore the good, the loved, the fair.
anguist,
shall we bewail the dear Hopes, crushed and
No more ueed we in doult or fear to languish ;
so far the day is passel, the journey done !
As voyagers, by fierce winds beat and broken,
So we, still bearing on our hrows the token
Of tempest past, draw to our Haven nigh. A sweet air cometh from the shore immortal Almost we see where from the oren portal,
Fair forms stand leckoning witl their Fair forms stine.
divine.
Tis well! The earth with all her myrian , onices
Has lost the power our senses We hear, above the tumult and the noises. soft toucs of music, like an angel's call.

Tis well, of frems: We would not thrin-retract The long, vain years, nor call our lost youth bac Wladly, with spirits braced, the Future facing,
We leave liehind the dusty, foot worn track. -[Chamber's Jourua

## Fisherman John is brave and stro

 Fisherman John is brave and strong,None more brave on the coast than he; He owns a cottage and fishing smac As snug as ever need be.
And, what is truer than I could wish,
Fisherman John loves me.

Often and often when day is done Often and often when day is done,
With smiling lips and eager eyes He comes to woo me ; in every wa
That a man may try he tries That a man may ty he tries
To win me ; but that he can neve To win me; but that he can never do,
Though he woo me till he dies.

Fisherman Jack is a poorer ma He owns not cottage nor fishing smack, And a manly grace. Alack! It will not break my heart to tell
That I love Fisherman Jack.

He loves not me; but every night
He sits at the feet of Kate Mahon Never a heart has she for him--
For she loves Fisherman John, For she loves Fisherman John,
Who cares no more for love of he Than the sea he sails upon.
Often we wonder, do Kate and I, That fate should cross us so cruelly
We think of the lover we do not love, And dream of what life would be, If only Fisherman John loved her,

Carlotta Perry

## English Tea-Making.

That the English are pre-eminently a tea-drinkng nation is an accepted fact. That they should
xcell in the preparation of their favorite beverag as naturally follows, and a cup of English tea al-
'eady takes rank with a cup of French coffee lighting those who taste. But to thoroughly enjoy the charm one must see the English breakfast table - its silver urn, radient with careful polish ; the
dainty service of pure white china, or Moulton or Worcester ware, sprinkled or wreathed with flowers; the low silver tea-pot of our grandmother's time. The sugar-bowl, milk-jug and slop-bowl, to
match the cups, are prettiest, but when all of silver they intensify the whiteness of the damask table cover, and gleam bright in the morning light,
which is too often a dull one from English skies. Which is too often a dull one from English
This is the still life of the breakfast room Now comes the touch that vivifies the wh light-footed attendant fills the urn with water, and touches a match to the spirit-lamp beneath. The reader of the morning paper comes in and shakes it
rustling from its folds. either mother or daughter-and with her morning greetings busies herself among the cups. The little tea-caddy (pretty enough for such grouping) is
opened, and the regulation "teaspoonful for each person, and one for the pot," measurel out into the empty tea-pot. Enough of the now boiling
water is drawn from the urn to cover well the grant leaves, and at last that popular English in grant leaves, and at tast that popular Engish in
stitution the "tea-cosy" is called in requisition. Fancy a double-wadded cup of some woolen ma-
terial, flannel or cloth, either of bright color or terial, flannel or cloth, either of bright color or
made gay with braiding orother ornamenta generous oval on one side, straight on the other drawn over the tea-pot, completely covering it like an extinguisher, and shutting in the heat while the green leaves unroll, and all the delicate flavor is Five, te
Five, ten or fifteen minutes pass. The cups are
half filled with liot water, and stand warming through and through, sending little clouds of stean gathers about the table, arrd pleasant things are said across it by gentle-voiced and gentle-mannered English girls. The toast appears, and eggs, with
perhaps tlin waferlike slices of con, or the national beefsteak, and the simple breakfast is ready.
Now the blessing asked, the tea cosy is lifted, thie
tea-pot filled with the proper amount of boin water, the cups, emptied into the indispensible slop bowl which accompanies every tea service, are
filled with filled with the aromatic decoction, sugar and milk
are added it pleasure, and Euglish tom inale

Sittle ©nu:es' Solumn.

## Over the Snow.

## by s. w. H.

All wrapped in furs and blankets, Over the sparkiing snow, The happy children go.
The chiming bells and the voices In the distance die away, As if the joyousness were lost
In the brightness of the day. It was only the glowing sunset
That brought them home once more To pass with its last red glory
The shade of the open door

And with dancing eyes, and voice Ringing with eager glee,
To tell their tales of wonde
Around their mother's kne
"Oh, mamma! the fields were shining Like silver-only whiteAnd sparkled antith the light my eyes
Were blinded with
"And all along the old stone walls In waves and wreaths, the snow
Was caught, as if it had been piled For some kind of a show.
"And the trees! Why every little twig Stood out as fine and high,
As if you had taken a pencil
And drawn them on the sky
"Oh! we saw such lats of bird's-nests Piled up brimful of snow, And all day long in the winter wind
They are rocking to and fro.

Little Amy felt like crying She said, to see them there With the birdies gone and the branches
Stretehed out so cold and bare

But Charley laughed and told h Birds like their new homes best
And would not In the spring for a last year's nest.
"There were some brown leaves that rustlell,
And would not let go their hold, But clung right tight to the busios All through the wind and cold.
"I am sure they loved the bushes,
And could not bear to go
And leave them cold and lonesome
But Charley don't think so.

- He says they'll be sure to scatter
Refore the first spring breeze For the green leaves of hot summe Are packed in the trinks of the trees.
" But everything looks so lovely,
And we've had such a happy day, Don't it seem almost a pity
To have winter go away?"


## Nimble Tongue Exercise

Our young readers will find amusement, and perhaps, profit in practicing some of the short say
ings arranged for the purpose of cesting one's abil ity to rapidly and correctly pronounce words with repeating each one of the following, five times, rapidly

Black bug's bloorl.
She sells sea shells.
Shoes and socks shock susan.
Six tall, slim, slick saplings.

After reading a number-eight or ten-farm
apers, I consider The FARMER's Advocat papers, I con
akead of all."

Dincle ©om's Department. My Dear Nephews and Nieces,-Which of you boys and girls have a pair of old skates lying around home besides the new ones given you last Christmas ? Lots of you, of course; but does it seem hardy fair while you see lots of your por school-mates stamping, shivering around trying to keep their toes from freezing, watching you skimming and cutting over the ice on your new skates, feeling as happy and warm as birds on the wing. It doesn't seem just right to have them lying idle at the most exhilarating and the most exusement and one "knows the how," and most of our boys and girls now think their education incomplete without this knowledge. Almost every town or village has its pond, of its superio skater, but often this distinction has been dearly bought. It requires long continued practice and great perseverance to become thus skilled. But few ladies
have the endurance to acquire this reputation. A younglady in a neighboring city, who belonged family in high social standing, became so fascinated so proficient in the art and so proficient in the art, that
she would remain for hours on the ice. Her skates were strapped on very
tightly and the result of one afternoon's exercise was
a paralysis, which laid her upon her bed for months,
and will doultless and will doulteless
her a cripple for life.
distine
Her distinction was bought at cannot be be price. Yon
too cautions about taking cold when out
skating skating. Tosit down when
you are very warm is al. most sure to give you a severe cold. Always have
a thick throw about you the to ment you stop skating; do not sit down at all, but culation and to restore cirt chilled. It is safer to walk home than to ride. In the city covered rinks it is very
different. There you can always go into the cloak room to rest, where there is
a good hot stove. Perhaps some of you have never seen will try and descrive one hat I witnessed a few lighted up with gas, and the band playing at in terals throughout the whole evening. There were about two hundred persons, composed of
men, boys, ladies and children in costume, each one representing some character in history, novels,
nursery rhymes, fairy tales, in fact anything such as kings, queens, clowns, neuroes, gipsies, winter as kings, Tueens, clower, would be a dress of entire
and night; the latter
l, ack, covered with gold stars and a salf l, ack, covered with gold stars and a half moon.
Some of the costumes were rich and lovely, and others very trashy, just as the character represented required; they nearly all wore masks, which made them look the more absurd, but it is most
anusing for the skaters trying to decipher who anusing for the skaters trying to decipher who
each one is and then coming up and calling them each one is anthen to go for a skate; they in turn
by_name, ask them the
try to find out who their escort is. Of course great
jokes and tricks are played, and you must be very
careful not to let them detect your voice I am quite delighted with the large nu have again placed their names among my list of nephews and nieces. I hope, though, to receive nore and better original puzzles for next month
It is not too late yet to try for the prizes, so I hope

## How Billy Goes Coasting

Billy is a gray horse kept by a family in Dor-
chester, When the boys and girls go out coasting,
that, as the snow is soft and nobody is hurt. The picture is drawn from life, and presents a The boys always keep a guard at of our readers. hill while they are coasting, so that no harm can be done to the people who are passing by. The
ill is steep and the sleds come down peed ; but the track is always cleared when the ord is given. Nobody is so surly as to stop the

HUMOROU
A raw-boned Irishwoman entered one of the National Banks in Provi-

how olb blley goes coastive. dene the other aday and



 "Why, poon wea, you are an






 lying about it. "An what
did ye say I must do?",
"Identify yourself. Bring "Identify yourself. Bring
some one here that knows
vou " "Indede you." "Indade ! An' who
knows me better than 1 know myself $\uparrow$ " The cashier paid the cheque without
another word.
 at the Water Registrar's office and introduced him.
self and his business by self and his business by
saying: I'm Misther
Jerry Muldoon Mrent Jerry Muldoon. My cellar
is full of water, and my is full of water, and my
hins will be drowned if it
inn't fixed ; so I went isn't fixed; so I want you
to fix it." Mr. Muldoon to fix it." Mr. Muldoon
was informed that nothing was in be done for him there.
Two or three days later he Two or three days later he reappeared. "I come again said he ; "it's worse than ever." "But we told you
the other day, Mr Muldoon, the other day, MrMuldoon,
that we can do nothing that we can "o nothing
about it here., "Yes, but
my cellar must be fixed or my cellar must be fixed or
my hins will he drowned."
"Well. Mr Mild my hins will he drowned."
"Well, Mr. Muldoon, did you see the Mayor about the matter ?"
and I did," and I did," replied Mr.
Muldoon. And what did
the Mayor say "" "Wh Muldoon. "And what did
the Mayor say "" "What
did he say, is it 'Mis did he say, is it? ' Misthe Muldoon,' says he, 'why
don't you kape ducks?'"
he goes out with them to take part in the sport; he goes out with them to take part in the sport
that is to say, the children have the sport, and th
horse does the work, as you will see in the picture horse does the work, as you will see in the picture
The boys have a long "double runner" that The boys have a long "double runner," tha
carries a good many of them at once. It is fine carries a good many of them at once. It is fine
fun to coast down the long hill upon it, but hard work to drag it up again ; so they harness Billy to
the sled, and he drags it up for them. the sled, and he drags it up for them.
Sometimes they all get on and ride Sometimes they all get on and ride up, and even
take some of the single-sleds in tow ; but usually the boys walk up, as they need the exercise to
theep them warm. When they get the the to keep them warm. When they get to the top, they
throw the reins on Billy's back, and he jogs down to the foot of the hill and waits for them jogs down
to come
downagain. down again.
Billy seem Billy seems to enjoy the sport as much as any of
them. Sometimes a them. Sometimes a party of merry boys and girls to be upset once or twice ; but they don't mind

I doan' know vhat I shall do mit dat telephone of mine," observed a citizen as he entered the headquarters of the company yesterday and sat down in
discouraged way. "Out of order, is it "" "Some a discouraged way. "Out of order, is it ?" "Some-
times it vhas, und sometimes it vhas all right. If I go to speak mit der coal man, or der Cityy. Hall,
or der butcher, it vhas all right, und I can hear or der butcher, it vhas all right, und I can hear
every word. If somepody vhants to order my peer every word. If somepody vhants to order my peer
1 get de name shust, as plain as daylight." "And when does it fail?" "Vhell, shust like two hours ago. A saloon man he owes me \$18, und I. ring
him oop und calls out; 'Hello ! hello ! I likes dot monish to-day !' Den he vhants to know whoI am mnd he says he can't catch der name. In tell him,
oafer again, und by und by he calls oot dot he doan' oafer again, und by und by he calls oot dot he doan
deal in waterme:ons, und dot if I call him a dand deal in waterme:ons, und dot if I call him a dandy
again he'll proke my head If sometings doan' ail my telephone, it may be ash my voice is fiving out. I wish you would examine me und see if ${ }^{I}$ had bet,
ter let my shondodertalking und I keep der pooks."

THHE FARMER'S ADVOCATE.
February, 1883

3.-Spinach, rose, Singapore.
4.-(1.) Anglesea, (2) 1 oldham, Pondicherry, Pekin, Bagdad.
5. -Gladstone.
6. - Soap-bubble.

Names of those who sent Correct Ans-
wers to January Puzzles. Wers to January Puzzzes,
Esther Etouise Ryan, Addio $V$. Morse, Minie




 Arthur Gibson. Geo. Siddons, John S. Mart
Francis. J. S. McCormack, Arthur H. Mabee.

## ©dommercial.

The month of January has indeed been all that
could be well desired in most sections of the De could be well desired in most sections of the Do-
minion. Cold, steady weather, with good sleigh ing, which is a very important factor in the pros. ing, which is a very im
perity of the country.
wheat.
This article has moved a step upward and awoke from a long season of quietness and lethargy. We
fancy the "buls"
and " "bears " have had a quiet fancy the tuils and bears have had a quier
time of it the past two months. Bad wather throoghout Europe, and the damage done by the flods in Austria and Germany, have had something
to do with the improved feeling. The amount of to do with the improved feeling. The amount of of
wheat in sight and on passage
larger than this time ine ist
 crop will soon begin to arrive off the coast of Eng-
land, and with the present stock insight and afloat, land, and with the present sock insight and afoat,
we do not se anything to warrant very much ad.
vane. Another very important tactor in the price vance. Another very $\begin{aligned} & \text { mportant factor in the price } \\ & \text { of wheat and other grains is the through rate of }\end{aligned}$ of wheat and other grains is the through rate of
freight.
This tinie last year the steamship compenies were anxious for grain tonate at one ronn-
per bushel, and during the months of March, April per May Mel they actually paid the owners of grain in
and Mlo
the eleators the elevators at New York and Boston one penny
per buyhel or the eriviege of carring that grain
to Liverpoor. To.dy the steamers are quite firm
 ence alone would be 12 cents per bushel. The
stocks of flour in England are very heavy, the stooks of flour in England are very heavy; the
market is pronounced decidedly overstocked in this
articl article.
peas
rule very quiet but steady, and the same remarks
applies to them applies to them as to the freight rates on wheat.
The demand for seed was so good last spring that many are holding back in the expectation of mak-
ing more about seeding time ing more anout see ining time. Ne do not look for
the demand there was ast spring for seed peas. We
then think farmers will plant more corn.
keep very steady, and the demand is good.
There is a good deal of com barley coming to market and the indifference of farmers about the quality of the seed they are sow-
ing from year to year
 as much for mixed samples, and the sooner farmers
turn over a new leaf on this score the better it will be for them. It will pay a farmer to buy his seed every spring if he cannot keep his sample up to
the mark any other way. The fact is, farmers would make money by changing their seed much
oftener, and barley is no exception to this rule. In oft, it is more important.
fact
is steadily moving clover sem been pail for choice sed. Fa
to sell their seed at these prices.
butter in the following cities on Jan. 1, and a year
previous :
$\underset{\substack{\text { New } \\ \text { Boston } \\ \text { York } \\ \text { pks } \\ \text { pkgs.. }}}{ }$



sters about the irregular sample of much of the high as it can safely go ; as high as 88 to 88.25 has

There is nothing new to report. Stocks are light, both in England and on this side. The following mentioned:
The following are the approximate stocks of
 The stock of chese in the undermentioned
places on Jan. J , compared with those of a year ago are approximately as follows

| Jan. $1,1882$. |
| ---: |
| 233,000 |
| 37,000 |
| 22,000 |
| $7,0,00$ |
| 77,000 |
| 90,000 |
| 637,000 | UTrier

# - 

declined considerable in the States the past few weeks, and there seems to be plenty of butter in
this country for home trade. The fact is there is any quantity of poor butter, and many farmers are working this poor butter over, perhaps churning
it with or sending it to market, and expect to get the outside price for such goods. We want to tell all
such that the dey for that such that the day for that sort of work has gone by,
unless the party is yery expert. We know a party unless the party y very expert. We know a party
who io sending some 45 to 50 pounds per week to a dealer in this city, representing it to be fresh
made butter, but the last box in was so badly made butter, but the last box in was so badly
mixed that the dealer had no trouble in tracing two or three colors in each roll. Had this butter been fine the dealer would have had no trouble in making 25 cents for the lot, but on showing it to-2
buyer he at once decided to take a tub of medium butter in preference. Another buyer, who had had one or two lots of this same butter, when informed
that he that he cold get some more rom the same party, at once,
butter.

FARMERS' MAREET
Per 100 Ibs ${ }^{\text {Losdos, }}$ Ostr, Feb. 1st, 1883.
 $\qquad$



 Torosivo, Oxt. Feb. 1st. | Torosiro, |
| :---: |
| Applese bril. |


grain and provisions

cheese markets.


February, 1883 THE FARMER'S ADVOCATE.


The independence shown in the columns of The A Avocate has been such that every farmer in say, been true to the name. May THE FARMERS'S ADVocate still continue to improve and prosper,
for it has done good service. I would rather read for it has done good service. 1 would rather read
one of its pages than a folio of the abortive attempts to deceive that are palmed off on the public under the name of agriculture in political papers. The articles in them contain some useful
information, but the interest of farmers is only of secondary consideration. They wish to nse us farmers as tools- they try to bind and deceive us.
Long life to THE ADvocaste." $-J$. W., Strathnain, Ont.

## NEW ADVERTISEMENTS UNRESERVED AUCTION SALR celebrated flock

SOUTHDOWN SHEEP
 three miles south-west of Paris, Ont. ON WEDNESDAY, FEBRUAKY 28, 1883.




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Superphosphate. ${ }^{\text {- }}$ on cora per ton. Fro
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LINSEED CAKE
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The Eest Food known for stock. For gue by the Manu facturers. Qualluy
guaranteca pure. \&uotations for any quanutity sent on applica. Wright \& Lawther Oil and Lead Marfg Co
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bate
Eithere of the



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fir min ens.
NT3 Send for Price List.
PETER R. LAMB \& Co.
Fertllizer Manufacturer,
206-c
TORONTO, ONT.

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## SEEDSI SEEDSI

 FOR 1833.



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SPRING PLANTINGI GOLD MEDAL NURSERY STOOK! 100,000 Apple Treess Grape Vines; Pear, Plum and Cherry mental Trees, for Lawn, street Planting and Shelter; Flower-
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Kubly of arvise arthy placing of ordere, as the tenent will not meet the demand the ensuing
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## STOCK NOTES.

Pea-straw is of more value as fodder than the straw of any other cereal. If ewll.s.aved it makes
anital odder for all descriptions of domestic ani capital
mals.
If you want "Randall's Practical Shepherd," the
 have it asa aift, hy sending us
to THE ADvocatz at $\$ 1$ each.
Green Bros., of Oakville, Ont., write: We have sold "Cavalier," 100 , sire Rovyal Brampton, im. John Weir, West Flamboro', Ont.
A good guide for feeding grain to eattle is one
pound to each hundred of their weight. Most pound to each hundred of their weipht. Most animals eat in proportion to their weight, and an
animal weighing 1,000 pounds may receive 10 animal weierhing pounds of train per day.
Readers of The Farierr's Advocate who pur-
chase stock \&c.. advertised in this issue. will chase stock, \&c., advertised in this issue. will
 gtating
journal.
In regard to grinding grain for feeding, it has been shown in every case in which a test has been made that meal is worth ahout one. third more than
whole $\begin{aligned} & \text { grain. The same is true, too, of hav, of }\end{aligned}$ whole grain. The same is true. too, of hay, of
which 115 pounds fed cut into chaff and fed with meal is equal to 20 pounds fed in its natural condition.
There are in the world sixty. five valuable breeds
of catte of which savs Dr.
. of cattle of which. says Dr. A. S. Heath, in his
book on " Breeds of Cattle," we have as vet ap. propriated only eleven, and, even of this sixth we have, most of them we possess so sparingly that
per menty we cannot supply one tents,
from which to breed grades.'
The canse of diminutive size of Jersey cattle as stated by Professor Arnold strikes one as being the Hereford, Durrham and Devon breeeds roam at will in well hedged pastures: one never sees a
tethered cow in their native districts, even on the tethered cow in their native districts,
coadsides, where cattle must not stray.
A good sugqestion is that about choosing, as a caff, lamb, piy or fowl. And a hetter suggestion yet, is that of strict carefulness not to forget afterward whose it is. Let it he something that the child or youth can take care of, and take pride in $\dot{d}$
an' will derive substantial beneffit from, and good will result for all life, in more ways than one
A ram will usanlly get from 800 to 1,000 lambs
during his brief life-time.
$A$ good animal will eat no more than a a port one, butit every one of his progeny as stock- -geters and producers of mutton
and wool, will be worth a qreat deal more t than the progeny of a poor one. If, then, a farmer himys
he latter and saves five dollars or or wenty dollurs he later add save pperation :
T. \& A. B. Snider have lately sold the following
tock: To Geo. Ackroyl, Searborough, a half bred
 mare, two years old, for 8225 ; to Donald Crerar, Shakespeare, eleven months old bull calf, Baron Beaumont, for sly. of hessrs. chlver frave anh exwelve months old.
The steers Canadian Champion, King of the West, and Young Aberdeen, exhibited by the Messrs, Grof, at he recenser at stock show, in Armour \& Osgood, and sold by them to Mr. John Ford, of Chicago, for Christmas beef. He has kindly furrished us with the following figures:
Canadian Champion dressed, 1.635 F lbs., his hide weighing 110 lbs. King of the West dressed, 1,662 los, the weight of his hide being 103 lbs. The

tallow of these two was not kept separate, but | tallow of these two was not kent, in one lot, 310 lbs. Young Aberdeen |
| :--- |


Every stock raiser in the land ought to lave n
co, of of Prof. Law's "' Farmers' Veterinary Adviser" in his home : it may save ten times its cost each year Price 83 and postage. We will send it free for eight new subscribers to the ADVOCATE,
nt \&1 oach.
(Contimued on page $6 \mathbf{6}$.


WI HIUSTRATED OATALOGUB FOR 1883 Finld Garden pnd clower Seds



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SEEDS!
RELIABLE SEEDS !
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ites, many of whom setted in Nourask seeeral
years amo. The trees are of of a istinat variety, do

 somewhat similar in taste. This tree is orery
hardy and tenacious of ife. Utility and orna.
ment could not be better blended in any tree. For furt her partictularrat and and in any tree.
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Four of their
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dustrial and Provincial shows at London in 1881 Awarded first at both places for Herd of Bull and
five females, and Breeders' Herd of five female


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Ontario, Canal.


The Victory coñmmil THREE SIZES.




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MICBROOM＇S
Illustrated Seed Catalogue and Amateur＇s Guide for 1883



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 eptions geeds will besent to all parit
potala card for forpy of catalogue to

GEO．McBROOM，${ }^{H}$ pRIZE MEDAL SEEDSMAN，

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 DRエエエS！ where there
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no
Rock，
OUR OLD
RELIABLE RUST WELL AUGER will And Water a
every

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EAGLE MACHINE IS THE CHAMPION OF THE WORLD nd is shipped on trial－that is，a man sent to set up and test until customer is satisisfed，before an and is shipped on trial－that is，a man sent DRILI，TOOLS：






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ZIMMERMAN Fruit and Vegetable Drjer！ manuractobad ay RICHARDS BROS．， $494 \times 498$ Yonge 8t．，Toronto，Ont． Mghees Awards at ihi Provinnelal Ex． London， 1881.
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Good Dining Rooms at Con-
Gustom Hone Pestemgerser from aill pointst in Canaldand and he
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going east.


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 reieght and pasesenger rates will be given on ap-
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Wetern Freight and Pasemengorder Apent, 93 Rosin

 Chief Superintendent, IToncton, N. B.


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 descriptive catanogue. Address (2).

AGENTS WANTED EVERPWHERR to EnI



## STOCK NOTES.

We have received from the Secretary of the B.
A. A. A. the 6th vol. of the Canadian Short of A. \&. A., the 6th vol. of the Canadian Short bbligacions. The work is simply got up, but shows marks of considerable labor on the part o
the energetic Secretary, Mr. Henry Wade.

John Jackson, of Abingdon, Ont., has sold five outhdown ewes and a ram lamb to John Renton ram lamb to J. W. Bussell, Hornby P.O., county Halton, Ont.
Many of the prize cattle at the Smithfield show were sold to the butcher. The first prize Polled ox, shown by . Cridan, Great Malvern,, which
was adjudged "the best Scot in the hall," went into the hands of Messrs. Cridlan Bros., South Kensington. Six of Lord Lovat's crosses fetched prices ranging from $\mathrm{ox}^{\mathbf{x}}$ shown by Mr. M'Kenzie, Alness, was sold for ox, shown by Mr. MKenzie, Alness, was sold for

$£ 63$; while the three heifers sent by Mr. Reid, Greystone, fetched from the butchers M 50 , Reid | t40. |
| :--- |
| At |

At the Christmas show and sale at Castle Doug.
las, Scotland, the other day, a first-prize, two-yearlas, Scotland, the other day, a first-prize, two-year-
old Galloway bullock, belonging to Mr. J. Bell Irving, of Whitehill, was sold for $£ 50$. The ani-
mal was, however, subsequently purchased by Mr. mal was, however, subsequently purchased by Mr.
James Cunningham Tarbreoch, to be sent to James Cunningham, Tarbreoch, to be sent to
America with the view of being fed and exhibited at the next winter fat stock show there.
Since our last issue we have been informed that
Mr. H. Y. Attrill, of Ridgewood Park, Goderich, Mr. H. Y. Attrill, of Ridgewood Park, Goderich, of his Princess Shorthorns at Dexter Park, on the 17 th April. These cattle are from the celebrated Col. John B. Taylor herd and their dispersion will be an item of great interest.

## Dairy Əัotes.

Anything which frets, disturbs, torments, or vitiates the quality of her milk.
At the half-yearly meeting of the Goat Society great breeder of goats, and that his two choice animals were call Doux. The contrast in tempers has given rise to
their names. Mr. Barrie, Professor at the Government Dairy are at present in the Province County, reports there factories, 47 butter factories, and 28 combined butter and cheese factories.
According to German authorities, the average sixth. After that there is a gradual diminution
till till the tenth season, when the quantity is about
the same as at first. From the tenth to the fourthe same as at first.
teenth season there is further diminution, and after the fifteenth calf the product is seldom more than one-fourth of an average
Dairy cows have become scarce in all parts of
the United States. Cause, the excessive the United States. Cause, the excessive shipment
of calves westward and the too diligent "deaconing" of those not shipped. Already buyers are
scouring the Western States and purchasing dairy scouring the Western States and purchasing dairy
cows to send east. This hint should save the lives of all the female calves born during the coming season.
Dairy matters in Ohio are "booming." Butter 40c.; cheese, 16 cc . at retail; milk at the creameries
18 c per gallon; Cleveland milk 22 c . per 9 lbs., delivered on board cars ; cream at ereameries 35 c. per.head, a herd of Holsteins selling near here for about or above that figure.
Professor L B. Arnold says the points in favor
of dairying are: First, a dairy farm of dairying are : First, a dairy farm costs ten per agriculture ; second, the annual returns average a little more than other branches; third, prices are nearer uniform and more reliable; fourth, dairying
exhausts the soil less; fifth, it is more secure against changes in the season, since the dairyman does not suffer from wet and frost and varying sea sons, and he can, if prudent, protect against
drouth.

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