

Grange Summary.

The number of paying members in the Order in the United States is 550,000.

Mr. Gilbert Elliott, of Nasik, Bombay Presidency, has recently written, asking for information respecting Granges. He is in the Civil Service in India, but has a farm in Tasmania. He considers the Grange just the thing to benefit the Tasmania farmers, and he is anxious to have it established among them.

J. P. Sheldon, Esq., of Sheen, Ashbourne, England, represented Great Britain at the recent session of the U. S. National Grange, held in Chicago, in behalf of the English Co-operative Societies; and M. Lamdusin, of France, in behalf of that country.

The English Grangers are to advance money at a small rate of interest to their American brethren.

The U. S. Grangers are moving for an Agricultural Bureau, to be presided over by a Cabinet officer.

Oak Grove Grange, Mount Brydges, held a public meeting in the Town Hall on Dec. 21st. The meeting was addressed by W. L. Brown, of this paper; Benj. Paine, Delaware; and W. Brett, Strathroy.

A number of prominent English papers are agitating the Grange movement.

The farmers of Lower Germany are organizing societies similar to the Patrons of Husbandry.

The tenants of Sir Clifford Constable, and the surrounding farmers in Holderness, Yorkshire, England, have written for information about the Grange.

A reporter of the Chicago Times has recently had a vision of the secret working of the Grange Society. He got it in a spiritual seance. The whole thing is produced in that paper. The Times ran ashore for matter that day.

A great amount of injury has been done to the Grange cause by too great haste in the establishment of Granges, which have been in some places needlessly multiplied, and two or three struggling Granges started with the material that would have made one good one. Where such is found to be the case no time should be lost in consolidating these weak and struggling Granges into one strong, efficient and successful Grange. Let this be done before the winter sets in, that the newly strengthened Grange may have ample time to do the work before it.

There is a pressing demand for the organization of a mutual fire insurance system. It is a well-known fact that the great majority of losses by fire are in towns and cities, and from this fact farmers who insure in the established companies are compelled to pay a much heavier per cent. for security than they would if they were insured by arrangement of their own. If a plan for a national co-operation should be adopted, a system of mutual fire insurance could be instituted and operated in connection with the same, and with no other expense than that made necessary by the additional clerical labor which would be required. We regard this plan perfectly practicable, and if put into execution will result in advantages of a very valuable character.

What is Co-Operation?

It is the great means by which the toiling class may raise themselves as a class out of the miseries into which they are plunged by the abuse of competition.

It is the great means by which the richer class may make their wealth produce more comfort to themselves, while they remove the causes of pauperism and wretchedness.

To the poor it is the self-help which is the only true help.

To the rich it is the uniter of interests, the healer of discords, the preventer of strikes, the safety-valve against explosion.

To all it is justice, wisdom, economy and morality; justice, by dividing profits equitably; wisdom, by showing how justice can be secured; economy, by preventing the waste of competition; morality, by discountenancing the frauds of trade.

It has proved itself to be a success.

There are in England and Scotland more than 400,000 registered members of co-operative societies.

Their subscribed capital exceeds \$60,000,000. It is conducted on principles fair to the honest trader whom it does not undersell, and most adapted to benefit the poor buyer, to whom it acts as a saving bank. Their clear profits at seven and a half per cent. only (and they often divide to the members ten per cent.) would be \$4,500,000.

Brethren in toil, will you join us to help yourselves?

Let the Ladies Work.

The Sisters can do much toward making the Grange meeting interesting and securing a full attendance, by the exercise of some of those little, womanly arts by which a bare log cabin is so often transformed into a haven of rest and comfort. Think of this matter, sisters, and see if you cannot make an entire change in the appearance of the Grange-room.

Indeed no one is more deeply interested in the success of the Grange than the sisters themselves. One of the great objects of the organization is the cultivation of the social qualities, and none have suffered so much from the need of this thing as the farmers' wives. Sisters, this is to a great extent your work. The future happiness of yourselves and the future social positions of your daughters depends much upon the prosperity of the Grange. Will you not throw your heart into the work, and say we shall have a Grange revival this winter such as has never before been seen.

Business Directory.

Officers of Dominion Grange for 1877.

Worthy Master, S. W. Hill, Ridgeville; Overseer, Stephen White, Charing Cross; Lecturer, E. H. Hilborne, Uxbridge; Steward, Levi R. Whitman, Knowlton, Que.; Assistant Steward, C. McGibbon, Douglas, N. B.; Chaplain, J. Manning, Schomberg; Treasurer, J. P. Bull, Downsview; Secretary, W. P. Page, Fonthill; Gate Keeper, J. A. Dixon, Central Onslow, N. S.; Ceres, Mrs. Jessie Trull, Oshawa; Pomona, Miss Whitlaw, Meaford; Flora, Mrs. Lossee, Norwich; Lady Assistant Steward, Mrs. J. T. Gould, Foley. Executive Committee—Messrs. Daly, Newburg; Hughes, Sharon; Gifford, Meaford; Cole, Cole's Corners, and Drury, Barrie. Auditors—Messrs. Cheyne, Brampton, and Lossee, Norwich.

List of Deputies.

The following are the Deputies in the different Divisions in Canada with their P. O. address. Parties wishing any information or desiring to organize will communicate with the nearest Deputy.

London Division, No. 1.—F. Anderson, London; B. Payne, Delaware; W. L. Brown, Hyde Park; H. Bruce, London; E. K. Talbot, Arva; J. Ferguson, Birr; E. T. Jarvis, Nilestown; D. Baekerville, Evelyn.

Grey Division, No. 2.—A. Clifford, Meaford; Alex. Webster, Jackson.

Niagara District Division No. 3.—D. W. Mettler, North Pelham; Robt. Green, Attercliffe Station; A. H. Pettit, Grimsby.

Simcoe Division Grange, No. 4.—Thos. Parker, Joy P. O.; Thomas Smith, Bramley P. O.; Thos. Duff, Cookstown P. O.; Richard Manning, Schomberg P. O.; Timothy Connel, Stroud P. O.

Lambton Division, No. 5 (West Riding).—Wm. Cole, Cole's Corners; Peter Smith, Colville. Halton Division, No. 6.—Hiram Albertson, Trafalgar.

Lucknow Division, No. 7.—P. McKenzie, Lucknow; J. Tolmie, Tiverton; J. S. Varcow; Carlow.

Brantford Division, No. 8.—J. S. Thompson, Brantford; W. B. Underhill, Burford; J. Willson, Galt; Henry Tutt, Kelvin.

York Division No. 9.—Robt. Clark, Downsview; S. Duncan, Richmond Hill; S. E. Phillips, Schomberg; J. Hagarty, Agincourt; Thos. Webster, Coleraine; A. J. Hughes, Sharon.

Peel Division, No. 10.—Francis Slightholm, Humber; Eli Crawford, Brampton; Guy Bell, Brampton; N. Steen, Streetsville; W. J. Oliver, Derry West; R. Dick, Cheltenham.

Kent Division, No. 11.—A. McCormac, Morpeth; J. Wright, Chatham; J. Mann, Valletta; R. Wilkie, Rond Eau; A. W. Crow, Kent Bridge; D. H. Everett, Dresden.

North Middlesex Division, No. 12.—John Levi, Fernhill P. O.

Durham Division, No. 14.—Wm. Hall, Oshawa; J. T. Gould Foley; R. D. Foley, Bowmanville.

East Lambton, No. 15.—Thomas Doherty, Uxton; John Dallas, Thedford; J. McDonald, Alvinston.

East Lambton Division, No. 15.—Francis Kearney, Watford.

Orangeville Division, No. 16.—J. K. Decatur, Camille.

West Middlesex Division, No. 17.—S. W. Dell, Strathroy.

Elgin Division, No. 18.—Jabel Robinson, Hathorley.

Lennox and Addington Division, No. 19.—W. N. Harris, Nanapanee; M. Neville, Nanapanee; Uriah Sills, Nanapanee.

N. Simcoe Division, No. 20.—Charles Drury, Barrie; E. Archer, Hillsdale; H. G. Lister, Rugby; R. Dixon, Ninonesing.

Belmore Division, No. 21.—Henry Smith, Gorie.

Oxford Division, No. 22.—G. E. Harris, Ingersoll.

Beaver Valley Division, No. 23.—Neil McCollman, Clarksburg; Wm. Hewgill, Heathcote.

Prince Albert Division, No. 24.—Robert McCormick, Kippen.

Ontario Division, No. 25.—Andrew Orvis, Whitby; J. Haight, Pickering.

Wentworth Division, No. 26.—M. J. Olmstead, Ancaster; P. S. Van Wagner, Soney Creek; D. Patterson, Copetown; G. Castle, Carlisle.

Huron Division, No. 27.—J. Smith, Newry.

County Huron.—James Livingston, Moncrief.

Norfolk Division, No. 28.—Isaac Austin, Port Dover; Levi R. Whitman, Knowlton, Que.

Kent Co.—Robt. Wilkie, Rond Eau; Charles McGibbon, Douglas, N. B.

Bruce Co.—Thos. Blair, Kincardine; John Biggar, Burgoyne; Thos. Houston.

Wellington Co.—Wm. Woodsworth, Bowling Green.

Stormont Co.—J. J. Adams, Wales.

Wellington County.—Robt. Cromar, Salem.

Belleville District.—W. J. Massey, Belleville.

New Granges.

531. Avonmore—John McLaughlin, M., Avonmore; D. McDermid, S., Avonmore.

532. Cameron—Thos. Blezzard, M., Villiers; Jno. H. Cameron, S., Westwood.

533. Rochester, Jno. Smith, M., Camber; Geo. Smith, S., Camber.

534. Selwin, F. J. Bell, M., Selwin; W. C. Manning, S., Selwin.

535. Grantham, Chas. Stewart, M., St. Catharines; Thos. Keys, S., St. Catharines.

536. Harcourt—Geo. McCallum M., Lorne; Jno. McFaden, S., Lorne.

537. Centre—Robert Forest M., Newry Station; Jno. G. Robertson, S., Newry Station.

"Well, my son," said a Detroit father to his eight-year-old son the other night, "what have you done to-day that may be set down to a good deed?" "Gave a poor boy five cents," replied the hopeful. "Ah, ah! that was charity, and charity is always right. He was an orphan boy, was he?" "I didn't stop to ask," replied the boy; "I gave him the money for licking a boy who upset my dinner basket!"

The Farm.

Useful Rules For Farmers.

To find the contents of a barrel or cask—Multiply the square of the mean diameter (in inches) by the length of the barrel (also in inches), divide this product by 29.5 and point off one figure to the right; the result will be the answer in wine gallons. It may be necessary to add that to find the mean diameter we add together the greatest and least diameters and divide by 2.

To find the number of bushels of apples, potatoes, &c., in a box or bin.—Multiply the length, breadth and depth together (all in feet) and this product by 8, pointing off one figure in the product for decimal.

To find the number of bushels in a box of grain.—Multiply its inside length, breadth and height (in feet) together; multiply the product by 45 and divide by 56.

To find the number of shingles required in a roof.—Multiply the number of square feet in the roof by 8, if the shingles are exposed 4½ inches, or by 7 1-5 if exposed 5 inches. To find the number of square feet, multiply the length of the roof by twice the length of the rafters. To find the length of the rafters at one-fourth pitch, multiply the width of the building by .56 (hundredths); at one third pitch, multiply it by .6 (tenths); at two-fifths pitch, by .64 (hundredths). This gives the length of the rafters from the apex to the end of the wall, and whatever projects must be taken into consideration. By 1-4 or 1-3 pitch is meant that the apex or comb of the roof is to be 1-4 or 1-3 the width of the building higher than the walls or base of the rafters.

To ascertain the weight of cattle by measurement.—Measure the girth of the animal (in feet) by passing a cord around behind the shoulder-blade and under the fore-legs. Then measure the length along the back from the foremost part of the shoulder-blade to the hindmost part of the rump. Multiply the length by the girth, and if the animal measures less than 11 and more than 9 feet in girth, multiply the product of the length and girth by 32; this will give the weight in pounds. If it measures less than 9 and more than 7 feet in girth, multiply by 31; if less than 7 and more than 5, by 28; if less than 5 and more than 3, by 16; if less than 3 feet, by 11.

Gross and net weight and price of hogs.—A short and simple method for finding the net weight or price of hogs when the gross weight or price is given and vice versa. It is generally assumed that the gross weight of hogs, diminished by one-fifth or 20 per cent. of itself gives the net weight, and the net weight increased by one-fourth 25 per cent. of itself equals the gross weight. To find the net weight, or gross price: Multiply the given number by .8 (tenths).

Example.—A hog weighing 365 lbs. 365 gross, will weigh 292 lbs. net, and pork at \$3.65 net, is equal to \$2.92 gross.

To find the gross weight, or net price: Divide the given number by .8 (tenths).

Example.—A hog weighing 348 lbs. .8)348.0 net, weighs 435 lbs. gross; and pork at \$3.48 gross, is equal to \$4.35 net. 435

Number of trees, plants, &c., required to set an acre:—

1 foot by 1 foot.....	43,560
1½ feet " 1½ feet.....	19,360
2 " " 2 ".....	10,890
2½ " " 2½ ".....	6,670
3 " " 3 ".....	14,520
3 " " 2 feet.....	7,260
3 " " 3 ".....	4,840
4 " " 4 ".....	2,722
5 " " 5 ".....	1,742
6 " " 6 ".....	1,210
9 " " 9 ".....	.537
12 " " 12 ".....	.302
15 " " 15 ".....	.194
20 " " 20 ".....	.103
30 " " 30 ".....	.48
40 " " 40 ".....	.27

Rule:—Multiply the distance in feet between the rows by the distance the plants are apart in the rows, and divide this into the number of square feet in an acre (43,560).

Why Must Farmers Co-Operate.

Some of the reasons can be given in a very few words.

1st. No movement of any extent no matter how obscure the origin, ever succeeded without co-operation.

2nd. By co-operation the prices of producers are kept down by the purchasers; and only by co-operation can this oppression be offset.

3rd. To have a voice in the control of the produce market, farmers must reach out more—even to England, if necessary—for England and Europe control the markets of this country much more than some of our would-be-wise men are willing to admit.

4th. Isolation, and the living exclusively on their own farms, as it were, have brought the agricultural community of the greater part of this country into the "common property" condition they are in to-day—a condition which makes them the victims for everybody to pluck.

5th. If the farmers do not take advantage of the Grange, but allow it to die out, it is doubtful if agriculturists will ever have sufficient courage to co-operate again—and then their latter condition will be worse than the first.

Therefore, farmers everywhere, co-operate. Don't be put off by your village store-keeper, or anybody else, unless you find it to be your own sober, sensible judgment. But as they must say "Join the Grange," unless you are already in, there is no fear, if you act according to your judgment at all, that you will find your best position to be, and to remain in the farmers' grand and mighty arms of reform.—*Ed.*

Amount of Dung Voided by Different Animals.

How much manure is voided by our farm animals is an interesting point for the farmer to know. As much depends on the size of the cow, and the character of the food, we should expect estimates and even actual weighings to show different results. It may be useful to bring together, however, such results as we have for comparison.

In Morton's Cyclopaedia, we find it stated that a cow furnished annually 20,000 lbs. solid excrement, and 8,000 lbs. urine. This is about 55 lbs. of dung and 22 lbs. of urine daily.

HORSE.

Morton, in his Cyclopaedia of Agriculture, gives the total dung evacuated by a horse as 12,000 lbs. yearly, and the urine as 3,000 lbs.

SHEEP.

According to Morton, a sheep furnishes annually 750 lbs. solid excrement, and 380 lbs. of urine, while Boussingault states that a sheep weighing 135 lbs. consumed in 24 hours 1.9 lbs. of hay, and evacuated 5.08 lbs of dung.

SWINE.

A pig furnishes annually, says Morton, 1,800 lbs. of solid excrement, and 1,200 lbs. of urine, but he neglects to give the weight of the pig. Boussingault states that a pig weighing 135 lbs was fed on 14.6 lbs. of potatoes, and gave 9.79 lbs. of fresh excrement.

In order to understand these amounts more perfectly, we would desire to know the amount of solid matter in the various dungs. We may assume that average fresh cow dung contains from 86 to 88 per cent. of water; fresh horse dung about 77 per cent. of water; sheep dung about 56 per cent., and pig dung about 77 per cent.

The ordinary cow dung as found in the barn cellar, unmixed with litter, except a slight sprinkling of dirt, will weigh about 63 lbs. to the cubic foot. Horse manure from city stables weighs about 35 lbs. to the cubic foot.

Money in Poultry.

Any farmer or person owning from 10 to 20 acres of land can make considerable money in keeping poultry. But it requires some knowledge of the manner in which fowls should be managed to succeed well. Where there are no neighbors near to be molested, turkeys are profitable when allowed to roam over extensive fields, as they require no feeding when grass-hoppers are plenty. Geese are also very profitable where they can have a stream of water and low grass lands to feed on. In some places several thousand are owned by one person, and a living is made on the profits of geese alone. In regard to the profits of dunghill fowls, they produce from 125 to 175 eggs each per year, and a bushel of grain supplies for each fowl, costing from 30 to 75 cents, according to locality, while the eggs are worth from \$1.25 to \$3.00 each per annum. But certain rules must be observed, or a failure is certain, as follows:

1. Never crowd too many into their roosting house.
2. Give them ample grounds to run in.
3. See that they do not become infested with lice.
4. A large shed to be provided to run under in storm.
5. Fresh water daily, and plenty of it.
6. Roosting house to be well ventilated, summer and winter.
7. Not to feed too much corn, as it makes them too fat.
8. Provide plenty of gravel, etc., lime, to produce eggs.
9. Avoid low, wet grounds where your fowls congregate.
10. Obtain a good breed—good layers and hardy.

Running in Debt.

Horace Greeley remarks on running in debt as follows:—

I dwell on this point, for I would deter others from entering that place of torment. Half the young men in this country, with many old enough to know better, would go into business—that is, into debt—to-morrow, if they could. Most poor men are so ignorant as to envy the merchant or manufacturer, whose life is an incessant struggle with pecuniary difficulties, who is driven to constant "shining," and who from month to month, barely evades the insolvency which sooner or later overtakes most men in business; so that it has been computed that but one man in twenty of them achieve a pecuniary success. For my own part I would rather be a convict in a State prison, a slave in a rice swamp, than to pass through life under the harrow of debt. Let no young man misjudge himself unfortunate, or truly poor, so long as he has the full use of his limbs and faculties, and is substantially free from debt. Hunger, cold, rags, hard work, contempt, suspicion, unjust reproach, are disagreeable, but debt is infinitely worse than all. And if it had pleased God to spare either or all my sons to be the support of my declining years, the lesson which I should most earnestly seek to impress on them is, "never run in debt." Avoid pecuniary obligations as you would pestilence and famine. If you have but fifty cents and can get no more for a week, buy a peck of corn, parch it, and live on it, rather than owe a dollar! Of course I know that some men must do a business that involves risk, and must give notes or other obligations, and I do not consider him in debt who can lay his hands directly on the means of paying, at some little sacrifice, all he owes; I speak of real debt—that which involves risk or sacrifice on one side, obligation and dependence on the other—and I say from all such, let every youth humbly pray God to preserve him evermore.