

THE FARMING WORLD

THE FARMING WORLD

FOR FARMERS AND STOCKMEN

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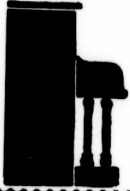
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The Farming World

For Farmers and Stockmen

Vol. XXI.

OCTOBER 28th, 1902

No. 18

Important Announcement

THE Farming World, with its next issue and early in its twenty-first year of publication, enters upon a wider field of usefulness and prosperity. A strong Canadian company with a capitalization of \$250,000 has been formed to take over the business. This company has purchased the Canadian edition of Farm and Home a paper with a wide circulation and influence in all parts of the Dominion. This paper will be merged with the Farming World into one large publication to be known as The Farming World and Farm and Home.

The Farming World in its new form will be made larger and better and each issue will contain much more reading matter than is given at the present time. Its readers will have the advantage of The Farming World's present editorial staff and writers and in addition will be benefited by a largely increased corps of contributors in all parts of Canada. The home department will be greatly enlarged and every effort made to make the paper the great family and home journal of the Dominion.

We look for every present subscriber to The Farming World to aid us in extending its circulation and influence. Special clubbing rates and premiums offers are being arranged for, full particulars of which will appear in next issue. In the meantime talk the matter up among your friends and neighbors and get ready to send in a big clubbing list for Canada's great Agricultural Journal.

Farmers' Telephones

Farmers' telephones are making rapid progress in the United States and especially in the middle West where thousands of telephone lines are in successful operation. In these districts the idea of the farmer owning his own telephone line is spreading, and a great deal of interest is being taken in the movement. Farmers usually get together and furnish the poles, each strings a half mile of wire, buys

and sets up a telephone, and the movement is under way. At a total cost of not over \$25.00 per subscriber for the outfit and an annual expense of from 50 cents to \$5.00, the line pays for itself the first year. The telephone is not a complicated piece of mechanism, no more so than the sewing machine, and anyone with ordinary intelligence can instal and repair a telephone under proper directions, which are now supplied by the companies who are making a business of supplying farmers' telephones.

The movement has made some progress in Canada, and every short while we hear of a new locality that has taken the matter up and installed a system. No modern invention will bring more comfort, more pleasure and more benefit to the farmer than a telephone in his own home. It will bring him in direct touch with the outside world. He has ready access to the doctor, the grocer, etc., and can find out in a moment's time how the markets are and when he should sell his products.

The Mutton Sheep

At no time in the history of stock raising has so much attention been given to selection as at the present time. More than ever must the animal be suited to the purpose for which it is being raised or fed. The successful cattle feeder wants an animal of the beef type. So with the mutton sheep, an animal must be secured that will produce the best quality of mutton at the lowest possible cost.

The ideal mutton sheep must have good legs that come to the ground squarely and give every indication of possessing power and strength to support the body. The best judges do not desire fine bone in a mutton sheep, as it indicates a lack of vigor and hardness and an inability to feed well. A long, narrow face is also a weakness in the mutton type, a short nose and broad face are to be preferred. A "ewe neck," or drop in front of the shoulders should be avoided. A mutton sheep is never without good depth from the top of the shoulder, and a point midway between the fore legs, and good heart girth. Avoid a prominent backbone or spine, as it is an indication of a deficiency of flesh along the back and loin. A good mutton sheep should be close coupled—that is, the distance between the last rib and the hip points should

be comparatively short. A good thigh will also be found on a good mutton sheep. The wool is of minor importance, though it must be considered in connection with the other points of the carcass. These are some of the prominent features to be considered in selecting a mutton sheep.

Cold Storage for Apples

The New Hampshire Experiment Station for several years back has been conducting a series of experiments in putting apples in city cold storage. The following gives a summary of what has been done:

On November 20th, 1899, a number of barrels of apples were shipped to one of the Boston cold storage houses. Beginning with February, two barrels were taken out each month until July and examined. The fruit did not receive any extra care and was representative of apples as ordinarily purchased at that time of year on the open market. It was found that the apples could not safely be allowed to remain after April 1st, as they decayed rapidly after that date. The prices at time of shipment ranged between \$1.25 and \$2.00 and on April 1st they brought \$3.50 to \$4.25.

On October 27th, 1900, a second shipment of apples were sent to cold storage with the following results. Price when put in storage, \$1.25. On April 23rd ten barrels sold for \$34.00. Expense, carting, 50c., commission 8 per cent., \$2.72. Net proceeds, \$30.78 or \$3.08 per barrel. Freight and cold storage charges must be deducted from this amount. The storage rates were 10c. per bbl. per month, or for the season ending May 1st, 35 to 50c., according to the number of barrels. The freight charges can easily be found out according to the location of the individual.

The greatest care in handling and placing the fruit immediately into cold storage pays for the extra trouble. One must understand that cold storage will simply retard and not prevent entirely the spread of decay. If the fruit is in prime keeping condition on entering it is likely to come out in proportionately as good condition.

Our recommendation would be to pick the fruit relatively early, a trifle earlier than the common custom. Use only the best grade for storage, and pick, grade and ship the same day if possible. The sooner the fruit is in storage after it is picked and cooled down to an

even low temperature, the better it keeps. Do not expect impossibilities of cold storage. It never makes an ill-shaped apple shapely, an unsound fruit sound, a wormy apple perfect, or a pale, sickly, immature fruit bright colored. The apple cannot be expected to increase in size or overcome rough, careless treatment if perchance may have received before going in. With a proper knowledge of the conditions carefully complied with, there seems to be no question but what the practice of placing apples in cold storage can be recommended.

Salt for Farm Animals

Many farmers do not realize the great importance of salt for all farm animals. Even pigs and sheep are benefited by a moderate addition of salt to the ration. Salt is said to increase the activity of the secretion of the body juices and their circulation. Prof W. A. Henry gives the following sound advice on the uses of salt on the farm:

Salt stimulates the appetite of the animal and is said to favor the passage of the protein substances from the digestive canal into the blood, and in general to increase the energy of the vital processes. If these claims are true, and we may suppose they are, then the use of salt, in moderate quantities, at least, should prove beneficial with our farm animals.

It is further reasonable to assume that where animals are heavily fed with concentrated feeds, like dairy cows, there is real need of salt to effect the results above indicated. Probably animals, which are not highly nurtured and which live in a quiet, natural way, have less need for salt than those living under more artificial conditions.

Some experiments have been reported in this country in which salt has been withheld and then given to dairy cows. The result seems to show the strong necessity for salt. The writer has believed that these experiments were too brief in time allowed and too limited in character to be of much value. Some salt work is now in progress at the Wisconsin station, but we are not ready to publish any results as yet.

We always feed salt to all our hogs at the station farm, and while we cannot speak positively as to the results, we believe on the whole that they are favorable. We admit the weakness of this position from the experiment station standpoint, but we cannot settle all problems at once in the great field of agriculture, and until we can do so we are practising what seems to be a more reasonable practice in this particular.

Licensing Cheese Factories

Editor THE FARMING WORLD:

I have read with interest the articles in your paper in reference to

licensing cheese and butter factories.

I am of the opinion that if all factories were licensed that it would be a move in the right direction. Let the standard of efficiency be fixed by a committee of up-to-date dairymen. Charge a fee of \$20 or \$25 and devote this

money to the work of instruction and inspection. Have the instructors appointed by the Government and give them the power to close up these filthy factories that are a disgrace to the business and to see that all factories are kept in proper condition. T. B. Miller.
London, Ont., Oct. 20th, 1902.

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The "National" is a purely Canadian made machine throughout, which cannot be said of some others. Intending purchasers are invited to call at our factory in Guelph, where they may see the machine and all its parts in course of construction.

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It possesses all the strong points found in other Cream Separators, while it is free from objectionable points that make other machines hard to run, and a source of trouble to those who operate and clean them.

The National is simple in construction, handsome in design, and finely finished; easy to operate, and few parts to clean; a perfect skimmer with a larger capacity than any other separator at the same price. Every machine guaranteed to do good work.

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The Sugar Beet World

Devoted to Sugar Beet Culture in Canada and Allied Industries. Specially
Representing the Farmers' Interests

Edited by JAMES FOWLER

Beet Sugar and Alcohol.

France has made more progress in the production of alcohol for manufacturing and industrial purposes than any other country. The Republic has no petroleum wells, and its necessities in this respect have caused the government to give particular attention to the production of alcohol. We notice that a distillery is to be started in Toronto for the producing of alcohol for commercial purposes, and both those who are engaged in the undertaking directly and the public generally cannot do better than direct their attention to the industry in France where it has reached such a high stage of development. A month or two ago an exhibition was held in Paris, under the direction of the French government, showing the possibilities of alcohol in the various fields where it is serviceable. This exhibition was a most extensive affair, and it showed that alcohol has an immense field in domestic and industrial uses. French economy has succeeded in producing alcohol at a price very near to that of petroleum and it is hoped, when the government relieves the manufacturer of certain unnecessary charges that the price will be brought down to the level of petroleum. The uses to which alcohol is already put in France include the operation of motors for all purposes, lighting, heating and very largely for the propulsion of automobiles. Used in connection with the Welsbach mantle, alcohol produces a magnificent light, and French manufacturers have designed hundred of styles of lamps varying from the plainest kind to those of a highly ornamental character. Alcohol stoves are extensively manufactured and sold, and the use of alcohol in the motor vehicle trade is rapidly increasing. Its freedom from smell, its comparative safety, its cleanliness, render it much more satisfactory than coal oil or gasoline. The article is produced from beet roots in France, and in connection with the exhibition there was a graphic illustration of the whole process of manufacture, from the planting of the beet to the distillation of the liquor. Now that Canada has started in the production of beets for sugar the establishment of a distillery for the production of alcohol as a by-product follows as a matter of course. There is no reason why alcohol should not be produced as cheaply here as in any other country, France not excepted. There is a wide field for the industry in this country, but we imagine it will need recognition from and encouragement by the government. If commercial alcohol can

reach the consumer at anything like the actual cost of production, it will find a very large field in every part of the country.—World.

Utilizing the By-Products.

The agreement between several European countries which pay bounties on all beet sugar exported to discontinue the practice after 1903, is causing farmers in those countries to look more closely into utilizing the by-products of the beet, so as to make up, to some extent, for the loss of the bounty which has made the business very profitable. Frank H. Mason, U. S. consul-general at Berlin, sends a report of a recent meeting held by those interested in the beet sugar industry, at which action was taken looking to improved processes for utilizing these by-products. The report says:

"As an indication of the direction in which progress is now being sought for and promoted among sugar-beet growers may be cited the proceedings of a recent meeting of the Verein der Deutschen Zucker Industrie, a national association of beet culturists and sugar manufacturers, wherein it was decided to offer a prize of 10,000 marks (\$2,380) for the best process which can be devised for drying beet leaves and 'heads'—i.e., the top which is cut off when the sugar beet is trimmed preparatory to grinding. The desperate condition in which the beet-sugar industry will be left by abolition of export bounties compels anew every possible economy in the conservation and use of each element in the raw material. This use of the pulp, leaves and waste molasses as food for cattle is a chapter of the general subject which has hitherto attracted comparatively little attention in the United States. Its importance in Germany, as well as the present technical status of the leaf-drying process in this country, will be indicated by the conditions of the tests which competitors for the prize must be prepared to meet. These as officially announced on the 27th of June, are as follows:

"1. Leaves and heads dried by the competing apparatus or process shall not contain water in excess of 12 per cent.

"2. The prepared product must be of good form and condition, as free as possible from foreign substance and smell, and not scorched or burned.

"3. The loss of soluble nutritive elements in the dried leaves as compared with fresh leaves shall not exceed 15 per cent.

"4. The working cost of the process, including depreciation and wear and tear of plant, shall be in

such relation to the fodder value of the product that it will be, when properly installed and managed, economically profitable."

Manufacturers in Michigan are also taking steps to utilize the beet pulp in the feeding of live stock, and also the waste molasses. The factory at Alma, Gratiot Co., has put in machinery for drying the pulp so that it can be shipped by rail, and keep in good condition until fed out. Some farmers are also testing the value of the beet leaves as silage, and we suppose the top goes with the leaves. If this practice proves a success, there will be no need of adopting a more costly process for their preservation.—Michigan Farmer.

Sugar Beet Experiments in Nebraska

The sugar beet experiments included tests of varieties, tests of fertilizers, distance of planting, time of planting, methods of cultivation, and the treatment of sugar beet diseases. Mr. A. T. Wiancko gives the following summary of the results:

A test of thirty-seven varieties under similar conditions showed a wide variation in the total amount of sugar produced per acre, the Original Klein Wanzelebener occupying first place.

A comparison of light and heavy soils for sugar beet production showed a considerably higher sugar content in the beets grown upon the heavy soil.

Slight increases in the yield, sugar content, and purity of beets were produced by the use of commercial fertilizers, but their use did not seem to be profitable upon the land where the tests were made. Of the different classes of fertilizers used the phosphates gave the best results.

A comparison of different depths of cultivating sugar beets was in favor of about four to five inches as compared with six-inch or two to three-inch cultivation.

The most satisfactory distance of planting was found to be 18 inches between rows and eight inches between plants in the rows.

A comparison of the sugar content of beets grown among weeds and on clean ground showed that the presence of weeds may very materially affect the quality of the beets.

The fresh growth of the beets induced by the wet weather during September was found to result in a rapid reduction of the percentage sugar content of the beets, but the results of extensive determinations indicate that unless the fresh growth is accompanied by buds upon the crowns, there seems to be

no real loss of sugar—the beets seem to increase in size and weight, while the sugar remains at a standstill.

The season's experience showed to a remarkable extent the drought-resistant qualities of sugar beets, in which respect they were found to be superior to any crop upon the farm except alfalfa.

Some Points in Sugar Manufacturing

The liquid which goes into the receiving tank is about the color of vinegar, and contains not only the sugar in a liquid form but some impurities. To get rid of these impurities the liquid is carried along to a tank where about 10 per cent. of milk of lime is mixed with it, carefully stirred and then carried along to a carbonation tank.

The milk of lime employed is very pure and high in carbonate of lime and when mixed causes the lime to crystallize. The liquid now is carried into a filter press, which made up of a long series of iron frames operated by hydraulic pressure. The lime which has taken up much of the impurities is removed thus, and when discharged has an appearance resembling putty. The liquor, which is rendered clear and transparent, now undergoes a second similar operation, except that it is mixed with a smaller percentage of milk of lime.

From this point it is carried to what is known as the sulphuring station, where sulphur is introduced to remove any impurities which may still remain.

The liquid is now sent to concentrators, usually known as quadruple effect evaporators. On entering the evaporators the juice is thin, containing about 14 per cent. of solid matter, and on leaving them is known as thick juice containing about 62 to 65 per cent. solid matter.

How Yankees Become Colonels

Canadians will appreciate the following extract from The Farmers' Tribune, a leading farm paper in the Western States, as it throws some light on how the Yankee Colonel is produced:

"A subscriber asks the Tribune why all live stock auctioneers are called Colonel. At first thought we were going to give up. In a paragraph in the Tribune some time ago we answered it from what information was at hand. Since that time the Iowa State Association of Auctioneers have been wrestling with the problem. They believe an auctioneer "should tarry" in Jerico until his beard has grown," or until the title of Colonel has grown, and that the time of probation should be until he had officiated in securing bids for live stock at 1,000 or more sales. The title of Colonel is acquired differently in different states. In Kentucky a large tall man with a long coat and wearing a broad brimmed hat is called Col. In Georgia a man who takes it "straight" is

called a Col. In Alabama, and some other of the southern states a man who will do—in a nigger is entitled to the handle. In many of the states it is like the rain that falls from heaven, it falleth upon the just and the unjust, and like the quality of mercy, is not retained by a society of auctioneers. Of course it is now understood that the title has nothing to do with military service and if there be any reason why a man who sells live stock should be thus breveted more than the man who sells grain or agricultural implements, or even the land upon which the cattle roam, it has not been stated. But there is no use of inquiring why this thing is, thus, for men may come and men may go, but the Colonels will go on forever."

A Great Demand for Pulp

This is going to be a good winter for testing the value of beet pulp as a stock food. At all events there is a great deal of it being fed, though it is fed mainly in a way to test its commercial value rather than its food value. Through the west the shortage of the corn and other feed crops last summer makes the demand for beet pulp extraordinary, and beet growers

are not only taking their quota of pulp returnable to them under their contracts, but a ready market is found for the surplus among the local feeders of sheep and cattle. The sheep in particular are taking very kindly to pulp, so that much of the mutton which goes into market from this locality next spring will be made of beet pulp, says the Rocky Ford, Col., Enterprise. Cattle also are being fed up to the limit, especially milk cows and young stock, and only so much corn and hay as are absolutely needful to finish and fit the meat animals for market will be fed. Some days of this week a line of wagons could be seen reaching from the pulp spout on the north side of the factory out to the scales house, waiting their turn to load. And so much larger is the demand than the supply coming from this spout that local feeders have engaged cars and had them loaded at the car spout and pulled down on to the siding down town, where their wagons can load without waiting.

Grandpa. — Well, Horace, we haven't caught any fish; it's hard lines.

Horace.—But we had good luck digging worms.

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The Agricultural Gazette

The Official Bulletin of the Dominion Cattle, Sheep and Swine Breeders' Association, and of the Farmers' Institute System of the Province of Ontario.

THE DOMINION CATTLE, SHEEP, AND SWINE BREEDERS' ASSOCIATIONS.

Annual Membership Fees:—Cattle Breeders, \$1; Sheep Breeders, \$1; Swine Breeders, \$1.
BENEFITS OF MEMBERSHIP.

Each member receives a free copy of each publication issued by the Association to which he belongs during the year in which he is a member. In the case of the swine breeders' Association this includes a copy of the swine record.

A member of the swine breeders' Association is allowed to register pigs at 50c. per head; non-members are charged \$1.00 per head.

A member of the sheep breeders' Association is allowed to register sheep at 50c. per head, while non-members are charged \$1.00.

The name and address of each member and the stock he has for sale are published once a month, over 10,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural College and each Experiment Station in Canada and the United States, also to prominent breeders and profitable buyers resident in Canada, the United States and elsewhere.

A member of an Association will only be allowed to advertise stock corresponding to the Association to which he belongs, that is, to advertise cattle he must be a member of the Dominion Cattle Breeders' Association, to advertise sheep he must be a member of the Dominion Sheep Breeders' Association, and to advertise swine he must be a member of the Dominion Swine Breeders' Association.

The list of cattle, sheep, and swine for sale will be published in the third issue of each month. Members having stock for sale, in order that they may be included in the Gazette, are required to notify the undersigned by letter on or before the 15th of each month, of the number, breed, age, and sex of the animals. Should a member fail to do this his name will not appear in that issue. He data will be published in the most condensed form.

A. P. WESTERVELT, SECRETARY,
Parliament Buildings, Toronto, Ont.

List of Stock for Sale.

TURKEY CLUB.

Bronze

Beattie, W. H., Wilton Grove.—4 yearling cocks, 2 cocks 2 years, 4 yearling hens, 3 hens two years, 50 pair young birds.

Bell, W. J., Angus.—to cockerels, 5 pullets, 2 cocks 2 years, 2 hens 2 years.

Cole, T. J., Bowmanville.—15 young birds.

Mitchell, Jas. B., Bexley.—34 hens, 4 cocks 1 year.

Silverwood, A. E., Lindsay.—50 young birds.

White Holland.

Beattie, W. H., Wilton Grove.—2 yearling cocks, 4 yearling hens, 20 pair of young birds.

Slate.

Beattie, W. H., Wilton Grove.—2 yearling cocks, 2 yearling hens, 8 pair of young birds.

FARM HELP EXCHANGE.

The Farm Help Exchange has been started with the object of bringing together employers of farm and domestic labor and the employees. Any person wishing to obtain a position on a farm or dairy, or any person wishing to employ help for farm or dairy, is requested to forward his or her name and full particulars to A. P. Westervelt, Secretary, Live Stock Associations. In the case of persons wishing to employ help, the following should be given: particulars as to the kind of work to be done, probable length of engagement, wages, etc. In the case of persons wishing employment, the following should be given: experience and references, age, particular department of farm work in which a position is desired, wages expected and where last employed.

These names when received together with particulars will be published FREE in the two following issues of the "Agricultural Gazette" and will afterwards be kept on file. Upon a request being received the particulars only will be published, the names being kept on file.

Every effort will be made to give all possible assistance, to the extent suitable workers, male or female, may be obtained. Every unemployed person wishing to engage in farm or dairy work is invited to take advantage of this opportunity.

Help Wanted.

Wanted—A man who has had some experience with cows and is a first class milker and good general farm hand. Wages \$22.00 a month and board. Farm in Vancouver, B.C. No. 146. a.

Wanted—Two men on a farm in Grey County; one to act as foreman and the other for general work. Good wages, steady work. No. 147. a.

Wanted—A good man who is accustomed to the dairy and feeding cattle for the winter or by the year. Farm situated in Peterborough County. No. 145. b.

Wanted—A man to work on a 250 acre farm in Ohio, U. S. In addition to milking and caring for stock there is general farm work. Good wages, to energetic and willing man. No. 144. b.

Domestic Help Wanted

Wanted—A strong reliable person to help with farm house work. A woman from 18 to 60; would give a good home to an elderly woman who could work. No outside work. No. 143. b.

Situations Wanted.

Wanted—A position as foreman on a stock farm by a married man aged 40. Have had a life-long experience in farming in all its branches. Wife is willing to take charge of housekeeping and board men on farm. No. 613. a.

Wanted a position on a farm by a young man 18 years of age caring for horses and cattle; has not had much experience in farm work but is willing to learn. No. 612. b.

N.—Where no name is mentioned in the advertisement, apply to A. P. Westervelt, Parliament Buildings, Toronto, giving number of advertisement.

Farmers' Institutes.

Under the head the Superintendent of Farmers' Institutes will each week publish matter relating to Institute work. This will include instruction to secretaries and other officers, general information about Institutes and Institute work, suggestions to delegates, etc. He will also from time to time review some of the published results of experiments conducted at the various Agricultural Colleges and Experiment Stations of Canada and the United States. In this way he hopes to give Institute members some valuable agricultural information which they might not otherwise receive, on account of not having access to the original publications. If any members at any time desire further information along any of the lines discussed, by applying to the Superintendent he will be put in direct communication with the institution that has carried on the work.

G. C. CREELMAN,
Superintendent Farmers' Institutes

Effect of Our Fruit Trade on the English Market.

WHAT IS BEING DONE TO MELT OUR IMPROVED METHODS OF PACKING—
EXTRACT FROM JOURNAL OF GREENGROCERY, LONDON.

EARLY APPLES.

A few weeks ago we reported the first consignment of American apples—much earlier than usual. From these early consignments it would appear that American growers intend to place their produce upon the market to compete with our earlier supplies. Now, if this is the case, home growers must wake up. Granted that we are heavily handicapped this season, everything being late owing to the weather, it is not always so. Every grower is aware of the fact, or should be, that the early produce fetches the best price, and this applies to fruit as well as vegetables. Intending apple planters must therefore plant early varieties as well as late ones. The best lists of early varieties can perhaps be obtained from the nurserymen who make a speciality of growing and supplying young trees to growers in the different growing districts, as much depends upon soil and locality; while to our mind, Early Rivers, Beauty of Bath, Red June-cating, Lord Suffield, Devonshire Quarrenden, Bismarck, Worcester Pearmain, are amongst the best early apples, in addition to which they have a bright color for the most part, which is a very important point for market apples.

HOW TO PACK.

That home growers can beat all comers at growing apples, pears, peaches, grapes, and most other fruits can be gleaned by those who care to visit the show of British-grown fruit held under the auspices of the Royal Horticultural Society at the Crystal Palace, which, by the way, takes place on Sept. 18, 19, 20, or by visiting many of the horticultural shows held in country districts. How to pack the fruit when it is grown, however, is quite another matter, and one about which growers in this country do not trouble themselves sufficiently. It is the greatest mistake possible for growers to content themselves by packing their fruit in sieves and half-sieves just because their fathers and grandfathers did so before them, and the sooner they get out of this "rut" the better. The Royal Horticultural Society have special classes at the before-mentioned show in which prizes are given for the best method of packing, but as a rule these classes receive very little patronage from growers, although grading and packing is the most important branch of the business after the fruit has been grown. In

the various markets throughout the country at the present time may be seen English and foreign apples and pears at the salesmen's stands awaiting the inspection of retailers with a view to being purchased. On account of the excellent grading or evenness of the foreign fruit, the method of packing, and its general appearance, the fruit in many cases is purchased in preference to English, not because it is better in quality, for often it is not, but because of its general appearance, which home growers would do well to remember.

Ventilation and Heating

BY DR. SINCLAIR, WALKERTON

Before commencing a study of the first part of our subject, let us clearly understand its meaning. Ventilation is the process of changing the air in rooms and closed places, so that a certain standard of purity may be preserved notwithstanding the vitiation which the air undergoes from the breath of occupants, the products of combustion of illuminating agents, and other causes.

We shall first consider what pure air is, and what amount of contamination is required to produce a deleterious effect upon the health of individuals inhaling it. Pure air is a mixture composed of 78.08 parts nitrogen, 20.99 parts oxygen, and 0.93 parts carbon dioxide, in every 100 parts. The association of these gases in atmospheric air is not a chemical union, but merely a mechanical mixture, readily separated. Oxygen is the absolutely essential element for the support of human, and all animal life. Nitrogen is the vehicle for carrying the oxygen, or for diluting it so as to make it fit for ordinary respiration. Carbon dioxide is far from being such an indifferent agent. It is essential to life in the vegetable kingdom, but not in the animal. To man it is a superfluous agent, doing no harm in minute quantities, but becoming very injurious as the quantities are increased. While oxygen, nitrogen and carbon dioxide are the three essential components of life-giving air, other gases, such as ozone (or peroxide of hydrogen) nitrous and nitric acids, and water in a gaseous form, are found to be more or less intermingled with them. Ozone, which is merely oxygen which has taken on a new set of properties in consequence of the action of electricity or some other force, is most valuable as a disinfectant.

Air becomes contaminated in various ways; by respiration, by combustion, by putrefaction, sewage emanations and excremental filth, by gases, vapors and suspended metallic, mineral and vegetable matters given off by trades and manufactories, and by poisons of unknown nature given off by damp and filthy soil.

To us the first mentioned means of contamination is perhaps most important. Air as expelled from the lungs contains only 13, instead

of approximately 21 parts of oxygen, the missing 8 parts having been withdrawn by the blood-cells in those organs. The 0.03 or 0.04 p.c. of carbon dioxide allowable, is increased to 4 or 5 p.c. An increase of watery vapor is perceptible, and this is loaded with organic matter, the most injurious ingredient of re-breathed air.

Quantities of this organic matter are given off with the perspiration, by the skin, as well as by the lungs. When it comes in contact with the moist warm air of a room it undergoes decomposition and forms a medium on which the various disease producing bacteria feed and multiply, and thus the room is made a focus from which contagious diseases are spread and propagated. Organic matter is characterized by a fetid odor, easily recognized in over-crowded rooms the occupants of which have not paid strict attention to personal cleanliness, and quite frequently, though in a less degree, in the neighborhood of our beds after they have been slept in, and also in sick-rooms. The odor, when strong, creates in those unaccustomed to such impurity, a feeling of positive debility, the result of poisoning. Now substances which imbibe water freely will absorb this matter and retain it indelibly, owing to its molecular form. Among the most common absorbents of your households are: woollen goods of all kinds, feathers, carpets and moist paper, besides the woodwork and furniture. Take warning then, and banish all articles of such description which cannot be easily and frequently washed and cleansed. We find that straw and horse hair take up organic matter in a very slight degree, and just here is a suggestion for your beds. If you cannot afford a good hair mattress, an expensive luxury, avoid wool ones, and those of unknown composition, as well as the still more unhealthful leather bed, and resort to pure clean straw that you can afford to empty out and renew at will.

We have seen that air as expelled from the lungs contains carbondioxide to the amount of 4 or 5 p.c. instead of 0.03 or 0.04 p.c., as it is in pure air, or 0.06 p.c., the limit of what can be endured without injurious effects. We can readily see then the necessity for frequently changing and freshening the air of our habitations. It has been ascertained that whenever other impurities exist in the air, carbon dioxide increases in the same proportion; and it is therefore usually taken as the standard of impurity, so that in order to have pure air to breathe, we must get rid of the excess of carbon dioxide.

Carbon dioxide is produced in large quantities not only by the breathing of human beings and the lower animals, but by the perspiration, by the combustion of fuel and lights, and by decomposition of animal and vegetable refuse. It is estimated that 822,000,000 cubic feet of it are produced in the city of London, England, every day; or

9,500 cubic feet per second. Nevertheless, through its powers of oxidation and the physical changes which it undergoes through the agency of storms, rain, currents, temperature, etc., the atmosphere preserves a marvelous uniformity of composition. Then shall we not make some provision in our closed buildings for the operation of some of those agents?

We have still another gas which is important for us to consider as an impurity of the air, viz, carbon monoxide, a most deadly poison. It is always present where combustion is imperfect. Our coal stoves and furnaces become generators of this poison, if not carefully and skillfully managed. It can easily be distinguished when burning on the top of the coal by its pale blue flame. Its formation can be prevented by giving the fire sufficient draught, and seeing that it burns brightly. The draught is especially necessary when a fresh supply of coal has been thrown on. This gas is not only formed by the incomplete burning of coal, but by that of wood, or any other carbonaceous material. This gas often destroys human life when allowed to escape into bed-rooms, the occupants of which are asleep. It acts as a narcotic poison, keeping those exposed to it in a comatose condition until life is extinct. Its milder effects are languor and oppression, difficulty of breathing, slight dizziness, confusion of thought, headache, accompanied by a feeling as if a tight band encircled the forehead and temples, in a word the symptoms of narcotic poisoning.

Besides the impurities formed within the room itself, we find many others, quite as injurious, drawn in from its neighborhood, where that is not in the condition it ought to be. The burning fires create a draught by which the air of surrounding soil is drawn within by suction. Then let us see to it that the soil about our dwellings is kept dry and clean, as well as the dwellings themselves. It is a well-demonstrated fact that the death rate from consumption, rheumatism and its concomitant heart disease, infantile diarrhoea, and a variety of other diseases, is materially lessened by the drying of the sub-soil. The popular idea that the air ends where the ground begins, is a wide-spread delusion. All soils are more or less porous, and contain air, which may give place to foul gases, or to water. A house built on gravelly soil is upon a mixture of two parts small stones and one part atmospheric air. It is as needful to keep this air pure as it is that of our dwellings, in order that we may enjoy perfect health. Where dish water is thrown from the door upon the ground, soap-suds disposed of in the same manner on washing-day, and all sorts of decomposing particles are sent with them, forming one grand cess-pool, or a large area of wet soil, giving out its poisonous exhalations to pollute the air, we must expect to find general bad health, and the most virulent

types of contagious diseases. In the days when we lived in the old-fashioned houses, with their ill-fitting doors and windows, and large open fireplaces, these poisons were so quickly sucked through the house, and were so diluted with fresh air, that they did little harm. But the modern house, with its double doors, and double windows, and absence of ventilating flues, forms an excellent receptacle for storing them to the subsequent injury of the inmates. Look well, then, to the cleanliness of your own yard; and, in case you are living in a closely settled part of a town or city, look to your neighbor as well. If he is not paying sufficient attention to the matter, report him to the health officer.

The size of the rooms we occupy is a question of great importance. In the British army, previous to 1836, the death-rate from consumption was exceedingly high, and the Government was moved to appoint a commission to inquire into the cause of such mortality. The decision of the commission was, that the limit of air space allowed each soldier was insufficient. Acting on this suggestion, the Government ordered that every soldier in barracks should be allowed 600 cubic feet of air space, and that was ordered to be well ventilated. This change was followed by an immediate improvement in the health of the soldiers. It is now an established rule that each individual requires a minimum of 600 cubic feet of breathing space; while 1,000 cubic feet is required for perfect comfort and health. The air of this space should be replaced by pure external air, at least three times per hour, in order that the individual may have the 3,000 cubic feet per hour required to keep him perfectly healthy.

In our uneven climate, we require a different system of ventilation in summer from what we do in winter, owing to the necessity for artificial heat in the cold weather. During the warm weather in summer, there is a larger amount of organic matter given off by the skin than in cold, and this necessitates freer ventilation, but on the other hand, the outer air is nearer the temperature of the body, and can be more freely admitted. Open your doors and windows and drive out the foul air; while, at the same time replacing it with pure and fresh air from outside. This means of ventilation will be found insufficient for fully occupied rooms, such as school-rooms, churches, public halls, etc., and the deficiency must be made up by artificial modes of ventilation.

The subject of ventilation, in a cold climate like ours, is inseparably connected with that of heating, for it is impossible to have efficient ventilation in cold weather, without warming the air, so that its rapid movement may not produce the discomfort of draughts. The degree of moisture contained in the air must also be considered in the same connection, a cool cur-

rent of air being rendered more disagreeable by an excess of it, and a warm current becoming less conducive to comfort by either an excess, or a deficiency of it. With most systems of heating at present in use, the great difficulty is to secure sufficient humidity in the atmosphere breathed. A pan or kettle of water set on top of the stove or furnace giving off its steam, may make up this loss. A certain amount of moisture is an absolute necessity to health and comfort.

We shall now consider the two parts of our subject together, and try to gain some information as to the best mode of securing both heat and ventilation, adequate to our needs. In cold weather, our efforts are directed mainly to securing a sufficient supply of warm air to counteract the effect of the colder atmosphere out of doors, and we seldom think of making provision for the escape of foul air. Fortunately for us, provision is often made without thought or knowledge on our part, by imperfect carpentering, draughts in stoves, etc. We think mainly of economizing fuel, and at the same time securing enough heat to keep us comfortably warm while to secure a constant access of pure warmed air to our bodies, the consumption of a large amount of fuel is necessary.

We have three great natural agents to co-operate with us in the securing of proper ventilation: the law of diffusion of gases, the difference of weight between masses of air of unequal temperature, and the wind, which is the result of the second of these agents. All must be taken into account when our arrangements are being made. Now there are numerous systems of ventilation and heating; some good, some fair and some very bad. Since a part of the time allowed for one of your afternoon meetings is very inadequate to an exhaustive study of the subject before us, we shall consider only one—recognized to be, on the whole, the best of these systems.

By this system a ventilating flue made of tin or some other smooth-surfaced material that will not tend to accumulate dust and dirt, is placed in the wall, its lower opening communicating with the out-door air, the fresh air entering here, and being carried to a furnace in the basement, about whose surface it is passed, for the purpose of warming, and then carried on its upward way through the flue, until it reaches a point in the wall above the breathing line of the occupants of the room. An opening is there made, and the flue connected with it, so that the warmed air may escape into the room. Now we know that heated air is lighter in weight than cold, and its natural tendency is to rise, consequently, if we were to stop here, we would have the upper part of the room hot, while the lower air would remain cold, and might cause great discomfort, but, by placing an outlet for the foul air at the floor immediately beneath the point where the warmed air enters, we create a

draught by which the cooler foul air of the lower part of the room is drawn off, and is replaced by warm air from above. By this means the heat is distributed fairly equally to all parts of the room, by diffusion and circulation. Thus we have, at the same time, a well-heated and a well-ventilated room.

We were to extend our study of the question of heating, we would find that steam and water possess many advantages over hot air, but the question of ventilation becomes more complicated where either is used.

In a well-managed room the temperature should never rise above 70 degrees Fahrenheit, and never fall below 60 degrees, 67 degrees being found comfortable for most people sitting still. The humidity should be kept as near 70 per cent, as possible, and the size of the inlets and outlets should be so regulated as to allow of the air being completely changed not less than three times per hour, and the air conducted from without, through the ventilating shaft, should be perfectly pure. In order that this may be so, it is necessary to see that no decomposing matter of any kind is allowed to lodge in our neighborhood. It may not be out of place at this meeting to suggest that the same rules of health should be observed for the lower animals as for man.

To Clean Wall Paper

Here are several ways by which wall paper can be cleaned so that it looks almost as good as new. The knowledge may be of use to housekeepers:

One way is an old one, but as it is satisfactory, we give it with the rest. Take a loaf of bread, stale, but not too hard, and cut off one crust; then, taking it in one hand, rub the paper gently with the exposed surface. When the bread looks soiled, cut off a very thin slice and proceed with the work. It is best to rub down on the paper, and clean each piece thoroughly before leaving it.

Another way is to take a loaf of bread, and, after removing the crust, soak it in cloudy household ammonia. It must be so wet that one can work it in the hands into a ball. Rub the paper lightly with it, and as the ball becomes soiled on the outside, knead it until a clean surface is exposed. This will remove the dirt and smoke and freshen up the paper wonderfully.

Another plan is to make a soft dough of coarse brown flour mixed with water. It should be stiff enough to handle easily. The paper can be rubbed with it as in the former method. When there are grease spots on the paper, lay coarse brown paper over them and pass a hot iron over it. Fresh paper may be needed several times if the spot is large.

When there are spots from which the color has been removed, they can be made to look as good as new by the use of watercolor paints.—The Woman Farmer.

The Farm Home

Opportunity

He was a yokel, freckled and tanned
Who stood with a rope in his horny
hand,
And tried to inveigle a fractious
goat
To give him a chance to encircle his
throat
With a rope.

It was the goat, contrary-impelled,
That laughed at the yokel and
rope he held
And wouldn't admit for a moment
that he
Was foolish as t'other had thought
him to be.
He should hope!

Then raced the two all over the
field
(The man wouldn't stop, the goat
wouldn't yield)
Till, what with the steps they had
run and retraced,
They found that the chase and pur-
suit had embraced
Quite a scope.

Tired of flight the goat turned
around,
And brushed with his whiskers the
battle ground;
Then lowered his head and proceed-
ed to dash
'Twixt the yokel's legs in a frac-
tional flash,
Slick as soap!

There was his chance! Had the
yokel grabbed
His horns, he'd have had the fugi-
tive nabbed;
But he didn't, and then with a
hopeless wail
He caught at the brief, inexpress-
ible tail
On the lope.

You know, of course, or hear it
from me—
A goat's tail's not as long as a
tail ought to be;
And so, when he grabbed, the tail
wasn't there,
And the goat was exciting the
yielding air
Up the slope.

Now, here is the moral: You
needn't try
To catch Opportunity that's gone
by;
For his tail is the briefest that
ever was
(Don't hang near as long as a
goat's tail does!)

If you're after Old Oppor., you're
sure to find
That you can't head him off if you
get behind.

—Baltimore News.
Moral: Buy land now.

Curing Rheumatism by Bee Stings.

One day, not a great while ago, Mr. Middelrib read in his favorite paper a paragraph copied from the Preger Landwirtschaftliches Wochenblatt, a German paper, which is

an accepted authority on such points, stating that the sting of a bee was a sure cure for rheumatism, and citing several remarkable instances in which people had been perfectly cured by this abrupt remedy.

Mr. Middelrib did not stop to reflect that a paper with such a name as that would be very apt to say anything; he only thought of the rheumatic twinges that grasped his knees once in a while, and made life a burden to him.

He read the article several times, and pondered over it. He understood that the stinging must be done scientifically and thoroughly. The bee, as he understood the article, was to be gripped by the ears and set down upon the rheumatic joint, and held there until it stung itself stingless. He had some misgivings about the matter. He knew it would hurt. He hardly thought it could hurt any worse than the rheumatism, and it had been so many years since he was stung by a bee that he had almost forgotten what it felt like. He had, however, a general feeling that it would hurt some. But desperate diseases required desperate remedies, and Mr. Middelrib was willing to undergo any amount of suffering if it would cure his rheumatism.

He contracted with Master Middelrib for a limited supply of bees. There were bees and bees, humming and buzzing about in the summer air, but Mr. Middelrib did not know how to get them. He felt, however, that he could safely depend upon the instincts and methods of boyhood. He knew that if there was any way in heaven or earth whereby the shvest bee that ever lifted a 200-pound man off the clover, could be induced to enter a wide-mouthed glass bottle, his son knew that way.

For the small sum of one dime Master Middelrib agreed to procure several, to wit: six bees, age not specified, but as Mr. Middelrib was left in uncertainty as to the race, it was made obligatory upon the contractor to have three of them honey, and three humble, or in the generally accepted vernacular, humble bees. Mr. Middelrib did not tell his son what he wanted those bees for, and the boy went off on his mission, with his head so full of astonishment that it fairly whirled.

Evening brings all home, and the last rays of the declining sun fell upon Master Middelrib with a short wide-mouthed bottle comfortably populated with hot, ill-natured bees, and Mr. Middelrib and a dime. The dime and the bottle changed hands. Mr. Middelrib put the bottle in his coat pocket and went into the house, evening everybody he met very suspiciously, as though he had made up his mind to sting to death the first person that said "bee" to him. He confided his guilty secret to none of his family. He hid his bees in his

bedroom, and as he looked at them just before putting them away, he half wished the experiment was safely over. He wished the imprisoned bees didn't look so hot and cross. With exquisite care he submerged the bottle in a basin of water, and let a few drops in on the heated inmates, to cool them off.

At the tea table he had a great fright. Miss Middelrib, in the artless simplicity of her romantic nature said:

"I smell bees. How the odor brings up—"

But her father glared at her, and said, with superfluous harshness and execrable grammar:

"Hush up. You don't smell nothing."

Whereupon Mrs. Middelrib asked him if he had eaten anything that disagreed with him, and Miss Middelrib said: "Why, pa!" and Master Middelrib smiled as he wondered.

Bedtime came at last, and the night was warm and sultry. Under various false pretences, Mr. Middelrib strolled about the house until everybody else was in bed, and then he sought his room. He turned the night-lamp down until its feeble rays shone dimly as a death-light.

Mr. Middelrib disrobed slowly—very slowly. When at last he was ready to go slumbering into his peaceful couch he heaved a profound sigh, so full of apprehension and grief that Mrs. Middelrib, who was awakened by it, said if it gave him so much pain to come to bed, perhaps he had better sit up all night. Mr. Middelrib checked another sigh, but said nothing and crept into bed. After lying still a few moments he reached out and got his bottle of bees.

It was not an easy thing to do, to pick one bee out of a bottle full, with his fingers and not get into trouble. The first bee Mr. Middelrib got was a little brown honey-bee that wouldn't weigh half an ounce if you picked him up by the ears, but if you lifted him by the hind leg as Mr. Middelrib did, would weigh as much as the last end of a bay mule. Mr. Middelrib could not repress a groan.

"What's the matter with you?" sleepily asked his wife.

It was very hard for Mr. Middelrib to say; he only knew his temperature had risen to 86 all over, and to 197 on the end of his thumb. He reversed the bee and pressed the warlike terminus of it firmly against his rheumatic knee.

It didn't hurt so badly as he thought it would.

It didn't hurt at all!
Then Mr. Middelrib remembered that when the honey-bee stabs a human foe it generally leaves its harpoon in the wound, and the invalid knew then the only thing the bee had to sting with was doing its work at the end of his thumb.

He reached his arm out from un-

der the sheet, and dropped this disabled atom of rheumatism liniment on the carpet. Then, after a second of blank wonder, he began to feel around for the bottle, and wished he knew what he had done with it.

In the meantime strange things had been going on. When he caught hold of the first bee, Mr. Middlerib, for reasons, drew it out in such haste that for the time he forgot all about the bottle and its remedial contents, and left it lying uncorked in the bed. In the darkness there had been a quiet but general emigration from that bottle. The bees, their wings clogged with the water that Mr. Middlerib had poured upon them to cool and tranquilize them, were crawling aimlessly about over the sheet. While Mr. Middlerib was feeling around for it his ears were suddenly thrilled and his heart frozen by a wild piercing scream from his wife.

"Murder!" she screamed, "murder! Oh, help me! Help! Help!"

Mr. Middlerib sat bolt upright in bed. His hair stood on end. The night was very warm but he turned to ice in a minute.

"Where, oh, where," he said, with pallid lips, as he felt all over the bed in frenzied haste—"where in the world are them internal bees?"

And a large "bumble" with a sting as pitiless as the finger of scorn, just then lighted between Mr. Middlerib's shoulders and went for his marrow, and said, calmly, "Here is one of them."

And Mrs. Middlerib felt ashamed of her feeble screams when Mr. Middlerib threw up both arms, and, with a howl that made the windows rattle, roared:

"Take him off! Oh, land of Scott, somebody take him off!"

And when a little honey-bee began tickling the sole of Mrs. Middlerib's foot, she shrieked that the house was bewitched and immediately went into spasms.

The householder was aroused by this time. Miss Middlerib and Master Middlerib and the servants, were pouring into the room, adding to the general confusion, by howling at random and asking irrelevant questions, while they gazed at the figure of a man, a little on in years, pawing fiercely at the unattainable spot in the middle of his back, while he danced an unnatural, weird, wicked-looking jig by the dim religious light of the night lamp. And while he danced and howled, and while they gazed and shouted a navy-blue wasp that Master Middlerib had put in the bottle for good measure and variety, and to keep the menagerie stirred up, had dried his wings and legs with a corner of the sheet, after a preliminary circle or two about the bed, to get up his motion and settle down to a working gait, fired himself across the room, and to his divine day Mr. Middlerib will always believe that one of the servants mistook him for a burglar and shot him.

No one, not even Mr. Middlerib himself, could doubt that he was,

at least for a time, most thoroughly cured of rheumatism. His own boy could not have carried himself more lightly or with greater agility. But the cure was not permanent and Mr. Middlerib does not like to talk about it.

Robert J. Burdette.

Hints by May Manton.

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4251 Box Plaited Blouse, 32 to 42 bust.

the plain stock can be substituted for this last whenever preferred. Taftetta, peau de sole, waist cloths flannel, and all waist and simple gown materials are appropriate.

The foundation for the blouse is a smoothly fitted lining that closes at the centre but separately from the outside. The waist itself consists of fronts and back only. The back may be either plaited or plain, but the fronts are arranged in a central plait with two stitched to yoke depth at each side. The sleeves are in bishop style with straight cuffs. At the neck is a roll-over Eton collar, but the plain stock also is included in the pattern.

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Of Value to Horsemen

Do you turn your horses out for the winter? If so, we want to call your attention to a very important matter. Horses which have been used steadily at work, either on the farm or road, have quite likely had some strains whereby lameness or enlargements have been caused. Or perhaps new life is needed to be infused into their legs. Gombault's Caustic Balsam applied as per directions, just as you are turning the horse out, will be of great benefit, and this is the time when it can be used very successfully. One great advantage in using this remedy is that after it is applied it needs no care or attention, but does its work well and at a time when the horse is having a rest. Of course it can be used with equal success while horses are in the stable, but many people in turning their horses out would use Caustic Balsam if they were reminded of it, and this article is given as a reminder.

A Money Maker

The Toronto Industrial Fair for 1902 has proven itself to be one of the very best investments the city of Toronto has. After paying all expenses there will be a surplus of over \$11,000. The management is to be congratulated upon the successful outcome of last year's show, both financially and otherwise. The Exhibition's many

friends will be glad to know of its past success and prospects for better work in the future. The Industrial Fair of 1903 will be held during the first two weeks of September.

Strathroy Dairy School.

The Strathroy Dairy School will open for the season of 1902-3 on December 2nd next. There will be four courses; a special creamery course beginning on Dec. 2nd and ending Dec. 20th, 1902; a short course in dairying beginning on January 2nd, ending January 24th; a long dairy course beginning January 26th and ending March 26th, and a course in domestic science, beginning January 14th, and ending March 14th, 1903. The last named course is a new feature that should prove attractive to farmers' wives and daughters. This school is well equipped for doing good work and should be well patronized by makers and others in the West this winter.

Soft Corn Versus Mature Corn for Fattening Cattle

Early in the month of August, Professor W. J. Kennedy, head of the Animal Husbandry Department of the Iowa Agricultural College, selected and purchased on the South Omaha markets a car load of high class western steers to be used in a feeding experiment planned by him at the Iowa Experiment Station. The steers mostly high grade Herefords and Short-horns averaged 1038 lbs. at the beginning of the experiment, which was started on August 17th. They

were divided into two lots of as nearly equal quality, weight, and breeding as it was possible to divide them. Lot No. 1, containing 8 steers, was given the run of a good 7 acre field of blue grass pasture and received a ration of shelled corn each evening. The corn fed was grown

Poultry and Eggs

Advertisements under this head one cent a word. Cash must accompany all orders under \$2.00. No display type or cuts allowed. Each initial and number counts as one word.

DUFF ORPINGTONS—choice breeding stock—B for sale. Cockerels from \$1.50 up, bred from imported stock. Also White Wyandottes, Barred Rocks and Indian Games. Will sell my entire stock, except Orpingtons—some grand 1800 pullets at great bargains. Have won many prizes on them. Birds sent on approval. Write for prices.

J. W. CLARK, Importer and Breeder,
Onondaga, Ont.

BROWN Leghorns, Prolific early layers; Strain won at Pan-American. Stock for sale—Minorcas, Barred Rocks, Chickens Strains, Eggs in season. JOHN B. PETTIT, Fruitland, Ont.

GET Free Catalogue on Fattening Poultry.

MORGAN'S ENCLAVE WORKS, LONDON.

BUFF ORPINGTONS—For sale, choice breeding stock. Prices on application. Also Cockerels of value to breed with ordinary farm fowl, especially Barred Rocks. Price \$1.00 each.

R. F. HOLTERMANN,
Barford, Ont.

BARRED ROCKS, White and Buff Wyandottes and White Leghorns. Cockerels and Pullets of the above varieties for sale. \$1.50 to \$2.50. Yearling fens. \$1.00 to \$2.00 each. On all these varieties I took almost all the first prizes this fall at the Halton County Fair and Oakville Fair. My Rocks and Wyandottes are especially fine winter layers. CLAUDE C. HEAVEN, Westwood Poultry Farm, Oakville.

Monkey Brand Soap cleans kitchen utensils, steel, iron and tinware, knives and forks, and all kinds of cutlery.

Keep your eyes open and be sure that when you ask for Perry Davis' Painkiller you get just that and nothing else. Use it promptly to cure cramps, diarrhoea and all other bowel complaints in summer.

CHAMPION EVAPORATOR

Save Your Fruit

Maple Syrup Evaporator.



and dry it with
Champion Fruit Evaporator

Dries all kinds of fruit and vegetables, producing a superior quality of clean white fruit. It is made of galvanized iron, is lined throughout with asbestos, is fire proof and portable. Made in five sizes. Catalogue for the asking.

Not a single feature of the "Champion" Evaporator could be dispensed with and leave a perfect Evaporator. Durability, rapidity, and high quality of product, with saving of fuel, are its features. Our optional pan system makes it easy to handle, and ever lasting. Write for catalogue, state number of trees you tap, and an estimate of your requirements will follow.



THE GRIMM MFG. CO.,

84 Wellington St. MONTREAL

TOLTON'S No. 1 Double Root Cutter

Points of Merit:

1. To change from pulping to slicing is but the work of a moment.
2. There are two separate wheels, one for pulping and the other for slicing.
3. The united force of both wheels is always used in doing the work in either capacity.
4. The hopper is between the wheels, and does not choke.

The Only Double Root Cutter Manufactured.
Fitted with Roller Bearings, Steel Shafting, and all that is latest and best in principle, material and construction.



TOLTON BROS.,

Guelph, Ont.

in 1900, and thus of good quality. The steers were started on a light ration of 3 lbs. of shelled corn per steer per day which was gradually increased until at the present time they are eating about 20 lbs. of shelled corn per steer per day. Lot No. 2, containing 8 steers, was also given the run of a good seven acre field of blue grass pasture, and were fed in addition green corn cut fresh each night. They were fed stalks, ears and all. Samples of the green corn were collected for chemical analysis at the beginning of the experiment and at the end of every seven days so that the feeding value at the various stages might be determined. The cattle were also weighed every seven days. In order to estimate the approximate yield of the green corn fed a corresponding area left standing and will be husked out and measured. Thus the approximate amount of corn consumed by lot No. 2 can be determined and compared with the exact amount fed to lot No. 1. Cattle feeders throughout the central west have been annually feeding large quantities of green corn. Some feeders deem it to be a very wasteful practice. The results of this experiment will furnish reliable data regarding the same.

Another important feature of this experiment is that the cattle in lot No. 1 will be fed on old corn until ready for market, which will be about the middle of December. Those in lot No. 2 will be fed on new corn which, due to the early frost, is soft, thus considered by many to be lacking in nourishment. By comparing the results the effect of the early frost can be ascertained. The results of this experiment will be issued in bulletin form at the conclusion of the test.

Some High Priced Beeves

On July 28th last, Mr. A. H. Lockridge, of Indiana, sold on Chicago market 86 head of 1,475 lbs. steers of his own feeding for \$8.45 per cwt. He describes his method of feeding as follows:

"The steers were selected by me in Putnam County, Indiana, and were as good as I could find, as I think it most profitable to feed the best. They were in good flesh when I received them in October and November, and were turned on to bluegrass. The latter part of November they had the run of stalk pastures adjoining the bluegrass. After getting the cream of the stalk fields, I added one peck of shucked corn per head daily, increasing this gradually and adding oat-hay and corn until January first. They were then getting about one-third of a bushel of corn and all the oat-hay they would eat. I turned them on a bluegrass pasture the first of May with seventy acres of red clover adjoining this. I added one-third of a bushel of corn per head daily and continued this until I shipped them. They averaged in weight about 1,150 lbs. when I received them and weighed 1,475 lbs. in Chicago."

U S U S U S U

The U. S. Separator has the advantage of being able to get more cream

out of the milk than the others. At the Pan-American Exposition, 1901, it averaged for 50 consecutive runs, .0138 of 1% and established

THE WORLD'S RECORD

thus proving its right to its claim of

BEING THE CLEANEST SKIMMER MADE

This, together with its many other advantages described in our catalogues, should remove any doubts that dairymen may have as to which is the best separator to buy.

Write for descriptive catalogue.

VERMONT FARM MACHINE CO., Bellows Falls, Vt.
There is no duty on U. S. Separators shipped into Canada.



USE **Mica Roofing**

Send for sample Roofing



For Flat or Steep Roofs. It is Waterproof, Fireproof, quickly and very easily laid, and cheaper than other roofing.

MICA ROOFING CO., 101 Rebecca Street, Hamilton, Canada

PROTECTION

AND

PROFITABLE INVESTMENT.

THE necessity of Life Insurance as a means of protection for a wife and family appeals to the heart and intellect of every man. In addition, a good investment can also be secured by means of the Unconditional Accumulative Policy issued by the Confederation Life.

POLICIES ISSUED ON ALL APPROVED PLANS.
WRITE FOR PAMPHLETS.

Confederation Life
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HEAD OFFICE, TORONTO.

Do You Want A Farm ? ? ?

If so, you can obtain one on very easy terms in some one of the various districts of : : : :

NEW ONTARIO

Write for particulars to the Bureau of Colonization, or to : : : :

HON. E. J. DAVIS
Commissioner of Crown Lands
TORONTO

FELCH'S STRAIN
Barred Plymouth Rocks
Grand Cockerels & Pullets
For Sale, at Cut Prices
A. T. GILBERT, Elmvalle, Ont.

**WOOD ENGRAVING,
PHOTO ENGRAVING,
HALF TONES**
168 BAY ST
J.L. JONES ENG. CO
TORONTO

We have not advanced the price of our tobaccos. Amber smoking tobacco Bobs, Currency and Fair Play chewing tobaccos are the same size and price to the consumer as formerly. We have also extended the time for the redemption of Snowshoe tags to January 1st, 1904. **THE EMPIRE TOBACCO CO., Limited**

WILSON'S HIGH-CLASS SCALES
SPECIAL PRICES THIS MONTH
On 2,000 lb.
Diamond Steel Bearing
SCALES
Write To-day.
C. WILSON & SON
50 Eplanned St. E., TORONTO, ONT



Working on a Farm

The following from a young man who has hired out on a farm for several years in the Western States contains some good advice for those who are inclined to the view that farm life is mere drudgery :
"I have been working out for eight years, and when I hunt for work I generally find it. I find that farmers always pay as good wages as I can get at public work. I will show you the figures to prove that this is true. On the farm I always get from \$20 to \$25 per month, my board and washing. On public works I get from \$1.25 to \$1.75 per day, pay from \$3.50 to \$4.25 for board and at least \$1.00 a month for washing. I make \$45-50 per month on public works at the highest wages and pay \$18.21 per month for board, leaving me \$26.29, less my washing (\$1.00), and allowing a half day each week for rainy weather I have left but \$21.79 clear money. On the farm I get straight time. The farm is the place for me. I love to be on the farm rainy days, and get into a shop or barn and mend harness or trim the horses' feet, or put the handle on the fork. That is the way a young man can always get a job on a farm. If he is sitting down at every opportunity he gets he is not going to suit the man for whom he is working. The hired man must get up in the morning without being called, if he wants to get a good reputation as a hired man. Never wait to be told what to do, and if you are told to do anything, go and do it, without a word or even a frown on your face. Be kind to your employer."

Ages of Animals and Birds

- A sheep lives ten years.
 - A cat lives fifteen years.
 - A lion lives twenty years.
 - A camel lives forty years.
 - A bear lives twenty years.
 - A dog lives fourteen years.
 - A squirrel lives eight years.
 - A canary will live six years.
 - A crow will live fifteen years.
 - An ox lives twenty-five years.
 - A guinea-pig lives seven years.
 - A horse lives twenty-five years.
 - A swan will live twenty-five years.
 - A whale lives three hundred years.
 - A tortoise lives one hundred years.
 - An elephant lives four hundred years.
 - A parrot lives one hundred and twenty-five years.—American Exchange.
- "Children," said Aunt Mary, "you have a new little brother. He came this morning while you were asleep." "Did he?" exclaimed the eldest. "Then I know who brought him." "Who was it?" asked Aunt Mary. "Why, the milkman, of course. I saw it on his cart. 'Families supplied daily.'"—Credit Lost.

STOCK

DAVID McCRAE, Janeſeld, Guelph, Canada, Importer and Breeder of Galloway Cattle, Clydeſdale Horses, and Cotſwold Sheep. Choice animals for sale.

JOHN DRYDEN
BROOKLIN, ONTARIO

BREEDER OF

CRUICKSHANK SHORTHORNS and CHOICE SHROPSHIRE SHEEP

Choice Young Bulls and Ram Lambs for sale. Write for prices.

QUEENSTON HEIGHTS SHORTHORNS.

Scotch and Scotch-topped choice young cows and heifers for sale at moderate prices.

HUDSON USHER,
Queenſton, Ont.

FOR SALE.

Large English Yorkſhire. Boars fit for ſervice; Sows ready to breed; Boars and ſows 8 weeks to 3 months old from imported and Canadian bred ſows. Write **JAS. A. RUSSELL,** Precious Corners, Ont.

Maple Lodge Stock Farm

Scotch Shorthorns, Choice Milking Strains, Prize Winning Leicesters, Young Stock for sale—imported and home bred.

A. W. SMITH, Maple Lodge P.O., Ont.



ROCK SALT for horses and cattle, in ton and car lots. **Toronto Salt Works, Toronto**

NOTICE TO BREEDERS.

THE THIRD ANNUAL

Provincial Auction Sales

Of Pure Bred Breeding Stock will be held at **Ottawa, Ont., February 11, 1903.** AND **Guelph, Ont., February 25, 1903.** 40 Shorthorn Bulls and 10 Ayrshire Bulls will be sold at Ottawa. 80 Bulls (beef breeds) will be sold at Guelph. **ENTRIES CLOSE DECEMBER 1st, 1902.**

For rules, entry forms, and further information, apply to **A. W. SMITH, President, Maple Lodge, Ont.** **A. P. WESTERVELT, Secretary, Parliament Buildings, Toronto, Ont.**

PURE-BRED STOCK

NOTES AND NEWS FROM THE BREEDERS

These columns are set apart exclusively for the use of breeders of pure-bred stock and poultry. Any information as to importations made, the sale and purchase of stock and the condition of herds and flocks that is not in the nature of an advertisement will be welcomed. Our desire is to make this the medium for conveying information as to the transfer of pure-bred animals and the condition of live stock throughout the country. The co-operation of all breeders is earnestly solicited in making this department as useful and as interesting as possible. The editor reserves the right to eliminate any matter that he may consider better suited to our advertising columns.

Swine

Mr. W. H. Durham, East Toronto, has sold fourteen of his pure-bred Berkshire swine to Mr. J. O. Parmer, Nashville, Tenn. The lot selected will maintain Canada's reputation for high class stock. They include two young boars by the champions King Tom and Lord Windsor. Mr. Parmer is a well-known horseman and breeder of high class stock.

Some British Columbia Fairs

Mr. John Gardhouse, Highfield, Ont., has recently returned from British Columbia, where he acted as expert judge at a number of fairs. Mr. Gardhouse says:—"The first show at which I judged was Agassiz, which was not a very good one, as there appeared to be a good deal of local jealousy among the people. I judged all the live stock, horses, cattle, sheep, and swine. Horses were poor, cattle fairly good, sheep rather poor, hogs few in number but fairly good. My next show was at Surrey, where they have a very good president and a splendid secretary. It was a good show. I judged all the live stock there also. The horses were very good, cattle fair, sheep and swine good, but not many in numbers. I then went to Chilliwack, where they had a good show but they say not as good as last year. The president, Mr. Paisley, had not got home from the East, and they had very wet weather. I judged the cattle, sheep and swine, two men from Victoria judged the

horses. The sheep and swine of this show were splendid, many of them afterwards winning at New Westminster and Victoria. I then went to Ladner, where I found the best heavy horses and Shorthorn cattle; in fact I think they were equal to those at either New Westminster or Victoria. They seem to have a good president and secretary, and as the Delta District is very good, I have every reason to believe that this show is bound to grow. I judged all the live stock at this show and had a very hard day, as many as eight or nine animals competing in one class, but as far as I could hear I gave splendid satisfaction, the president and several others congratulating me on my good judgment and explanations of the same, and saying that they hoped to see me back again.

From Ladner I went to Salt Spring Island. Mr. Cottrelle was with me at this show, the first time that any of our judges and I had been together. We found this a live little show, with one of the best presidents that I have met, a Mr. Robertson, who was all over, looking after everything. They have a very nice ground, have built a new hall and a number of horse stalls. I judged the cattle, sheep and swine, and as most of the cattle were of the dairy class, I had to commence early to get through. I asked Mr. Cottrelle to go into the ring with me. We got along finely, gave good reasons for our awards, and received very complimentary remarks from the president and exhibitors. This is a

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Catalogue

MAILED FREE

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Book-keepers, Stenographers and Telegraphers.**

We especially call the attention of young men who purpose following Agriculture or any of the Trades, to the fact shown in our Calendar that our System of Training offers such young men the best facilities for acquiring a knowledge of municipal business of every description, whether in city, town, village or county.

Address the Principal,

J. FRITH JEFFERS, M.A., - - - Belleville, Ont.



Warranted
to give satisfaction.

GOMBAULT'S CAUSTIC BALSAM

A safe, speedy and
positive cure for

Curb, Splint, Sweeney, Carped Hock, Strained Tendons, Founder, Wind Puffs, and all lamenesses from Spavin, Ringbone and other bony tumors. Cures all skin diseases of Parasites, Thrush, Disinfectant. Removes all Bunches from Horses or Cattle.

As a **HUMAN REMEDY** for Rheumatism, Sprains, Sore Throat, etc., it is invaluable.

Every bottle of **Caustic Balsam** sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circular, testimonials, etc. Address:

THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio

OR 21 FRONT STREET WEST, TORONTO, ONT.

Blood will tell



When an animal is all run down, has a rough coat and a tight hide, anyone knows that his blood is out of order. To keep an animal economically he must be in good health.

DICK'S BLOOD PURIFIER

is a necessity where the best results from feeding would be obtained. It tones up the system, rids the stomach of bots, worms and other parasites that suck the life blood away.

Nothing like Dick's powder for a run down horse.

50 cents a package.

Leeming, Miles & Co., Agents,
MONTREAL.

Write for Book on Cattle and Horses free.

NO SPAVINS

The worst possible spavin can be cured in 45 minutes. Ringbones, Curbs and Splints just as quick. Not painful and never has failed. Detailed information about this new method sent free to horse owners.

Write today. Ask for pamphlet No. 204. Fleming Bros., Chemists, 26 Front St., West, Toronto, Ont.

ONTARIO VETERINARY COLLEGE, Limited

Temperance St., Toronto, Can.

Affiliated with the University of Toronto.
Patrons: Governor General of Canada and Lieutenant-Governor of Ontario. The most successful Veterinary Institution in America. Experienced Teachers. Fees, \$65 per session.

PRINCIPAL PROF. SMITH, F.R.C.V.S.,
TORONTO, CANADA

sident and exhibitors. This is a splendid little show, and while they have only a small island I think it is a show that will grow. I met Mr. Westervelt there and also at Victoria, where they had fine weather and a good exhibit of stock. All the judges sent out by the Dominion Live Stock Department were present at Victoria.

The Fair at Victoria, B.C.

We finished up the judging of fairs in British Columbia to-day. On Monday Mr. Clemons starts Institute work along with myself in the upper mainland, including the Okanagan Valley. The Institute circuit ends about the 12th of November. The Victoria Exhibition has been very successful. Weather clear, sunny and warm, attendance good. The exhibit of live stock in every department has shown a very marked improvement over last year's fair. In horses, both heavy, general purpose and light, in some classes, the competition was keen. There was a Clyde stallion three years old from the lower mainland of the right stamp and quality that has been shown at several fairs; and was very much admired. He was a good object lesson as to the correct type of the draft horse. In the classes for Shorthorn cattle the entries were numerous and the quality good. One or two choice Polled-Angus, but the Herefords were not representative of the breed.

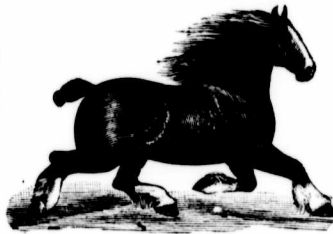
The exhibit of dairy stock particularly Holsteins and Ayrshires was very creditable. Two herds of registered Holsteins from Vancouver Island and a small herd of Ayrshires from Lum Island in which there was a very choice three year old bull, some Red Polled. The only weak part of the cattle exhibit was the Jerseys, both as to numbers and quality. Nearly all breeds of sheep were represented and there were some fine specimens of Oxford, Shropshire, and South-down. The pigs were strong in numbers and quality, especially the Berks, Yorks, and Chester Whites. In judging in the different sections we gave the reasons why we made our awards.

After we were through with judging Mr. Clemons lectured on the dairy cow, Mr. Gardhouse on the draft horse, and I spoke on the correct type of beef animal. We all, while making our addresses used animals as object lessons, pointing out their defects as well as their good points. I think our judging and addresses were very much appreciated.

(Signed) Duncan Anderson.

The Guinea-hen is unknown in Guinea. The Shanghai fowl was never seen in China. The Black Spanish fowl is unknown in Spain. French, Swiss, Dutch and Italian cheeses are made in New York. European wines of the finest grades are made in New Jersey. Moral: It is a wise product that knows its own nationality.—N. Y. Farmer.

Unreserved Sale of Pedigreed and Registered Shire Horses



Comprising Five Stallions, Twelve Mares and Fillies in foal, and Three Colts,

At the Stables of the Proprietors, on Thursday, Nov. 13th, 1902, at 2 p.m.

A number of these horses have been prize-winners in England, at Toronto Spring Show, Toronto Industrial and London Shows.

Catalogues furnished on application, which will give full particulars of sale, pedigree of horses, and information how to reach Fonthill.

MORRIS & WELLINGTON, Proprietors, : : : Fonthill, Welland Co., Ont.



FRED. RICHARDSON of SMITH & RICHARDSON Columbus, Ont.

Will return from Scotland about August 20th with six Clydesdale Stallions, including "Hopewell" (11375), full brother of the great Glasgow winner, "Hiawatha," and "Lavender" (11349), out of the same mare as "Royal Cairnton," the Chicago three-year old winner in 1901, and "Pioneer" (11131), sired by "Sir Arthur," owned by Whitby Clydesdale Association, and a pair of young mares for Mr. George Gormley, Unionville.

ONTARIO PROVINCIAL

Winter Fair

A Combination Exhibition of both Live and Dressed Cattle, Sheep, Swine and Poultry, also a Dairy Show,

—WILL BE HELD AT—

Guelph, Ont., December 8 to 12

Over \$7,000 00 Offered in Prises
Live Stock Entries Close November 22nd
Poultry Entries Close November 24th.

Experts will deliver practical Lectures on interesting Live Stock, Poultry and Dairy Topics. Increased Accommodations this year for the convenience and comfort of visitors, exhibitors, and their exhibits.

RAILWAY RATES—Single Fare from all points.

For Prize List, Entry Form, and any further information, apply to

A. W. SMITH, President,

Maple Lodge, Ont.

A. P. WESTERVELT, Secretary.

Parliament Buildings, Toronto, Ont.

WESTON HERD

Improved Large Yorkshires

Special low prices for extra choice young pigs from mature imported and home bred stock of highest quality and most fashionable breeding. Pairs and trios not skin; boars fit for service; sows ready to breed and in farrow. Satisfaction guaranteed.

L. ROGERS, Weston, Ontario

OAK LODGE YORKSHIRES



Years of CAREFUL BREEDING have made the OAK LODGE YORKSHIRES the Standard of Quality for IDEAL BACON HOGS.

The championship against all breeds has been won by this herd for 4 years at the Provincial Winter Fair, on foot and in dressed carcass competition.

Prices are reasonable.

J. E. BRETHER, Burford, Ont.

Market Review and Forecast

Office of The Farming World, Confederation Life Bldg.

Toronto, Oct. 27th, 1902.

The cooler weather of the past week or two has stimulated trade considerably. Prices for most staples are firm. Money is a little easier, though nothing can be had on call at the banks at less than 6 per cent.

Wheat.

Though local markets are quiet and steady there is a feeling in speculative circles in Chicago and elsewhere that higher prices will prevail. Some are looking for 80 cent wheat at Chicago in December. But it is only the bullish element that believes this. The strengthening of the American corn market has made wheat firmer. The world's supply in prospect is large and there will likely be a good surplus when the year is over. Prices for Manitoba rule firm at Fort William No. 1 hard at 72c to 73c afloat, and No. 1 Northern at 70c to 71c. The market here rules steady at 66c to 67½c for red and white, 65c for goose, and spring at 65½c at outside points. On Toronto farmers' market red and white bring 69½c, goose 65c and spring 67c a bushel.

Oats and Barley

There seems to be a temporary scarcity of oats at market centres. Farmers have not begun yet to market this year's crop. The market is firmer at Montreal at 34½c in store. Prices here rule at 31c to 32c at outside points. On the farmers' market here oats bring 36c a bushel.

A good demand for barley for export has sprung up. Prices here are 39c to 43c at outside points. On Toronto farmers' market barley brings 43c to 45½c a bushel.

Peas and Corn

Peas rule steady at 77c afloat at Montreal. Here quotations are 71c to 72c for choice milling at outside points.

Corn keeps firm. At Montreal, Canadian is quoted at 72c in car lots. Here Canadian yellow sells at 63½c west and American at 69c in car lots, Toronto.

Bran and Shorts

Ontario bran has advanced to \$15.25 and Manitoba to \$16 in car

POULTRY !

I am buying for the English Market Can take any number of good plump birds, live or dressed, and pay daily by cash or check on Bank of Montreal, Toronto.

JAS. RUDDIN, 33 Jarvis St. Toronto.

M. P. MALLON, Manager.

Poultry and Eggs Wanted

CHICKENS
DUCKS
TURKEYS
GEESSE

Empty crates forwarded on application.
Highest market prices paid.
Correspondence solicited.

Toronto Poultry and Produce Co.

Office 470 YONGE ST., TORONTO

lots at Montreal. Shorts are quoted at \$18.00 to \$19.00. City mills here sell bran at \$15.00 and shorts at \$20.00 in car lots f.o.b. Toronto.

Potatoes and Beans.

Potatoes are quoted at Montreal at 60c to 65c in car lots. Prices are firm here at 75c to 78c for car lots on track Toronto. On the farmers' market potatoes bring \$1.00 to \$1.10 a bag.

Beans are firm. Montreal quotations are \$2.00 to \$2.05 in car lots and \$2.10 to \$2.25 in a jobbing way.

Hay and Straw.

American buyers are still contracting for large quantities of baled hay east at \$7.00 f.o.b. at country points. Canadian hay continues in good demand in England. Montreal quotations are, No. 1 timothy, \$9.00; No. 2, \$8.00 to \$8.50, and clover, \$7.00 to 7.50 per ton. No. 1 baled timothy is quoted here at \$9.50 in car lots on track. On Toronto farmers' market timothy brings \$14.00 to \$17.00, clover \$6 to \$10.00, sheaf straw \$12.50, and loose straw \$8.00 per ton.

Eggs and Poultry

The egg market is strong with an upward tendency. As high as 16½c to 17c have been paid at country points east during the week. Fresh selected stock is quoted at Montreal at 17½c to 18c in case lots. Here selected stock rules firm at 18c to 18½c in a jobbing way. On Toronto farmers' market new laid bring 24c to 25c and held stock at 18c to 20c a dozen.

At Montreal dressed turkeys and chickens have sold at 12½c to 13c in case lots. Very few are coming forward. Receipts are light here. Quotations are 50c to 70c for young chickens, 40c to 50c for old, and 60c to 80c a pair for ducks and geese 6½c to 7½c per lb., turkeys 10c to 11c for young and 9c to 10c for old. On Toronto farmers' market prices rule at from 15c to 20c per cwt. higher.

Until further notice the Toronto Poultry and Produce Co., 470 Yonge street, Toronto, will for poultry and eggs pay the following f.o.b. at shipping point:

Chickens (this year's) per lb. 7c,

chickens (last year's) per lb. 4c, turkeys (this year's) per lb. 9c, ducks per lb. 7c, geese 5c per lb., eggs per doz. 16c f.o.b. Empty crates, egg cases and butter boxes are supplied free of charge, the outgoing charges being paid. The net express charges are paid on butter and eggs.

Fruit.

The total shipment of apples so far this season is 479,490 bbls. as compared with 120,272 bbls. for the same period last year. At Montreal sales of winter varieties are reported at \$2.25 in car lots and \$2.50 to \$2.60 in a jobbing way, No. 2 at \$1.75 to \$2.25, and inferior at \$1.00 to \$1.50 per bbl. On Toronto fruit market apples bring \$1.00 to \$1.50 a bbl.

Cheese

The statistical position of cheese is very strong. The falling off in Canadian exports during the past few weeks, has greatly stimulated the English demand. It would seem as if Canadian dealers controlled the situation as they have stored a large share of the Sept. and Oct. make in Montreal. Very little summer cheese is held on this side. Finest Westerns are quoted in Montreal at 11½c to 11¾c.

Butter

The butter market rules quiet but steady. Finest creamery is quoted at Montreal at 20½c to 21½c. Factories are asking 19½c to 20c for fine lines. Ontario creamery is quoted at 19c to 20c as to quality.

Offerings are heavy here and the market active. A great deal of the

100,000

CHICKENS, DUCKS and TURKEYS wanted for local and foreign market. We pay highest price, supply crates and remit promptly by P.O.O. Correspondence solicited

The Ontario Poultry Produce Co. LIMITED
17 Carlaw Avenue TORONTO

shipments are of inferior quality. There is a good demand for choice grades. Creamery is quoted at 20c to 21c for prints and 19c to 20c for solids, dairy tubs and pails at 15c to 16c and pound rolls at 16c to 18c. On Toronto farmers' market, pound rolls bring 18c to 20c each.

Cattle

The cattle markets rule steady with lower prices for the poorer grades. On Toronto cattle market on Friday the run of live stock comprised 405 cattle, 1,200 hogs, 992 sheep and lambs and 25 calves. The quality offered was not good, too many rough unfinished ones being offered. The best exporters sold at from \$4.50 to \$4.00 the bulk going at \$4.80 to \$4.75 per cwt. Butchers' cattle were dull at quotations. Feeders and stockers of best quality were in fair demand. Export Cattle.—Choice loads of heavy shippers are worth from

\$4.75 to \$5.00 per cwt., medium exporters \$4.25 to \$4.50. Heavy export bulls sold at \$4.00 and light ones at \$3.75.

Butchers' Cattle.—Choice picked lots of these, equal in quality to the best exporters, weighing 1,075 to 1,150 lbs. each sold at \$4.50 to \$4.75 per cwt. Choice picked lots of butchers' heifers and steers, 950 to 1,055 lbs. each, sold at \$4.25 to \$4.50, good cattle at \$3.00 to \$3.50 medium at \$3.00 to \$3.40 and inferior to common at \$2.25 to \$2.75 per cwt. Loads of butchers' and exporters' mixed sold at \$3.85 to \$4.35 per cwt.

Feeders.—Steers, 1,000 to 1,100 lbs. each, are worth \$3.75 to \$4.25 per cwt., and light feeders, 800 to 900 lbs. each \$3.50 to \$3.75 per cwt.

Stockers.—Well bred young steers weighing 500 to 700 lbs. each, are worth \$3.25 to \$3.50 and off colors and those of inferior quality at \$2.75 to \$3.00 per cwt.

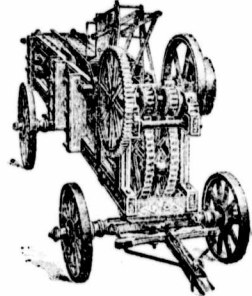
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and Consequently CHEAPEST DIGGER made. Used by C.P.R., G.T.R. and all leading Contractors

The... BEAVER DIGGER

Direct from manufacturer to user. Hall & Son, 30 Bay St., Toronto

The Columbia Hay Press



Leader in the Hay Press World. Has a Record of 40 tons per day. Has Pressed 1,975 tons hay on \$1.50 repairs. Made by the ANN ARBOR MACHINE CO. Ann Arbor, Mich., U.S.A. E. J. WIGLE, KINGSVILLE, ONT., Agent for Ontario and Quebec.

THE OLDEST FIRM OF HEINTZMAN & CO.

WONDER Bargains in Organs

SHIPPED ANYWHERE ON EASY TERMS. . . .

Here is a list of Organs that are bound to be quick sellers. All are in good condition before we offer them to buyers. The prices are so little, the terms so easy, that there is hardly anyone who need be without a musical instrument in their house.

Uxbridge Organ, piano case, 11 stops, 4 sets of reeds, treble and base coupler, grand organ and knee swell, used less than six months. Manufacturers' price \$125; special **\$79.00**—\$10 cash and \$5 a month.

Dominion Organ, high back, 11 stops, 4 sets of reeds, treble and base coupler, grand organ and knee swell. Manufacturers' price, \$110; our special **\$47**—\$5 cash and \$4 a month.

Bell Organ, high back, 11 stops, 4 sets of reeds, treble and base coupler, grand organ and knee swell. Manufacturers' price \$115; our special **\$49**—\$5 cash and \$4 a month.

Kilgour Organ, high back, 9 stops, 5 octaves, 4 sets of reeds. Manufacturers' price \$90; our special **\$43**—\$5 cash and \$4 a month.

Bell Organ, medium high back, 9 stops, 4 sets of reeds, 5 octaves, grand organ and knee swell. Manufacturers' price \$80; our special **\$37**—\$4 cash and \$3 a month.

Uxbridge Cabinet Organ, 4 sets of reeds, 5 octaves, 6 stops, knee swell. Manufacturers' price \$85; our special **\$18**—\$4 cash and \$3 a month.

Bell Organ, 8 stops, 4 sets of reeds, medium high back, octave coupler and knee swell. Manufacturers' price \$90; our price **\$35**—\$4 cash and \$3 a month.

Thomas Organ, piano case 11 stops, 4 sets of reeds, treble and base coupler, grand organ and knee swell, fully equal to new. Manufacturers' price \$125; our price **\$85**—\$10 cash and \$5 a month.

We guarantee these organs just as described. Fifty years of square dealing with the Canadian public is a guarantee of any business that you may do with us. Special attention paid to orders by mail.

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Dissolves Easily....

Windsor Salt is very soluble. Its pure, white, delicate crystals are quickly absorbed in the butter. It makes butter making easier and more profitable.

WINDSOR SALT.

WANTED

Reliable Men in every locality throughout Canada to introduce our goods, tacking up show cards on trees, fences, along roads and all conspicuous places, also distributing small advertising matter. Commission or salary \$50.00 per month and expenses, not to exceed \$2.50 per day. Steady employment to good, honest reliable men. No experience needed. Write for full particulars. THE EMPIRE MEDICINE CO., London, Ont.

We have not advanced the price of our tobaccos. Amber smoking tobacco. Bobs. Currency and Fair Play chewing tobaccos are the same size and price to the Consumer as formerly. We have also extended the time for the redemption of Snowshoe tags to January 1st, 1904. THE EMPIRE TOBACCO CO., Limited.

Calves.—At Toronto market good to choice calves bring \$3.50 to \$5.00 per cwt. and \$3.00 to \$10.00 each.

Milch Cows.—These sold at \$35 to \$45 each.

Sheep and Lambs

These rule steady at \$3.25 to \$3.40 per cwt. for ewes and \$2.50 to \$2.75 for bucks. Spring lambs are worth \$3.50 to \$3.75.

Hogs

Hogs held at \$6.10 all week for best, but on Friday they dropped to \$6.00 for select bacon hogs and \$5.75 for lights and fats.

For the week ending Nov. 1st, The Wm. Davies Co., Toronto, will pay \$6.00 for select bacon hogs, \$5.75 for lights and \$5.75 for over-weights.

The Montreal market is steady. Packers there are paying \$6.00 to \$6.25 per cwt. for bacon hogs.

The Trade Bulletin's London cable of Oct. 23rd, re Canadian bacon, reads thus:

"The market is demoralized, owing to heavy shipments from Denmark, and Canadian bacon has taken a further drop of 4s per cwt. being quoted at 59s to 63s."

Horses

The big trotting sale at Grand's last week passed off well. 60 horses were sold for a total of \$13,000. The highest price paid was \$465 for a brown mare 6 years old, Lady Brino. Her mate Casey, a bay gelding 7 years old sold for \$170. The mare Darkness sold for \$325. Prices ranged from these figures down to \$100 each. They were the speediest lot of horses ever offered at Grand's.

There is a fairly good demand for work horses but people prefer to do without rather than pay prices asked.

"Mike, d'I ever tell ye the story av the dirty window?"

"Yez did not. Tell me about ut."

"No use. You couldn't see through it."

FREE TO MEN, AND WOMEN TOO



To the man who wants to regain his youth, who wants to feel like he did when he was budding into manhood, I offer a book which will show him the road to happiness—a book which will give him courage and enlighten him as to the causes and cure of his troubles. It will point out the pitfalls and guide him safely to a future of strength and manhood. It is beautifully illustrated. It tells what other men have suffered and how they have cured themselves. It is free. I will send it, closely sealed, without marks, if you will send this ad. If you are not the man you ought to be, send for it to-day.

My Dr. McLaughlin Electric Belt builds up broken-down men, restores youth and manhood and makes men look and feel strong. It will cure every case of Rheumatism, Nervous Debility, Weak Stomach, Kidney and Liver Troubles, Lamé Back, Sciatica, Varicocele, Lost Vitality and every evidence of weakness in men and women. It will not fail, it cannot fail, as it infuses in the weakened nerves the force of life and strength.

Put it on when you retire: you get up in the morning refreshed and vigorous, with courage in your heart and a clear head, full of ambition for your daily work.

I have now used your Belt for one month. I have gained five pounds in weight; I sleep better, and that awful nervousness is gone.—JAMES LENNIE, 103 Lock Street N., Hamilton, Ont.

I can say that your Belt is all that you claim for it. I have tested its merits. The varicocele has disappeared.—JEROME RICHARD, Welland Station, Ont.

I am offering my Belts on terms never equalled before. When a man says, "I'll cure you before you pay me," that denotes confidence. I have that confidence, for my years of experience have taught me the proper way of applying electricity. You may use the Belt entirely at my risk, and if you are not satisfied it costs you nothing. All I ask of you is evidence of your good faith in the form of reasonable security. Give me this, and I will send you the Belt on conditions of

NO CURE, NO PAY.

CAUTION.—People write me that they have used Electric Belts and received no benefit. I will explain why. They have purchased from firms who have practically no knowledge of electricity and the manner in which it should be applied.

Dr. McLaughlin's Electric Belt is the only electric appliance that is sold where the patient is under the care of a physician until he is cured. The success of any electric appliance depends upon its intelligent application.

I have a nicely illustrated book which every man should read. I will send it, closely sealed, free.

DR. B. A. McLAUGHLIN, 130 Yonge St., Toronto, Ont.

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1902

SINGLE FIRST CLASS FARE

On OCT. 24, 25, 26, 27, 28, 29, 30, 31 and NOV. 1st.

FROM all Stations in Ontario, Sharbo Lake, Windsor, Wingham, Teeswater, Owen Sound and intermediate stations, also Hamilton.

TO all points Mattawa to Nepigon and Garden, inclusive, also Kippewa and Temiskaming, Havelock to Sharbo Lake, inclusive, and points on Canada Atlantic Ry.

Tickets good to return until Dec. 13th, or until close of navigation, if earlier.
Ask your nearest Canadian Pacific Agent for a copy "FISHING AND SHOOTING" and "SPORTSMEN'S MAP."

A. H. NOTMAN,

Asst. Gen'l. Pass. Agent, King St. E., Toronto

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Wise People will Examine their Buildings to keep out cold and wet.

PATERSON'S

Red Star Brand

Patent Wire-Edged Ready Roofing and Heavy Tarred Felt Paper.

ECONOMICAL, DURABLE FIRE-PROOF.



ANY farmers are sceptics when the merit of some new article is pointed out to them. All the officials of the Paterson Manufacturing Co., Limited, were raised on a farm. We know how often the farmers have been deceived, and don't blame them for being cautious. When we tell you that our Patent Wire-Edged Ready Roofing is better and more economical than shingles, and our Heavy-Tarred Felt Paper is the best material known to-day for lining Poultry Houses, we know what we are talking about, and mean every word we say. Nearly all hardware merchants can tell you about our business reputation, and any banker will give you our financial standing.



LEAKY SHINGLE ROOFS

May be made **WATERTIGHT** and **DURABLE**, without removing the shingles, by covering the roof with Red Star Brand Ready Roofing.

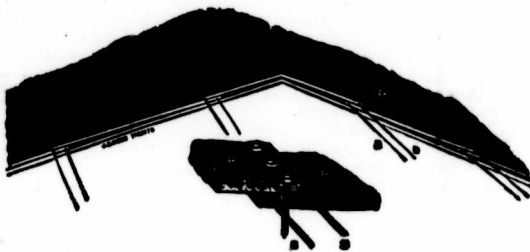


Important

You've got some Leaky Shingle Roofs! Or else you're going to build this season!

In either case use our **Patent Wire-Edged Ready Roofing** and you'll be satisfied. Don't forget the fact that this Roofing is **Durable, Economical and Fire-Proof.**

Cover your Poultry Houses with **Ready Roofing**, line them with our **heavy Tarred Felt Paper**, and you'll get plenty of eggs next winter when eggs are worth something.



A shows method of laying Red Star Brand Wire Edged Ready Roofing, with 2 inch laps secured by nailing 2 inches apart. B B shows wire running through the edges of the roofing, giving it great strength at the joints or laps—a very desirable feature, especially in localities where high winds prevail.

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