

**PAGES
MISSING**

Clover, try some	496	Pasture summer-fallow	690	Agricultural Society, problems of...	340	Freight, farmers pay	430
Clover as a fertilizer	577	Penalty for stealing fertility	533	Agricultural Society prize-lists, re-	458	Freight rate classifications	461
Clover, seeding to	578	Peas, sow some	655	vision of	458	Fruit shipping in Colorado	848
Clover, some causes of failure	618	Pithy remarks of farmers	8	Agricultural building at Cornell	661		
Clover, North Dakota Exp. Station's	808	Plow-maker, a famous	951	Agricultural organizations, support-	538	Game Protection Association for	
work with	808	Plank-barn frames	578	ing	538	Manitoba	414
Co-operative experiments in Terri-	88	Plan before building	577	Alberta Horse-breeders meet	581	Game, will protect	538
tories	88	Plan home grounds before planting	408	Alcohol condemned	849	Gambling in wheat operations,	
Co-operation, a plea for	293	time	408	American wheat	921	ment	539
Corn, varieties for Territories	690	Plan of prize house	292	Amendment to Inspection Act.....	957	Government control of public uti-	
Corn for Manitoba	691	Plan of a compact farmhouse	334	Animal Contagious Diseases Act,	221	ities	659
Corn, experience with	728	Plan of \$1,300 farmhouse	455	changes in	221	Grants to agriculture in Manitoba...	222
Corn, setting drill to plant	729	Plowing by steam	407	Annual meetings, Sec. Greig and	14	Grading grain, agrees with articles	
Crop rotations	914	Plowing match, the	727	executives arrange for	14	on	221
Crop rotation wanted, a	728	Point of view, the	842	Another idea exploited as a fad.....	539	Grain must be loaded in daylight...	731
Crops and climate	843	Public school system, farmers' sons	114	Anti-fly mixture	773	Grain-growing, problems in.....	258
Cultivation before a dry season	690	handicapped by	114	Answers the last call	774	Grain-growers, a timely suggestion	
		Quack grass, eradicating	655	Auto and the horse	821	for the	150
		Roads, caring for	690	Autonomy Bill not satisfactory	373	Grain-growers' Associations multiply-	
Dakota wheat, new grades for	47	Rotation of crops, system of neces-	533			ing	186
Day's work, what constitutes a	532	sary	533	Banquet to the Stock-breeders	841	Grain-growers' Executive at work...	849
	654, 764	Rotation of crops with grasses	950	Battleships and cruisers	849	Greenway as a prophet	921
Disk harrow, to sharpen	84	Roots, are they indispensable in a ro-	807	B. C. gets the Dominion Exhibition	186		
Drills, how far apart should they be?	408	tion or stock-raising	807	B. C. railway, new	186	Hamilton Grain-growers meet	340
Dumb waiter, a	706	Rust in wheat	218	B. C. Dairymen's and Live-stock	415	Hackney sale, Mr. Beith's	539
		Rust, some more testimony re.181,	218	Association meets	415	Hereford Breeders' Association.....	873
Education of farmer's son	146, 182, 294	Rust, black, on wheat, my experience	181	B. C. Central Farmers' Institute.....	429	Hides, taking care of	863
Experiments summarized, some	531	of	181	Brandon, convention at	149	Horse show, eleventh annual Cana-	
Experimental farms, champion of the.	455	Rust, last year's	253	Brandon Horticultural Society's an-	149	dian	695
Experimental farm surplus stock	455	Rust, observations on	254	annual meeting	149	Horse show for Winnipeg	732
		Rust question, valuable data on	294	Bridge work on C. N. R.	538	Horse show arrangements	811
Fall wheat in Southern Alberta	255	Rust, a few observations on	370	Bridge, defective, responsibility for.	416	Horse show, Winnipeg	956
Farmer's friends, some of the	655	Rusted wheat, use of for seed	113	Breeders' Association, report of the	51	Holstein-Friesian meeting	222
Fakers and side-shows at fairs	49	Rusted wheat, on handling	219, 253			Horticultural prospects	850
Farmhouse plans	765	Rusted crop, waiting on a	408	Canadian produce in England.....	220		
Farmer vs. professor	842	San Jose scale, none in B. C.	219	Canada's wheat production	340	Ice, lay up some	300
Farm products, selection, care and	950	Seeding, hints on	370, 533	Calgary will have a horse show.....	299	Improving our postal service	697
marketing of	950	Seeding to clover, some points on ..	114	Calgary show, prize-list	826	Important judgments rendered	873
Fence problem	84	Seed selection the present problem ..	218	Camera competition	921	Insurance, a novel idea in	461
Fence building to avoid losses	765	Seed, make sure it will grow	333	Cattle-feeding, more data on.....	921	Inspector Horn, additional work for	86
Fertility decreasing	618	Seed Control Act, the	409	Chartered bank as a safeguard in	414	Inter-States commerce commission...	186
Flax and its uses	655	Seed Control Act, the new	728	marketing grain	414	Institutes and stock-judging schools,	
Flax fibre for binder twine	880	Seed distribution, re	457	Chicago International	811	N.-W. T.	300
Forecasting the weather	915	Soil, is it deteriorating	146	China-man in South Africa	850	Inoculation for clover	416
		Soil moisture, concerning	293	Clover-growing, some northern experi-	774	Institute work in Minnesota, notes	
Government seed distribution, a be-	690	Soil moisture	293	ments	774	from	416
liever in	690	Spring conditions in B. C.	843	Compensation for glanders	624	Inoculation of soil in Great Britain,	
Good seed, production of	880	Subsoil packer, opinions re, requested.	843	Cowboys' contest	623	how they view	461
Grading grain, percentage system of.	495	Sugar beets, culture of	842	Complaint re the mail service.....	117	Investigations at Central Experiment	
Grading wheat	82	Sugar-beet culture in Alberta	409	Conference of agricultural societies	186	Station	957
Grading wheat, charges against	117	Surface draining, how it may pro-	9	wanted	186	International Sunday-school conven-	
Grading wheat, ex-minister on	117	note early seeding	9	Conference of men interested in grain	299	tion	885
Grass seed, method of sowing	114	Summer-fallow, a hint or two on.	808	C. P. R. encourages fall-wheat grow-	731	Jones' prophecies, cold facts dis-	
Grass, an experience in laying down	293	Summer-fallow or a substitute	45	ing	731	prove	537
to	293	Summer-fallow for wild oats	808	Crop bulletin, Territorial	622	Judging school at Portage la Prairie	
Grass, pointers on seeding in Alberta.	334	Telephone Co., organization of	691	Dairy test, Ottawa	418	117	
Grain-Growers' Convention	8	Telephone development, rural	766	Dark ages, a heritage of the	461	Keeping alert	117
Grain-growers, suggestions for	181	Three-horse equalizer	539, 576, 578, 691	Dairy stable in spring	461	Law, points in for farmers.772, 850, 885	
Grain-Growers' Convention, Manito-	255	Timber problem, the	766	Death roll of great battles	460	Lewis and Clark Centennial Live-	
ba... ..	255	Tile drainage in Manitoba	764	Department of Agr., N.-W. T., never	298	stock show dates	538
Grain inspection and judging, sugges-	47	Tool-shop, farmer's	578	sleeps	298	Lewis and Clark Exposition	622
tions re	47	Travelling for agricultural knowledge.	950	Deputy-Minister McKellar's honor	13	Letter of a scholar and a statesman	731
		Turnip seed, effect of soaking in	844	vindicated	13	Leeds tramways	921
Harrowing and its effects	531	paraffin and turpentine	844	Devon Long-wool sheep	418	License commissioners and the pub-	
Haggard, Mr. Rider, prophecies	766	Ventilating live-stock dwellings, plan	618	Diamond fields, shall we have	771	lic interests	773
Heating and ventilation of farm	45	for	618	Dominion Cattle-breeders' annual	222	Live-stock convention resolutions...	299
houses	45	Wells, difficulty of securing good.....	457	meeting	222	Live-stock breeders, Manitoba, to	
Headlands, look well to the	408	Weed seeds, how long will they live?.	84	Dominion Shorthorn-breeders' Asso-	299	hold sale	428
Hint to farmers, a	879	Weed seeds, beware of	576	ciation, suggestions to	299	Market in country towns, advantages	
Humus, benefits and success of	217	Weeds, plan your campaign against ..	113	Dominion Show, B. C. shows interest	209	of	13
Hydraulic ram satisfying	880	Weed-killer, every man a	531	in	209	Manitoba crop report for 1904	50
		Weed seeds, germinating conditions of	880	Dominion S.-H. B. Association calls	416	Manitoba wants more territory	186
Ice, homemade—an ice-house	180	various	880	special meeting	416	Manitoba summer fair circuit	498
Industrial exhibitions, about	369	Where the prairie townsman has it	655	Dr. Osler says stay at home	773	Manitoba Farmers' Institute circuit.	694
Investment, every farmer should	618	over the city man	655	Dry-hand farming	920	Manitoba and the Northwest, facts	
make a similar	618	Wheat-producing power of soils	532	D. S.-H. B. A., Western member of	220	about	848
Inoculation for the growth of legumes.	765	Wheat values	8	asks questions	220	MacDougall, Hon. Wm.	885
		Wheat, investigation of elevator,	46	Eastern Ontario live-stock and poul-	460	Meat trade in the antipodes	87
Japan's little farms	147	samples	46	try show	460	Mexican cattle	299
Letter, a chatty, full of meat	690	Wheat rust, lessons to be learned	81	Effect of cow food on dairy products	625	Mexican cattle, another nail in the	
List of licensed and bonded firms to	407	from	81	Elevator company entitled to a re-	624	coffin of the	341
be published	407	Wheat, Western, the handling of.145, 254	254	fund	624	Mexican cattle not favorites	430
Lifting posts	620	Wheat markets, in the larger	292	Emerson Agr. Society alive to its	148	Milling propositions, new	661
Line	807	Wheat trade in Britain	577	duties	148	Milling and baking test experiment,	
Lightning, protection against	843	Wheat grades, American miller on	618	Embargo still stays	773	Old Country	415
		abolition of	618	England buys less from Canada	149	Mills in Manitoba and N.-W. T.	51
Machinery, up-to-date, where it is	10	Wheat, how it panned out across the	619	Examinations, outside, allowed at	298	Minister of Agriculture, Ontario's	
used	10	line	619	Manitoba 'Varsity	298	new	299
Manure on your farm, what are you	219	Wheat, a milling test of	619	Farmer's son's position	118	Morris, E. D., Agr. Society meets..	415
doing with?	219	Wheat-growers' problems	913	Fat-stock show, Territories' initial	461	Modern flour and good teeth	581
Manure, believes in using	369	Whiffletree for six horses	951	venture	461	Mosquitoes	695
Manure on breaking	370	Windmills on the farm	843	Fat-stock show, week at Saskatche-	580	National History Society in the Ter-	
Manuring and cultivation, English	408	Wild oats, how one farmer gets rid	879	wan's Capital	580	ritories	538
view of	408	of	879	Flat's Clydesdale sale	811	National record keeper	581
Manure, why waste the?	496	Would not cut green	370	Flour and oatmeal	51	National live-stock convention	581
Manure, one farmer's method of	496	Yearbook of agriculture	451	Flathead Valley	220	National Live-stock Association Or-	
handling	496			Fly time and the cows	773	ganized	621
Making the farm pay wages	807			Forestry Branch sprouts in a new	773	National records established	660
Manitoba grasses	879			direction	773	Nature teaching	850
Minnesota Experiment Station, how	292			Free fencing wire	539	New Westminster gets busy over Do-	
it distributes seed grain	292			French draft studbook	86	minion Show	300
Millets and their uses	533			Freight rates, should mean lower..	428	New machines	732
Moose Jaw country, an ex-Manitobian	728					New York City milk supply	958
in	728					"Nuts" to the Dept. of Agr. and	
Moisture for crops	729					the V. D. G.	473
Moon and weather forecasts	915					Oakley-Hunter Ayrshire sale	499
						Oil fields, Indian Territory	498
Oat smut and how to check it	3, 0						
Old settler's advice to the tender-	112						
foot	112						
Organization of agriculture, the	476						
Our English letter	46						
Oxen, yoke or harness for	256						

PART I.

CONTENTS FOR 1905.

iii.

Oliver, Mr. Frank 582
 One hundred per cent. farmer 623
 Ontario cattle shippers gain concessions 581
 On the block 51
 Opinions of farmers re five-bushel seed distributions 299
 Origin of the Thoroughbred 697
 Organization for purchasing supplies 958
 Our English letter 372, 538, 696, 772
 Our Scottish letter 624, 920
 Pacific coast will have a show this year 86
 Packing-house corporation, a new 416
 Pacific coast salmon cannery trust 416
 Passing of the range, the 659
 Panama canal 848
 Pine Grove Shorthorn sale 150
 Plow, new style of 659
 Plowing match at Bird's Hill 956
 Postage on British periodicals 373
 Portage la Prairie, a judging school at 417
 Poisoning gophers 539
 Points in law for farmers, 624, 660, 696
 Portfolio of Agriculture for Alberta, to construct 732
 Postage to Canada, reduction of 773
 President of British Board of Agriculture 537
 Prizes for district exhibits at coming Dominion Show 478
 Prices for seeds 185
 Provincial autonomy 298
 Professor of dairying for the M. A. C. 812
 Prairie Home sale 956
 Pullets, first lay of the 625
 Pure-bred auction sale on May 31 477
 Pure seed propaganda 773
 Pure-bred bulls, advantage of 850
 Pumpkins, a good crop of 896
 Queries from Morris Farmers' Institute question drawer 220
 Railway extensions 14
 Rapid City grain-growers 148
 Rape with grain, sowing 659
 Races at the Industrial 694
 Relation of food to Production of Butter-fat 185
 Renaissance of Manitoba Farmers' Institutes approaching 298
 Representative men of Western Canada 694, 731, 774, 811, 848
 Robertson, Prof., remembered by his staff 118
 Rubber investment 920
 Rusted crop, a farmer's experiments with 186
 Samples of seed grain 51
 School notes 623
 Score-cards for live stock revised 185
 Settle the speculator 417
 Selling wheat, re 340
 Seed distribution, some pertinent remarks on 415
 Seed distribution, endorses our stand on 581
 Seed-growers' convention 850
 Shorthorn breeders' Annual meeting 149
 Shorthorn sale, J. E. Smith's 372
 Shorthorn records go to Ottawa 499
 Shorthorn sales, Ontario 539
 Sheep and swine breeders convene 341
 Simplon tunnel, the great 957
 Single tax advocated at Virden 186
 Snaring rabbits 774
 Soil moisture a debated subject 298
 Spring Park nurseries, award to 957
 Spring stallion show 221
 Stock judging at Brandon 371
 Stock-judging classes 498
 Stags at large 659
 Stock food once more 849
 Successful feeding and breeding 859
 Telephone, rural, how to install 118
 Testing dairy herds 52
 Territorial Teachers' Institutes 732
 Thistle Ha' Shorthorn sale 150
 Things to remember 415, 623
 Three-horse evener 539
 Things to remember 773, 849, 885, 958
 Torpedo and torpedo boats 811
 Toronto horse market 819
 Trap, a 51
 Transportation commission, good man appointed to 86
 Transportation and competition 771
 Treves, Sir Frederick, re alcohol 771
 Tuberculosis, talk on 820
 Union Stock-yards Co., what about the? 625
 U. S. wheat import regulations 222
 U. S. grain-growers organize 417
 U. S. insurance companies 623
 Vancouver Island wants an experimental farm 538

Veterinarians meet 341
 Veterinary branch in Manitoba 259
 Veterinarians of Western Canada, 660, 694, 731
 Veterinary inspectors and their stations 732
 Veterinarians of Western Canada, 772, 811
 Veterinary examination 864
 Virden, new industry for 148
 Washed soils, the handling of 416
 Washington State Agricultural College 772
 Western students at O. A. C. 773
 What the farmers would like 460
 Whitewash 581
 Why he is in the F. A. and Vt. profession 661
 Wheat supplies 731
 Winter wheat condition 340
 Winnipeg Industrial leads the way 773
 Wisconsin enacts a stallion law 774
 With the turning of the cycle 957
 HORTICULTURE AND FORESTRY.
 Advice to new settlers 535
 American Forestry Congress, the 413
 Amputating limbs of trees 918
 Apple boxes, uniform 458
 Apple-growers, a pointer to would-be 297
 Apples, hardy, and other fruits, experiences with 183
 Apples, B. C., abroad 183
 Apple culture at Brandon Experimental Farm 257
 Arbor day at Victoria, B. C. 534
 B. C. Fruit in England 621
 B. C. Fruit-growing 694
 Bean, the 693
 Binder twine prices 730
 Canadian Forestry Association, report of 86
 Canadian nurserymen, fair play for 810
 Celery 769
 Celery, to grow 578
 Celery, starting, seed 810
 Child and the garden, the 769
 Convention of grain-growers 11
 Currants, red, white, and black, how to grow 148
 Cultivator, keep it going 884
 Cuttings, would exchange 810
 Evergreen planting time 730
 Free distribution of plants 534
 Fruit trade with Ontario 535
 Fruit tree prospects 884
 Fruit prospects at Indian Head 884
 Fruit prospects at Brandon 918
 Fruit-growing in Manitoba 953
 Garden, the farm 458
 Hotbed, making a 413
 Hotbed, preparation and care of 458
 Improvement of public places 12
 Insecticide for plants 458
 Lime and sulphur wash in Horticulture 458
 Luther Burbank and his work 953
 Manitoba's floral emblem 730
 Macoun, Mr., to resign 884
 Mulching 622
 Onion sets 730
 Onion, the 769
 Orchard, begin to think about planting 183
 Orchard and the lawn 693
 Plowing match, a 810
 Potatoes in a market garden 693
 Potato scab 535
 Potato-growing on irrigated land 578
 Potato culture, frenzied 579
 Potato planting, experience in 693
 Potato planting, a guide in 730
 Potato night 918
 Roses, paper on how to grow 184
 Seeds for Alberta, notes on 297
 Shelter belt, provide a 579
 Sow clover 497
 Spray mixtures, formulas for 535
 Strawberry-growing, hints on 536, 621
 Strawberries and raspberries 579
 Strawberries, home culture of 657
 Strawberries in Northern Manitoba 918
 Sugar-beet topper, a 536
 Tasteful farm homes 954
 The great West 11
 The early bird 371
 Tomatoes, pruning 458

Tree planting, some pointers on 85
 Tree, how it grows 336
 Trees, to keep in line 371
 Tree, shrubs, etc., recommended by Western Horticultural Society 457
 Trees, planting 621
 Vegetables, some unused 116
 Vegetables recommended for Manitoba 693
 Weed inspectors take notice 458
 Western Horticultural Society's convention 184
 Western Horticultural Society 297
 HORSES.
 A day with a surgeon 492
 Age of breeding mares 876
 All Standard-breds will not make coach horses 492
 Army horses 652
 Arab horse, the 688
 Arab blood 716
 Balky horse, the 725
 Bit, look to the 761
 British horse supply 43
 Brood mares, winter care of 6
 Breeding fillies 725
 Buying stallions 78
 Canadian Pony Society, annual meeting 215
 Canadian Clydesdale Breeders' Association, annual meeting 215
 Canadian horses for the Imperial army 653
 Care of horses 889
 Calgary Stallion Show 803
 Calgary Stallion Show and Horse Fair at 578
 Castration 760
 Castration, untoward results of 888
 Cleveland Bay and Coach mares 726
 Cleveland Bay and Yorkshire Coach horses, future of 493
 Clyde, studying the 688
 Cloud on the horizon of Western horse-breeding 839
 Colt crop, the 910
 Colts, handle, during winter 110
 Colts, get in shape for altering 688
 Con tipation in foals 617
 Developing action 493
 Developing horses 946
 Diarrhoea in foals 726
 Draft-horse breeding, how handicapped 330
 Draft-horse breeding, points on 804
 Draft-horse breeding 946
 England wants Canadian horses 336
 English Shire horse-men determined to improve the breed 492
 Equine rarities 404
 Fancy horses, breeding 840
 Fitting up horses 288
 Foal, arrival of the 688
 Foal's navel, treat the 689
 Frostbites, burns and scalds 214
 German Coach, agent the 616
 General-purpose and agricultural horses 911
 Geldings, do they make a better appearance than stallions? 947
 Glanders, an authority on 42
 Grays becoming white 110
 Great Britain's horse imports 726
 Hackneys, some notable English 142
 Hackney breeders' annual meeting 215
 Hackney, points of a 250
 Hackney, height of a 808
 Hackney action 286
 Hackneys, the soundness of 451
 Harness, Hunter and Saddle Horse Society 288
 Heavier horses wanted 761
 Heavy draft horses, scarcity of 761
 How to throw a horse 804
 Horses for hard work need good length of rib 451
 Horseshoeing 110
 Horse Show at Toronto, the 111
 Horse judges, selecting 143
 Horse courage 178
 Horse breeders' convention 330
 Horse market 530
 Horse-breeding 652
 Horse trade keeps good 876
 Horse ranching, conditions changing in 877
 Indian streak endures, the 946
 In-foal mare, the 78
 Iowa Agricultural College and horse judging 404
 Irish draft horse 178
 Ireland as a Hunter-raising country 688

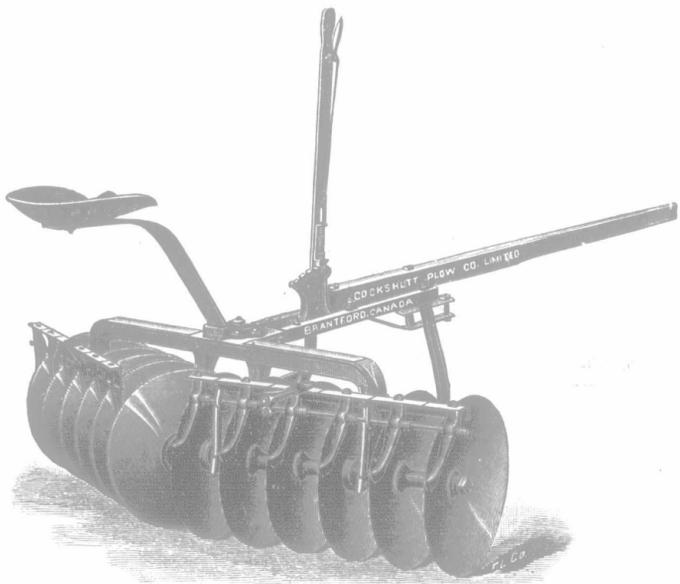
Joint ill (navel ill) in foals, prevention and treatment 839
 Light horses 653
 London Shire Horse Show 405
 London Hackney Horse Show 450
 Lord Minto on Canadian horse breeding 616
 Long-distance record 653
 Mare, the in-foal 78
 Mare, watch at foaling time 287
 Mare and the foal, the 877
 Maladie-du-Coit (dourine) 875, 910
 Melanotic tumors 405
 Old Country Shire men, wake up! 803
 Our Scottish letter 288, 493
 Pastern, functions of the 330
 Pasterns 573, 877
 Popular colors 838
 Purchasing farm horses 287
 Runabout horse, the 911
 Showing draft horses 250
 Shetland is a favorite 803
 Shire Horse Association, annual meeting 215
 Shires, where they are being improved 451
 Shire champion, a 616
 Softness in horses 78
 Sterility in mares 529
 "Stupid" describes it 617
 Stumbling 498
 Stick to type in horse-breeding 450
 Stable talk 48
 Stallions, how have they wintered? 366
 Stallion laws, more 366
 Stallions, over-fat 529
 Stallions, working them 616
 Stallion, give him a chance 725
 Stabling and feeding horses 840
 Swamp fever, the equine scourge of the Middle West 42
 Thoroughbreds, some famous 648
 Thoroughbreds and hunters at London Horse Show 530
 Trotters with style 910
 Weight of the farm horse 616
 World's horse supply, the 79
 Working stallions 148
 Would carry the gospel of up-to-date agriculture to others 179
 ILLUSTRATIONS
 Abayan Kohellan 688
 Agility 689
 Agricultural Dept. officials, Regina judging school 915
 A more pleasant aspect than the bare prairie 116
 Apiary in Manitoba 115
 Armored cruiser, modern 849
 Asleep, the coyote of the plains 149
 A tramp in the country 51
 A type of animal beauty, a pointer at work 494
 Barn in Assiniboia, a stockman's 47
 Barn in Assiniboia, Robt. Miller's farm, near Lumsden 82
 Barn of French settler, out here 12 years 111
 Bapton Favorite 917
 Battleship, modern 848
 Basement plan of C. W. Baker's barn 577
 Basement plan of barn, farm of John Dryden & Son 409
 Barron, John, Carberry 332
 Barred Rock hen 410
 Baird, Thomas, Red Willow, Alta. 848
 Beauty combined with utility here 11
 Betchton Royal, Hackney gelding 143
 Belanie Princess Royal, Hackney mare 143
 Beeman, G. C. 222
 Benson, Stephen, Neepawa 330
 Bee colony at the Brandon Experimental Farm 335
 Beef carcasses, judging classes, Regina 913
 Birleff, Admiral 919
 Black, W. J., B.S.A. 42
 Blackface shearing ram 180
 Bonfire 143
 Border Leicester ram 452
 Brandon, cattle scene at 7
 Brandon, scene at Experimental Farm 691
 Carrie 952
 Carbine 48
 Cawdor Cup 451
 Calgary, in the sale ring at 657
 Cannock Conqueror 655

Carson, Prof. W. J.	812	McGregor, A. B., Davidson, Asa.	731	Barred Rocks, breeding, an expert on	147	Argentine Government has become suspicious	841
Cedars, B. C., among the	459	Merry Maiden's Third Son	48	Breed that lays, a	185	A stockyards authority endorses our stand for better cattle	406
Cement, how used in bridge work	808	Meat, a study in	216	Brooder, the	412	Awful fate of a steer	44
Cheviot ram	144	Mixed plantation along a wide road, Central Experimental Farm, Ottawa. 12		Building up a flock	411		
Champion junior lamb	289	Miller, Robt., Stouffville, Ont.	869	Buff Orpingtons as utility fowl	459		
Champion Clydesdale mare, Regina.	911	Milking machine, the Thistle	656	Buff Orpington ducks	954		
Champion Shorthorn heifer	912	Minnie of Lessnessok	767				
Clemons, Mr. W. A.	581	Monteith, Hon. Nelson	299	Chicks, why they die	537	Bath and West of England Show	949
Clover-growing, what Morris, Man., can do in	49			Chicks, care of the	621	Beef production, experiments in	111
Clydesdale mare and foal, champion.	179	Nebogatoft, Vice-Admiral	810	Chicks, feeding the	658, 954	Beef-ring, twenty-share	216
Clydesdale stallion, sample of	287	No time to loiter; everybody hustles	183	Chicks, another method of raising	883	Beef outlook in Ontario	617
Count Cecil	496	Noon hour at an Edmonton farm	575	Chicks, color of pure-bred	883	Beef cattle raisers classified	689
C. P. R. train on the loop in the Rockies	46			Chicks, give them attention	919	Beef cattle supply	763
Crown Prince Frederick William of Germany and his bride	919	O'Keefe's cattle ranch	251	Cold storage romance, a	411	Birmingham bull sale	494
Cullinan diamond, the	771	Onions, a dish of	769	Concrete for poultry-house floor	883	Bids for the Portfolio of Agriculture should be sent in	654
		Orme	6			Blue-gray beeves	111
Dartmoor shearling ram	368	Ornament	43	Diseases of poultry	116	Blackfaced mountain sheep	180
Devon Long-wool ram	418	Out in spring; Northern Ontario Indians	457	Does your flock pay?	85, 219, 411	Blackleg, salt as a preventive of	451
Deachman, R. J., B. S. A.	875			Ducks, feeding them	770	British breeds of sheep	654
Dissenter	143	Pigpen in Manitoba, a whiter	45	Edmonton, poultrymen's convention at	337	Branks, two kinds of	576
Diplomatist	450	Pine tree, where it grows	253	Egg-eating	85	Breed problems, Shorthorn Breeders in Manitoba discuss	331
Director	670	Pine tree girdled by mice	336	Egg-eating, lime for	297	Breed Society and its Secretary, work of a	44
Disk plow, the	659	Pleasure resort in the Canadian West	79	Egg fertility, effect of weather on	536	Breeding, fads in	290
Donovan	43	Pointer at work, a	494	Eggs, large ones from small hens	883	Breeding and feeding pigs	878
Dorset lambs, prizewinning	81	Poultry show winners, pair of, Winnipeg	411	Eggs, put down for winter use	883	Bulls on the range, use of	8
Dominion Shorthorn breeders	291	Prince Edward	623			Bulls on the range, how to handle	215
Doesn't like his new pants	415	Prince Arthur and Charlie	955	Fattening fowls, Surrey method of	52		
Dunbar, W. A., V. S.	660			First breed produced by farmers, the	770	Campbell Bannerman and the embargo	111
Duncan, Robt., Calmar, Alta.	774	Raymond beet-sugar factory	51	Grading up farm stock	537	Calves, fall, where they prefer	143
		Rape at Rosser	117	Hatching, keeping eggs for	579	Cattle choking and bloating	216
Each one to his own pail	9	Range cattle, a bunch of, near Lethbridge	338	Hatching, selecting eggs for	693	Cattlemen in convention	332
Eldorado Potato	579	Registered Shelties at Poplar Grove.	181	Henhouse sanitation, a poultryman on	52	Cattle, better-bred wanted	689
Eminent 2nd	885	Revolving disk mouldboard plow	659	Hens gave good returns	410	Cattle show and sale at Calgary.	804
English Leicester ewe	452	Roan Conqueror	807	Hens, best "paying" ones	846	Cattle auction, first Manitoba Provincial pure-bred	878
Equine baby	690	Romney Marsh ram	44	House, poultry, is it too warm?	10	Calves, raising, 289; Teaching to drink	368
Exmoor shearling ram	406	Round-up time, at the	333	Importance of detail	919	Calves and summer pasture	689
Excelsior, first-prize cockerel	536	Roscommon ewe lambs	574	Incubator, running a	219, 338	Cheviot sheep	144
		Royal London	574	Incubator and brooder, mission of	296	Cost of exporting a sheep	530
Farmstead, a typical Western	47	Round-up, the	805	Incubator management	536	Cost of production, getting at the	369
Farm home, B. C., abode of M. Grant	83	Rojestvensky, Vice-Admiral	841	Incubator and brooder on the farm	693	Convention week, 144; Programme, 215; A subject for	289
Farmhouse, a handsome Manitoba	337	Ryeland ram	453	Incubator, brief experience with	729	Co-operation for the beef industry	912
Fall fair exhibit of school at Worcester, Mass.	769	Sand Boy	288	Incubator chicks, raising	955	Cows, size up this summer	653
Fisher, Mr. F. W., Burlington, Ont.	461	Saskatoon Stock-judging Institute	759	Infertility in eggs	459	Contagious abortion, how controlled in Scotch dairy herd	80
Fletcher, Jas., LL. D.	12	School, Victoria, B. C.	458	Laying competition	410	Contagious abortion, treatment for	840
Fresh picked and inviting	657	Setter in the field: Popular type of sportsman's dog	494	Layers, from them we get layers	497	Cotswold, a Manitoba man champions the cause of	494
Gardhouse, J. M., Weston, Ont.	370	Sealand Sensation	653	Large egg, a	730	Cream diet too expensive for grade calf	726
Garden, planted by a girl of twelve.	769	Sheep ranch and corrals, Medicine Hat	804	Lethbridge Poultry Show	372	Cross that works well in Shorthorn breeding	806
		Sheep rack, end view	453	Lice	85, 729		
Hackney head, a typical	142	Shropshire ram	112	Mixing breeds	809	Dartmoor sheep	368
Harvest time for the bees	884	Shire stallion, Girton Charmer	405	Plymouth Rocks, an experience with	339	Daily grain ration, is two pounds enough?	761
Harvesting scenes near Rapid City.	367	Shoults, W. A., V. S.	622	Possibilities in egg production	847	Dehorning	44, 251
Haying time on the Bute farm	531	Shorthorn head, a typical	727	Poultry discussions	11	Diarrhoea in calves	618
Herdwick ram	338	Simplon tunnel	957	Poultry don'ts	411	Dipping no detriment but a help to cattle	659
Headingley Road, on the	533	Sky Pilot	654	Poultry depulming mite	459	Dipping approved by ranchers	878
His Majesty	142	South Devon ram lamb	495	Poultry superstitions	658	Dipping in Dakota	911
Hillhard, W. A., D. V. S.	812	Spallumcheen Valley, B. C.	45	Poultry notes	809	Docking the lambs	452
"Hoodoo," national mountains	293	Spring pets	575	Profits from hens, exaggerated	185	Dorset Horn sheep	81
Home of one of Manitoba's captains of industry	113	Stock Judging at Regina Fat-stock Show	918	Pullets, laying, an experiment with	85	Dual-purpose cow	840
House with homelike surroundings	408	Stevenson, J. A., V. S., Carman	772	Pure-bred poultry, price of	955	"Dual-purpose," Henry Wallace on the	8
House, unimproved	408	Stuntney Pharos	725	Rode Island Red, or American Red	883	Economical gains, best age for	332
Home, a Manitoban, residence of Dr. McDiarmid, Brandon	450	St. Simon	6	Roup, cause and cure	338	Embargo, will it go?	368
Hop-raising on rape, Indian Head Exp. Farm	9	Success	878	Selecting next year's layers	657	Embargo, whom does it injure?	763
Holsteins, group of	417	Suffolk ram	8	Show, grain and poultry	116	Exmoor sheep	406
Horseless binder, the	692	Sugar-beet topper	536	Show, Manitoba	148, 337		
Hume, Alex., Menie, Ont.	413	Submarine torpedo boat	811	Sitting hens, care of	658, 955	Fat-stock shows, interest in is growing	44
		Swine and mutton carcasses, judging school, Regina	913	South Dakota poultry	297	Fall fair judging competition	913
Incontrovertible evidence that Medicine Hat can grow apples	11	Taking in the situation on an Alberta horse ranch	947	Soft-shelled eggs, what they mean	11	Feeding beef in Manitoba	423
		Ten years' progress	879	Square dealing with customers	692	Feedstuff, a profitable	806
Jacobs, F. S., B. S. A.	178	Togo, Admiral	810	Turkey-raising, about	497	Form in the show-yard	911
Jersey bull, English-bred	497	Tree, ideal shelter and ornamental	184	Turkeys, profit in	847		
Joyful	881	Tree, young, growth checked by wire band	336	Two dollars' worth of eggs from \$1 worth of feed	412	Galloway, points of a typical	331
Judging horses on fair day, Portage la Prairie	145	Trout Creek Wanderer	418	Utility breeds, list of	459	Get them off	617
Judging two-year-old bulls at Calgary Show	949	Vampire	43	Vegetables for poultry	770	Gaitre in lambs	180
		Ventilation, Grisdale system of	618	White Wyandotte as a farmer's bird	411	Grade Durham as a dairy cow	288
Knight of Glamis	221	We've seen them more anxious	10	Winnipeg Industrial Exhibition Association	338	Grade bulls, no excuse for	653
Lake near Agricola, N.-W. T.	80	Werner, Mr.	258	Winter feeding	48	Grade stock breeders' opportunity	689
Lawrence-Kennedy milker	656	Where small fruits flourish—Portage la Prairie	49	Winter, caring for hens in	257	Hartney, stock-feeding operations at	8
Lawrence-Kennedy teat cups	656	Whitewall Fashion	695	Winter, layers, a house for	416	Hereford, a good word for	406
Leslie, Mr. John	186	Why the hens don't lay	770			Hereford, advice to range men re	290
Lewis Gabriel	886	Williamson, A. E., V. S., Winnipeg	731	Abortion in cows, compressed yeast for	574	Herdwick sheep	333
Linevitch, General	841	Wood Baronet	876	Abortion in cows, treatment of	575	Hog to raise, and the price obtained for it	618
Live-stock and sale pavilion at C. P. R. stock-yards	773	Zebra	621	Agricultural Society prize-list revision	451	Horns, to prevent growing	913
Live-stock and sale pavilion, floor plan	773			A hint to fitters of stock for auction sales	574	Inbreeding, limitations to	948
Live-stock Exposition, Chicago, new home of	839			Aids in raising colts	913		
Lonk ram lamb	288					Jerseys, scale of points for	531
Lord Kimberley	951					Judging competitions at Chicago, live-stock	8
Luther Burbank	953					King Edward, farmer	81
						Lands, care of the	453
Magrath, Alta., some students at Stock-judging school	449					Leicester, the English	452
Martin, W. E., V. S.	660						
Mary had a little lamb	761						
Maconnald, A. B., New Oxley, Alta.	804						
Matthews, R. G., Macleod, Alta.	805						
McGivray, V. S., M. D. V.	529						
McMillan, Vet.-Capt. Adam, V. S.	622						
McKinlay, S. M., Niuga, Man.	694						
McArthur, D. A., V. S., Hartney	694						

Lessons for the meat producer from the shows of 1904	454	Liability for stallion service	709	Whitewash	809
Live stock, study your	530	License to sell liquor	159	Wheat, wants seed of an early	435
Live-stock associations, popularize the	727	Life insurance, difficulty re	163	Wheat chop	510
Lonk sheep	289	Lien on colts by stallion owner, re	266	Wind-breaks	97
Lumber circles, activity in	689	Lien on machinery	388	Wife's rights	159
Masculinity, one indication of	530	Lien note, power of a	426, 709	Wire as a trap, leaving	383
Market, competitive live-stock, wanted at Winnipeg	727	Lien on homestead	678	Work in B. C.	566
Meat products, prices and consumption	144	Lien note, judgment on	709	Wolf hounds, sale of	931
Meat, a study in	216	Lice on cattle	471	Yoke or harness for oxen	61
Meat, to mark the	333	Line fence burned	787		
Mexican cattle	330	Lost animal	25		
Mexican cattle, opinion of ranchers re	253	Loans on life assurance	309		
Mexican cattle, beef buyer's testimony re	289	Loss of land	788		
Mexican cattle, Pat Burns re	290	Locating well	861		
Mexican cattle gets the coup de grace	453	Local improvement district, re	896		
Milk, learn to	653	Making a living off a small farm	858		
Molasses for live stock	530	Measuring hay	309		
Mullins on the 1904 cattle trade	7	Minor buying implement	321		
Non-breeders, a plea for	291	Miller's legal toll	899		
Orphan stock, rearing	841	Misrepresenting land	862		
Oylook for beef cattle	762	Mosquito preventives	238		
Our Scottish letter..44, 112, 216, 368, 762, 806		Moving schoolhouse	862		
Oxford County show	878	Mohair, where is a market for?	792		
Packers, a question for the	251	Mohair, re sale of	858		
Packer's hint to increase profits on pork	289	Naturalization in Canada	549		
Parents' influence on progeny	841	Naming farm	632		
Pertinent questions and up-to-date advice given 40 years ago	406	Neighbor's chickens	678		
Pedigree, what constitutes a good	82	Number of mares for a stallion	556		
Pedigree, an expert's testimony on	452	Ownership of hay	812, 551		
Pigpen, plan of	369, 454	Ownership of cow	383		
Pig troubles, cough and worms	8	Parliamentary procedure, standard Canadian work on	309		
Pigs, rates of gain in	530	Paying for culvert	320		
Pine tar, keep some	253	Painting plows and drill shoes	714		
Pork-packing in the country	617	Peculiar case	476		
Prof. Shaw on stock-breeding	947	Pedigree of a Clydesdale stallion	745		
Predetermining the sex of animals	806	Pimples on mare	714		
Preventing disease and lice	911	Planting trees	632		
Rape growing necessary for production of cheap pork	81	Poisoning gophers	549		
Rape as a food for pigs	576	Potato beetle	931		
Range bulls in the Territories	252	Poultry-raising establishment, site for	95		
Range conditions changing	948	Poultry books	126, 233, 514		
Registration standards	331	Preserving meat in summer	435		
Regenerative power in animals	727	Press attachment, new	745		
Relation of the Alberta Stock-yards Co. to live-stock auctions	727	Question of conception, a	792		
Romney Marsh sheep	44	Rape, how to handle	274		
Roscommon sheep	574	Rape, questions re	383		
Ryeland sheep	453	Railway compensation	312		
Salt in barrels, care of	452	Railway killing cattle	861		
Salt for cows, amount of	454	Ration for cows	320		
Senate vs. embargo	574	Raising the foal by hand	792		
Selling stock by correspondence	912	Raising two foals	829		
Seed fair and poultry show at Neepawa	367	Registration of a stallion	782		
Sheep on a wheat farm	495	Requirements to teach	430		
Sheep racks	252, 453, 762	Responsibility for an incubator note	476		
Shropshire sheep	112	Responsibility for debts contracted in the U. S.	513		
Shorthorns, the outlook for	145	Receipt for mortgage	931		
Show sheep, feed and care of	251	Riding colt	426		
Shorthorn breeders, a meeting called	251	Right to entertain	430		
Shorthorn cows, some good advice re handling	761	Right of way	514		
Shipping crates, making	949	Ringbone	709		
Smithfield block test	333	Roup	430		
Sow at farrowing, the	407	Roads in Assinibola	383		
South Devon sheep	495	Road allowances, the law re	551		
Steer feeding, advice by Agriculturist Grisdale	216	Root-house, building	551		
Stock foods in pork production	406	Sale of farm	709		
Stock food experiments, Dominion agriculturist on	575	School taxes, re	233		
Suffolk sheep	8	School, wants a	233		
Supplement the succulence	727	Seeding to grass on low-lying meadow	195		
Tamworth pig, the	144	Second homestead, re	266		
Tank, how to build	530	Seizure for debt	507		
Territorial Dept. of Agriculture and live-stock improvement	179	Shoe or disk drill	97		
The man who succeeds	144	Sick dog	435		
Three-horse evener	531	Soil cultivation in B. C.	274		
They must have our cattle	912	Sowing grass seed in brush	634		
Training pointers and setters to work on prairie chickens	494	Spelt as hog feed	271		
Tuberculosis, inoculating against	252	Storage of hay	511		
Tuberculosis, Principal Dewar on eradicating	576	Stammering	233		
Welsh ram	252	Steam plow, would use	232		
Welsh cattle	368	Steam plowing	310		
Weaning pigs	726	Stable plan	310		
Wensleydale sheep	574	Stretching wire	510		
Western Stock-growers' Association	654	Stags, no law against	678		
Western Stock-growers' convene	763	Sunday work	677		
Winter treatment of live stock	80	Supplying contractor	678		
Yorkshires get a knock	575	Taxidermy, book wanted on	233		
		Taxidermy, book on	426		
		Tanning hides	384		
		Telephone line for farmers	233		
		Timothy, growing	551		
		Treating seed	383		
		Trees to plant	195		
		Trees	383		
		Turnips or mangels	632		
		Turkey eggs, wants	706		
		Unsatisfactory heifer	476		
		Vaccination, re	430		
		Wages, dispute over	426		
		Wages, agreement upon	974		
		Well-drilling machinery	320		

Grease	678	Lymphangitis	600, 858	Pyæmia in cow	25	Stiff leg	353
Heaves	201	Malignant tumor	287	Quarter-crack	353	Stallion, to increase procreative powers of	431
Horse blows its nose	475	Mange and worms	271	Qualifications to practice as V. S. ...	25	Sweating, excessive	28
		Mange, probably	308	Queries re cattle diseases	232	Swelled fetlock	161
		Mange	550			Swollen knee	279
Inappetence	555	Marasmus	471	Retention of afterbirth	201, 635, 750	Swollen hock	272
Indefinite case for diagnosis	513	Mare does not lie down	473	Ringworm treatment	25, 201, 237, 277		
Indigestion	317, 353, 554, 555, 744	Malpresentation of fetus	671	Ringbone	130, 394, 635, 786	Tapeworm in horse	387
Indigestion in sow	556, 862	Miscellaneous	278, 475, 744	Roars	898	Teeth, examine his	29
Indigestion in a foal	232	Milk fever not a germ disease	353			Thrush	632
Inflammation of the uterus	858	Miscellaneous	898	Sallanders	390	Throat trouble	26
Influence of a previous impregnation	431	Muscular atony and nervous irritability	556	Salivation	471	Thumps	236
Infectious bronchitis	236	Mud fever	164	Scurfiness of the legs in drafters	858	Thoroughpin	600, 898
Infectious abortion	273	Multiple abscesses of udder	202	Scratches and a condition powder	635	Tongue lolling	741
Inversion of uterus	902			Scratches	67, 394	Tongue loller	933
Injury, result of	26	Nasal gleet	61, 201	Scratches on filly	394	Tuberculosis, suspects	25, 555
Injury to colt's neck	69	Nasal discharge	552	Scirrhus cord, probably	271	Tuberculosis	825
Injury from a fork tyne	426	Navicular, probably	741	Scales from burns	602	Tumors	394
Injury to fetlock	426	Nettle rash	860	Scouring in an ox	635	Typhoid influenza	308
Indolent sore	350	Non-appearance of œstrum	202	Septic infection followed by mammitis	28	Typanitis	902
Inflammation of the stomach	387	Nymphomania in mare	668	Sexual evidence in abeyance	195	Umbilical hernia	427
Influenza	744			Serous abscess	21	Unthrifty colts	26, 555
Inherited bad feet	707	Obstruction in milk duct	712	Shoulder bruises	25	Unthrifty heifer	317
Inversion of the uterus	674	Obstruction of the gall	195	Shoulder tumor	860	Unthrifty cow	601
Itchy legs	69, 164	Obscure lameness	473	Sick mare, re	858	Unthrifty bull	671
Itchy skin	202, 384, 437	Occult lameness	511	Sidebones	933	Uterine discharge	61, 236, 794
		Edema	277	Skin disease	61, 513, 601, 712	Vaginal discharge from cow	25
		Orchitis	860	Small hoofs	600	Veterinary book	272
Knee-sprung	668	Opt of condition	272	Sores on heifer's legs	387		
		Ox, injured	29	Sore eyes in cattle	273	Water witching	25
Lame mare	60, 600	Paralysis in sow	707	Sore shoulder and tumor	933	Warts	273, 387, 474
Lame horse	164	Partial paralysis	793	Sore neck	966	Washy driver	350
Lame cow	271	Periodic ophthalmia	130, 201	Swelling on stifle	793	Washy mare	550
Lame sheep	967	Pot-bellied calves	934	Swelling on leg	793	Wasting of muscles due to injury	426
Lame in front	431	Prepotency of Aberdeen-Angus	741	Sprained fetlock	237	Weed or lymphangitis	798
Lampas	67	Premature activity of lacteal apparatus	164	Spavin	62	Wind-puffs on horse	387
Lame behind	858	Premature activity of mammae	600	Sprained tendons	635	Worms	25, 69, 164, 277, 398, 782
Lameness	902	Pus formation in the sinuses	475	Sprain	707	Worms in dog	161
Lameness	902	Puffs on knees	933	Stalks when standing	26		
Leucorrhœa	25, 967			Strangles or distemper in colts	273	Yeast, use of for abortion	637
Lice	25, 201						
Lockjaw	393						
Lupp jaw	234, 353, 387, 427, 860						
Luxation of the patella	67, 437						
Lymphangitis in mare	317						

Cockshutt Plows and Disc Harrows



Cockshutt Disc Harrow.

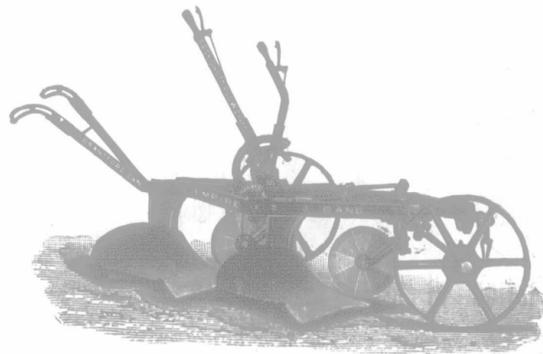
Our Disc Harrows are strong and durable.

THE FRAME is made in one piece from heavy T steel.
SCRAPERS have steel blades and scrape the disc perfectly.
BEARINGS—The bearings are made out of hard maple soaked in oil, and can be quickly and cheaply renewed.

Satisfy the Dealer and the Customer

The Empire is the strongest and best-working light gang plow on the market. It will clean in any soil. Three horses will handle it anywhere. In buying the Empire you get your money's worth.

Breaker-bottoms supplied if desired.

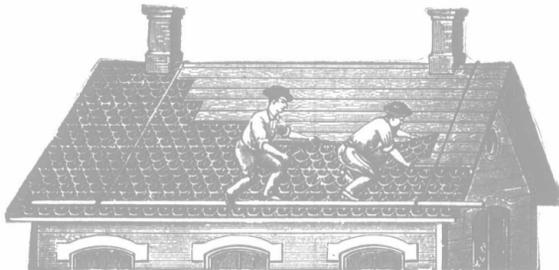


Empire Gang Plow.

COCKSHUTT PLOW COMPANY, LIMITED, Winnipeg, Man.
Factory: Brantford.

Pedlar's Steel Siding and Shingles

At \$2.00 and \$2.55 per 100 Square Feet



Painted red on both sides. Most durable and economical covering for Roofing or Siding for Residences, Houses, Barns, Elevators, Stores, Churches, Poultry Houses, Cribbs, etc. Easier to lay and will last longer than any other covering. Cheaper than wood shingles or slate. No experience necessary. A hammer and snips are the only tools required. It is semi-hardened high-grade steel. **Brick or Stone Siding** at \$2.00 per 100 Square Feet. **Pedlar's Patent Steel Shingles** at \$2.55 per 100 Square Feet. Also Corrugated Iron, Painted or Galvanized, in sheets 98 inches long. **Beaded and Embossed Ceilings. V Crimped Roofing.** 2,000 designs of Roofing, Siding and Ceilings in all grades. Thousands of buildings through the Dominion covered with our Sheet Metal Goods, making them

FIRE, WATER AND LIGHTNING PROOF.

Send in your order for as many squares (10x10 feet) as you require to cover your new or old building. The very best roofing for this climate. We can supply **Kave Trough, all sizes, Corrugated or Plain Round, Conductor Pipes, Shoes, Elbows, Spikes, Tubes.**

All goods shipped day after order is received. We are the largest concern of the kind under the British flag. Established 1861. Capital invested \$150,000.00.

THE PEDLAR PEOPLE, OSHAWA, ONT., CANADA.

MONTREAL, Que., OTTAWA, TORONTO, CALGARY, Alta., VANCOUVER, B.C.
767 Craig St. 423 Sussex St. 50 Yonge St. 201 7th Ave., E. 615 Pender St.
Write Your Nearest Office.

Senega Root

Ship us your Senega and turn it into money while prices are high. We predict low value in near future.

THE LIGHTCAP HIDE & FUR CO., Limited

Dealers and Exporters of Hides, Pelts, Deerskins, etc.
Northern Furs and Senega.

Highest Prices, Prompt Returns. 172 KING ST., WINNIPEG, MAN.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

Sunshine Furnace

Don't Shovel Ashes



Not one make of furnace in twenty is supplied with an ash-pan.

Without an ash-pan the ashes must be shovelled into a pail or some other receptacle for removal—means dust in the eyes, ruined clothes, extra work; a dirty disagreeable job—the meanest part of furnace tending.

The Sunshine Furnace has an ash-pan which catches all the ashes, and slides in and out easily. Has two handles for carrying. No shovelling, sweeping or dirt.

This is only one of a dozen good features possessed by the Sunshine Furnace, none of which are found on any other furnace.

McClary's

London, Toronto, Montreal, Winnipeg, Vancouver, St. John, N.B.

TO SECURE THE BEST RESULTS
Place an Ad. in the Farmer's Advocate

Western Canada's Great Industrial Exhibition

WINNIPEG, JULY 20-28, 1905.

\$50,000 in Prizes and Attractions

Reduced Fares on All Railways.

Seven Days' Racing.

PRIZE LISTS AND ATTRACTIONS PROGRAMMES MAILED ON APPLICATION.

F. W. DREWRY, President.

R. J. HUGHES, Sec.-Treas.



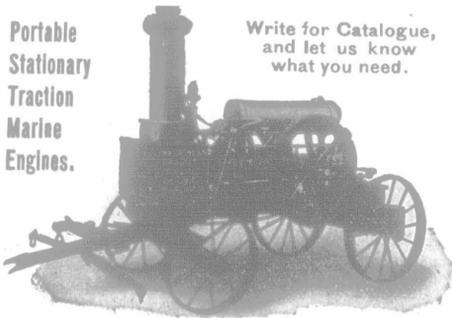
Satisfaction or Money Back

Out of 3,000 wigs and toupees sold to bald men in the West, we supplied 65 per cent. by mail, and although we are ready and willing to return purchase price in full for any complaint, we have not been asked to do so in a single instance. Bald men should not allow the ill-appearance of some wig they have seen to incur their prejudice against all hair creations, for our work is of a decidedly superior character—the kind which is recognized as a work of nature, not of man. Our booklet on the subject is interesting. Write for it.

MANITOBA HAIR GOODS CO.,
301 Portage Ave., WINNIPEG, MAN.

Portable
Stationary
Traction
Marine
Engines.

Write for Catalogue,
and let us know
what you need.



and we debited the account under this item with \$15, engine oil, \$2; total, \$36.80, or \$24.00, including extra labor, amounted to \$169, or \$3.75 per 100 bus., wear, tear and renewals not taken into account, which the writer considers nominal."

The engine used was a McLACHLAN 10-horse power, manufactured by
THE McLACHLAN GASOLINE ENGINE CO., LIMITED,
TORONTO, ONT.

Mail Address, 1500 King St. W. Office and Factory, Lakeshore Road

On March 22, 1905, Mr. Chas. B. Phillips, Asker, N.-W. T., wrote to W. C. Wilcox & Co., box 818, Winnipeg, agents for the McLACHLAN GASOLINE ENGINE CO., Ltd., as follows:
"Possibly it may interest you to know the result of last season's threshing. Apart from the economical feature, the convenience of being able to thresh at our own time, as well as having so few hands about, is to ourselves a great consideration. We were 69 hours threshing 4,400 bus. of oats and barley, averaging about 75 bus. per hour. The consumption and cost of gasoline was 45 gals. @ 44c.—\$19.80, or per hour, 1 gal., costing 33c. The extra labor employed above that regularly on the ranch was two men for a fortnight. We were not threshing continually, but regularly on the ranch was two men for a fortnight. We were not threshing continually, but regularly on the ranch was two men for a fortnight. We were not threshing continually, but regularly on the ranch was two men for a fortnight."

To Farmers

THE BURR STEEL SELF-LOCKING SAFETY LIFT.

You can do two men's work, and you need not spit on your hands. Write us for prices, also on all kinds of

Wire Fencing.

Muro Wire Works, Limited,
Winnipeg, Man.

WINDMILLS



Grain Grinders,
Gas & Gasoline Engines,
Tanks,
Bee Supplies,
Etc.

WRITE FOR CATALOGUES.

Gould, Shapley & Muir Co., Ltd.
BRANTFORD, CANADA.

WIND WATER AND FIRE PROOF STANDS SEVERE FROST ROOFING

ALL WOOL MICA ROOFING

MANUFACTURED IN CANADA, ESPECIALLY TO WITHSTAND THE SEVERE CONTRACTION OF THE FROST.
Send stamps for samples and booklet.

Winnipeg, May 22nd, 1899.
W. G. Fonseca, Esq.
Dear Sir,—Replying to your enquiry, would say that the All-Wool Mica Roofing that you supplied us with four years ago has given satisfaction. (Signed) BLACKWOOD BROS.

W. G. FONSECA & SON,
AGENTS FOR WESTERN CANADA,
56 FONSECA AVE., WINNIPEG

PENMANSHIP Stenography and Book-keeping. Write for complete course for home study in all three. Insures a beautiful hand. Catalogue free. NATIONAL BUSINESS COLLEGE, LTD. E. J. O'Sullivan, C. E., M. A., Prin., Winnipeg, Can.

FARMERS:

Are you shipping your cream to us? If you are not, why not try us, and you will see that we will give you better satisfaction than you ever got, for we

GUARANTEE { HIGHEST PRICES.
CORRECT TESTS.
PROMPT PAYMENTS.

Write us for our latest circulars.

Crescent Creamery Company
367 Hargrave Street, Winnipeg, Man.

ALBERTA LAND CO.

HEAD OFFICE
818 CENTRE ST.
CALGARY, ALTA

OUR LANDS ARE IN THE WINTER WHEAT BELT OF ALBERTA—WHERE GOOD HOMESTEADS ARE STILL AVAILABLE

PRICES \$5 TO \$12 PER ACRE.

WRITE US FOR SAMPLES OF GRAINS AND INFORMATION PROMPT REPLIES



\$4.75 WATCH \$4.75

Our offer for gold-plated open-face or hunting lady's or gent's watch still holds good. Movements and case guaranteed. For the next two weeks we are also offering a HEART-SHAPED LOCKET with raised horse head through horse-hoe of Rhinestones. Locket is gold-filled, guaranteed for five years. Only 75 cents. Chains, Guards, Fobs, Chatelaines, etc. Best value in the West. Liberal commission to agents.

THE NORTH WEST WATCH SPECIALTY CO.,
Box 345, 639 Elgin Ave., Winnipeg.

ADVERTISE IN THE ADVOCATE

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

PAROID

Sit down today and send us your name. We will send you a book that tells about roofing and how it is made. We'll tell you our story honestly and send you a sample of the roofing. It will pay you. Write and see.

F. W. Bird & Son, Makers.
(Originators of the complete roofing kit—fixtures in every roll.) Established in 1878.
Hamilton, Ontario, Canada.

ROOFING

FREE!

Information as to preparation of spraying materials, time to spray, etc. The wonderful

AUTO-SPRAY

used for painting, as a fire extinguisher, applying whitewash, disinfectants, etc., to buildings or animals. Costs a trifle, should be in every house. Sells at sight. Agents wanted. Manitoba and Territories. Write postal to

BUCHANAN NURSERY CO.,
St. Charles, Manitoba.

THE Kelowna District

OF THE FAMOUS Okanagan Valley, B. C.

Has a reputation for its mild climate, fruitful soil and beautiful scenery. Write for information about the conditions of the country and list of farms of all descriptions.

J. COLLINS,
Estate Agent. Kelowna, B. C.

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.*

VOL. XL.

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.

NO. 666.

WINNIPEG, MAN. JUNE 28, 1905. LONDON, ONT.

Editorial.

To College or Not?

A young man in Western Manitoba sends us the following letter:

"To the Editor 'Farmer's Advocate':

"I am thirty years of age, and lack sufficient capital to start farming. I would like to increase my knowledge of live stock, particularly draft horses and Shorthorn cattle. Would you recommend a short course at the agricultural college (I could only attend during the winter months), or would it be more advisable for me to secure employment with a successful breeder? I hope the college authorities will soon be in a position to publish some information regarding courses, fees, etc. I would be pleased to have an estimate of cost for attending, say from December to March. No doubt plenty of young men can attend regardless of cost; unfortunately with me the '\$' feature must be considered."

The question raised in this letter is one that constantly presents itself to young men who are anxious to improve their positions by acquiring knowledge that will enable them, through having a more intelligent idea of their work, to make the most of their natural abilities and their present conditions. We think it is pretty generally conceded that the larger a man's knowledge of farming, the better are his chances of making a success of his work. It used to be the popular opinion, and some people yet hold to it, that all a farmer needed to know was "how to work," that a man's success in farming was measured wholly by the amount of rough work he could do, and that thorough scientific knowledge had no application in the operation of a farm. This mediæval belief, we think, is being dispelled. But, of course, one must not run to the other extreme and expect that an agricultural education will of itself make a successful farmer of any boy upon whom it may be grafted. It all depends upon the individual. If a young man has that within him that makes him ordinarily successful as a farmer, an agricultural education most naturally makes that man a greater success; but if a boy has no natural bent for farming, no amount of study of agricultural subjects will make a successful farmer of him, although he may work away on his land and make a fair living.

In farming, as in any other pursuit, knowledge is power, and in the case of the writer of this letter, we would advise that he add to his power by whatever means his circumstances will permit. The method he suggests would probably be the best. The short courses are calculated to give an intelligent idea of the why and wherefore of the ordinary farm practices, and serve an excellent purpose in that they make the person who takes them more valuable on any farm. But we have known plenty of young men who have been situated just as our correspondent, who have entered agricultural colleges, and have worked their way through to graduation. These men, of course, were possessed of a lot of determination, were apt at learning, and were endowed with a large supply of "horse sense," which would probably make them successful in any line of work; but any young man who shows a determination to climb up will always find the ways and means to do so.

We understand that the Manitoba College will be prepared to give a short course the following winter on live-stock subjects, grain-breeding and selection, dairying, etc. The cost of attending such a course will include board, a few textbooks, and possibly tuition fees—a decidedly low-priced course, considering the advantages that should come from it.

The Service of Fairs.

Within a few weeks the exhibition and fair season will have opened.

Fairs are arranged to cater to as many of the different classes of humanity as is consistent with the nature of the event, so that, if one would spend his time at a fair to the best advantage, he must use a little discrimination in the disposal of his time to the examination of the different exhibits and features. The word "fair" conveys a meaning just in accordance with the manner in which the event is seen. To some it means a race meet, to others a live-stock show, to others a collection of implements, musical and other instruments, works of art, etc., etc., to others a horticultural display, and, to a great majority, it means the aggregation of all these features, with the addition of howling fakers, grinding organs or circus features; the live stock, however, generally at the far side of the grounds, and, in the minds of some, scarcely worth seeing. Such an impression is far from the one intended to be conveyed when fairs were instituted, and toward which Government grants are made. Primarily, fairs are conducted to afford an opportunity for the display of meritorious products, to award prizes for the best, and to give those who are interested in such production an opportunity to acquire information that will enable them to improve in their methods of production, whether it be for exhibition or not. Incidentally, other features have developed at the fair, some, such as manufacturers' displays, being also of an educative nature; others are purely for entertainment, and others are on the grounds for the express purpose of getting money from the visitors without giving value in return. With all these features clamoring for the visitors' attention, it is well, before visiting the fair, to lay some kind of a plan of the method of spending the time while there.

In the first place, one should read the prize-list or programme of the events, and then decide which of these would be the most useful and interesting to him. When that is decided he can arrange the order in which he will visit the different features, and the length of time he has to spend at each.

Perhaps to the majority of people who visit the fair with the express purpose of receiving information in as many different branches as possible, the display of machinery, implements and household instruments is of the most interest. Machinery of all kinds has a peculiar fascination for most people, and with our present scarcity of farm help, labor-saving machinery is of increased interest. With more general use, and the ever-increasing varieties of such machines as cream separators, manure spreaders, hay loaders, road-making machinery, electrical apparatus, pianos, sewing machines, etc., there is a corresponding increase of study required, in order to determine by comparison which article is most suited to the individual needs. An opportunity for such comparison is afforded at the fair, and at no place is there a better opportunity for comparison. On such occasions the visitor is privileged and is even requested to ask as many questions as he may choose regarding the machinery or other products on exhibition.

In the live-stock departments many items of interest can be picked up. Among the draft-horse breeders just at present there is an effort being made to develop horses with more size, along with good quality of bone. An examination of the rings as these horses are being judged, affords the very best possible opportunity to become posted on the approved type of the modern drafter. He will find the winners in every case where there are good horses shown and good placing done, a type that commends itself to the

needs of the time. Among the cattle there are equally interesting features to notice. How many men are there that can tell at a glance whether a black animal is a Galloway or a Polled Angus, and identify offhand cattle of the other breeds? The country is yet full of people who have a very faint idea of a model modern butcher's steer, and who do not appreciate the value of special-purpose stock. These are the people who should use their time at the fair to become informed upon such subjects. The bacon hog is another of the modern productions in stock-breeding that is none too well known. Knowing the bacon breeds does not perfect one's knowledge of this modern money-maker. A continual study of his form, irrespective of color, is required, in order that every hog upon the farm may be as long, as deep, of as good quality, and as economical a feeder as the prizewinner at the fairs. Turning to the pens, there are other lessons to be learned. The distinctive characteristics of the different breeds should be familiar to every person interested in farming, yet it is safe to say that not more than one out of ten of the visitors to an ordinary fair can tell at a glance whether a sheep is a Lincoln or a Leicester, a Shropshire or an Oxford.

Turning from this to the dairy department (where such is found) the buttermaker will be interested, particularly just now, with the method of packing butter for distant markets; the farmer will see here the different separators, churns, butter-workers, etc., at work, and can form intelligent ideas of the practicability of these for his own case.

The seeing of these and many other features which may suggest themselves, is a profitable way in which to spend the limited time at the fair; and with so much of this kind of sight-seeing to be done, the wonder is that the side-shows and circus features of a fair, receive any attention at all. If the freaks and the fakers, the grandstand acrobat and the "hoss trot" are the big things at the show you attend, then make a good display of your common sense by spending your time looking at something else.

The Mission of the Cream Separator.

Elsewhere in this issue of the "Farmer's Advocate," Miss Laura Rose gives an interesting and helpful review of what the centrifugal cream separator has done for Canadian dairying. She has not overestimated the advantage that has come to the buttermaker through the application of this wonderful discovery whereby cream can be immediately extracted from milk, instead of depending upon the slow process of gravitation, with its attendant disabilities. At a Quebec dairy meeting, Mr. A. A. Ayer, the Montreal produce exporter, condemned the farm separator system in creamery buttermaking, and commended the plan of having the whole milk separated at the factory, or, at all events, at large skimming stations. Where the milk supply is reasonably adjacent to the factory, the whole milk system has much to commend it. Miss Rose presents the case from the viewpoint of the farmer, and we apprehend that under a very wide range of conditions, he will be disposed to agree with her. In our judgment, the farm separator is here to stay. The problem is how to make the best of it. It is a permanency, because of its advantages to the farmer in securing more fat from the milk, a better quality of cream for farm buttermaking or other purposes, and what, with many, counts even more, because it assures sweet, fresh milk, for which the rising generation of calves and pigs are devoutly thankful.

Miss Rose does not shut her eyes to the

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN MANITOBA
AND N.-W. T.

PUBLISHED WEEKLY BY
THE WILLIAM WELD COMPANY (LIMITED).

WALTER E. GURR, BUSINESS MANAGER,
A. G. HOPKINS, D. V. M., B. AG., EDITOR,
F. B. JACOBS, B. S. A., ASSOCIATE EDITOR.

OFFICES:

IMPERIAL BANK BLOCK, CORNER BANNATYNE AVE. AND MAIN ST.,
WINNIPEG, MANITOBA.

BRANCH OFFICE: CALGARY, ALBERTA.

EASTERN OFFICE:
CARLING STREET, LONDON, ONT.

LONDON (ENGLAND) OFFICE:

W. W. CHAPMAN, Agent, Mowbray House, Norfolk Street,
London, W. C., England.

1. THE FARMER'S ADVOCATE is published every Wednesday (24 issues per year). It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most profitable, practical, reliable information for farmers, dairymen, gardeners, and stockmen, of any publication in Western Canada.
2. TERMS OF SUBSCRIPTION.—In Canada, United States, England, Ireland and Scotland, \$1.50 per year, in advance; \$2.00 when not paid in advance. All other countries, 12s.
3. ADVERTISING RATES.—Single insertion, 15 cents per line, agate. Contract rates furnished on application.
4. THE ADVOCATE is sent to subscribers until an explicit order is received for its discontinuance. All payments of arrears must be made as required by law.
5. THE LAW IS, that all subscribers to newspapers are held responsible until all arrears are paid and their paper ordered to be discontinued.
6. REMITTANCES should be made direct to this office, either by Money Order or Registered Letter, which will be at our risk. When made otherwise we will not be responsible.
7. THE DATE ON YOUR LABEL shows to what time your subscription is paid.
8. ANONYMOUS communications will receive no attention.
9. LETTERS intended for publication should be written on one side of the paper only.
10. CHANGE OF ADDRESS.—Subscribers when ordering a change of address should give the old as well as the new P. O. address. A couple of weeks necessarily elapse before the change can be made, and before the first copy of The Farmer's Advocate will reach any new subscriber. All subscriptions commence with the date of the first copy received.
11. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve the ADVOCATE, Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
12. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

Address—THE FARMER'S ADVOCATE, or
THE WILLIAM WELD COMPANY (LIMITED),
WINNIPEG, MANITOBA.

obstacles likely to arise, but she credits the Canadian farmer with sufficient intelligence and determination to overcome them. Nor does she stop there; she sets forth in a very practical way how the farm separator should be used, and if her advice is faithfully carried out, we believe it will add materially to the life and efficiency of the separator on the farm, and also assist the creameryman most materially in his efforts to produce a uniform product of excellent quality under the gathered-cream system.

Regulation of Railway Rates.

As at present constituted, provision is made for an appeal from the decisions of the Canadian Railway Commission to the Governor-in-Council on matters of fact, and to the Supreme Court on matters of law. Thus far our new Railway Act has proven an efficient instrument, doing useful work. Some day a pronouncement will be made, probably on a most important matter, which the railways will resist, but there is, apparently, no good reason for any protracted delay in the redress of a grievance that should be summarily disposed of. Our American friends are realizing the need of a more complete subvention on the part of their Inter-State Commerce Commission, an instrument which, although it has done much to reform high rates, discrimination, and other transportation abuses, finds itself hampered by the courts, which virtually have the power of veto on all its decisions. Note the remarks of President Roosevelt, addressing the Chamber of Commerce, at Denver, Col., May 8th. After advocating the policy of extending the powers of the Commission and of giving it, particularly, the power to fix

rates and have those rates go into effect practically at once, he continued:

"In the days of the fathers of the oldest among you, the highways of commerce for civilized nations were waterways and roads open to all who chose to travel upon them. Now the typical highway of commerce is the railroad, and under this changed system we see highways of commerce grow up, each of which is controlled by a single corporation or individual; sometimes several of them being controlled in combination by corporations or by a few individuals. When such is the case, in my judgment, it is absolutely necessary that the nation should assume a supervisory and regulatory function over the great corporations, which practically control the highways of commerce."

And a couple of days later U. S. Secretary Taft, at a dinner given by the American Railway Association, emphatically declared that railway rate legislation must come, and if the railway men of the country were wise they would aid, not hinder it; that the sentiment of the country was such that failure of proper regulation meant a campaign on the subject that would do no good to the railways. Though positively against Government ownership, he reminded his hearers that the public have rights which must be regarded. "You cannot run railroads," said he, "as you run a private business. You must respond to the public demand. If there is danger of discrimination, then you must allow the establishment of some tribunal that will remedy that discrimination."

In Canada of late we have had the opportunity of witnessing the concern of a prominent railway man, lest the vested rights of capital should be ignored by the rapidly crystallizing public opinion, to the detriment of the country's development through the timidity of investors. No one wishes to deny the capitalist the legitimate fruits of his enterprise, but the conviction is warranted that the moneyed classes have displayed a signal capacity to look after themselves, that they have, indeed, through their sovereign privileges, obtained rather more than is coming to them. It is time someone has the temerity to remind the capitalists that the country has a vested right in the railroads, by virtue of the millions of dollars of subsidies granted them, to say nothing of the privilege the companies possess of levying on the commerce and industry of the community. By reason of the limited number of railways which a given territory can support, competition in land transportation is not usually a practicable remedy for grievances, hence the necessity for artificial control of a business which the ordinary laws of commerce are inadequate to regulate.

The franchises of the Canadian railways constitute an asset of enormous and ever-increasing value, and entitle the country to some voice in the regulation of tariffs which affect its prosperity more vitally even than that of the railways themselves. The carrying corporations derive, approximately, the same net profit from high rates on a small volume of traffic as from low rates on an increased volume, consequently they have no motive except good will to induce them to risk a dollar of possible revenue, by keeping rates low. Not so with the public, who have everything to gain from a reduction of tolls, and are thus interested in maintenance of rock-bottom charges. Only an impartial tribunal, with the most complete information and powers, is competent to adjust rates so as to secure to the public maximum concessions, without violating the legitimate rights of the railroad stockholders. Such an authoritative body we are supposed to have in the Railway Commission, and the country will expect it to exercise its functions with a fair but unflinching hand.

Do You Want a Situation?

WITH ONE OF CANADA'S LEADING FARMERS OR STOCKMEN? THEY ALL READ THE "FARMER'S ADVOCATE AND HOME MAGAZINE." AN ADVERTISEMENT IN OUR "WANT AND FOR SALE" COLUMN WILL NOT ESCAPE THEIR ATTENTION. SOME OF THEM WILL WANT YOU. TRY IT. SEE RATES UNDER THAT HEADING IN THIS PAPER. ADDRESS: THE FARMER'S ADVOCATE, WINNIPEG, MAN.

Horses.

The Indian Streak Endures.

In grading up of horses from the pony to some of the recognized types, some very peculiar incidents are noticed. In some cases, after two or three crosses the produce will resemble the sire in form, others in fore quarters, but still retaining a resemblance to the neche behind; in other cases the order is reversed, producing a horse heavy in the legs and hind quarters, but running light and narrow in front; again, the whole body will resemble the type toward which an effort is being made to breed, but the head will still retain the size and form of the original female foundation stock. The peculiarities are interesting to note, as they illustrate with what persistence characteristics, fixed as they are in the neche will adhere even when stallions of the recognized breeds are used for two or three generations.

On Developing Horses.

Anent the subject of developing conformation and speed in light horses, Prof. Redfield, the noted authority upon horses, recently wrote:

"The practical problem for the breeders of trotters is to develop for conformation at the time when changes of conformation are possible, and to develop for dynamics at the time when the greatest dynamic development occurs. This means that the young animal should be trained at the trot continuously and persistently, but never to an extent which is liable to cause a breakdown or impair its health in any way. This training should be for both speed and endurance, the former by frequent fast work, and the latter by long and continuous work at a moderate speed. It is preferable that these should occur alternately. While the animal is young these alternate periods should be short, each lasting but a few days, but as the animal grows older they may be lengthened, until, at the age of eight or ten there may be a month or more devoted principally to the production of speed, followed by a month or more devoted principally to the production of muscle."

In this connection the question might be raised, "Why should not draft stallions have a certain amount of work of the kind for which such horses are bred?" If work is required of light horses to bring out the best within them, surely the same principle will apply to drafters.

Draft Horse Breeding.

English farmers favor the Shire as the best horse for the farmer to raise for work and to sell. A Live-stock Journal correspondent thus urges the merits of Shire horse breeding:

It is evident, in the first place, that the best draft horse will be the last to feel the effects of the motor on the road, notwithstanding the fact that motor plows, wagons, etc., are already in the field. But there is one advantage in a sound young horse which a machine does not possess, viz.: that the horse increases in value up to six or seven years old, if it is in anything like good hands, which the motor never does, be it ever so skillfully handled, and there is a feeling of satisfaction about owning stock—whether living or dead—which is increasing in value which cannot be felt over that which is continually decreasing.

Further, the initial cost of setting up horseless machinery is considerable, and quite beyond the reach of a small farmer; whereas a Shire may be bought which breeds a £500 stallion, one such instance having come under the writer's own notice, and instances are recorded of a Shire foal being bought for less than twenty sovereigns which afterwards made a thousand. No horse-hater can claim similar results from a machine made of iron and steel, without entire reconstruction. In these days it becomes increasingly necessary for a farmer who wishes to make a living to stock his farm to the full, so that he can make the most of his produce without depending on receipts by the sale of hay and grain, and it is obvious that two or three roomy Shire mares will give as little trouble as anything else, either summer or winter, and, of course, they will cheerfully do most of the work needed on an ordinary farm.

With regard to selling, a good deal depends on the nature of the holding. If it is small, then it may be best to sell the young stock as foals, and for this purpose the best sires should be used for mating with registered dams, so that the youngsters are given every possible chance of turning out "trumps," and paying for the dam and fees twice over. But the owner of sound, low-grown mares, unregistered and on the small side, need not use any screw of a stallion that comes along. Rather select one with "feet, joints, and feather, size, soundness and activity," and try for a really good gelding, which will make its 90 gs. at the yard gate when five years old. It is some time to wait, certainly, but he can be out to work at two years old, after which he will earn his keep and "grow into

money," and certainly no better farm stock can be desired than those which will do this.

There is one great point in favor of the Shire, and that is his tractability. If haltered as foals, and at intervals afterwards, it is exceedingly rare that they give any trouble, even when the day of being harnessed comes, and it is a mistake to put that off too long, for no Shire, either male or female, is injured by doing a little light work when about two years old, and if so trained the collar may be put on at any time, and if distinction in other directions has been missed, the horse may still be profitable as a worker, and the mare as a combined worker and breeder.

Do Geldings Make a Better Appearance Than Stallions?

To the Editor "Farmer's Advocate":

I have read with some surprise the article by "Whip," in your issue of May 24th, re the subject of castration, and I cannot agree with his opinion, that from ten days to three weeks old is the most suitable time to operate. In my experience the aim of every breeder has been to have a gelding resemble an entire horse as much as possible, and there surely can be no question as to which has the most attractive appearance in harness or under saddle. No doubt when a "stag" is hitched with a mare the contrast is striking, but it certainly is not in favor of the mare. On the continent of Europe, stallions are almost universally worked and driven, and it is a rare thing to see a gelding on the streets. Were this the custom in America, we would hear fewer accounts of accidents from horses taking fright at automobiles, etc.

In my opinion a colt should be kept entire as long as possible; it will not only improve his appearance, but also his character. He will be pleasanter to handle, safer, more reliable in harness, and far more courageous and intelligent. If geldings have a better appearance, why are all the statues and paintings of horses copied from stallions?

Neither can I agree that age makes much difference in the danger of the operation, although I have never seen it attempted on anything under a yearling. I may add that in this part of the country we have passed the stage of leaving clamps on the cord for twenty-four hours, considering it an unnecessary cruelty. An emasculator is safe, simple, and not expensive, and it is high time it was universally used.

Maple Creek, Assa.

W. MACNAGHLIN.

Stock.

Prof. Shaw on Stock-breeding.

While on his recent Institute tour through Southern Manitoba, Prof. Thomas Shaw, of Minnesota, gave the following address on the principles of stock-breeding:

In the breeding of live stock, of whatever class, there are three natural laws which operate. These are: The law that like produces like in transmission; that like does not, always produce like on the law of variation; and the law of atavism. No one of these laws is so unvarying in its action that the exact character of the transmission can be certainly predicted beforehand. But it would probably be correct to say that the first of the three is apparently the most uniform in its action, and that the last is the least uniform.

The law that like produces like is the great sheet-anchor of the breeder. Were it not so, no substantial progress could be made. Breeding would be absolutely a game of chance. The breeder would be out upon a vast expanse of sea, without a compass or even a rudder. The principles that govern this and every other form of transmission are doubtless inflexible and unvarying, but the influences that determine the precise nature of the action of these principles are so many and so oftentimes so little understood, that absolute uniformity in results cannot be looked for.

It would seem correct to say, however, that uniformity in results may be looked for in proportion as transmission is potent. Transmission is potent in proportion to the prepotency of one or both parents. It will be prepotent in proportion to the purity of the breeding, to its duration, and to its intensity, and also in proportion to the inherent vigor of the parents. In the first fact is found a great argument for the invariable use of pure-bred sires, even when grading up. In the second fact are found the reasons why sires that have come from a long line of pure ancestry, especially, are to be preferred. In the third fact are found the reasons why males chosen from families judiciously bred in line are usually more prepotent than other pure-bred sires of the same breed. And in the fourth fact lies the wisdom of giving much attention to the indications of bodily vigor in a sire, as a probable guarantee of increased prepotency. But in choosing sires the danger lies in too much intensity of breeding, and must be shunned because of the evils that would result from the same. Individual vigor, in a marked degree, is one of the most important evidences that the intensity of the breeding has not, in that instance, at least, been carried too far.

Theoretically, equal prepotency on the part of

both parents would be more desirable than superior prepotency on the part of one, providing the individuality of both were equally good. But in actual practice little attention relatively is given to prepotency in the female as compared with the prepotency of the male, and very properly so, since the individual male, through the number of his progeny, exercises a far greater influence on the herd as a whole than the individual female. Viewed from this standpoint, the importance of individual prepotency in the female wanes. In fact, if such prepotency were antagonistic to the results sought from using a prepotent male, the absence of prepotency on the part of the female is to be preferred to its presence, since, in proportion as it was weak or absent in the female, just in that proportion would added improvement in the progeny come through the male.

The second law of breeding, viz., that like does not always produce like on the law of variation, furnishes the reason, but not the full explanation, as to why the progeny are not always like the ancestry. It might be supposed, on first thought, that because of the operation of the first law of breeding the progeny would be an exact mean between the parents, when the individual furnishings of the latter differed. But such a result never follows, since the exact measure of the prepotency in the two is never exactly the same. Other influences which affect variation are also usually present, such as pertain to different degrees of individual vigor at different ages, and because of different management. In these facts is found a partial reason for constantly recurring variations, but they do not account for all variations.

So constantly recurring are variations that some persons in their haste have said that the law

the limited number of instances in which they occur. Man has utilized these in the instance cited, but usually it is not desirable to perpetuate them; hence they do not call for much attention on the part of the breeder. It is with ordinary variations that he is chiefly concerned, and he should show much decision with reference to the discarding of specimens for breeding when the trend of variation is downward, and in saving those for future breeding when it is upward. It is far more frequently downward than upward, in unison with the natural trend of human actions in the absence of sufficiently potent counter-acting moral influences. This does not of necessity imply that the causes are the same in the two classes of instances. But that the trend of variation is more frequently downward than upward does not mean that more animals must be sacrificed in the herd than are retained in it, if improvement is to be continuous.

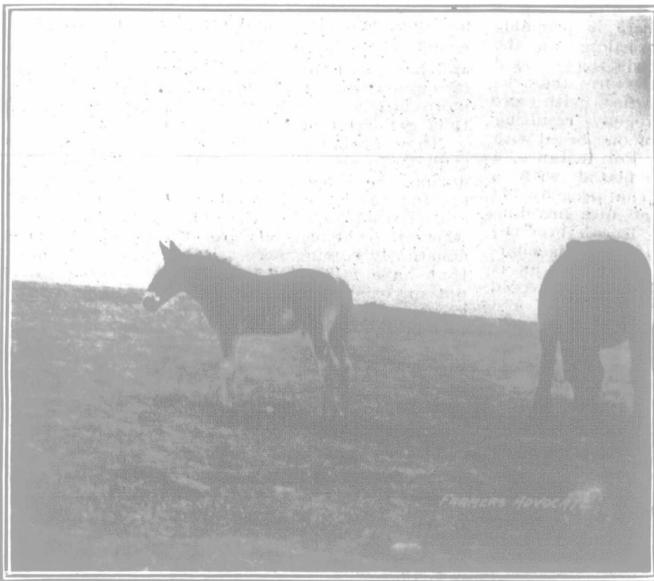
Atavism, the third law of breeding, refers to animals born into the herd possessed of characters which belong to ancestors more or less remote, and which it is not desirable to perpetuate. The white coloring of Shorthorns, the occurrence of the white belt in Galloways, the occasional red color in Angus cattle, and splashes of white on Berkshire swine on other parts than the forehead, feet and tip of tail, furnish illustrations. These are usually of less frequent occurrence with each succeeding generation; hence, with due vigilance in discarding animals thus characterized for breeding uses, the instances of atavistic transmission may be expected to grow less and less remote in the future. They should finally disappear. It is not meant, of course, that the atavistic transmission will cease to be operative, but that the transmission of those undesirable characters will disappear.

A grade, strictly speaking, is the offspring of a pure-bred and an animal of common or mixed breeding. Either the male or the female may be pure, but in practice the male is usually pure and the female of mixed blood. The reasons for breeding thus will be at once apparent, when it is remembered that to mate pure females with males of mixed blood would be to lessen the value of the offspring. It would, of course, be grading downward rather than upward. The importance of using pure-bred males and of good quality in all breeding, will be at once apparent to those who understand the principles that govern breeding.

Pure-bred sires are prepotent; that is, they have much power to produce characters in the progeny such as they themselves possess, because they are purely bred. This comes from a constant accumulation of similar blood units through continued pure-breeding. They will have this power in proportion to the length of the period during which their ancestors have been pure-bred, to the excellence of the animals in the near ancestry, to the closeness of the breeding in the same, and to the strength of the inherent ruggedness of the constitution and bodily vigor of the animal. A grade male cannot transmit his own good properties with certainty, because of the absence of concentration of similar blood units, arising from the mixed character of his breeding. He cannot be expected to transmit characters with any degree of fixedness which are not stable even with him, since time has not been given to make them so by breeding within straight blood lines, and the more mixed the breeding, especially of the immediate ancestry, the less uniform is the transmission of character by such a male.

In upgrading, the foundation females are usually much mixed in breeding. This does not render them objectionable for such a use, providing they have good and rugged frames. In fact, the more diverse the blood elements which they possess—that is, the more mixed the character of the breeding—the more quickly will improvement be effected through the use of a prepotent male, as the resistant power to the improvement effected by the male in the progeny decreases in the female with increase in the mixing of the blood elements which she possesses.

When good pure-bred males are used from the same breed in upgrading, improvement is rapid and continuous until that point is reached when, for practical uses, the progeny have reached the level of the breed from which the sires have been chosen. It is taken for granted that the feeding and management generally which accompany such breeding are in the main correct. When pure-bred animals of equal purity and strength are



Taking in the Situation on an Alberta Horse Ranch.

mated, the progeny will possess approximately 50 per cent. of the blood units of each. But in upgrading this does not follow. It cannot. The pure male has much more power, to effect change than the mixed female has to resist the same; consequently the progeny will bear a much closer resemblance to the male than to the female. This preponderance in resemblance will be in proportion as the power in the male, because of his purity, in breeding, to transmit properties, exceeds that of the female of mixed breeding to transmit the same. The sum of the properties transmitted by the male will be much greater than the sum of the properties transmitted by the female. The progeny will, therefore, not inherit simply 50 per cent. of the blood units from the male, but much more than 50 per cent. In some instances it may be 75 per cent.; when a pure male of the same breed is used in the next mating, this inheritance will not simply be increased to 87½ per cent., but to something over 90 per cent.; hence, in four or five generations of such breeding, the progeny will become possessed of nearly 100 per cent. of the blood elements of the breed from which the sires have been chosen. In other words, they should be as good, for practical uses, as the breed from which the sires have been taken.

The possibilities in improvement, and consequent increase in value of live stock, which this simple method of breeding will produce, are simply astounding. It is evident, therefore, that the farmer who refuses to use pure-bred sires is a loser because of such refusal, and the extent of his loss increases with increase in the extent of his breeding operations.

Much confusion exists in the minds even of many breeders with reference to the place for crossbreeding on the farm. In the highest and strictest use of the term, it may be said that a cross-bred is the progeny of two distinct pure breeds. As thus understood, there is probably no important place for crossbreeding on the farms of this country, for the breeds thus crossed are usually worth more in the pure form than the cross-bred progeny, but, using the term with more latitude, it may be applied to progeny resulting from the mating of a pure male of one breed with a high-grade female of another. For instance, a pure Aberdeen-Angus sire may be mated with a high-grade Skorthorn female. The progeny is still essentially a cross-bred. Let such breeding be continued and the process at length becomes akin to that of grading. Crossing of this character is commendable in many instances, as it does not destroy purity of breeding, as it would if both animals at the outset were recorded, and in many instances it produces improvement in the progeny. Should the progeny through straight upgrading lose more in size, for instance, than is desired, then it may be wise and beneficial to produce an out-cross by using males from some larger breed, and then returning to the usual line of breeding. For instance, should Shropshire grades become too small, because of environment or for other reasons, it may be wise to introduce one outcross of Oxford Down blood to increase the size, and then go back to the use of Shropshire sires. The common idea that a first cross improves, and that succeeding crosses deteriorate, is not always true. It is not necessarily true; much depends on the nature of the cross. It is frequently true when pure-breds are outcrossed, but it is seldom true when a pure-bred is crossed on a high-grade.

I desire to emphasize the great value of high individuality and high performance in the near ancestry of sires, or even dams, selected for breeding. Descent from a remote ancestor of great renown is of but little consequence, as in the intervening generations, the blood units inherited from him may have been practically eliminated by generations of crossing from other blood lines within the breed. To illustrate: The search is frequent at present for milking Shorthorns of Bates breeding, or at least of descent from such. But suppose four or five top crosses of Scotch Shorthorn blood have been made in the more recent generations, such females have but little of Bates inheritance left in them; and yet such animals are frequently advertised as milking Shorthorns because their ancestry of long ago were straight Bates in their breeding.

The breeding of live stock on the farm is a subject so simple in some respects that it may be compared to a shallow pool in which a child can wade. In other respects it is a great deep sea, which will cover a giant at the very first plunge. Among the shallow places may be included the general operation of the law that like produces like, that heredity is strong in proportion to the purity and intensity of the breeding, and that usually the influence of the parents of the recent ancestry is greater in transmission than that of the ancestry more remote. Among the great deeps are the influences that govern variation, atavism and sex in transmission. To these may be added the influence of a previous impregnation and the laws that control intrauterine development. Before the breeder has proceeded very far in the study of the latter class of subjects, he will be ready to conclude that the domain before him is higher than heaven; that it is broader

than the sea; that it is deeper than the depths; that many of its pathways are so dark that they may be fitly compared with caverns and underground avenues into which the light has never shone and which have never been trodden by the foot of man. In these facts the explanation is found that breeders who have made a great success of their work are fewer in number than legislators who have made a great success of theirs. Notwithstanding, the rules that govern transmission, such as will lead to a fair measure of success in the work, are so few and so simple that the child even can understand and apply them.

Range Conditions Changing.

A writer in the Live-stock Report notices the same changed conditions in the range country of the South-west as we commented upon in our June 14th issue. In discussing this subject he says:

A trip into the range country at this time affords an interesting illustration of the development that is going on in an agricultural way all over this country. It is the change from the wasteful methods of the new country where land is unlimited and competition is almost unknown, to the conditions of higher land values and close competition that make it necessary to make the most of nature's bounty; to, at least, save what she so generously produces.

There is yet much of the old-time practice on the older and larger ranches. Those who have grown up with this easy, happy-go-lucky method are loth to give it up. But men are gradually pressing into this country who are not in a position, financially and otherwise, to operate on a sufficiently large scale to permit so great waste and have a living left. These men are, by force of circumstances, employing methods that will more nearly save what the land produces, and thus get a larger return from a given area.

They are plowing up some of the land and growing forage crops which they feed to the cattle during the more severe weather of winter, preventing the large winter losses that are so generally characteristic of the old system. In localities where the old methods are still in vogue you are constantly coming across the carcasses of animals that have fallen by the wayside, unable to eke out an existence till the coming of spring and of grass. Now and then you come across a great pile of bones, marking the spot where large numbers have succumbed, for lack of feed and shelter, to the rigors of a winter storm.

During a recent visit to the Panhandle country of Texas, a canyon was pointed out to us in which the informant said 500 cattle perished during a storm the past winter. In this instance some feed had been provided for just such occasions, but the range was still depended upon for winter feed to such an extent that the cattle had not been placed where the feed could be gotten to them. The winter feeding not only saves these tremendous losses, but also others that are less apparent.

The old-time rancher is prone to not consider any loss that stops short of the actual death of the animal. His first efforts towards a change to winter feeding are limited to the thinner, weaker individuals that are less likely to survive the winter without assistance. These are usually the animals that are least worth saving, and while the practice prevents so large inroads as formerly upon the number of individuals in his herds, it does not lessen the loss sustained by reason of exposure and lack of feed for the better, and stronger individuals composing the main part of the herd.

This loss is no less real because the animals succeed in living through the winter. It falls, moreover, on the best individuals, and is all the greater because of this fact. Much of the flesh stored up during the previous summer has been sacrificed to the rigors of winter. A considerable portion of the summer, and of the feed produced in a given season, is consumed in getting the animals up to where they were at the end of the previous season, and the cows are not in a condition to produce calves of as good quality and as great value as they would were they given more care during the winter season.

There are a number of factors that operate to obstruct the change to more general winter feeding. There is the force of habit which operates in all kinds of business and in all parts of the country: where the herds are large it looks like a big undertaking to winter-feed them, and the owner at once says: "It can't be done: it will cost too much." Then there is the problem of getting the right kind of help for carrying on the operations under other conditions than those that have obtained in the past.

The average cowboy has done nothing that could not be done on a horse for so long that he does not know how to do anything else. Hence it is difficult to get any farming done at all, let alone getting it done properly. But the ranch-

men are gradually being forced into the change, and, as a result, are finding that many of their preconceived notions were unfounded. Based upon their present rate of return, the business would not stand; the extra expense of winter feeding, but by proper winter feeding enormous losses are prevented, and the returns greatly increased.

It is not alone in the maintenance of the condition of the animals that the returns of the ranch are increased. The extension of winter feeding enables the ranch to carry a much larger number of animals, as in the growing of forage crops adapted to the conditions they produce, even with their present shiftless methods of tillage, several times as much feed to the acre as is produced by the open range.

One of the chief benefits that may be derived from more extensive feeding on these ranges will come through the supply of manure that it will afford for the improvement of the soil. The crying need of all the semi-arid country is for a greater supply of humus in the soil. Like the inhabitants of all other new sections, however, the people living in this region have not realized the importance of this fact, and are not yet ready to make use of manure when it is produced. They only haul it to get it out of the way, and then instead of being put where it will do some good, it is hauled down into some canyon.

But all this will be changed in time, and the passing of the old range conditions, instead of lessening the number of cattle that will be sent to market from this territory, will see an increase, not only in the number, but in quality as well.

To everyone who has studied the trend of the stock business this seems the only permanent means of increasing the price of cattle in our own range country. Market conditions, no doubt, will vary, depending on the supply and demand; but the range country will never be able to compete seriously with grain-fed cattle in the world's markets, unless more intensive methods are adopted.

Limitations to Inbreeding.

There is, probably, no one question connected with the breeding of stock that has received closer study or more extended research than that which stands at the head of this article. The theory is sound beyond question, that by breeding in a long line of established merit the particular characteristics sought become fixed in a measure proportioned to the length of the line of descent. Hence, in the case of male and female of a high merit, and both of the same line of breeding, when coupled together, the special merit of the family should be intensified in the offspring. This has been found to prove true in practice.

The close breeding in a particular line has been practiced more or less by all breeders who have acquired distinction in building up a family of animals specially noted for merit in a particular direction. It was in this way that the Jerseys was fixed, and it is through the same line of breeding that the great milk and butter performers of that breed are now being multiplied. So, too, it was in the same way that the thick coating of flesh and the white markings were fixed in the popular Herefords, and that Thomas Bates established the notable family of Shorthorns that bore his name, and, recently, that the now popular "Scotch Shorthorns" were fixed in the type that is giving them so wide a distinction at the present time.

But there is a limit to the extent to which this line of effort in building up improvement in animals can be carried. In-and-inbreeding for the purpose of extensive development of a single characteristic, carried too far, breaks up the balance of the animal. Nature rebels against so one-sided a work. The constitution of an animal, the powers of endurance, must be built up along with performance, and kept in balance with it, or, when a trial comes, the animal will break down under the strain.

Intensive milk or butter production, as an example, cannot be built up in a cow and maintained indefinitely unless along with it are built up powers to endure the work. Milk fever among the best of cows, weakened offspring, and consequent disease in the great performing herds, are Nature's protest against the one-sided work of performance alone being carried further. All along the way, among the great masters of the art of breeding, wrecks have finally set the limit to what can be reached by continued in-and-inbreeding. The most disastrous example of this kind known in the business, probably, was the going to pieces of the cattle from the New York Mill's herd of Bates Shorthorns, sold at auction at fabulous prices, yet proving of little value as breeders afterwards. Many less noted examples are to be found among those dairymen and breeders intent on building up a herd with the one point of great performance in view.

In-and-inbreeding, therefore, has been practiced with advantage up to a certain undefined limit, but has proved a failure in every attempt to pursue it indefinitely.—[Agricultural Gazette.]

Bath and West of England Show.

For the first time in its history, this society, established in 1777, went out of its usual district, and held its show in the Midlands. The reason for this change of venue was that the inhabitants of Nottingham desired to have within their borders an agricultural exhibition of the first importance. The Royal Agricultural Society was not available, having fixed its show in London, consequently this society, which ranks next in importance to the Royal, was invited and accepted the invitation.

The continued demand for British stud stock was clearly in evidence during the first and second days of the show. Round the pens of the Lincoln sheep and the other breeds in this section, and Shorthorn classes, it was quite noticeable the keenness with which South American buyers watched the work of the judges, and satisfactory to find they were prepared to pay high prices for the successful animals. In fact, it was currently reported, that the lucky owner of the champion Shorthorn bull refused the high price of 2,000 gs. for him.

HORSES.

The Shire horse breed was practically the only breed represented in this section. Sir P. A. Muntz was one of the leading and most successful exhibitors, winning both the gold medal for the best stallion or colt, and also that for the best mare or filly, given by the Shire Horse Society, and in addition the reserve number for the gold medal for the stallions. The champion stallion was Dunsmore Bishop, and the reserve number Dunsmore Albert Victor.

In the Hackney section the entries were not very numerous, but the superior merit found in many of the leading winners to some extent compensated for the deficiency of numbers.

The brood mare class had for its winner Miss Terry, sent by Mr. F. J. Batchelor. Mr. W. B. Tubbs won in the five-year-old and upwards class with Morning Glory. In the three and four year old classes the leading honor went to that well-known filly, Crayke Czarina, whose splendid action and beautiful symmetry made her a popular winner. The winner in the two-year-old class, Mr. J. P. Evans' Pollinaris, by Polonious, not only won in her class, but also secured the Hackney Society's silver medal for the best mare or filly. Sir Walter Gilbey, in the yearling class, won the leading honors with Bouncing Danegelt, a very promising son of the champion sire, Royal Danegelt.

CATTLE.

Shorthorns have probably not been present in larger numbers for many years, which is mainly accounted for by reason of the central position in which the show was held. The class was judged by Mr. J. Peter, Berkeley, Glos.

The older bull class found Mr. R. Stratton's Great Mogel at its head; H. M. the King being second, with Royal Carlisle, and Mr. J. D. Willis third, with Matchless Diamond—a trio of specially good bulls.

In the two-year-old class, one of the best of its age seen for some time, Mr. P. S. Mills won with the rich roan, King Christian of Denmark, a notably fine, typical Shorthorn. This was made the champion bull of the show. Mr. J. D. Willis, with Doynton Brave Archer, took second honors, and was r. n. for the championship. These bulls will meet again at the Royal Show, and that event is being looked forward to with very keen interest by all Shorthorn breeders.

The yearling bull class had Mr. J. D. Willis' Orphan Chief at its head, a very fine and promising young bull. Agricola, owned by Mr. D. Church, who has purchased him for the Argentine, taking second honors.

The cow class was specially strong in leading animals, Mr. George Harrison, with Ursula Raglan, taking first honors, and Earl Manvers second with Lady Dorothy 39th.

In the three-year-olds, first went to Ratcheugh Witch, one of Mr. W. Bell's typical Shorthorns. Sir A. Henderson won first honors with Lady Buscot Grace, in the two-year-old class; whilst in a grand class of 20 yearling heifers, Mr. A. A. Haley had the honor of winning both first and second prizes with Bright Jewel 6th and Queen of Anknese.

The Hereford section was one of considerable merit, and certainly most attractive. All through the several classes the quality of this breed, i.e., uniformity of type and character, was most distinctly seen. H. M. the King, with that grand, deep-fleshed bull, Fire King, won leading honors in the older bull class; Marquis, from Mr. E. B. Turner, taking precedence in the next class, and the Royal herd at Windsor was very close up with Admiral.

In the yearling class, Mr. E. Hughes won first with Premier, and H. M. the King second with Emperor. Mr. G. D. Faber, with Ivy Lass, a cow bred by Mr. R. Green, won first in the cow class, Mr. R. Phipps taking first and second honors in three-year-olds. Mr. A. E. Hughes' Iyngton Plum was the winning heifer in the two-year-old class, and Mr. C. T. Pulley won first and second honors for yearlings.

The Aberdeen-Angus shown, while not a very large entry, were of particularly good quality. Mr. J. J. Cridlan was very successful, his animals winning both of the special prizes offered—the gold medal for the best breeding animal, and the silver medal for the best female. The winner of the gold medal, Wizard of Maise-more, led in the old bull class, Mr. Hudson taking second place here.

In the younger bull class, the winner, Earl Fenwick,

is owned by Mr. J. H. Bridges, who also had the winning heifer in the two-year-old class. The silver-medal cow, Mabel VIII., won first prize in the cow class for Mr. J. J. Cridlan, and the Rev. C. Bolden won first in the yearling heifer class.

The entry of Jerseys was not so large as we have seen in former years, but the smaller entry did not indicate any loss of merit. The winning owners in the bull classes were Captain L. G. Gisborne, Mr. J. D. Drew, and Lord Rothschild. The competition in the cow and heifer class was very keen indeed, and many of the entries received recognition in the award card. Between Mr. A. Miller-Hallett and Lord Rothschild there was a very close competition in the cow class. The former won with Lottie, and the latter with Day Star took second place. Lady de Rothschild went to the front in the three-year-old class, and Mrs. C. McIntosh won second and third. The two-year-old class found the latter exhibitor a close second with Havering Glorissa; first and third place was occupied by two very fine heifers sent by Mr. C. W. Armitage. Yearling heifers, another good class, was headed by Benita VI., an imported animal, exhibited by Mrs. C. McIntosh.

The sheep section was one of great interest. Cotswolds had not a large number of entries, but the average of merit was very good indeed. Mr. W. T. Garne, whose flock has a world-wide reputation, led with first-class animals in the yearling ram and ram lamb classes, and Mr. W. Houlton occupied the same position for yearling ewes.

The Lincoln breed, which has not before been exhibited at this show, took full advantage of the opportunity offered them, and made an entry of particular merit and high quality. The winning two-shear ram, owned by Mr. T. Casswell, was made champion, and his superior merit and quality was speedily recognized by the Argentine buyers present, several offers of high

PIGS.

Berkshires were well represented, and the quality good. Mr. G. T. Inman won again champion honors for that splendid boar Highmoor Mikado. The same exhibitor was first in the breeding sow class. Mr. J. A. Fricker, Mr. A. D. Acland, the Duchess of Devonshire, and Sir A. Henderson, Bart., were all well within the run for leading honors.

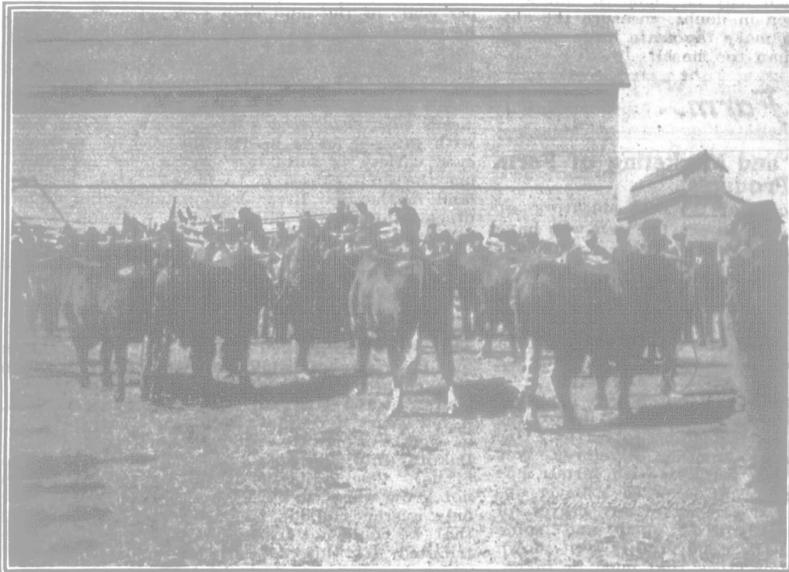
Large Yorkshires made an entry of real merit and quality, and the competition all through was keen. The correctness of the awards was somewhat challenged by exhibitors and other experts of the breed. The Earl of Ellesmere was first for boars, pairs of boars and sows, and Mr. T. H. Henson for pairs of sows. Sir G. Greenall, Mr. D. R. Daybell, were also owners of some of the leading pigs, and a better lot of Large White sows have not been seen together for many years.

The Tamworth breed was a first-class entry. Mr. H. C. Stephens' herd won the special challenge cup, with a sow of very high merit. The same owner was also successful in other classes, with pigs of high merit and quality, and Messrs. D. W. Phillips and R. I. Ibbotson took the remainder of the prizes, with pigs, in nearly every instance, of high quality and merit.

Making Shipping Crates.

Now that so much stock is bought and sold by correspondence, and shipped in crates by express, the making of neat, light shipping-crates at a minimum cost is a matter worthy of consideration. The increasing cost of lumber renders it necessary to economize in its use, and since express companies charge for the gross weight of the animal and the crate combined, it is important that the weight of the crate be as light as possible, consistent with sufficient strength. Where a considerable amount of business is done, it

is well to lay in a good supply of lumber of the required widths in winter, in order to have it seasoned and convenient when required. Basswood, where it can be secured, is quite suitable, as is also spruce, or pine reasonably free from knots. The widths most suitable for the sides, as a rule, are six inches for the lower bars, and four inches for the upper; the width apart of the lower, three inches, and of the upper, four to six inches. For shipping pigs two to three months old, half-inch stuff is sufficiently strong for sides and



Judging Two-year-old Bulls at Calgary Show and Sale.

figures being made for him. Messrs. R. & W. Wright came second here, and Mr. H. Dudding third. The yearling ram class of 11 entries was a good one, all being commended, a sure indication of merit. Mr. Wright won first honors, and Mr. Dudding second. The latter exhibitor was first and second in the ram lamb class, with lambs of superior merit and notable quality, and Messrs. Wright, with half a dozen yearling ewes of grand character, were first and second in their class.

Southdowns came out in fine quality, Mr. C. Adeane winning first for yearling rams, a position that was closely challenged by Mr. E. Ellis, who came second. Mr. C. Berners was third, and H. M. the King r. n. In the ram-lamb class, Mr. Adeane won with a pen of notably fine lambs, and the better one of the two well deserved the champion honors he secured. H. M. the King was second, and Mr. Ellis third. The position of these two pens could well have been reversed. Mr. Ellis came in first for yearling ewes, and H. M. the King followed with another even pen.

The Hampshire Downs were represented by an entry of very superior merit and quality, and Mr. Jas. Flower had the honor of winning in three classes, whilst in the fourth, in which he was not represented, the leading honor went to a grand pen of sheep from Mr. H. C. Stephens' flock.

The Shropshires provided the largest entry in the sheep section, and in the yearling ram classes the winner from Mr. Williams' flock was one of high quality and merit. Mr. Cooper took first for ram lambs and yearling ewes.

Oxford Downs made an entry pleasing and satisfactory to all interested in this breed. Mr. A. Brasley repeated his former victory at Oxford in the yearling ram class, and also in that for yearling ewes. Mr. J. T. Hobbs won in the ewe lamb and the ram lamb classes, with animals of superior merit.

ends, and, indeed, for bottoms also, and three inches wide for the upper side bars. A handy way of making a bottom is to use 1 x 3 inch or 1 x 4 inch pieces for sills the required length; cut one inch or half inch boards, as the case may be, the length of the width of crate required, and nail these with wire nails across the sills; clinch the nails, and you have a solid bottom. For the upright corner-pieces, use 1 x 4 inch stuff the required height, or 1 x 3 inch for light stock. Nail these to the sills, then cut your top bars the same length as the bottom, and nail them on the inside of uprights, turning the bottom over on its side while this is being done, so that the uprights lie flat on the floor; next lay the lower bar and the intervening ones, and nail all with wire nails, to be clinched on the outside. If the crate is more than four feet long, central uprights should be added before turning over to nail on the side boards. Now cut cross pieces of 1 x 3 inch or 1 x 4 inch, two inches longer than the width of the bottom; nail these on the top of the uprights to hold them the right width apart, turn the crate on end, and board up the front end close from bottom to top, or to within four or six inches of the top. For the hind end make a removable door, which can be slipped in and taken out as required, but board it close, as open bars are apt to cut into the skin of a pig or calf as they will press backward, or rub off the wool of a sheep, and also allow the voidings of the animals to soil the outside of the crate and the floor of the express car in which they are shipped. The making of this slide door is not easily described in words, but a little ingenuity will work it out. One way is to nail a 1 x 4 inch piece

across at the bottom and another at the top of the rear uprights, then take two 1 x 3 inch uprights, a couple of inches longer than height from floor to top of crate, and across these nail inch boards, width of crate on outside of uprights, the lower four inches from bottom end of uprights, and the upper, say six inches from top, sliding door up at top in putting it in, and then in at bottom inside of bottom cross bar. A nail driven part way in through one board on each side into end uprights keeps the door from being worked out of place, and is easily withdrawn with a hammer when taking the animal out. A few slats across or lengthwise of crate, on top, finishes the contract.

This is one way of making a crate. It is not claimed to be a model, or the best, but is simple in construction and strong enough for ordinary purposes. A cow has been safely shipped in a crate made on this principle. Others may be able to supply descriptions of better, cheaper and more easily constructed crates, and if so, we shall be glad to receive such description, with a sketch or photograph of same.

Any farmer or farmer's son should be able to make a crate such as above described in about the space of half an hour, if the material is in convenient shape, the only tools needed being hammer, saw and square, with, perhaps, a drawing-knife. For the sake of neatness of appearance, it is well to have the lumber dressed on one side at least, though in the case of half-inch boards this is not necessary. Make the crate high enough that the back of the animal may not be rubbed by the top bars, and long enough to avoid cramping unduly; the width need not be more than will allow the animal to lie down comfortably with its feet under it. It is well to have a list of dimensions for different ages written out and tacked up over the work-bench, variations from which may be made to suit special cases; but when in doubt, measure the animal, to be sure you make the crate large enough—better too large than too small.

Farm.

Selection, Care and Marketing of Farm Products.

Experience teaches that the best educators at farmers' institute meetings are the men who have made a success of their business, and are consequently in a position to advise farmers how certain things can be done profitably. One of this class of men is Mr. J. J. Ring, of Crystal City, one of the speakers at the recent Institute campaign, whose subject was that at the head of this column, the following being a digest of his remarks:

"The great point in getting horses or stock of any kind ready for market is to get uniformity to produce a type. For instance, in cattle: One farmer has Shorthorns, another Herefords, yet another Galloways, or, perhaps, each farmer has a few of each. The result is, when a buyer appears, he cannot get a carload of any degree of uniformity, but some will be good and some poor. The price of the good stuff is kept down on account of the poor stock that must be taken. The farmers lose a great amount of money each season for this very reason. The only remedy is for the farmers to assemble and decide to keep to one type, let it be Shorthorn or what it will, the majority to decide. In this way, when the shipping time comes, they will be able to get together a carload of more equal and thus better stock, and secure a better price. In shipping, avoid the middle man. Choose a good representative farmer and send him to Winnipeg with the lot. When he arrives he need only call up the principal dealers and tell them that he has a load of stock in the yards, and ask them to come down and see them. At first the reply may be somewhat lukewarm, but after the dealer once sees the cattle the matter becomes easier. At future times, when the load comes from this point, the dealers will be on the lookout, and most likely will send word to hold back the sale until they can come down. This is the way to create a market.

"It is not necessary to go into pure-bred stock; the common cow will do just as well. The offspring from a pure-bred Shorthorn bull and a common cow, for example, is 75 per cent. Shorthorn; the next is more nearly pure. So, in this way a farmer can breed into good stock without going into heavy expense.

"As to the dehorning of steers, he was greatly in favor of it. It should not be done until they were about 1½ years old; that is, until they had become thoroughly accustomed to the use of the horns. This prevented them from taking up the bunting habit."

The speaker himself thought that the Shorthorn was the best all-round breed of cattle, but, if the rest of his neighbors bred Galloways, he would do so also, so as to have a uniformity of type.

In horses, similarly, his taste was Clydesdale, but, as in the case of the cattle, would follow

the general custom and keep Percheron if such were the ruling breed in his neighborhood. Uniformity of type is here again the cry—to develop a class of the same color, temper, etc., in the neighborhood, and thus create a market. The common mare, crossed with the Clydesdale, Percheron, etc., is what is wanted, but in all cases avoid the Standard-bred horse for the farm work. In breeding, care must be taken to keep the mare in good condition, there is no danger of the mare being too fat. In reply to a question as to working a mare in foal, the speaker answered: "Certainly; he had always done so himself, with good success. The mare must be handled carefully; if so, there was no danger. In working a mare with a young colt, if the mare is very warm when brought into the stable, she should always be milked, the colt not being allowed to get such fermented milk."

The same course as in the two previous cases is to be followed with swine—all agree to keep Berkshire, Tamworth, or Yorkshire, as the case may be.

A good method of providing feed is to sow oats and barley mixed, and have them chopped. The variety of oats best adapted for this is the Commonwealth, which ripens at the same time as the barley.

Rotation of Crops with Grasses.

At Dauphin, Gladstone and Plumas Mr. J. J. Ring delivered the following remarks on the above subject on the recent Farmers' Institute campaign: He prefaced his remarks by stating that rotation of crops and summer-fallowing were questions of vital importance to the West, and that he was opposed to summer-fallowing because, first, the farmer could not afford the land; secondly, because it will tend to make our country a desert. On the question of keeping about 30 per cent. of the land each year without a crop, he pointed out that a business man who followed such a principle could not survive in trade, and must go to the wall; nor could the farmer afford to do this any more than the business man. Instead of leaving the land idle to grow rank with weeds each year, seed down a section of the farm with grass; let it be timothy, brome, or whatever variety is suitable. Again, summer-fallowing the land causes it to blow. The heaviest land in the Red River Valley, under this system of cultivation will blow, and rich mould on the top is drifted away. Travelling through Manitoba one can see drifts of our richest soil along the road or against the fences, so high that it looks like a railway grade. The sand storms of Southern Manitoba are becoming notorious. A farmer needs a title deed that will hold his land. The remedy for the above state of things is to avoid summer-fallowing, and grow grasses. In this connection, it is interesting to trace the course of the northern limit of the wheat belt. A few years ago this was in the Genesee Valley, in New York State, later Wisconsin, Minnesota, Dakota, into Manitoba, and now it is far north of us. The majority of the above sections do not grow wheat to-day. North Dakota does, but only averages about 15 bushels per acre, a yield that we could not live upon. Much must be attributed to this system of summer-fallowing, which has impoverished the land.

The system of rotation of crops begins with wheat on the new land. Only the very best grade of wheat should be sown if a good return is to be expected. It bears out the old proverb, "Whatsoever a man soweth, that shall he also reap." A person that wishes to have an extra good sample of seed, when the crop is about ready to cut plucks by hand the earliest and heaviest heads. This may result in securing only a peck of seed, but the result pays for the effort. This seed is kept separate and sown again. The process of selection is again followed, and finally results in securing a good, hardy, early strain of wheat. The effort is laborious, but amply shows that good seed produces more than proportionately good results. Many farmers sell their best wheat and sow the poorer grades, but this is a short-sighted policy. Sow the wheat thick—two bushels per acre—as this serves to choke out the weeds.

The next season the ground is sown with oats, followed by barley. Three seasons in grain, followed by three seasons in grass, have proved to be an ideal system of rotation.

The grass seed, timothy, or whatever is thought to be most suitable, is sown with the third crop. The best way to sow the timothy is by means of the broadcast attachment to the seeder. If sown mixed with the grain, sow across the furrows; otherwise, when along the ridge, the seed is put in at unequal depths. Five pounds of timothy seed to the acre is sufficient. It is better to cut the first crop of timothy with a binder and stook it. This means easier handling, and avoids much inconvenience with the previous year's stubble. The stubble in the bottom of the sheaf keeps it open, and the crop can be put into shelter within a short time of cutting without any danger of spoiling; or, if left outside for a considerable period, it will take little harm. When the sheaf is cut open in the winter

the hay will be found fresh and green. If the crop is cut for hay during the second year it can be cut with a mower, as all the stubble has disappeared. The third season it should be pastured; in fact, many cut but one crop, and pasture two seasons. This necessitates keeping much stock, but that is to the advantage of the farmer. During this one year, or two years, as the case may be, every foot of the ground is well packed, and you may talk of a roller or packer as you will, but there is no machine made that can pack the earth like a cow's or a horse's foot. If the above system is followed no roller or packer is needed. In addition, an even coat of manure has been put on. In the third fall the grass is broken up; break deep and disk well. This can often be done during the wet times of the harvest season, and your cattle have the use of the pasture all summer. Do not harrow the fall plowing; leave the surface rough, so as to catch more snow. The uneven surface retains the snow and stores up more moisture. The next spring this is sown in wheat, and the round begins anew. It takes time to get into this system; it cannot be done in a few years.

The soil under this system does not blow. When the sod is broken up the surface of the field no longer presents the smooth surface pleasant to the eye, but a rough mass of tangled fibrous roots. But the humus exhausted from the soil by the crops has been replaced and can only be replaced in this way. It is estimated that ten tons per acre of humus is restored to the soil from timothy. The further benefits are numerous. The land is in good condition, and dry seasons are not so dreaded; weeds do not overrun the fields; the farmer enters more extensively into stock; his income depends no longer on the precarious outcome of the wheat crop, and finally the native strength of the soil is restored through the fertilization.

Travelling for Agricultural Knowledge.

Long ago the famous educators, Pestalozzi and Froebel, strove to impress upon the teachers of the world their opinion that the best method of gaining instruction about a great many matters is seeing and doing. Since their day "Learn to do by doing" has become an educational axiom, whose value is being daily proved in school, laboratory, technical institution and manual training hall. It stands to reason that an educative principle found valuable in other lines must also be so in that of agriculture, which is a science as truly to be studied, learned and benefited by, according to the skill and thoroughness to be expended upon it, as any other curricula. Denmark, to the fore, as usual in all things pertaining to agriculture and dairying, has seized upon this fact, and is putting forth every possible effort to provide for the further instruction of her people in these subjects. "Learn to do by doing" has become her slogan to the farming world, and in order that as few obstacles to the best results as possible shall stand in the way, she has hit upon a number of clever expedients.

Among these is that of providing "travelling aids" to farmers, to enable them to visit the various experimental farms and dairy schools at the lowest possible cost. During these visits they are expected to take actual part in the operations which they have gone to see, and in this way are likely to have facts fixed firmly upon their minds. Briefly, the method is this: Each year the Government sets apart a certain sum of money for this purpose. Each farmer who wishes so to travel sends in his application to one of the offices of the Royal Danish Agricultural Association not later than three weeks before he wishes to set out. He is thereupon supplied with a book of coupons which will serve as certificates at the different places he visits, also with a plan, setting forth exactly where he must go, and at what date he must arrive at and leave each point. This plan he must rigidly adhere to. His coupons, marked at each place on the route and returned at the end of the trip, will show whether he keeps to it or not. If he does so, well and good; if he does not, he forfeits a certain amount for each day wasted. While visiting, as said before, he must take notes and engage in practical work; any neglect in interest, or misconduct in any way, is reported to headquarters, and he must suffer by a deduction of the amount allowed him. In order that there shall always be an opening for these travelling pupils, no private pupil is permitted to stay at any school to which the former are admitted for more than six months at a time.

Owing to the small extent of Denmark and the exceedingly low board rates prevalent there, this plan is found very feasible. In Canada such conditions do not obtain, but many of our farmers and dairymen are very well able to pay their own way on short and frequent trips, and it might be telling a few of them a thing or two were they to take a leaf from the book of the prosperous Danes.

A Famous Plowmaker.

From the People's Journal, Dundee, Scotland.

Throughout the whole of the Carse land bordering the Forth, and among the agricultural community in many a parish beyond it, the name of Paterson's chilled plow possesses a charm for the worthy son of the soil, who prides himself on "haudin' straucht," and being "weel furrit" in the prize-list as each recurring plowing match comes round. So the subject of our sketch, "Dauvit" Paterson, of the Fauld Smithy, Alloa, may not need much introduction to "Journal" readers. The story of his long career can scarcely be other than interesting.

A TYPICAL SCOT.

For here you have a noble type of the Scot, who forms a living link between the most up-to-date methods employed in agricultural operations to-day and the laborious system of the past, when harvesting meant the prolonged wielding of the sickle and the scythe, and threshing relied on the wearisome thud of the flail. In both epochs "Dauvit" has played his part. He was born at the rural smithy of Carnock, near Airth, in May, 1829, and is thus in his 76th year. When 11 he "fee'd" with the parish minister. During three years' service at the Manse he developed a turn for handling the plow, a turn which in later years became an all-absorbing study, and one in which his interest has never waned. At 14 he started as apprentice in his father's shop, and hammered iron, as four generations of his forbears had done before him. After 62 years at the forge he hammers it still; his hand has lost little of its cunning. In youth all his spare time was spent in improving the type of plow in general use, and in this he was so successful that in no part of Scotland could better plowing be found than in the region round Carnock Smithy. David tells how 51 years ago he crossed the Forth to compete at a great championship plowing match, which took place in the classic "Hawkhill" field at Alloa. One hundred and fifty plows faced each its allotted half acre, and our hero, determined to give his plow every chance, handled it himself. The match was advertised as open to all, and he was "makin' gran' wark." But some aspiring champions, and others interested in the success of rival plows, made a "hullabuloo" when they found the brawny smith among the "hauders."

A JUDGE O' PLOOIN'.

Such influence was exerted that the committee adopted a special rule, "that all competitors must be bona-fide plowmen." The judge approached David. "Are you," he asked, "a plowman, ma man?" The reply was characteristic. "Weel, sir, I suppose you're a judge o' plooin'; jist cast yer een ower that rig ahint ye, and mak' up yer mind yersel'." "Ay, ay! man, that's just the faut; you're plooin' ower weel—that's what's wrang," commented the other, with a smile. "But, tell me, are you the smith of Carnock?" David, of course, admitted his identity. "Aye," he declared proudly, "I'm the smith o' Carnock. I made the plough mysel', and I'm gaun to haud it mysel', get the prize wha likes." "Weel! weel!" said the judge, "I'm rale sorry I canna gie you the prize. You've the best plooghed rig on the field, but, ye see, yer a smith." But our hero's day's work was not without its reward. Far and near the virtue of the plow and the skill of the maker was sung. For half a century since scarcely a plowing match has taken place throughout the shires of Stirling, Fife and Clackmannan without some of the chief prizes being annexed by a "Paterson" plow. In the long period of 54 years Mr. Paterson has missed attending the famous ten-parish match, held annually at Falkirk, only twice. His attention has not been solely confined to the implement branch of the trade.

IN STEEL AND IRON.

His renown as a horseshoer was vast, and few country smiths could set a lame horse "square on his pins," and send him on his way rejoicing, better than he. Almost a score of years ago his increasing business connection compelled him to look around for a more convenient center of operations. So he crossed the Forth to Alloa. On leaving Airth he was publicly entertained by his farming friends, and presented with a valuable gold watch and chain in recognition of the painstaking care and trouble he had displayed in business, and as a testimony to his personal worth. When the much-boomed Yankee chilled-plow struck the market 16 years ago it looked as if the Scotch-made implement must succumb. Admittedly the "Yank" was a splendid innovation. Mr. Paterson, however, took the matter with a philosophic calm. "Why not a Scottish-chilled plow?" he asked himself; and with the able assistance of his two sons he started to work out the answer in steel and iron. For two years he plodded, experimenting, constructing, tearing down, and consigning to the "scrap bin" many an unsatisfactory production. He expended nearly a hundred pounds for patterns.

VETERAN "SON OF VULCAN."

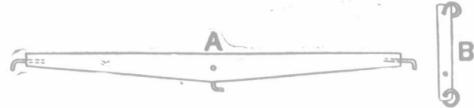
But eventually he triumphed. He invented a plow which on many a well-plowed rig has beat the imported variety. The smith has not been a laggard in the world of sport. Fifty years ago, as the bow-oarsman in the famous Dunmore team of rowers, he pulled in many a hard-tried race, and in those days the Forth regattas were events that mattered in the realm aquatic. The championship race was decided over a seven miles' course. The Dunmore lads annexed premier honors repeatedly. On the ice, too, David was an expert, and even on classic Carsebreck he is no stranger. With glee he tells of a great game played between his rink and the illustrious Northern men from Breadalbane, in

which Dunmore men had a majority of 16 shots. Much more could be written of the experiences of this veteran "son of Vulcan" did space permit. But, summarized briefly, we may say his is a personality the world could do with many more examples of.

Whiffletree for Six Horses.

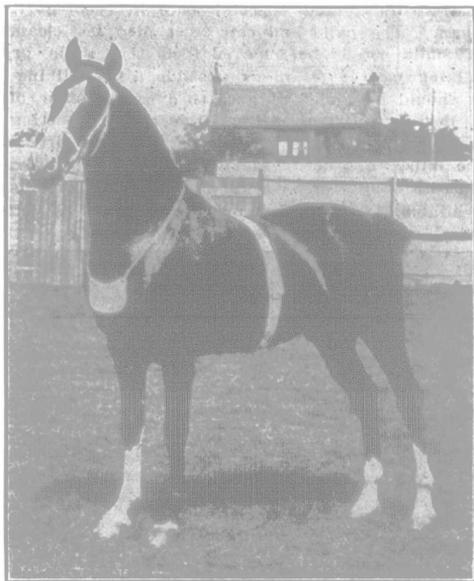
To the Editor "Farmer's Advocate":

We have a nine-foot cultivator, a wide set of disks, and have used a four-horse team regularly this spring. We sometimes put six horses on the cultivator, disks or roller, and fasten the harrows behind. Six horses are handled as easily as four. We put the fastest walkers on the outside, with ordinary lines on them, and tie from bit to bit along the center of the string.



Accompanying is a cut of the whiffletrees we use for six horses.

A is a long doubletree, with a nook bolt screwed in each end. B is iron, one foot long, recently described in your columns for three horses. One of these irons is hooked on bolt in each end of long doubletree, standing upright. This allows six horses to be used without having an extra long tongue. L. M. BROWN.



Lord Kimberley (7536).

Hackney stallion; brown; 15.2 high; foaled 1899. First prize Hackney Horse Society's Show, London, Eng'and, 1904.

Dairying.

Rules for the Milkers.

The following is the text of the rules for milking issued by the Danish creameries to the farmers, and applies with equal force to all who have to do with cows and their product:

MILKER, MARK THIS WELL.

1. The cow is a living machine. (a) Kindly treatment entails less labor and gives more milk.
2. Good work improves the living machine. (a) Milk clean. Clean milking develops the udder, and with this increases the quantity of milk, and (b) You receive richer milk. (c) Remember that the milk last drawn is by far the most valuable.
3. Cleanly milking. (a) You should wear tidy and clean clothes. (b) Have the milk pail clean as well as the creamery can. (c) Thoroughly clean the udder by rubbing with a piece of linen. (d) Wash the hands thoroughly before milking. (e) Let the udder be quite dry before you begin to milk.
4. Carry out the work properly. (a) Milk with dry hands. (b) Seize the teats with the whole hand. (c) Keep a gentle pressure on the udder. (d) Milk as fast as you can, and never cease working until the milk is wholly drawn. (e) Don't strain the teat beyond its natural length. (f) Remember the value of the last drops.
5. Healthy state of the udder. (a) If there be soreness or lumps in the udder or teats, stoppage in the milk canal, or unnatural colored milk, don't mix the milk with any other, and don't send to the creamery.
6. Milking times. (a) Begin milking always at fixed times. (b) Milk the same cows in the same order.
7. Regard this excellent work as one of honor.

FARMER, MARK THIS WELL.

1. Clean the cows.
2. Have good air in the stalls.
3. Light should be freely admitted.

What the Cream Separator Has Done for Canadian Dairying.

By Laura Rose.

It is twelve years since I became especially interested and identified with dairy work. Separators were then quite a novelty, and comparatively few were to be found in use on the farms. My broad acquaintance with rural districts has afforded me a good opportunity of noting the introduction of these machines and the changes they have brought about in the dairy industry of the Dominion.

We have to acknowledge that in years past Canadian butter has had a poor reputation in foreign markets. This may be largely attributed to the custom of storekeepers buying all grades of farm butter, and reworking and packing it for shipment; also to lack of knowledge on the part of makers in creameries, which resulted in a great variety of grades of butter.

The invention of the cream separator gave a great impetus to the butter industry, and revolutionized the handling of milk and cream. Shortly after this, the establishing of dairy schools supplied the long-felt necessity of skilled makers.

The cream separator on the farm has also done much to raise the standard of dairy butter. Setting the milk to allow the cream to come to the top by gravity, usually resulted in the cream being overripe before a churning was collected. With intelligent care of the separator and cream, not only a better butter is obtainable, but considerably more of it, and, of course, this adds materially to the revenue of the dairy.

Very much less butter is made on the farms now than before the advent of the separator. This is desirable, for it means that a greater bulk of butter of uniform quality can be manufactured for export in creameries.

It has taken time to change the system of farm dairying to co-operative dairying, but the separator, more than any other one thing, has been influential in inducing the farmer's wife to give up her churning, for, after all, hard-worked as she is, she is the one who usually holds out the longest.

The first, and the one considered still the better, is the whole-milk system. The milk is taken to the creamery and there separated, and the skim milk returned to the patrons. It is claimed by many buyers that butter made in whole-milk creameries is of superior quality, but there is considerable disadvantage to such a system. The keeping of a large quantity of milk from getting overripe in warm weather before getting to the creamery, the hauling of the same, the re-heating of the milk at the creamery, the pasteurizing and cooling of the skim milk so that it may be returned in good condition for the stock, all means an expenditure of both time and money.

The general introduction of the hand separator on our Canadian farms has brought about another system, and one which appeals more strongly to the farmer. The milk is separated at the farm, and only the cream sent to the creamery. This means fresh, warm milk, ready at the right time for the young stock, no cooling of the milk, or expense in hauling such a quantity to the creamery.

Some cannot speak too strongly in denouncing the cream-gathering system, but I have always tried to see things from the farmer's standpoint, and much can be said in favor of separating the milk at home.

One trouble in having the cream delivered seems to be that the majority of farmers take too poor a cream. To do the best work in creameries, it is necessary that the cream contain a moderately high percentage of butter-fat—30 per cent. is considered about right. The patrons should do all they can to meet the wishes of the makers in this respect. By the proper adjustment, and a uniform speed and feed, all reliable makers of hand separators should take a 30-per-cent. cream, with no undue loss of fat in skim milk.

Another still more serious defect in having the milk separated on the farm, is the lack of care of the machine and the cream. To have pure cream it is absolutely necessary that the machine be well cleaned and scalded after each time of using. With the proper brushes and plenty of hot water, this is not a hard or long task with the majority of makes of machines.

Much complaint has been justly made of the bad flavors found frequently in separator cream, and usually, I think this is due to the fact that many do not immediately and quickly cool the cream. It is difficult, if not impossible, to make a first-class butter without doing so. The can containing the cream should be placed in cold water, and the cream frequently stirred until the temperature is reduced to between 50 and 55

degrees, and should be held at that until called for by the cream collector. One of the inexpensive, simple coolers may be used where the quantity of cream is great.

I have heard men say you can't get farmers to properly care for the separator and cream. I don't believe it. I have more faith in their ability and desire to do the proper thing. In many cases the neglect is only due to their not knowing what is required of them. I feel sure the patrons will co-operate in every way they can with the makers to build up our reputation, until no better butter than that made in Canada is found on the markets of the world.

In closing, I would like to say a few words about the care of the separator. The very best and strongest of them is a delicate machine, and needs careful treatment. To cause the least strain on the parts and to insure smooth running, the floor or foundation on which the separator stands should be firm, the machine perfectly level and securely fastened down. All the bearings should be free of grit, and every week or two well flushed out with coal oil.

The high speed at which the machine runs, makes it most necessary that it always be well oiled, and only the oil furnished with the machine, or equally fine oil, be used. Speed should be gotten up slowly, and in turning the crank the same pressure should be applied all the way around. Before turning on the milk put through a little hot water to warm and wet the bowl.

Milk always separates best immediately after it is drawn from the cow. If it cools below 80 or 85 degrees it should be heated to about 100 degrees, although no harm is done by getting it quite hot. Run the machine up to the stated revolutions; never below, or there will be an extra loss of fat in the skim milk. A machine doing good work should skim to .05, and never should have over .1 per cent. fat left in the skim milk. If there is a thin scum of cream on the separated skim milk, something is wrong.

Have the flow of milk into the separator as even as possible. The quantity of milk in the receiving can has much to do with this, and should be kept reasonably full all the time.

When finished separating, the bowl should be flushed out with warm water and the machine allowed to run down of its own accord.

Care should be exercised in taking the machine apart and putting it together not to blunt or bend any of the parts. I have seen good machines seriously injured by a little carelessness in this regard.

Where a herd of dairy cows is kept, a separator is now considered almost a necessity. It certainly is a paying investment, and few farmers can afford to be without one.

Cream on Buttermilk.

A Manitoba reader asks the following question, an answer to which is given by Prof. W. J. Carson, the newly-appointed Professor of Dairying for the Manitoba Agricultural College:

"I milk eleven cows, and on y make about an average of 40 pounds of butter a week. Each time I churn the cream raises on the buttermilk and is quite rich. Can you tell me any reason for it? When cream goes sour it never goes thick, as it should, only on top; and when buttermilk stands it gets real thick on top and creamy."

"Stormy Beach."

Ans.—Your trouble, in all probability, is due to the manner in which you ripen or handle your cream. The fact that cream rises on the buttermilk would indicate that the churning is not sufficiently exhaustive, and there is a serious loss of butter-fat. I presume you are in the habit of adding sweet cream, or the last skimming, to the sour cream shortly before churning begins. When this occurs the cream is not of a uniform acidity, and consequently the churn is stopped before the churning is completed. In other words, ripe cream churns more quickly at a given temperature and with less agitation than does sweet cream, and in your case the ripe cream is in the form of butter granules before the sweet cream has broken; therefore, the latter passes out with the buttermilk and is lost. For the same reason your cream does not have time to become sufficiently thick before churning.

You can easily overcome this difficulty by having all creams mixed together at least twelve hours before churning, so that the condition of acidity shall be the same throughout the whole mass. This will give you a more exhaustive churning, as well as some improvement in the flavor of your butter.

It is advisable at this season of the year to skim a rich cream, which will enable you to churn at a lower temperature, thus giving a better yield, and a finer-bodied butter.

Your cows are making a remarkably low record for this season of the year, and it has occurred to me that you may have a few "boarders" in the lot. I would advise you, therefore, to get a Babcock test, test each cow's milk frequently, and weed out the unprofitable cows.

W. J. CARSON.

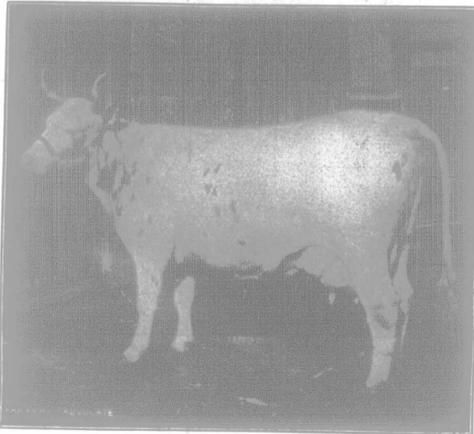
Caring for Milk on the Farm.

The following notes, sent out by the Ontario Department of Agriculture and Dairymen's Associations, were prepared by Prof. H. H. Dean, of the Ontario Agricultural College, and are worthy of careful study by every milk producer:

The cows should be healthy and clean. Colostrum (Beistings) should not be sent to the factory. The stable and pasture should be clean, dry, and free from bad odors and bad-smelling weeds. The food should be clean, pure, sweet and wholesome. Cows giving milk should not be allowed to eat brewers' grains, distillery slops, turnips or tops, rape, mouldy meal, spoiled hay or spoiled silage, cleanings from the horse stable, or anything which would tend to taint the milk.

Either rock or common salt should be accessible to the cows at all times. Plenty of pure water ought to be within easy reach of milking cows. Foul, stagnant, or very cold water, are injurious.

Cows should be milked with clean, dry hands, after wiping the teats and udder with a damp cloth. The milk should be strained at once after milking through a fine wire strainer, and also through two or three thicknesses of cheese cotton. The strainer needs special care in keeping it clean. The pails and can must also be clean. The milk should be removed from the stable or milking yard as soon as possible after milking. It should be cooled at once to a temperature of 60 degrees—certainly below 70 degrees—by setting the cans in tanks of cold water, and by stirring the milk, in order to facilitate cooling rapidly. Where a supply of cold water, under pressure, is available, one of the many forms of coolers will



Carrie.

Grade Ayrshire cow. Winner of the championship in the two-days test at the Eastern Ontario Dairy Show, Ottawa, 1905. Exhibited by T. A. Spratt, Billings' Bridge, Ont.

do the work more quickly, but it is very necessary that the air be pure where this form of cooling is adopted. After the milk is cooled to 60 degrees (and where Saturday night's and Sunday morning's milk is to be kept over until Monday morning, the cooling should be so low as 50 degrees in the hot weather), the cans may be covered with the lid or with a piece of damp, clean cotton. By leaving one end of the cotton in the water, evaporation will tend to keep the milk much cooler. Night's and morning's milk should be kept separate as long as possible.

If the milk be placed on a milk-stand for some time before it starts to the factory, the stand should be covered and boarded in on the sides, and the whole neatly painted a white color. Milk should be protected from the rays of the sun, from the dust and from the rain-water.

If possible, the cans should be covered with a canvas cover while on the way to the factory, especially in hot, dusty weather. It is needless to say that the wagon, the man, the horses and the harness should be clean, and a credit to the great dairy industry of Canada.

Where practicable, the cans which are not used for the returning of skim milk should be washed and steamed at the creamery or cheese-ry as soon as possible after being emptied. Sour whey or buttermilk should not be put in the cans, as the acid destroys the tin and causes the can to rust. Rusty cans cause bad flavor in the milk. It is safer not to run whey in the milk can. A separate vessel should be used for this purpose. The whey must be returned to the farm. If the whey must be returned to the milk can, it should be emptied at once upon its arrival at the farm, and the can thoroughly washed

and aired in the sunshine before milk is put in it again. The whey tank must also be kept clean.

The two main points in caring for milk are, to have everything clean, and to cool (especially the night's milk) as rapidly as possible to a temperature below 70 degrees, and to 50 or 60 degrees, if possible.

BE CLEAN! KEEP COOL!

The Process of Milking.

While we await the advent of the milking machine in Canada, some notes on the good old way by Wm. Smith, in the Scottish Farmer, will be of service at this time of year:

Given a clean udder, the milker will rub the udder with the hand and sit well into the cow, and begin by milking the fore teats with the full dry hands. When the teats are short the milking has to be done with two fingers and the thumb, until there is room for the whole hand. The milking should be proceeded with as rapidly as possible and without interruption, and the fingers should go well round the teat, pressing the teat against the cushion of the thumb more than into the hollow of the hand. The milker will pass backwards and forwards between the fore and back teats, until full streams of milk are no longer obtained, and now begins the most important stage of the milking process, and it is here the milking machine fails. Up till now the weight of milk in the udder and the natural assistance of the cow to give up her milk, has kept the core, or outlet cistern of the teat, full as fast as the milker could take it away, and this has been practically the skimmed milk, but the fat, which is lighter and more sticky than the skimmed milk, lodging in the ducts which lead to the cistern, requires painstaking effort to get it away. When Mr. Howie, of Netherauldhouse, was in Denmark last year, along with a deputation of experts, he saw or heard about what is called the Hegeland system of milking, which is simply going further up on the udder, and using the external pressure to bring the cream downwards, which cannot be brought down by suction at the lower end of the teat. Indeed, the pulling of the teat is contrary to what is needed to get the cream. Where you have a large, fleshy udder, it is necessary to take the quarters one by one, but where you have a nice silky udder, you can take them in pairs. The hands are pressed towards each other, and at the same time upward, the same as a calf would do with his head. This pressing is done two or three times, taking out the milk collected in the cistern. It is a sort of massaging process. Resorting in the end to stripping one teat at a time, when the thumb, instead of going round the teat, is placed perpendicular and pressed hard as high up as the looseness of the udder will admit. This is exhaustive milking, which tends to increase both the quantity and quality of the milk, and permanently develop the dairy qualities of the whole herd. It is claimed that where this system is carefully carried out, the fatty contents of the milk is increased by .2, as compared with cows milked without this manipulation. The want of the strippings is a serious loss to the farmer and a danger to the cow, and so long as the milking machine cannot follow the udder as it empties with some kind of a large mouth to press the quarters to get the "afters," it is doomed to failure, and the same thing applies to bad milkers. They simply rob their master and injure the cows.

Uniform Marked Weights of Butter.

Sir,—A number of communications have been received from representative bodies and leading butter merchants in Great Britain, concerning the matter of a uniform weight of butter in what is intended to be the 56-pound box. It is stated that boxes are frequently marked 57, 58 and even 60 pounds. It is not claimed that these boxes contain less than the marked weights any more than those which are marked 56 pounds; the objection is against having any more or less than 56 pounds in each package. The butter-makers of New Zealand, Australia and Argentine are very careful on this point, and the uniformity in their weights is much appreciated by the trade. The 56-pound package was adopted because it represents half an English cwt. If any other weight is marked, and invoiced, the advantages of having such a standard are lost. The butter merchants in Great Britain are as much influenced by a matter of this kind as they are by the quality of the butter itself. New Zealand butter is receiving a premium over Canadian to-day more on account of its uniformity in all respects, the excellent packages and heavy parchment paper which is used, and the careful attention which is given to weighing and branding, than because the quality is superior. It is a penal offence in New Zealand to place any other than the true net weight on a package of butter or cheese.

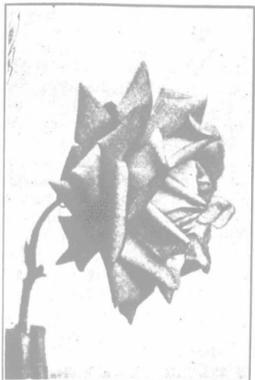
Every butter-box should be weighed after the parchment lining is placed therein, the tare marked on it, and then filled with the proper amount of butter to ensure it turning out 56 pounds.

J. A. RUDDICK, Dairy Com.

Horticulture and Forestry.

Luther Burbank and His Work

Our readers will be much interested in seeing to-day the portrait of Luther Burbank, whose apparent miracles in plant life have drawn upon him the attention of the world. Of his work it is scarcely necessary to speak. Everyone knows something of what he has accomplished, of how he has banished the thorns from the cactus, turned the yellow California poppy crimson, produced an everlasting that will not lose its perfume, and created new fruits—the plumcot, for example, which is a cross between the plum and apricot—while marvellously improving others; but not everyone, perhaps, realizes the economic value which his productions possess. To quote from the New York Independent: "Varieties of fruit have been produced that are more prolific and hardier, growing in regions where the old varieties failed; the fruit season has been prolonged several months by early and late bearing varieties; keeping qualities have been developed so as to stand long distance shipment; fruits have been made larger, stones removed, thorns eliminated, shells made thinner, flavor, color and odor improved, and entirely new fruits produced. Grains and fodder plants have been made larger, more prolific, more nutritive, and to have less waste; cotton, rice and sugar cane have been improved. To flowers have been added beauty, grace, perfume, size and color. . . . The practical value of this can scarcely be estimated."



Burbank Rose, which took the Gold Medal at the Louisiana Purchase Exposition, St. Louis, 1904.

Mr. Burbank lives very quietly at his home at Santa Rosa, Cal., where he is carrying on his experiments on a gigantic scale, which requires all of the vast profits which he has reaped as a reward of his labors. On his farm at Sebastopol, Cal., "there are now growing 300,000 varieties of plums, each tree grafted so as to contain 500 different kinds; at one time there were nearly or quite 500,000 lilies growing on the place, and 26,000 roses; the thornless blackberry was selected from 65,000 seedling plants, and from nearly a million seedling pears no tree worthy of propagation was produced." But, quietly as he lives, his name has travelled far to lands across the sea, and everywhere it meets with recognition. When it was spoken in the French Chamber of Deputies at Paris recently, "every member arose to his feet as a tribute of honor."

The following letter, from his sister, to the Independent, tells something of his life: "My brother was born March 7th, 1849, in the beautiful and historic town of Lancaster, Mass.; reared on a New England farm, loving nature in her varied forms, he made the best use of all his opportunities. My father was a man of scholarly tastes and strong convictions, a good business man, who gave each child the best example and education in his power; while my mother, possessing a remarkable fondness for flowers, no doubt transmitted the inventive and horticultural tendencies to her son. Luther's first toys were the plants in the window and in mother's flower garden; he never ruthlessly destroyed a blossom, but loved them as things of life, and a bright flower placed in the baby hand would always stay the falling tears. A quiet, retiring child, shrinking from notice, Luther spent much of his time with nature; he knew more than anyone else about the apples in the orchard, the wild berries on the hillside and in the meadow grasses, the chestnuts and hickory nuts in the woods. He knew where to find the first blossoms of spring and the brightest flowers of summer. The birds and animals allured him, and no rock, tree or cloud escaped his notice. The habit of observation and classification, with the power of individualizing which he possesses in such a remarkable degree, was early developed. Both in the district school and the Lancaster Academy he excelled in scholarship, and was a favorite with teachers and classmates. Our home was always supplied with good literature, and the town had one of the best public libraries in the State; he availed himself of these advantages, delighting in books of science, yet his reading was not limited to one subject. At one time his thoughts were directed toward the practice of medicine

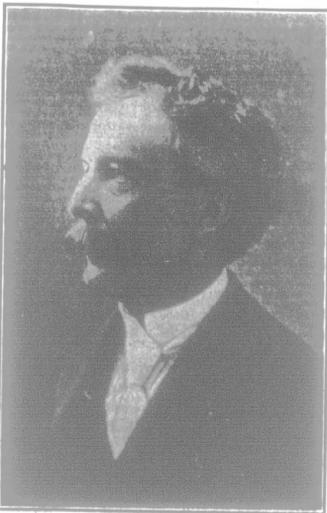


Plumcots. (Reduced from life size.)

as a life work, and the science of health has always been of great interest to him; with naturally a frail body, of such practical use has been the knowledge acquired that few men have been able to accomplish as much real work in life as he. Utilizing all his powers, physical and mental, at the age of fifty-five years, he each morning takes a cold sponge bath and a few physical-culture exercises, and is as active as a boy; harmony with nature has kept mind and body young and vigorous. Another subject of interest to him is mechanics, always keeping in touch with the latest discoveries and inventions; his early experiments along this line were

had collectors in foreign lands, and has been greatly assisted by botanists and explorers. Penetrating into the secrets of nature, finding unknown truth in familiar facts, he has acquired a knowledge of the habits, characteristics, adaptability and latent possibilities of plant life possessed by no other. This has required patient toil, privations and self-denial; often misunderstood, sometimes misrepresented, thwarted and disappointed, but never discouraged or impatient, he has gone steadily on with his experiments. Life is very simple in the vine-covered cottage at Santa Rosa, with his plants as his only family; the mother, now past ninety years of age, shares his home and rejoices to see her son honored of the world, revered by associates, respected by employees and loved by all. Strong in his principles and convictions, he uses neither tobacco nor alcoholic drinks, and employs no men addicted to their use; he recently declined to have a new brand of cigars bear his name and portrait. He subscribes to no creed, believing that each to-morrow should

"Find us farther than to-day."

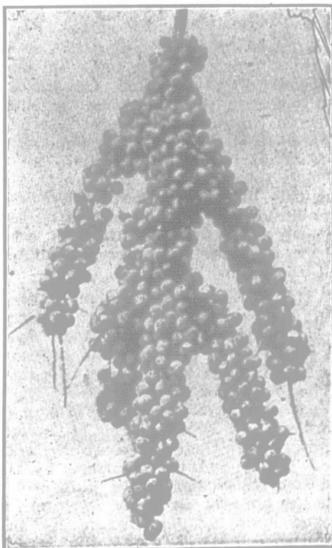


Luther Burbank.

Tender in his nature, he may be seen some early morning in summer as he carefully examines certain plants, to gently open the petals of a poppy where some belated bee, in his task of carrying pollen from flower to flower, had become imprisoned by the closing of the flower for the day; the bee's smothered cry had reached his sensitive ear, and very tenderly he sets the little captive free, watching its glad flight in the bright sunlight. The only secret of success that he claims is honesty with nature. When upon introduction one said: "I believe you are the man who improves upon nature," he rather indignantly replied: "No, sir; I only direct some of her forces." My brother has opened broad fields for development and made earth richer. May his life be a continued inspiration to the young. He says: "I shall be content if because of me there shall be better fruits and fairer flowers."

with an o'd teakettle in the backyard. While studying at the Academy winters, he spent the summer months at Worcester learning the patternmakers' trade; his letters written to the home folks while there reveal his intense love of nature, and to her call he responded, beginning his real life work in the production of the Burbank potato in 1873. Coming to California in 1875, the letters to the New England home tell how the beauties of the Santa Rosa Valley, afterward to become his home and the scene of his plant transformations, appealed to his enthusiastic temperament: "I firmly believe this is the chosen spot of all the earth, the climate is perfect, the air so sweet that it is a pleasure to drink it in, the sunshine pure and soft. The mountains which gird the valley are lovely, and the valley is covered with majestic oaks placed as no human hand could arrange them for beauty. The gar-

The following is a synopsis of the address delivered by Mr. A. P. Stevenson, of Nelson, at the Farmers' Institute meetings recently held throughout Manitoba: Mr. Stevenson first dealt with currants, because they were usually the first fruit planted, and the easiest grown. The yield, however, is usually very small; the grass and weeds are allowed to grow, and the pruning, cultivation and manuring are neglected. The following points need strict attention in the cultivation of currants: First, planting: They should be handy to the house and in long rows; this latter is very important. People usually put them in a little square patch, which requires a great amount of labor in hoeing, or the plot becomes overgrown with weeds. By putting in long rows a horse and cultivator may be used to keep them cultivated and free from weeds. Second, pruning: The idea in pruning is to keep the old wood cut out, and encourage the new growth. The right time to prune is in the spring, before the leaves show, just when the buds begin to swell. In pruning, cut the last year's growth about half way back. The old bark is black, the new an amber color, so that there is no trouble in distinguishing them. After the bush is eight years old its usefulness is over, and it had better be dug out to give room to new stock. Another point that needs attention is when a person is moving from one place to another; it is often the custom to cut a favorite bush in two, digging out half the bush—but this is a mistake. In such a case the proper thing to do is to take a cutting. This will do best in the end. The bushes well cultivated, pruned and manured will ensure good fruit. The varieties most suited to our climate are: In red currants, the North Star and Stewart's Seedling; in white varieties, the White Grape currants are most suitable; in black, currants, Lee's Prolific. In gooseberries, after long experimenting with the Downing, Industry, Houghton's Seedling, and many others, the latter was found most satisfactory. To succeed well, gooseberries must have deep, moist soil, be well cultivated, and manured about every other year. Cuttings should be set out in the spring, and moved into their permanent position in the second season. Red raspberries should be planted in a row, the canes about two feet apart in the row when set out, and the rows about 5 ft. apart. The canes should be allowed to meet in the row, but not cross, the intervening space being well cultivated with a plow to kill the suckers. Care must be taken when planting the roots to cut the cane off; the roots are perennial, but the canes are annual. The most suitable varieties are the Turner and Loudon. The fruit of the former is the softer. In blackcaps care must be taken to protect them during the winter. The best way to do this is to bend the canes down and cover them with earth. Some use manure, but this is objected to because it harbors the mice. Strawberries have proved a great success in the West, where thoroughly tested. Attention must be given to the soil, location and protection. The ground intended for the plants should be in roots the previous year, then plowed well in the fall and harrowed. The plants are set out in the spring in straight rows. Holes deep enough can be made with the hands. These holes



Improved Peach Plum. Branch 3 1/2 feet long. (Reduced from life size.)

dens are filled with tropical plants, palms, figs, oranges, vines, etc. Rose trees climb over the houses, loaded with every color of bud and blossom. English ivy fills large trees, and flowers are everywhere, even now (November). The birds are singing, and everything like a beautiful spring day. I took a long walk to-day, and found enough curious plants in a wild spot of about an acre to set a botanist wild."

Since coming to California he has collected plants from all parts of the globe. In recent years he has

Fruit-growing in Manitoba.

had collectors in foreign lands, and has been greatly assisted by botanists and explorers. Penetrating into the secrets of nature, finding unknown truth in familiar facts, he has acquired a knowledge of the habits, characteristics, adaptability and latent possibilities of plant life possessed by no other. This has required patient toil, privations and self-denial; often misunderstood, sometimes misrepresented, thwarted and disappointed, but never discouraged or impatient, he has gone steadily on with his experiments. Life is very simple in the vine-covered cottage at Santa Rosa, with his plants as his only family; the mother, now past ninety years of age, shares his home and rejoices to see her son honored of the world, revered by associates, respected by employees and loved by all. Strong in his principles and convictions, he uses neither tobacco nor alcoholic drinks, and employs no men addicted to their use; he recently declined to have a new brand of cigars bear his name and portrait. He subscribes to no creed, believing that each to-morrow should

"Find us farther than to-day."

Tender in his nature, he may be seen some early morning in summer as he carefully examines certain plants, to gently open the petals of a poppy where some belated bee, in his task of carrying pollen from flower to flower, had become imprisoned by the closing of the flower for the day; the bee's smothered cry had reached his sensitive ear, and very tenderly he sets the little captive free, watching its glad flight in the bright sunlight. The only secret of success that he claims is honesty with nature. When upon introduction one said: "I believe you are the man who improves upon nature," he rather indignantly replied: "No, sir; I only direct some of her forces." My brother has opened broad fields for development and made earth richer. May his life be a continued inspiration to the young. He says: "I shall be content if because of me there shall be better fruits and fairer flowers."

The following is a synopsis of the address delivered by Mr. A. P. Stevenson, of Nelson, at the Farmers' Institute meetings recently held throughout Manitoba: Mr. Stevenson first dealt with currants, because they were usually the first fruit planted, and the easiest grown. The yield, however, is usually very small; the grass and weeds are allowed to grow, and the pruning, cultivation and manuring are neglected. The following points need strict attention in the cultivation of currants: First, planting: They should be handy to the house and in long rows; this latter is very important. People usually put them in a little square patch, which requires a great amount of labor in hoeing, or the plot becomes overgrown with weeds. By putting in long rows a horse and cultivator may be used to keep them cultivated and free from weeds. Second, pruning: The idea in pruning is to keep the old wood cut out, and encourage the new growth. The right time to prune is in the spring, before the leaves show, just when the buds begin to swell. In pruning, cut the last year's growth about half way back. The old bark is black, the new an amber color, so that there is no trouble in distinguishing them. After the bush is eight years old its usefulness is over, and it had better be dug out to give room to new stock. Another point that needs attention is when a person is moving from one place to another; it is often the custom to cut a favorite bush in two, digging out half the bush—but this is a mistake. In such a case the proper thing to do is to take a cutting. This will do best in the end. The bushes well cultivated, pruned and manured will ensure good fruit. The varieties most suited to our climate are: In red currants, the North Star and Stewart's Seedling; in white varieties, the White Grape currants are most suitable; in black, currants, Lee's Prolific. In gooseberries, after long experimenting with the Downing, Industry, Houghton's Seedling, and many others, the latter was found most satisfactory. To succeed well, gooseberries must have deep, moist soil, be well cultivated, and manured about every other year. Cuttings should be set out in the spring, and moved into their permanent position in the second season. Red raspberries should be planted in a row, the canes about two feet apart in the row when set out, and the rows about 5 ft. apart. The canes should be allowed to meet in the row, but not cross, the intervening space being well cultivated with a plow to kill the suckers. Care must be taken when planting the roots to cut the cane off; the roots are perennial, but the canes are annual. The most suitable varieties are the Turner and Loudon. The fruit of the former is the softer. In blackcaps care must be taken to protect them during the winter. The best way to do this is to bend the canes down and cover them with earth. Some use manure, but this is objected to because it harbors the mice. Strawberries have proved a great success in the West, where thoroughly tested. Attention must be given to the soil, location and protection. The ground intended for the plants should be in roots the previous year, then plowed well in the fall and harrowed. The plants are set out in the spring in straight rows. Holes deep enough can be made with the hands. These holes

In blackcaps care must be taken to protect them during the winter. The best way to do this is to bend the canes down and cover them with earth. Some use manure, but this is objected to because it harbors the mice. Strawberries have proved a great success in the West, where thoroughly tested. Attention must be given to the soil, location and protection. The ground intended for the plants should be in roots the previous year, then plowed well in the fall and harrowed. The plants are set out in the spring in straight rows. Holes deep enough can be made with the hands. These holes

must not be too deep, or the rain will wash the earth over the crown of the plants and smother them. The runners must have assistance in striking root, for the next year's crop depends on these new plants. To do this, put earth on them to hold them down until they have taken root. On the approach of winter cover the plants with clean straw, but not too deeply. In the spring remove this, but leave enough to form a bed for the fruit, which otherwise would be damaged with sand. Washing spoils the flavor to a certain extent.

The varieties most suitable are Bederwood and Dunlop; the perfect flowering sorts are recommended.

Plum Trees.—The trees from the East are not suitable to our climate; a hardier variety is needed. This has been secured in the Improved American plum, a variety of the wild plum. In order to produce a hardy type, the best varieties of wild plum were secured and cultivated, until we have at present about all varieties of hardy fruit. The best, perhaps, is the Cheaney plum. The fruit is large, the skin feels like that of a peach, the quality is excellent, and the flavor not too stringent. Another variety is the Wejant, a free-stone. In planting, place the trees almost 10 feet apart each way. The trees need but little pruning. After beginning to bear, manure the surrounding land, but great care must be taken that the manure does not come in contact with the tree or roots.

Apples.—Perhaps the most discouraging of all fruits during the first experiment was the apple. The Ontario apples were found to be not suitable, and even Russian hardy varieties were not in every case successful. In Southern Russia the climate is fairly temperate; grapes and such fruit were grown, and, consequently, the apples of this district are not suitable in Manitoba.

Crab Apples.—Some from Minnesota were tried with good results. They have borne fruit for about 18 years; are about 26 years old; have a spread of about 25 feet, and almost the same height. The Transcendent is a good apple. It has a large fruit, of good color and quality, and ripens early.

Standard Apples.—These are of the Russian variety, from the Iowa Experimental Farm. Altogether the speaker has about 500 trees in cultivation, composed of about 86 varieties, and about 40 bearing fruit. Some of the varieties most suitable are Blush Calvin, Charlmayne, Silvus No. 1, and Hibernial. The trees are subject to many ills, and only the best types survive. Some bear too heavily, and are killed during the winter. Often there comes an extra severe winter, and cuts off trees that have hitherto stood all tests. A very common ailment is sun-scald. In the bright sunny days of early spring the sap begins to ascend the trunk, but a cold night follows, the sap is frozen, and in expanding ruptures the cells. They leave no connection on this side between the roots and branches, the vitality of the tree is weakened, and it finally dies. A remedy for this is to keep the head low, to have a bushy tree. The tree should be wrapped in gunny sacking in the fall, and this covering should be left on until about the middle of May. Another point to pay attention to is when planting the trees, to lean them somewhat towards the south-west. This affords some protection from the sun, and any prevailing wind will tend to bring the tree to the perpendicular. In planting trees, young ones about two years old are to be preferred.

Cherries.—The sorts from Ontario and United States are not suitable. The best one is a hybrid, half miner plum and half sand-cherry, and is called the Compass cherry. This fruit makes excellent preserves.

In closing, the speaker laid especial stress on good protection for all fruit. In winter this shelter protects from the cold winds; in spring, when the blossoms form, it is again of the highest importance to keep sheltered, and, finally, even if the fruit matures, the high winds we are subject to would destroy the fruit. A person wishing to obtain trees to form such a protection belt can do so by applying to the Forestry Branch, at Ottawa. He can have these free, by agreeing to plant, care for and cultivate them. If he accepts this offer and receives the trees, he will be visited by the Forestry Inspector, and given suitable advice and instruction.

Another point to which the speaker wished to draw attention, was that usually the ladies and boys and girls did not attend in larger numbers. The ladies are just as interested in fruit-growing, gardening, dairying, etc., as the men, and just as capable of carrying away the ideas that are intended to be conveyed. As the younger generation they are the citizens of the future, and it is by impressing these lessons on them that advance in the future lies.

The Forestry Building at the Lewis and Clark Exposition, at Portland, Ore., is an imposing structure. It required no carpentry, being built entirely of logs and cedar-bark shingles, framed together with tree nails and big, old-fashioned wooden pins. It occupies a space 102 by 206 feet. The base logs are 6 feet in diameter by 52 feet long. The logs above these, which make the walls, are not less than three feet in diameter, while the roof-supporting pillars are 6 feet in diameter and 48 feet high. The roof and upper part of the walls are of cedar shingles. The logs are all left in their original state, with the rough bark still clinging, and nothing has been done which would lend an air of civilization.

Tasteful Farm Homes.

While fine houses and tasteful surroundings do not, in themselves, constitute ideal homes, they certainly have an elevating and refining influence, and in combination with the true nobility of character that is the outgrowth of unselfishness, such surroundings are helpful in the best sense to those whose lives are lived on that most healthful of places, the farm. It is, perhaps, safe to say that in no country in the world are found more substantial, comfortable and commodious farm dwellings and barns than in Canada. It is a genuine pleasure at this season to drive through many sections of this country, noting the prosperous appearance of the well-built homesteads and well-kept farms, and one cannot but feel that, in this regard, our people have "a goodly heritage." But while most of the farmhouses seen are substantial and make a good outside appearance, it must be admitted that many have been indifferently planned from the standpoint of convenience and economy of time, labor and heating, and, owing to the scarcity of help and of fuel on the farm, many of them need to be improved in their internal arrangement to bring them up to the requirements of the times. The remodeling of an old or comparatively new house is not, to the average farmer, an inviting task, as it involves considerable temporary inconvenience and expense, but those who have made the venture will, as a rule, testify that the added comfort and convenience from well-considered improvements is well worth what it costs. Certainly no class of people are better entitled to comfortable homes than the toilers of the farm, and those who can afford it without embarrassment should not hesitate to consider the possibility of making needed improvements, and should set about their accomplishment at the earliest favorable opportunity. There is no valid reason why well-to-do farmers should not have the convenience of a water supply on tap in the kitchen and bath room. The windmill provides the necessary power at moderate expense, where water cannot be had by gravitation, and with an elevated tank in the barn or yard this improvement is easily available, and is a great convenience. The removal and replacing of partitions in the house, in order to make a more suitable arrangement of rooms, though it may create considerable disturbance for a few weeks, is quite practicable, not too expensive, and may add greatly to the comfort of the family and the saving of time and trouble to those having charge of the housework. The same is true of many of the basement stables seen in one's travels, lack of light and ventilation and of convenience in feeding being common defects, and such as might well be remedied at a moderate expense, by enlarging the windows, placing additional ones where needed, and hanging part of them on hinges so that they may be lowered at top to admit air without exposing the animals to uncomfortable drafts. Special attention needs to be given to these considerations now that basement walls are being built of concrete, as while it is no great undertaking to make a hole through a stone wall, with a cement wall it is a much more serious proposition.

The placing of farm buildings with a view to convenience and appearance has, in many instances, been sadly overlooked, the barns being either too near or too far from the house—too often nearly in front of the house, instead of in the rear, and frequently obstructing a landscape view that would be a pleasure and an inspiration. Where the buildings are substantial and permanent this difficulty is not easily cured, and must be endured, but may be mitigated to a considerable extent by the planting of evergreens, which serve at once as a screen and a shelter from cold winds in the winter.

It is a pleasure to note the increasing attention given in many districts to the tasteful care and keeping of the lawns and front yards of farmhouses. This is a work that is inexpensive, adds greatly to the attractiveness of country life, and may be shared in by members of the family, with pleasure and profit to all. Tree-planting is little short of a duty devolving on farmers, especially now that their cultivation is so well understood. The planting of trees by the roadsides and line fences has added immensely to the beauty of the country in many sections, and may be improved upon by planting groups in out-of-the-way corners and in places that are of little use for other purposes. The clearing of rubbish from the roadsides, and levelling the ground so that grass may be cut by the mower, would be a useful improvement in many places. These are but a few suggestions that might be offered for consideration of those interested, and are such as are often neglected, more from want of thought than from lack of interest or taste.

IF YOU HAVE A FARM FOR SALE OR WANT A SITUATION, PUT AN ADVERTISEMENT UNDER THE HEADING OF "WANT AND FOR SALE" IN THE "FARMER'S ADVOCATE."

Poultry.

Buff Orpington Ducks.

The following, quoted from Mr. Jorgen Anderson, Oakleigh, Australia, comes as a surprise to those of us who have always supposed that the Pekin was the only duck for utility purposes: "My Buff Orpington ducks started to lay at the end of June (one must bear in mind that the Australian seasons are the reverse of ours), and layed up to the middle of January, when they commenced to moult. They averaged 164½ eggs each. I have found the Bufts to be hardier than Pekins and Runners. During the great heat in January a large number of young Runners died in this locality. I lost everyone of my young stock, although I was careful both as to feeding and shade. I know of three breeders who had over 700 young Runners between them, and all died. My neighbors and friends have lost all theirs. My Buff ducklings, however, stood the heat; not one showed the least indisposition; there were some a few days old, and others up to eight weeks. The Bufts have evidently more vitality than the Runners, and appear to be more suitable for keeping in the changeable Australian climate. As to laying, they are not behind Runners, and far ahead of Pekins, and have a wonderful capacity for putting on flesh. I breed Pekins and Runners as well as Bufts, but the latter appear capable to fill, profitably to their owner, the place of both the former."

The Buff has an advantage over the white duck which our Australian friend does not mention. The white duck, always dabbling around any little puddle it can find, is usually dirty. It will present a pleasing appearance only when carefully looked after. The Buff does not show the dirt, and under ordinary circumstances is more attractive to look at.

A common mistake, with reference to the profit in raising ducks, is made by some because they notice that a duck eats much more than a chicken. A full-grown duck does not outweigh a full-grown chicken enough to pay for the extra feed, but a duckling can be made to weigh from five to six pounds as quickly as a chick can be made to weigh two. In most cities there is a great demand for these "green ducks," as they are called, and here is where the profit in duck-raising comes in. If one is near enough to a city to ship without too much expense, he will find that the very rapid growth of young ducks, and the price paid for such youngsters, makes them a source of profit if sold at the right age.

No stream or natural pond is needed for raising ducks. Breeding ducks should have a place to swim, in order that the eggs may be fertile and the ducklings vigorous when hatched, but a good wide trough is sufficient. Ducklings do not need water to swim in while growing. It is more profitable to raise them without, for they put on flesh faster, and are more plump and tender at the marketing size if they have not been allowed to swim. W. I. T.

The Feeding of Chickens.

Several queries have recently reached us, asking for information as to the cause of death of chickens, and post-mortem examinations have, in most instances, revealed the fact that improper feeding was responsible for the loss. There is no great difficulty in the feeding of chickens, and there is no reason at all why errors in this direction should occur. Nevertheless, several poultry-keepers, not only beginners, but also those of experience, constantly find much trouble in the feeding of their birds. Appended are just a few of the errors into which poultry-keepers commonly fall in chicken-feeding:

1. Giving too much soft food and not sufficient hard grain.
2. Giving foods of a too-concentrated character.
3. Not supplying a sufficient quantity of animal and green food.

Chickens do best when fed a little at a time, and at frequent intervals. Where they have plenty of means for exercise they may be given as much as they will eat; but more than this should not be placed before them, as the surplus amount is found to become fouled and tainted by lying about the yard, and so not only become wasted, but is calculated to give rise to serious troubles, that may end fatally if, perchance, the chickens may partake of it in such a condition.

Attention should also be paid to the importance of providing a constant supply of fresh, clean water. No more common cause of disappointment in chicken-rearing exists than that of neglecting to keep the drinking water pure and fresh. Impure and dirty water, whether it be in vessels that have not been refilled for perhaps two or three days, or in a stagnant pool, is one of the most fruitful causes of disease among poultry, both as chickens and as older birds. Several of the most successful poultry-keepers make a point of changing the water left for their chickens as often as two or three times in a day.

Raising Incubator Chicks.

In my experience, I left the chicks in the incubator thirty-six hours after they were hatched, operating it as before the hatch; but opened the door a little bit to let in more air after they were all dry. In the meantime, I heated up my brooder to 95°, putting a little chaff on the floor, and adding a saucer with inverted tin can of water. A tin can such as used for corn or peas answers the purpose admirably; clean it perfectly. Make a hole with a small nail in the side, $\frac{1}{4}$ or $\frac{1}{2}$ of an inch from the opening; fill it with clean water, from which the chill has been taken; place a saucer over the top, and invert. In this way you will have water before your chickens which they cannot get into, become wet or chilled, and the saucer will have water in even with the hole in the side of can as long as it contains any.

Remove chicks from incubator to brooder, being careful to cover them in transit, that no cold air may chill them, bearing in mind that every fifteen chicks adds one degree to heat of brooder. Do not put too many chicks in one brooder; fifty is plenty for one rated to hold one hundred. Fewer in number they thrive better. As soon as chicks are in the brooder, I give a good feed of grit, chick size. They are then ready to digest their food. In a couple of hours feed them a small quantity of bread and egg, in the proportions of three or four hard-boiled eggs (the infertile ones from incubator will do) to one small loaf of stale bread—chop or grind shells and all with the bread. Feed every two hours, being careful not to feed too much at a time. In two days add a little grain. The formula I use is: Cracked wheat, 25 parts; granulated oatmeal, 15 parts; millet seed, 12 parts; small cracked corn, 10 parts; small cracked peas, 6 parts; broken rice, 2 parts; rape seed, 1 part, and grit (chicken size), 10 parts.

Scatter sparingly, and let chickens work for it. Start with one feed a day, and as they become accustomed to it, substitute for three feeds of bread. In the meantime, let more air into your brooder, by raising the lid a little during the day, if weather is favorable, and as soon as they seem strong enough let the chicks out in a small yard made of boards or wire netting, watching them a little at first, until they become accustomed to going in and out of brooder. I find that giving them a little new milk once a day makes them grow much more rapidly. One must use their own judgment as to the heat. A little too much is preferable to too cold, as they can get out of the heat, but they can't remedy the cold. When you see the chicks getting out from under the hover, lessen the heat; when they crowd together under it, give more heat.

When six or seven weeks old, remove from brooder to a colony house, in which you can arrange a cold hover, if weather seems a little cool, by tacking flannel around a square board, slitting at intervals to allow the chicks to pass in and out. Place this high enough above the floor to allow the chicks plenty of room, and as they outgrow it it can be removed. If you consider the chick food too expensive, after they are four weeks' old, wheat and cracked corn (the latter sparingly) can be used for one or two feeds, leaving out the bread and egg. By the time they leave the brooder, lessen the feeds to three times daily, and other grains may be substituted.

If you wish to raise layers, I would by all means feed dry grains, as by so doing you have a much harder pullet; if for broilers, a mash of corn meal, bran and oatmeal will give best results, for two feeds a day.

We had no bowel trouble last season, and raised a large per cent. of chicks, while others around us lost them by the dozens; and our pullets raised on dry feed were laying when a little over five months old. Our aim was to feed too little rather than too much, and as soon as chicks were old enough we gave them free range. L. H. S.

Care of Sitting Hens.

Assuming that the hens when set were confined to the nests, and they should be unless it is certain that they will not leave them (some hens are so quiet that there is practically no doubt that they can be set anywhere, and from the first be trusted to come off to feed and go right back of their own accord), they should have an opportunity to leave the nest within twenty-four hours after being set, and if they do not come off of their own accord should be taken off, for if they do not leave the nest and void their excrement now, they are almost certain to foul the nests before the corresponding time on the following day, and during the first days of incubation the change of conditions and food often produce a disturbance of the bowels, and for awhile some hens will be loose and unable to retain the excrement as long as they will later. Hence, even if a hen is not hungry, and eats little or nothing, it is important to have her off the nest daily at first.

Hens that are handled without any trouble may be let off the nests at any time convenient for the attendant. With hens that are inclined to be shy, the easiest

way to break them to return promptly to the nest in a strange place is to let them off just long enough before dark to give them time to feed. They will often return to the nest quietly at this time, when if let off early in the day they would make a great fuss, and if handled roughly give the business up altogether. At dusk hens that do not go back of their own accord are more easily caught, and settle down quietly when returned to the nest.

Having returned to her nest of her own accord, a hen may, as a rule, be allowed to leave it at any time convenient for the attendant, and unless there is something wrong with the hen or the nest, will generally go back within fifteen or twenty minutes, which is about as long as it is safe to have the eggs uncovered in cold or very cool weather. On bright warm days, hens may remain off the nest half an hour to an hour without the eggs being any the worse for it. Indeed, the general rule is that the colder-blooded hens stick closest to the nests, while the hot-blooded ones give so much heat to their eggs that the nest gets uncomfortably warm, and they leave it for their own comfort, and instinct seems to prompt them to let their eggs cool longer than the cold-blooded hen does.

When many sitters are in the same room it might cause trouble to release them all at once, especially if they came from different flocks. There are several ways of keeping things working smoothly.

If the hens were all set at the same time, and all, or any considerable part of them, are so shy that it is advisable to let them off late in the day, the attendant can watch them while off, and interfere if they go to fighting. If he does not wish to watch them daily he can, within a few days, arrange to let them off at different times in pairs or small squads, leaving the more troublesome ones to the last.

If, as is the case on most small plants, the hens set in a pen are set a few at a time, they are broken to return to the nest in the order in which they are set, and when new hens are set the others can be released at intervals earlier in the day.

On a larger scale of operations, if several rooms or pens are required for sitters, they can be prepared at the same time, a few hens set in each, then a few more, and so on until filled. This admits of gradually breaking in a large number of sitters to the desired routine without having to watch them when off the nests. Thus it is possible to establish a routine of releasing sitters which will enable one to do all the work of caring for them as he goes about his other work, yet take so little time for it that he never feels it as a burden; in fact, hardly notices it.

The routine just described will apply when up to twenty or twenty-five hens are sitting in the same place, but with larger numbers together, as there often are

Price of Pure-bred Poultry.

To the Editor "Farmer's Advocate":

The question comes before the breeders of pure-bred fowl, "Why should I ask a price that is above that of common stock?" Someone might say, because I paid high, therefore I should charge high. Another may say, because other breeders put on high prices, therefore I should do the same. These arguments are all right as far as they go, but the main question is, are pure-bred fowl really worth more than common stock?

I shall endeavor to give a few reasons in the affirmative.

Take, for instance, the Barred Plymouth Rock breed. How long has it taken to get that breed up to its present standard? It has taken years of careful and scientific breeding to get the B.-P. Rock an established breed; nor does the work end there. The careful breeding has to be continued year after year to acquire and maintain the ideal type. Can this extra work be done for nothing? No; time is too precious to devote years of extra labor for nothing.

There is another strong reason. It is that a pure-bred fowl will, in nine cases out of ten, breed true to type, whereas you do not know what to expect from a mongrel. Is it, therefore, not worth something to know what kind of progeny you are going to get from your fowls? The breeder can have the kind of chicks he wants if he has sufficient breeding in the parents.

When speaking of pure-bred fowl, don't mistake between the pure-bred fowl in name only and the one that has breeding in reality, for there is a vast difference.

If the price on pure stock and the eggs of the same were to come down on a level with the common run, the interest in raising pure-bred stock would abate also, because the extra work and extra quality demands the extra price. It goes without saying, that, to keep the price of well-bred fowl up, it behooves the breeder to send out nothing but what is genuine.

COLIN CAMPBELL.

Apiary.

Clipping Queens.

When natural swarming is practiced—that is when the bees are allowed to swarm naturally instead of having their swarming done for them by their owner, "shaking," or otherwise manipulating them—there is nothing which will give more satisfaction than having the queens clipped. It used to be the fashion to let the queen have her wings and for the beekeeper to follow the swarm or try to do so, wherever it might go—often into the top of the highest tree in sight. If the swarm has sense enough to cluster on a branch it is not so bad, as they can then be cut or shaken down with little or no injury to the tree; but in the writer's experience, before he practiced clipping, about three-quarters of the swarms would make for the evergreens and cluster on about six feet of the trunk, from which they could only be removed by cutting the tree off below them, unless the queen could be found and caught, which is not just the easiest thing in the world to do under the circumstances.

There is an easier, quicker and better way of doing it, which is to catch the queen when she is in her hive on the ground and easy to get at, and fix her so she cannot follow the swarm. This is done by clipping one of her wings so that she cannot fly, and should be performed in the spring or early summer before the swarming season commences. There are several ways of doing it, but one which is largely used and gives general satisfaction is to pick up the queen by the wings with the right hand, first, of course, having opened your hive and found the queen. Allow her to catch hold of the left thumb or forefinger



Prince Arthur and Charlie.

Four-year-old Clydesdale geldings. First for heavy draft team any breed, first for team sired by registered Clydesdale stallion, first and third, respectively, for single draft horse, any bred at the Canadian Horse Show, Toronto, 1905. Owned and exhibited by J. W. Cowie, Markham, Ont.

when nests are several tiers high, it becomes necessary to let many hens off at the same time, watch them to some extent while off, and return them to the nests after a sufficient time off has been given them.

I have always had better hatches, on the whole, when I kept nests closed, except when the hens were off for food, etc. By doing so, one is sure that no nest is uncovered too long, and no serious interference of hens going on without his knowledge. Making this the rule insures against the most common causes of spoiled eggs. It is one of the little things that it pays to do, and the rule should be broken only in emergencies. — [Farm Poultry.

with her feet, and then, holding her by two or more legs with the left hand, cut off about half of one of the large wings with a pair of sharp, fine scissors, and let her go back to work. Now, when the bees swarm the queen cannot fly, but will be found crawling on the ground in front of her hive. Have a little wire cloth cage ready, with one end open. Hold the open end over the queen, and she will crawl up inside. Close up the open end, and set the queen in a safe place out of the sun. Lift the hive which the swarm came from to a new stand, and set an empty hive ready to receive a swarm in its place. The swarm in the air will soon miss its queen, and, returning home to look for her, will run into the new hive which is where their home was when they left it. When they are going in well, allow the queen to run in with them, and there you are. In clipping queens care must be taken not to injure them. It is well for a beginner to practice on drones until he learns how to pick them up and hold them. Never clip a queen unless you are certain she is a laying queen. A clipped virgin queen is worse than useless—she is a nuisance.

E. G. H.

Events of the World.

Canadian.

A rich discovery of gold-bearing quartz has been reported from the north of Frontenac Co., Ont.

Hon. David McCurdy, for 24 years member of the Nova Scotia Legislative Assembly, died June 10th of pneumonia, at Baddeck, N. S. He was 95 years of age.

Mrs. Leonidas Hubbard, wife of the explorer who perished in the interior of Labrador last year, has arrived at Halifax, on her way to Sillisoort, where she will organize a party and take up the work at the point where her husband gave up his life.

This is the last year in which the military camp will be held at Niagara, where the 400 acres set apart for the purpose are entirely inadequate. The next camp for the district will probably be in Northern Ontario, where the Government has reserved 25,000 acres as a military training ground.

British and Foreign.

The torpedo mines carried by the sunken Russian warships are now coming afloat, and rendering navigation very dangerous in the Sea of Japan.

Lieut. Peary will make another attempt to reach the North Pole. His expedition will set out from New York on the Steamer Roosevelt on July 4th.

Russia has agreed to Washington as the point at which negotiations between Russia and Japan are to take place.

The Danish Imperial family has refused the crown of Norway for one of its Princes. In Norway the Norwegian tricolor has in all places been hoisted instead of the union flag.

In commemoration of Togo's victory, a lighthouse whose light will be visible for 80 miles, covering nearly the whole scene of battle, will be erected on Okino Island, Japan.

Germany has addressed a note to the Powers, proposing an international conference on the Moroccan question, qualifying the step by the assertion that it has been authorized by Morocco. Germany's action in the matter is looked upon as the beginning of a possible European crisis.

Theodore P. Delyannis, the popular Premier of Greece, was assassinated recently while on the way to the Chamber of Deputies at Athens. The assassin, a professional gambler, stated that he did the deed in revenge for the Premier's order that all the gambling houses in Greece be closed.

Field Notes.

On June 15th we received a plant of winter rye which measured two feet nine inches from root to tip. The plant was grown in south central Manitoba.

The Argentine exporters of live stock to Great Britain, in order to avoid the prohibition of the importation of live animals, now send 1,500 live sheep weekly to Antwerp, where they are slaughtered, and the fresh mutton is sent across to England. The enhanced price received for the Argentine-Antwerp mutton encourages this circuitous mode of trading.

One cause of the dearth of apples in Great Britain at the present time is the comparative scarcity of Australian apples. Last year nearly 700,000 cases were brought to the British market, but this year's aggregate is not expected to reach over 400,000 cases. This probably explains why from four pence to six pence a pound is being asked for Australian apples.

Have You a Camera?

In view of the popularity attending those in previous years, we have decided to have another camera competition, or rather six competitions, as follows:

A—Photographs of farm homes, showing house, grounds, trees, etc.

B—Photographs of buildings and live stock, or any farming operations, such as seeding, plowing, harvesting, threshing, etc., in which people or animals are at work. (Last year's photographs accepted.)

C—Photographs of interior views of rooms in houses, showing arrangement of furniture, kitchen appliances, etc.

D—Rural school and grounds, with group of pupils. In this section we particularly desire photos of schools where grounds and surroundings are well kept.

E—Photographs of cheese factories or creameries, with surroundings.

F—Photographs of gardens or orchards.

The prizes will be, in each section:

First prize	\$3.00
Second prize	\$2.00

RULES FOR COMPETITORS.

All photographs must be mounted, and preference will be given to those not smaller than 4x5 inches in size.

THEY MUST BE CLEAR AND DISTINCT. In making the awards consideration will be given to the judgment displayed in the choice of subjects, and to the suitability of the photographs for illustration purposes.

They must reach the office of the "Farmer's Advocate and Home Magazine," Winnipeg, Man., not later than July 31st, 1905.

The name of the competitor, with P. O. address, must be marked on the back of each photo, as well as the name and location of the view depicted.

Any competitor may send in more than one photo, but may not receive prizes in more than two sections, nor more than one prize in any one section.

All photographs entered for competition shall become the property of the "Farmer's Advocate and Home Magazine."

No photograph from which any engraving has been made is eligible for competition.

June and July is the season par excellence for obtaining beautiful views of the various kinds for which our prizes are offered. Every Province in Canada and the adjoining States should be represented in this friendly competition.

Western Manitoba's Big Fair, Brandon.

The dates for the farmers' great annual holiday have been chosen for the first four days in August. This will be about a week earlier than last year. The prize-lists are now being distributed, and one may be obtained by dropping a post card to the manager. There have been several changes made in the prize-list, and it will pay everybody to obtain one. A number of valuable prizes have been offered, which are somewhat out of the ordinary; for instance: The Chatham Mfg. Co. are donating one of their handsome Chatham wagons; a Canton plow is also being donated; the Campbell Mfg. Co. are donating a cutter; the Armstrong Mfg. Co. are also donating a cutter; the Massey-Harris Co. are donating a hay rake; the Cockshutt Plow Co. are donating a plow; Frost & Wood are donating a set of harrows; the Campbell Incubator Co. are donating an incubator; Mr. Carruthers, the well-known hide and fur merchant, is donating two Galloway rosettes, and the "Farmer's Advocate" are again giving a gold medal in the stock-judging competition. In fact, the number of special awards that are being donated this year is too long a list for us to mention in this issue. They are valuable, useful and practical prizes of all kinds, and should bring out strong competition.

No doubt one of the great attractions at this year's fair will be the collection of native animals. There are bears, wolves, foxes, deer, pheasants, etc., etc. No extra charge will be made to see this interesting collection.

Besides the usual platform attractions and speeding events, the directors, at great expense, have arranged for a magnificent fireworks display, in which living pictures will be shown in fireworks. The day's attractions, amusements and sports will be concluded with a magnificent arrangement in pyrotechny, of the fall of Port Arthur, which was one of the crucial events in the Russo-Japanese war.

Horse Show at Winnipeg.

Winnipeg's first horse show, programmed for June 14th and 15th, was visited by all the drawbacks incident to the incubation of a new institution. Rain compelled a postponement for two days, so that it was Saturday night before the final events came off. From the standpoint of a display of horseflesh, however, the show was a splendid success, nearly all of the sixty classes being well filled, and many of them exceptionally large. Interest was well divided among the carriage, roadster and saddle types, and it was the unanimous opinion of all who saw the show that no such an excellent collection of horses had ever before been brought together in the West. In the harness classes, Hackneys and Hackney grades were most prominent; those belonging to J. A. Mitchell, Kildonan; Baker & McLaughlin, Winnipeg; Dr. Henderson, Carberry; Mrs. F. Scott, Winnipeg, and W. M. Gibson, Winnipeg, were particularly admired. In the grand sweepstakes for the best horse in the show (Osler, Hammond and Nanton cup), Dr. Henderson's Hackney stallion, Mars Meteor, was the choice of the judges. Among the roadsters, Dr. Hinman's (Winnipeg) So Gay was easily an outstanding winner, while in saddle horses, honors were pretty evenly divided between K. A. Price, of Moosomin, Miss Cameron, Winnipeg, and H. M. E. Evans, Winnipeg.

A splendid string, members of which appeared in many different classes, was shown by Mr. C. C. Chipman, of the Hudson's Bay Co. Polo ponies from Gillingham, Alta., and Qu'Appelle, Assa., were exceptionally plentiful, and all were well mannered. Heavy draft horses were not numerous, the honors going to J. A. Mitchell, on four of his excellent mares that have few peers in any district. The judges were Messrs. Alex. Galbraith, of Janesville, Wis., and Clem Alloway, of Montreal.

Given favorable weather conditions, a horse show in Winnipeg would do much for the horse interests of the West, as it would be the means of directing attention more generally to manuring horses, to keeping higher classed individuals, and would keep the advantages of the horse constantly before the well-to-do public.

Prairie Home Sale.

On June 15th the third annual auction sale of Shorthorns and Ayrshires was held by Hon. Thos. Greenway, at Crystal City. The attendance at the sale was good, and the facilities for conducting a sale in the new pavilion on the farm could scarcely be improved upon. Altogether there were forty head catalogued, but eleven of these were not sold. Six bulls averaged \$97.50, and the twenty-three females \$121.35. Only three Ayrshires were sold, at an average of \$78.83. The cattle were all in good sale condition, with the possible exception of an odd one or two. T. C. Norris, of Griswold, wielded the hammer, in his usual able style. The following is a list of purchasers and the animals sold:

Starling, A. C. McCollum, Roland, \$145; Crystal Beauty, M. McKellar, Pilot Mound, \$140; Roan Rose, Robt. Lawson, Darlingford, \$120; Beauty Spot, H. Stewart, Larivere, \$160; Red Beauty, C. Crowton, Ausk, N.D., \$85; Regalia, J. A. Young, Cypress River, \$150; Laura, J. A. Young, \$180; May Blossom, T. W. Stone, Clearwater, \$125; City Maid, J. Elton, Pilot Mound, \$100; Scottish Queen of Prairie Home, A. C. McCollum, \$145; Minnie, T. Stone, \$75; Lady Bell of Prairie Home, Dr. McConnell, Morden, \$125; Royal Belle, J. C. Stewart, \$200; Irwin's Bud, R. Sharpe, Crystal City, \$95; Rockwood Daisy, R. Nixon, Crystal City, \$60; Lavender Duchess, W. B. Cornish, Greenway, \$115; Diana IV., J. J. Ring, \$80; Vanguard's Valentine, W. B. Cornish, Greenway, \$175; Roan Queen, J. J. Ring, \$100; Lovely Seraphina, Jas. Campbell, Cypress River, \$85; Jessie of the Ring, J. J. Ring, \$175; Ury X., J. A. Young, Cypress River, \$115; Royal Victoria, A. Lawson, Darlingford, \$110.

Bulls—Judge Greenway, Henry Tiscall, Clearwater, \$125; Judge Challenger, John Stewart, Pilot Mound, \$110.

Plowing Match at Bird's Hill.

The fifth annual plowing match, under the auspices of the Bird's Hill Farmers' Institute, was held on June 14th, and brought out a long list of competitors, as the prizes were numerous and valuable. Most interest centered about the winning of the open championship silver cup, which fell to Mr. Chas. McLachlan, a veteran of many contests in Scotland and Eastern Canada.

For the best work of a boy under twenty, a square Morris piano was given, and was won by H. Bushel. The holding of annual plowing matches has been found to be a great stimulus to better work throughout the whole neighborhood. The winners in the different classes and their scores are as follows:

Class 1, boys 16 and under—R. George, 50; F. Henderson, 45; R. Line, 43.
Class 2, boys 20 and under—H. Bushel, 60; H. Hoddinott, 55; E. Edmonds, 55.
Class 3, men—J. Hoddinott, 75; F. Steward, 68; G. Studham, 59; J. A. Henderson, 52; B. Ishister, 45.
Class 4, gang plows—B. Studham, 70.
Class 5, disk plows—No entries.
Class 6—Chas. McLachlan, 80; A. E. Sperring, 75; E. Garven, 71.

Chas. McLachlan has now won the sweepstakes on two successive years, and it now becomes his property.

The judges were J. Yule, of East Selkirk; W. H. Corbett, M.P.P., Springfield, and Mr. M. Harper.

With the Turning of the Cycle.

Since the overwhelming Japanese victory in the Straits of Corea, the faint voice again begins to pipe its periodical alarm as to the Yellow Peril. This time, it is true, the warning comes from Vienna and Berlin, and Emperor William at least is accustomed to speak in no subdued tone of voice. The reason the pipe waxes faint is probably that all the rest of the world, practically, is up in arms against the suggestion. Carried away by enthusiasm for the plucky little men of the Chrysanthemum land, at one in disapprobation of the big Russian bear which has been lordling it so long, and which, so far as the autocracy is concerned, well deserves the drubbing it has received, the whole world unites in hurrahing for Tsushima, and Togo and his clever land officers in arms are hoisted up to the top of the pedestal upon which, as yet, the "white light" has not begun to beat too strongly. The Yellow Peril is laughed at as something beyond the bounds of possibility, and yet may not the great white world be wise in taking time to consider? "Forewarned is forearmed." There is possibly more sense than nonsense in the recent comment made by the Argus on the situation:

"The German Emperor's words need not be ridiculed, even if this mighty people has been raised up as a 'scourge' to the 'elect' of the continents of Europe and America. Asia has taught the rest of the world a good deal in its time; its teaching not having been generally appreciated, its lessons may possibly be permitted to become more pointed by the Great Architect of the universe, who, in His human building material, probably ignores colors and social distinctions."

China is full of resources—minerals, metals, building materials of all descriptions. Moreover, she has boundless wealth at her command, a wealth which is only waiting for direction. Already some of this surplus has begun to flow into the building of warships, a rather significant fact, in view of the general opinion that, beyond an occasional Boxer uprising, China cannot move. True, China has been for ages at a standstill. Long ago her capacity for invention seemed to become worn out; yet the Chinese, as well as the Japanese, are recognized as possessing a marvellous genius for copying. "Almost universally," as a missionary who spent many years in the Far East remarked, "the yellow man is a mechanic. He may not invent, but he can duplicate what you have invented." Now, the Japanese have "learned it all," torpedo, modern warship, submarine, wireless telegraphy, the heliograph, all that western science has evolved after centuries of study and experiment. Some of her chief officers, Oyama for instance, have spent years in Europe studying European military tactics. Given the direction of China's millions, China's vast resources, what might she not accomplish?

Great Britain has admittedly, owing to the Anglo-Japanese alliance, much present reason for gratification at the success of the Japanese navy. At the same time her necessity for keeping on the right side of the Japanese has been materially increased. Henceforth Great Britain, as all other heretofore self-styled "superior" nations, will find it expedient to defer to the little yellow people, and to sue where she has been in a position to disregard, if it so suited. In itself this is no calamity. Neither is the fact that the territory-grabbing policy of the European powers in regard to Asia has suffered an effective blow. The spirit of aggrandizement has been too characteristic of nations and individuals whose energies might have been better directed—it would be interesting just here to know into what state of mind Lord Curzon in India, for instance, has been thrown by the present juncture. It is held by many that otherwise little difference will be

made in the relations between the East and the West; that Japan will now be more careful than ever of embroiling herself with a European nation, knowing that combined Europe must form a formidable foe; and that she will be increasingly desirous of maintaining her connection with Great Britain, understanding the added prestige which such an alliance must give her on the sea.

Granted that all this is immediately true, it is also true that the Oriental is an individual who wears neither his impulses nor his ambitions on his sleeve. Already his reverence of the white man as a fighter has been upset, and he is chuckling, if a solemn-faced Oriental can chuckle, over the electric shock which the demure little soldiers have given the swollen-headed world. The Oriental works quietly, and there are, in all probability, many cycles still to be wound off before the mundane sphere grows cold. Let China develop as rapidly as has Japan during the past ten years, let modern science and Japanese discipline join hand with the not-yet exorcised Chinese savagery, let the united east reach out to Persia, Thibet, Afghanistan and all the Mohammedan and Buddhist hordes, which might be only too glad to get a crack at the long domination of the white man, and United Europe and America might well tremble. The Yellow Peril is not an immediate danger, but it would be a far-fetched assertion to say that it might not be a possibility of the future. As was recently pointed out by one well versed in the condition of the Celestial Empire, the greatest obstacle to an aggressive advancement on the part of the Chinese at the present time is the all but universal use of opium, with its deadening effects upon their intellect and energy, but who can say that even opium eating is an ineradicable evil, even in China, were she once to come under the domination of the Japanese and their wondrous skill in all that pertains to sanitation, hygiene, and medicine?

The Great Simplon Tunnel.

Possibly one of the greatest engineering feats of modern times has been the construction of the great tunnel through Simplon Mountain, Switzerland. About six and a half years ago the construction of this enormous passage, the longest railway tunnel in the world, was begun, one party of workmen starting on the Swiss and the other on the Italian side of the mountain. Month after month passed by, and as the workmen penetrated the depths of the earth with 7,000 feet of earth and rock above them, they were often compelled to stop work by reason of gatherings of foul gas and torrents of hot water which were encountered. In March of this year the work was completed, and so accurately had the engineers planned the work that the two parties met exactly, and when the stone wall between them was thrown down a continuous tunnel 12½ miles long, and at a cost of \$15,700,000, was ready for the traffic of the world. It consists of two single line tunnels, 50 feet apart from axis to axis, and a grade rises from each end to the middle. As may be imagined, the work was not accomplished without loss of life; even on the first trial engine which essayed to run through the passage two men were asphyxiated. All difficulties have, however, been overcome, and the tunnel was formally opened recently with great ceremony, trains from the Swiss and Italian ends meeting in the center of the bore, where the exercises were held. The point marked with a cross in the accompanying illustration shows the entrance of the tunnel.

If You Want Anything.

AND DON'T KNOW WHERE TO GET IT, AN ADVERTISEMENT IN THE "WANT AND FOR SALE" COLUMN OF THE "FARMER'S ADVOCATE AND HOME MAGAZINE" WILL GET IT FOR YOU. THE FARMER'S ADVOCATE AND HOME MAGAZINE, WINNIPEG, MAN.

Award to Spring Park Nurseries.

A decision has at last been reached by the arbitrators in the case between Mr. B. D. Wallace, of the Spring Park Nurseries, Brandon, and the C. P. R. This case arose out of a claim by Mr. Wallace of \$30,000 for damages to his land and nursery stock by the building of the Kirkella branch of the C. P. R. through part of his grounds. Before going into arbitration the Railway Co. offered compensation to the extent of \$5,500, but the arbitrators gave an award of \$4,987.40. The award, however, is only signed by two members of the board, T. D. Cumberland and Dr. W. L. Harcourt, Mr. Ingram refusing to affix his signature. Mr. Wallace will have to pay the costs of the arbitration, which will be heavy, as deliberation on the case lasted twenty days, and the arbitrators' fees alone amount to \$529.

Amendment to Inspections Act.

An Act has been introduced into the Federal Parliament to amend the Grain Inspections Act by adding thereto subsection two, which reads as follows:

"2. In case the lateness of harvesting or climatic conditions prevent the procuring of proper and representative samples of any quantity of grain of the crop of that year in time for the purposes of inspection thereof and action thereon at any meeting of the Grain Standards Board convened for the purpose of this section, the board at such meeting may authorize a committee, of such number of its members as it may appoint, to meet at a later date and to select such further commercial grades and samples as the character of the samples so procured may require; and the commercial grades and samples so selected by such committee shall be deemed, for all purposes of inspection and grading, to have been chosen by the full board."

Investigations at Central Experiment Station.

(Ottawa correspondence.)

Among the investigations conducted in the Laboratory at the Experimental Farm, Ottawa, during the past year were the following:

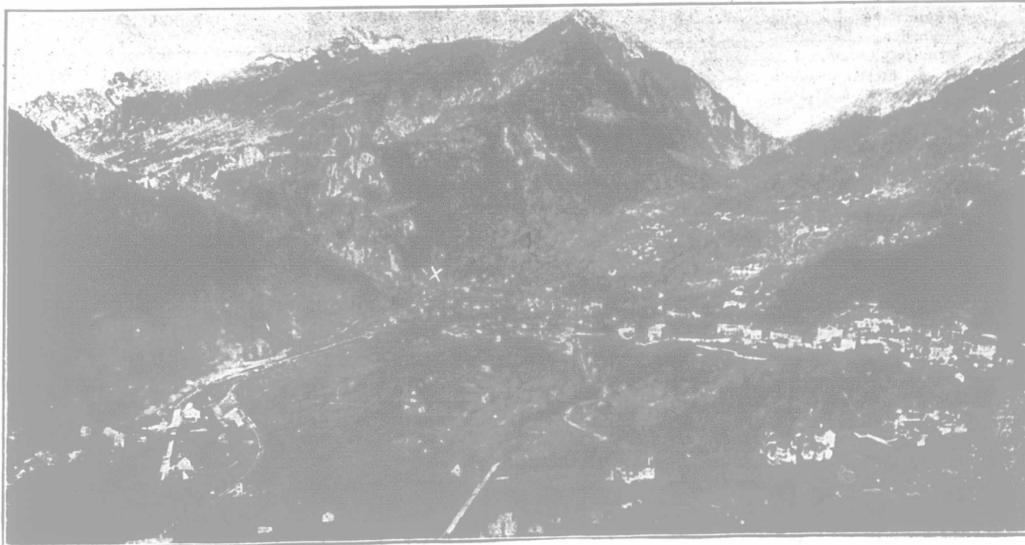
Examination of a process patented in Denmark for the preservation of milk. Dr. Horsch, of Copenhagen, was the patentee, and it was claimed that by putting the milk through this process, namely, treating it with hydrogen peroxide, it would keep sweet for an indefinite length of time. Samples of milk treated in this way were received at the Experimental Farm, and although the milk was sweet and fresh, it had certain objectionable features, such as flavor, etc., that precluded the success of the process.

Examination of certain instruments recently invented for rapidly ascertaining the amount of moisture in butter:

A recent law passed by the British Government forbids the importation of butter containing over a certain per cent. of moisture, therefore it is very important that the exporters should have some means of determining quickly and efficiently the amount of moisture in the goods about to be forwarded. Some of the instruments examined were found to be fairly efficient if used properly, while others were totally useless.

An investigation of supposed changes in the composition of the fat in cheese when it is kept in cold storage.—This investigation was undertaken owing to the fact that it was alleged in England recently that some Canadian cheese was adulterated with foreign fat, and when an analysis showed that such was not the case, the British merchant who had purchased the cheese claimed that some change must have taken place in the composition of the cheese while they were being kept in cold storage. The investigation at the Farm proved conclusively that no change whatever took place in the composition of the fat in cheese while being kept in cold storage. An examination of a process for making butter recently exploited in the United States. It was claimed that by adding certain chemicals to the cream more butter of better quality could be manufactured than by the ordinary process of buttermaking. The process proved to be of no use whatever, and, according to Prof. Shutt, was another sample of the fad game so much in evidence in the United States.

A bulletin will be issued in the course of a few days from the laboratory, containing an analysis of the different grades of wheat of the Northwest, with discussion thereon. As is generally known, the wheat grown in the Northwest is graded into different classes, according to quality, by a Government official in Winnipeg, and is sold according to classification. The principal grades of wheat are No. 1 hard, No. 1 northern, No. 2 northern, No. 3 northern, No. 4 extra, No. 4 and No. 5. There are some grades lower than this, but they are not used to any extent for milling purposes. The claim was advanced by a large number of farmers in the West that the difference in price between the different grades was not warranted by the difference in milling qualities, hence the analysis.



The Great Simplon Tunnel.

The spot marked with a cross shows the entrance of the tunnel.

Organization for Purchasing Supplies.

Instead of dealing with co-operative organizations in their two general classes—those for buying and those for selling on the farmers' behalf—I am discussing them in the order of their present importance. Hence, before dealing with further problems of the disposal of products, this article will take up that large one of the purchase of supplies by co-operative organization.

It is safe to estimate the value of what Canadian farmers buy annually, exclusively for use in their farm business, at \$20,000,000. They imported over three million dollars' worth of implements, fertilizers and animal foods (for finishing) last year. In 1901 (year of last census) they bought of our own manufacturers over \$12,000,000 worth of similar articles. Add to these binder twine, power machinery, corn, salt, and other widely-used articles, and \$20,000,000 will hardly cover the total. It is worth considering whether the half-million farmers who spend this necessary and enormous sum of money are getting all they should in return.

It is clear to any business man that they are not. Anyone knows the difference between buying retail and buying wholesale. By the present system the farmers support an army of agents, and pay large profits to merchants as well as to manufacturers. We may divide that twenty millions into two parts: One the real, necessary costs of manufacture, plus a reasonable profit, over all other capital charges, of, say, 3%, which part will amount to \$12,000,000 at most; the other part, \$8,000,000, is now paid for costs of selling, risks of business due to present conditions of industry that co-operation would eliminate, and profits that are greater than is fair to the farmers, who are the chief wealth-producers. That \$8,000,000 can be saved by a complete organization of the farmers, according to the principles already shown to be absolutely proven. That would mean \$8,000,000 more yearly on the bank accounts of farmers, or that much applied to reduction of farm mortgages, or as extra capital on the farms.

If anyone doubts the possibility of such a large saving, estimated at 40% of the amount now expended, let him look at the evidences. At present, as business men know, the usual or average agent's commission is not less than 25% of the total cost; and this would be saved by buying co-operatively. Other expenses of selling, such as advertising, travellers or general agents, office staff necessary to present system, amount at least to 10% of the total. "Risks of capital," and profits above what is necessary for the farmers to pay, will easily amount to the remaining 5%. Recollect the great wealth of the Masseys, the McCormicks, and others, gathered as profits on dealings with farmers. Recollect the dividends paid by the Farmers' Binder Twine Co., amounting—as I believe they have boasted—to 400% on invested capital since the beginning, and to 100% in one year's dividend! If a concern which exists in the farmers' interest and wars against monopoly and the robber trusts will take such profits out of the farmers, what can we expect of the trusts and private enterprises? It is clear that the figures given are moderate.

And the remedy? Co-operation—the kind of co-operation these articles have been advocating—is the remedy. That is, all the farmers uniting in one vast organization to buy what they need from those who manufacture such articles. Notice: It is neither necessary nor advisable for such a body of united farmers or any number of them to manufacture anything, but it is both advisable and necessary for them to buy thus co-operatively. The plant already manufacturing for the farmers is sufficient for that purpose. It is quite enough to bring the manufacturers to terms. And they will come to the farmers' terms; but only when the farmers compel them, and that can be done only by united action.

How to organize? That has already been outlined in a general way. Seven or more farmers organize themselves into an association for purchasing supplies for the members; directors are elected to carry on the business of the association; rules are framed and adopted governing the members and the directors, and the association and its rules are registered as any notary will prescribe. The important points to consider in organizing are:

1. Have the object of the association clearly defined: To make purchases of any kind whatever for the members; purchases of certain articles, such as harvesting and other machinery and implements, twine, salt, etc., to be made by members ONLY THROUGH THE ASSOCIATION, on pain of a fine or expulsion.
2. Have annual, or, at least, frequent changes of directors, to prevent certain difficulties that might arise, and to maintain interest of all members, as well as to familiarize them all in turn with the workings of co-operative business.
3. Empower directors to act freely in negotiations and all transactions on behalf of members, subject to certain conditions, as individual preferences for certain kinds of machinery, etc.
4. See that rules strictly maintain continued loyalty of every member who remains a member; and that said rules compel at least 12 months' determined and continued co-operative action as commenced.
5. Rules should also insist on cash dealings by members; that is, "cash or its equivalent," so as to prevent embarrassment of directors in making purchases for members.
6. Arrangements should be provided for federating with other SIMILAR ASSOCIATIONS.
7. Profits of business, if any, should be paid on ledger accounts and not on shares of association.

Other rules should be adopted that are not necessary to detail here, but the above are assuredly essential to continued success.

Such a co-operative association can do profitable business at once, and by dealing with manufacturers direct can save all agents' commissions on everything bought. The larger its membership, of course, the more powerful and economical its operations will be. And when federated with others, its buying capacity bring increased, its influence on the manufacturers will be correspondingly greater, until, when all or nearly all the farmers of Canada are members of the federated associations, the savings effected could be named in millions of dollars.

It will be seen at once that this is a totally different remedy from that offered by such concerns as the Farmers' Binder Twine Company, the Farmers' Co-operative Harvesting Machine Co., etc., both because it is not a plan to manufacture but to buy all together, and because it aims to benefit, not investors of capital, but buyers of farm supplies only, and to benefit all such buyers as wish to be benefited, and not merely a few special individuals among the many. Estimable as the companies named doubtless are, they are not the kind of co-operation we want, and can never do for us what we can and must do for ourselves.

It will be seen also that such an organization is not a repetition of the Grangers or the defunct Patrons of Industry, with their omnivorous capacity for undertaking everything at a gulp, and accomplishing less than they fall in accomplishing. Those enthusiastic and loosely-organized movements failed to gain their objects, because they had little to hold their members together except enthusiasm—and so were fore-doomed to failure. It cannot be too strongly emphasized that provision must be made and strictly enforced, binding those who join any co-operative organization to steady loyalty and active support. And it cannot be too often repeated that any organization must have just one special object—and stick to it. AUSTIN L. MCCREDIE.

Things to Remember.

TERRITORIAL FAIRS.

Edmonton	June 29, 30 and July 1
Lacombe	June 30 and July 1
Wetaskiwin	July 4
Calgary	July 5, 6, 7
Innisfail	July 7
Okotoks	July 11
Churchbridge	July 19
Yorkton	July 20, 21
Wolsley	August 3 and 4
Carlyle	August 4
Gainsborough	August 8
Moosomin	August 8
Indian Head	August 8 and 9
Carnduff	August 9
Regina	August 9, 10, 11
Wapella	August 10
Alameda	August 10
Grenfell	August 10, 11
Prince Albert	August 14, 15
Fairmead	August 15
Lethbridge	August 15, 16
Raymond	August 17, 18
Moose Jaw	August 17, 18
Red Deer	August 30, 31
Olds	September 19, 20
Strathcona	September 21, 22
Maple Creek	September 26, 27
Medicine Hat	September 28, 29
Saltcoats	September 29
Macleod	October 3, 4
Pincher Creek	October 5

FAIRS.

Neepawa	June 29 and 30, July 1
Swan Lake	July 18
Minnedosa	July 18 and 19
Winnipeg Industrial	July 20 to 28
W. A. A. A., Brandon	July 31 to August 5
Killarney	August 8, 9, 10
Manitou Show	August 11 and 12
Dominion Exhibition, New Westminster	
B. C.	Sept. 27, Oct. 7
MANITOBA FAIR DATES (DEPT. OF AGRICULTURE CIRCUITS).	
Elkhorn	July 17 and 18
Virden	July 18 and 19
Carberry	July 19 and 20
Westbourne	July 21
Hartney	July 18 and 19
Melita	July 19 and 20
Deloraine	July 20 and 21
Cartwright	July 18 and 19
Pilot Mound	July 19 and 20
Morden	July 20 and 21
Shoal Lake	August 8
Strathclair	August 9
Oak River	August 10
Hamiota	August 11
Carman	July 6 and 7
Morris	July 10 and 11
Crystal City	July 13 and 14
Portage la Prairie	July 18 and 19
Wawanesa	July 20
Cypress River	July 21
Dauphin	August 8
Swan River	August 10

FALL FAIRS.

Woodlands	September 27
Stonewall	September 27 and 28
Gilbert Plains	October 3
St. Jean	October 3
St. Pierre	October 4
Brokenhead	October 4 and 5
Russell	October 5
Macgregor	October 6
Austin	October 6
Headingly	October 11
Meadow Lea	October 12
Grenfell Grain Show	December 7

Secretaries of fairs and agricultural societies are requested to send in their dates, so that their fixtures may be made known to our readers.

New York City Milk Supply.

The past ten years have shown wonderful advancements in the betterment of the milk supply for human consumption. Five years ago the trend was to fix the value of milk by its food contents—the solids it contains—and for all practical purposes this was estimated from the fat contents of the milk. This, however, did not satisfy the public, especially the medical profession, which is deeply interested in the subject. It was felt that milk should not only contain the maximum food value, but that it should reach the consumer in as sweet, pure and clean a condition as possible; or, in other words, that it should be fresh and clean. The cleanliness of milk is ascertained by a bacteriological examination to determine the number (colonies they are called) of bacteria in a cubic centimetre of milk. A cubic centimetre is one-thirtieth of an ounce.

That the public at large is taking a greater interest in a pure-milk supply for large cities, is evidenced by publications on the subject appearing in the American monthly magazines and in the New York City daily press. As the largest city on this continent, it is interesting to know how the citizens of New York are supplied with that very necessary article of diet, milk. The consumption in Greater New York every day is approximately 1,500,000 quarts, besides the condensed milk and cream, of which a large quantity is used. It is distributed by 3,500 wagons and 11,500 stores. With the ever rapidly-increasing population of New York an increased quantity is required each year—about 1,500,000 quarts.

Of the 1,500,000 quarts distributed in New York every day, about 450,000 quarts are bottled, and the bottled milk includes about 6,500 quarts of certified milk and 2,000 of inspected milk. About 1,000,000 quarts are sold from stores every day. Certified and inspected milk is produced under the direction of the Medical Society of the County of New York, which has formulated stringent rules for the production on the farm, looking to absolute cleanliness. An agent of the Society inspects the premises before a permit is given. The Society gives to the producer a metal cap, bearing its name, with which to seal the top of each bottle. It makes weekly bacteriological examinations of the milk to see that it does not contain more colonies of the bacteria than are allowed by their rules—in case of certified milk, 30,000; inspected, 60,000.

Right here it may be said that the Board of Health of New York City does not consider milk unhealthy which contains a million bacteria per cubic centimetre. The minimum fat in inspected milk is four per cent.

The certified milk sells at from 13 to 15 cents a quart. Nearly all groceries and delicatessen stores sell milk (dipped milk)—that which is dipped from forty-quart cans—and some sell bottled milk, though comparatively very little of it. The usual price of bottled milk is eight cents a quart, and of dipped milk five cents a quart, in summer, and six in winter. In thickly-populated sections of the city some "dipped milk" is sold as low as four cents a quart, but this is done as a "leader."

The milk supply of Greater New York is drawn from a radius of from 400 to 450 miles of New York City, and includes the States of New York, New Jersey, Pennsylvania, Connecticut and Massachusetts, and a small quantity comes from Canada at points adjoining this country. There are 20,000 cows kept within the city limits, principally in the suburbs.

There are 1,223 dealers selling milk. As is usual in a business of such vast proportions, the greater part of the milk trade is in the hands of "leaders" in this business. One firm delivers close to 75,000 bottles in a day in Greater N. Y., and another over 40,000. There are also "leaders" in the can trade, who deliver forty-quart cans to the groceries and delicatessen stores.

The price paid each month for milk is fixed in the preceding month by the N. Y. Milk Exchange, an incorporated body, composed of about

100 of the leading dealers of New York. The price is usually two to two and one-half cents in summer, and from three to three and one-half cents per quart in winter. An American quart is about one-fifth less than the imperial. The freight and five cents a can for ferriage are deducted from this price. New York is an island. The North River runs on the New Jersey side of it, and the East River on the other side. There are but two railroads entering the city, consequently the most of the milk is brought over on the ferries in large four-horse wagons; hence the charge of five cents a can ferriage. The freight depends upon the distance from which the milk is shipped. If within a radius of 40 miles from the city, the freight per 40-quart can is 23 cents, for 100 miles 26 cents, for 190 miles 28 cents, and for any distance beyond 190 miles 32 cents.

The milk supply of this city is made at 15,000 farms, and is gathered at some 450 receiving stations (or creameries as they are called) which are scattered in different sections of the State, and are usually owned by the dealers in the city.

The "milk trains," contrary to the old custom, are run on express time, and often exceed in speed the fastest passenger train. Some milk is bottled on the farm, though the greater part of that intended for bottle delivery is shipped in cans to save freight, and is bottled in the city in the large plants of the dealers. The milk trains begin to arrive about nine o'clock in the evening, and continue to arrive until near midnight. It is a sight to see the enormous wagons drawn up at the long platforms at which the milk is received, and crossing over the ferry with the empty cans and returning with the full ones. The milk is iced in transit by the railroad. Blocks of ice are placed on the cans, and if any ice is left over on arrival the railroad people give it to the milkmen to place on or around the cans in transporting them across the city.

The milk supply is controlled by the Department of the City of N. Y. Board of Health, of which the chief official is the health commissioner, appointed by the mayor. The health commissioner is also president of the Board of Health. Each borough into which Greater N. Y. is divided has its local board of health, but the head office is in Manhattan—Old New York before consolidation.

The Board has thoroughly-equipped laboratories and a very large staff of employees. Among them are thirteen inspectors, whose duty it is to inspect milk on its arrival in the city, at the groceries and delicatessens, and on wagons in transportation across the city, or while being delivered to customers. They have power to seize and condemn any milk that does not comply with the law. Two of these inspectors are employed by the State Board of Agriculture, but are paid by the city and are under its directions, as the jurisdiction of the health commissioner of New York City does not extend beyond its limits.

One of the most stringent laws of the Board is that the milk on arrival must not exceed 50° F. in temperature, and must not be at any higher temperature when exposed for sale in stores. When milk is at 50 F. the growth of bacteria is retarded; at 80 to 95 bacteria multiply very rapidly. If the inspectors find the milk exceeds 50, either on arrival or in stores, they turn it into the river or gutter.

The use of preservatives is not permitted, and a constant warfare is waged against their use. Formalin is that which is most often used by those who try to avoid the law. Formalin in the milk renders the casein less digestible, especially by children. The adding of gelatine to cream to thicken it is a favorite device.

The sale of skim milk is prohibited. While it is known that the fatty substances of whole milk are necessary for infants, there seems no good reason why so valuable an article of diet as skim milk, which could be sold so much cheaper than whole milk, should not be permitted to be sold, except for fear that it might be palmed off as whole milk. Skimming, or adding water or skim milk to whole milk, is punishable by fine. The Health Department uses the Babcock test to determine if milk has been adulterated.

As I have said, the authority of the Board of Health extends over the milk only when and after it reaches the city, but the readers of the "Farmer's Advocate" need not be told that, to ensure a clean, pure milk, the beginning must be made at the farm. It is a deplorable but undeniable fact that too many farmers have a deep-rooted objection to taking proper precautions in the production of milk. Dr. Darlington, President of the N. Y. City Board of Health, has found by experience that a little persuasion is good, but that forceful measures are sometimes better. He and his State inspectors are constantly visiting the farms where the milk is produced and the creameries where it is received. If they find milk is being produced at the farm under unsanitary conditions, or that preservatives are being used, the farmer has pointed out the error of his ways, and suggestions are made to him for the betterment of such conditions. Often a word to the wise is sufficient; but if the farmer is obdurate

and will not comply with the requirements of the Health Board, an inspector camps on his trail. A visit is paid to the creamery which receives his milk, and the one in charge is told of the inadvisability of receiving any more milk from that particular farm. If the farmer ships his milk to the city by rail, it is followed by the inspector and promptly dumped into the river when it reaches here. Dr. Darlington believes in persuasion first, as he has no desire to put anyone out of business, but if the health of the people of this great city, especially that of infants, is jeopardized by unsanitary or unwholesome milk, drastic measures have been and will be applied by the Health Board impartially to the farmer, the middleman or the seller.

All raw milk, as contrasted with condensed milk, sold in New York, must contain not less than three per cent. fat and twelve per cent. total solids. By this it is presumed that the ratio of fat to solids other than fat are as one to three, and this is the usual ratio necessary to comply with the legal requirements of each State in this country. In England it is 3 per cent. fat and 8.5 per cent. solids other than fat. I would like to know where there is any large quantity of milk which contains not more than 3 per cent. of fat and has 9 per cent. solids other than fat. If there is I do not know it, and I am pretty familiar with the milk situation and milk analyses. Will some of your readers enlighten me? Let them look at the public tests and examine the ratio of fat to solids other than fat, and see if it accords with the usual legal ratio of the United States—one to three. I am perfectly aware I am raising "a leading question," but it is one worthy of being discussed.

A strange condition of affairs in this State exists, caused by the existing laws in regard to the fat in milk. By the laws, as they are now, the farmer's cows can produce milk containing less than 3 per cent. fat. The producer can deliver such milk to the receiving station, and he cannot be successfully prosecuted for selling it; but the moment the receiver sells this milk he can be successfully prosecuted for selling milk below the legal standard. But the dealer or his agent at the receiving station are fully alive to the situation. A "clarifier" is run at the creamery, or at the N. Y. City depot, to clarify the milk. It is nothing more or less than a centrifugal separator. The cream is separated from the milk, and ALL the cream and skim milk, or separated milk, are supposed to be added together again. But are they? I will leave your readers to decide this question, by stating the facts. In certain sections of this and other States milk is delivered at the receiving stations containing 5 per cent. fat; frequent analyses by the Babcock of bottled milk sold at 8 cents a quart, rarely show more than 4 per cent. fat, and often between 3 per cent. and 4 per cent. What became of the fat that was in the milk between the time it reached the receiving station and its delivery to the consumer? It has been repeatedly asserted in print, and not denied, that at certain receiving stations eleven 40-quart cans of whole milk will be received, and when it has been clarified 1 can of cream and 10 cans of whole milk will be in its place. Yet the legal requirement of 3 per cent. fat has been complied with.

The Board of Health has an appropriation of \$30,000, with which it employs trained nurses to visit the thickly-populated parts of the city where the poorer classes live, and teach them how they can best care for their milk, how to pasteurize it, and how to modify it. During the past winter I delivered a lecture in New York, Brooklyn and Long Island City, under the joint auspices of the Boards of Health and Education, on "Milk from the Farm to the Table," illustrated by stereopticon views. The audience was very large on each occasion, and seemed very much interested in the subject. The lecture was educational.

Dr. Darlington is a progressive, energetic, painstaking official. His department has happily been removed by him from politics, and a vast amount of good has been accomplished. This is evidenced by the fact that at the present time but 10 per cent. of the samples of milk taken by the inspectors as suspicious (not 10 per cent. of the whole) are condemned as adulterated or deleterious, whereas five years ago 33 per cent. of suspicious samples were condemned.

As a natural result, the death rate among infants has decreased to a very appreciable extent. With the crowded conditions of part of New York; with the foreign element, unused to our customs or even to our language, and ignorant on the subject of milk, the tremendous death rate of a few years ago among infants was traceable to a large amount of milk unfit for human consumption being sold in the city. I am glad to say that science and practice, going hand in hand, have made such vast improvements in our milk supply that New York has never seen such good milk as it has to-day, and that no large city in this or any other country is receiving any better milk than New York.

VALANCEY E. FULLER.

Markets.

Winnipeg.

Thompson, Sons & Co.'s market report says: Wheat—The crop reports are rather conflicting. A good many of them from Texas, Oklahoma and Kansas, as well as some of the other early winter wheat states, report the wheat thin on the ground and heads short, suggesting a disappointing yield, besides which there is mention of rust in some parts. Other reports are not nearly so pessimistic. For the most part there are good reports from the spring wheat States, but there again everyone does not see the prospect from the same standpoint. Too much rain and absence of sunshine keeps the weather condition too cool. The United States Government report for June gave condition of winter wheat on June 1st, 85.5, against 92.5 on May 1st, and 77.7 on June 1st last year. The condition of spring wheat is given as 93.7, compared with 95.9 on June 1st, 1904. Harvest has begun in Texas, Oklahoma and Southern Kansas, and new wheat has arrived at St. Louis. European crops continue to make reasonable progress, and large world's shipments from Russia, Argentina, etc., continue to supply importing countries with all they need. Manitoba wheat in the Winnipeg market has been rather uneven. July wheat has been kept pinned at the dollar. There is evidently still some short interest in July wheat, which holds the price of July and cash No. 1 and 2 northern up to present figures. There is practically no export or shipping demand. Crop prospects over Manitoba and Canadian Northwest continue very favorable. No. 1 northern, \$1.02½; No. 2 northern, 99¢; No. 3 northern, 84¢; No. 4 extra, 77¢; No. 4 wheat, 75¢; No. 5 wheat, 64¢.

PRODUCE.

Potatoes—Car lots on track, Winnipeg, 55c. per bushel; farmers' loads, 60c.
Butter—Jobbers are paying 14c. to 15c. for choice tub; round lots, 12c. to 13c.; bricks, 15c. to 16c.
Eggs—14c. to 15c., in cases.
Poultry—Prices higher; demand good; fowl, 14c.; chickens, 16c.; turkeys, 19c.; ducks, 15c.; geese, 14c.
Hides—6¢. to 7c. at country points for butchers' hides; full wool sheep skins, 60c. to 75c., at country points.

LIVE STOCK.

Cattle are moving more briskly, but prices remain steady. At Winnipeg dealers quote best butchers' 3½c. to 4c. per lb.; medium grades, 2½c. to 3½c.
Hogs—Receipts continue very good; prices firm. Live hogs, weighing from 150 to 250, bring 5½c.; heavier, 5½c. off cars.

Foreign Crop Conditions.

J. R. Heintz & Co. (R. B. Holden) furnish the following Broomhall foreign weekly crop summary:
Liverpool, June 20.—United Kingdom—The weather has been the most favorable of the season.
France—Continued rain and storms are beginning to cause complaints of rust and lodging.
Germany—Generally favorable conditions for the crop.
Roumania, Bulgaria—Damage by storms is unimportant. Prospects are now excellent.
Russia—Reports are now quite favorable. Some indications of smaller shipments.
Italy—Moderate complaints of damage to the crop.
Denmark—Reports are unfavorable.

Montreal.

Cattle—Prime heaves sold last week 5½c. to 5¾c.; pretty good cattle, 3½c. to 5c.; common stock, 2½c. to 3½c.; lean canners, about 2c. lb. For good large sheep shippers pay from 3½c. to 3¾c. lb.; butchers', 3½c. to 4c. Good lots of lambs sold at \$4 to \$4.50 each. Hogs, fat, 6c. lb.; fed, up to 7c., for selects, weighed off cars.

Chicago.

Cattle—Good to prime steers, \$5.25 to \$6; poor to medium, \$3.75 to \$5.15; stockers and feeders, \$2.60 to \$4.60. Hogs—Mixed and butchers', \$5.15 to \$5.32½; good to choice, heavy, \$5.25 to \$5.35; rough, heavy, \$4.50 to \$5; light, \$5.10 to \$5.30; bulk of sales, \$5.25 to \$5.30. Sheep—Good to choice wethers, shorn, \$4.40 to \$5.70; fair to choice, mixed, shorn, \$3.25 to \$4.30; native lambs, unshorn, \$4.50 to \$7.40.

British Cattle Market.

London.—Cattle are quoted at 11½c. to 12½c. per pound; refrigerator beef, 9½c. to 9¾c. per pound; sheep, 13c. to 14c. per pound.

THE "WANT AND FOR SALE" COLUMN OF THE "FARMER'S ADVOCATE AND HOME MAGAZINE" IS THE PLACE FOR YOUR ADVERTISEMENT. SEE RATES UNDER THAT HEADING IN THIS PAPER. ADDRESS: FARMER'S ADVOCATE AND HOME MAGAZINE, WINNIPEG, MAN.



Life, Literature and Education.

Charles Dickens.



(Biographical sketch.)

Thirty-five years ago this month there died in England the novelist, who, perhaps, more than any other English writer, has endeared himself to all classes of people, both in his day and ours. In London the anniversary is being made the occasion of a great demonstration in his honor; in Canada, it is but fitting that we, too, should pay his memory tribute.

Charles Dickens was born Feb. 7th, 1812, in Landport, Eng., where his father was a clerk on a small salary in the navy pay-office. With a large family, and naturally "shiftless" habits, the elder Dickens found the problem of making both ends meet too much for him. His little children were reared in poverty, and he was finally imprisoned at the Marshalsea for debt. In passing, it may be said that he still lives in the immortal Micawber, who will go down the ages "waiting," like many another of his clan, "for something to turn up." The mother of the family seems to have been scarcely more "thrifty," and as a consequence the education of the children was sadly neglected. During his early years, however, Charles made up for this by an insatiable habit of reading. Even at the age of eight years, his genius was already showing itself by his devotion to Fielding, Smollett, Lesage and Cervantes, writers who have been wont to tax much more mature intellects. At a later day he added to these favorites Shakespeare, Addison, Steele, Ben Johnson, Carlyle, Scott and Goldsmith. The Bible was at all times his stay.

Having at last been liberated from the Marshalsea, his father went to London, where he obtained the position of reporter for the London Chronicle, and here in this big city were spent the saddest days of the author's life—the saddest, and yet the richest in the material whose elaboration was afterwards to make him famous. For a time he worked at odd jobs along the Thames, and even was apprentice in a blacking establishment, mingling with many of the people who afterwards were resurrected for all time in his books. His schooling appears to have been confined to three or four years in

as many educational institutions, one of which, doubtless, afforded the basis of "Squeer's Academy," in "Nicholas Nickleby." For a short time afterwards he was clerk in an attorney's office, where he became conversant with the legal facts and characters which appear in his writings. But, for the most part, such education as he attained was due to his own efforts. Among other things, he taught himself shorthand, an acquisition which stood him in good stead; in fact, his whole earlier life, unwittingly as it was, seemed to have a direct bearing on the work of his after life. By reason of his acquirements in shorthand he was given the position of reporter for the True Sun, in the gallery of the House of Commons, a position which later led to his appointment as general reporter for the Morning Chronicle. In this capacity he was sent here and there all over England, and so enabled to travel in stage-coaches, lodge in inns, and mingle with the great mass of "common" people, in whose description he is at his best, and whose every trait and peculiarity he perceived with hawk-like keenness and registered in his memory with an unflinching tenacity.

From reporting he soon turned to original work, first in a series of newspaper articles which appeared as "Sketches from Boz." In 1836 appeared the "Pickwick Papers," whose success was so marked that the struggling young journalist of twenty-four found himself immediately one of the most popular writers in England. From this time his pecuniary troubles were at an end. In fast succession came "Oliver Twist," "Master Humphrey's Clock," "Nicholas Nickleby," "Old Curiosity Shop," and "Barnaby Rudge," all of which were widely read and lucrative. In 1841 he sailed for America, and, on his return, published those works, displeasing enough to the American people, which marked him as a satirist of the first order—"American Notes," and "Martin Chuzzlewit." In 1843 appeared "The Christmas Carol," "The Chimes," "Cricket on the Hearth," and "The Haunted House." The next year he went to Italy, and finally settled for a time at Lausanne. Here were written "Pictures from Italy" and "Dombey and Son." Following these came "David Copperfield," "Bleak House," "Hard Times" (his poorest work) and "Little Dorrit." About 1850 he established the magazine, "Household Words," which still exists as the official organ of an association known as the "Dickens Fellowship."

Besides accomplishing this enormous amount of writing, he was for several years connected with theatrical companies, acting as stage manager, playwright, and, on occasion, even as actor. In 1856, also, he began the fatal series of "reading" tours, which netted him an additional fortune, but finally resulted in undermining his health. In the same year he bought his famous old place, "Gadshill," where unfortunate domestic complications immediately led to his separation from his wife. Once more he plunged into work, and "Tale of Two Cities," "Great Expectations," "An Uncommercial Traveller," and "Our

Mutual Friend," appeared in quick succession. In 1868 he again came to America on a reading tour, but returned to England broken down in health, and began his "Mystery of Edwin Drood," which was never finished. On the 8th of June, 1870, after working at his book all day, he was suddenly stricken with paralysis, and died the following morning. On the 14th of June he was buried in Westminster Abbey with the ceremony which Great Britain offers as a last tribute to those who have proven themselves the worthiest among her children.

The Literary Genius of Dickens

A just criticism of the work of Charles Dickens would require nothing short of a volume; nay, to it has been given the space of many volumes. Yet, upon this anniversary of the great author's death, a few words, in passing, may not be amiss. It has often been a matter of wonder as to why his books have taken such a hold upon the public—for they are still, and promise to be indefinitely, among the most popular on the sales' counters. Faultless they are not. Occasionally their narrative drags until it becomes almost wearisome; almost invariably they show lack of system and balance in construction; in some portions there is ample evidence of hurried work, in others a straining for theatrical effect, due, probably, to the author's passion for the stage. Here and there, even, one may detect a positive lack of skill in inventing a natural sequence of events to bring about a desired situation. His style, though in general masterly, and in places ascending to the very highest type of literary art, is not uniformly up to the recognized standard of excellence. Yet he is, perhaps more than any other English writer, beloved by the great reading public, and his works have been translated into almost every other language in which books are written or read.

The greatest secret of his popularity, probably, lies in his unbounded sympathy, and that keen insight into the motives and thoughts of men, which—since human nature does not change, though its outward manifestations may—has rendered Dickens, like Shakespeare, "of no age," because belonging to all. Add to this his inimitable humor, his pathos, his power of vivid word picturing, and the fact that he extols most of all in depicting the great middle class—the class to which the majority of people belong—and it does not appear wonderful that he should be popular. We like to laugh, we like to cry, we like to encounter ourselves and those whom we meet, on paper. In all this, and more, Dickens gratifies us. He understands the human heart. He interprets humanity to itself. The world understands him.

It has been claimed that Dickens' characters are, as a rule, caricatures. But, as has been observed, "this objection has been chiefly launched by those who never knew the classes of which he has written." Possibly, also, it has been hazarded by those whose vision is not so keen as they credit it to be.

In a little book called "Friendship of Art," Bliss Carman has told of examining the work of an artist friend who always painted his shadows blue. To the poet this coloring seemed unnatural, and he objected. His friend simply told him to "use his eyes." He did so, and, after a short time, was astonished to find that all shadows appeared to him blue, a thousand times more beautiful than the brown ombres he had imagined them to be, simply because he had not seen aright. Possibly, among many of Dickens' critics, a little closer observation of real life might bring about a modification of this criticism as to his "exaggeration." Certain it is that, the more of Dickens we read, the more often do we meet his very "creations" on the street, in our business, in our homes. True, he often forces the "eccentricities" of his characters upon us by reason of constant repetition, but this repetition serves its purpose in giving a distinctiveness to each individual among the hundreds of which he treats, and without it his works would lose immeasurably. His books contain matchless examples of the very highest literary art. What, for example, could excel the ability to portray Sairey Gamp in such a way as to disclose to our minds the besotted, repulsive creature that she was in reality, and yet enable us to see her live in the story, without a feeling of nausea? Again and again he is equal to this achievement.

Dickens' books, unlike those of Howell's and others of a highly-lauded school, were all written with a purpose. He was a champion of the poor and downtrodden, and threw his whole soul into their cause. He wrote neither for money nor for fame, although both of these came to him; and who can say that his very ambition that his books should do good was not the true well-spring of his marvellous success? When writing, he laughed and cried with his paper children, and more than once grew positively ill over their troubles. Could the expression of such feeling be other than powerful? However that may be, the fact remains, and will remain, so far as literary foresight can prophesy, that he ranks among the most beloved of those who have contributed to the world's literature.

The Death of Little Paul.

Little Dombey closed his eyes with these words and fell asleep. When he awoke the sun was high, and the broad day was clear and warm. Then he awoke—woke mind and body—and sat upright in his bed. He saw them now about him. There was no gray mist before them, as there had been sometimes in the night. He knew them every one, and called them by their names.

"And who is this? Is this my old nurse?" asked the little child, regarding, with a radiant smile, a figure coming in.

Yes. Yes. No other stranger would have shed those tears at sight of him, and called him her dear boy, her pretty boy, her own poor, blighted child. No other woman would have stooped down by his bed and taken up his wasted hand and put it to her lips and breast as one who had some

right to fondle it. No other woman would have so forgotten everybody there but him and Floy, and been so full of tenderness and pity. "Floy! this is a kind, good face. I am glad to see it again. Don't go away, old nurse. Stay here! Good-bye!"

"Good-bye, my child!" cried Mrs. Pipchin, hurrying to his bed's head. "Not good-bye?"

"Ah, yes! Good-bye! Where is papa?"

His father's breath was on his cheek before the words had parted from his lips. The feeble hand waved in the air, as if it cried "Good-bye!" again.

"Now lay me down; and, Floy, come close to me and let me see you."

Sister and brother wound their arms around each other, and the golden light came streaming in, and fell upon them, locked together.

"How fast the water runs between its green banks and the rushes, Floy! But it's very near the sea now. I hear the waves! They always said so!"

Presently he told her that the motion of the boat upon the stream was lulling him to rest. Now the boat was out at sea. And now there was a shore before him. Who stood on the bank!

"Mamma is like you, Floy. I know her by the face!"

The golden ripple on the wall came back again, and nothing else stirred in the room. The old, old fashion! The fashion that came in with our first garments, and will last unchanged until our race has run its course, and the wide firmament is rolled up like a scroll. The old, old fashion—Death!

O, thank God, all who see it, for that older fashion yet, of Immortality! And look upon us, Angels of young children, with regards not quite estranged, when the swift river bears us to the ocean!—[Charles Dickens, in "Dombey and Son."

Up from Slavery.

II.

The story of how the little colored boy, Booker T. Washington, conquered every obstacle which confronted him in his never-wavering determination to obtain an education, reads like a romance. While at work in a coal mine he overheard two miners speak of a great school for colored people somewhere in Virginia. It was called the Hampton Normal and Agricultural Institute, at which poor but worthy students could work out all or part of the cost of their board, and at the same time be taught some trade or industry. He resolved at once to go to that school, although he had no idea where it was, how many miles away, or how he was going to reach it. He was fired by the one ambition—to get to Hampton. The thought was with him day and night and never left him, till after long service, patient waiting, and the learning, meanwhile, of many other practical lessons, he presented himself at its gates, which were to him as the gates of Paradise. The story of that intervening time is well worth the reading. A year and a half of it was spent under the strict supervision of a mistress whose teachings were of great value, and who rewarded his fidelity to his trust by furthering his great work later on. "Even to this day," writes the founder of Tuskegee Institute, "I never see bits of paper scattered around a house or street that I do not want to pick them up, a filthy yard that I do not want to clean it, a paling off a fence that I do not want to put it on, an unpainted or unwhitewashed house that I do not want to paint or whitewash it, a button off a coat that I do not want to put it on, or a grease-spot on the floor that I do not want to take it away." And so was learnt the lesson which has passed into the training of many others since—that everything must be done systematically and promptly; nothing must be either slipshod or slovenly, whilst

at the bottom of all must be found absolute honesty and truth.

HOW HE GOT TO HAMPTON.

Tramping part of the way, getting occasional rides in trains, wagons or cars, as his very small resources allowed, and once having to walk the whole night through, outside an hotel which would not admit him on account of his color, Booker at last reaches Richmond, Virginia, 82 miles from Hampton. He had never been in any large city, knew no one, and was without a copper left in purse; moreover, he was so hungry that the sight of the food stands, "with fried chicken and apple pies," was almost unendurable. He walked the streets till after midnight, "tired, hungry, and everything but discouraged," and then, finding a spot where, the sidewalk being elevated, was a nook into which he could creep, the weary traveller, at the extreme of physical exhaustion, snatched some hours of slumber, undiscovered and undisturbed by the tramp of feet overhead. For many nights the undaunted boy, having obtained work in the unloading of a ship, slept under the sidewalk, until he had earned enough to carry him to the promised land. Having been so long without proper food, a bath, or change of clothing, no wonder that there were doubts in the mind of the teacher to whom he presented himself, as to his admission; but at last she gave him his chance. "The recitation room needs sweeping; take the broom and sweep it."

"Never," tells Booker, "did I receive an order with more delight. I knew that I could sweep, for Mrs. Ruffner had thoroughly taught me. I swept that room three times. Then I dusted it four times—all the wood-work, every bench, table and desk; moved every piece of furniture, and cleaned every closet and corner. I had the feeling that, in a large measure, my future depended upon the impression I made upon the teacher in the cleaning of that room. She was a 'Yankee' woman, and knew just where to look for dirt, and her reply was, 'I guess you will do to enter this Institution,' and that made me the happiest creature on earth, for it paved the way for me to get through Hampton." Working early and late, preparing his studies as best he could, he mounted step by step upwards. Everything was new to him at first; even his very bed was a puzzle to him. The first night he slept under both sheets; the next night on the top of both of them, until, by watching his room-mates, he learnt that he was to sandwich his body between them. Greater problems were unravelled by his growing powers of observation, and difficulties, unsurmountable, as they would have appeared to most people, white or black, melted away before his indomitable will and steadfastness of purpose. From a pupil he became a teacher, supremely happy to use any opportunity which offered to help others as he had been helped himself, with or without fee or reward, until finally, in 1881 there came to him an invitation to his life-work in the form of a telegram, dated Tuskegee, Alabama, from the promoters of a proposed Normal School there: "Booker T. Washington will suit us. Send him at once."

H. A. B.
(To be continued.)

Appreciation of the "Quiet Hour."

The following has just been received: Dear Hope—of the Quiet Hour.—You do not know how much your words in the Quiet Hour to-day on "Rest in the Lord" have cheered my heart. Have just been reading it in the quiet of this peaceful beautiful evening. It has been a day full of trouble and heart pain to me, and those beautiful words of Rest seemed to come to me as a special message, and have turned my thoughts away from home cares and worries to the beautiful world above, and my heart finds Rest. Thanking you so much for those as well as other cheering words, for I always love the Quiet Hour.

I am always a
WELLWISHER.



Puzzle Competition.

I will give you a few problems this week, but don't send in your answers just yet. You shall have full directions later on.

C. D.

I. A farmer had two sons. He gave nineteen cents to one and six cents to the other. What time would that be?

II. An acrostic.
Nature's renovator.
Hard water.
Proper.
A numeral.
Not far.

My initials when read downwards and my initials read downwards give the name of one of the apostles.

III. A charade.

My First is a short and familiar name You give to an islander well-known to fame, And if you reverse it you mention the place

Where sometimes that islander's found in disgrace.

I'm sorry to say that all I have left Is caused by my First when of reason bereft;

In fact, I am told that when out of employment He looks on it quite as natural enjoyment.

I wish I could add that my Whole is a name That all of his countrymen justly could claim.

IV. A riddle.

When has a man four hands?

V. A flower wedding.

1. What was the bridegroom's name?
2. The bride's name?
3. At what hour was the wedding?
4. Who was one dark-eyed bridesmaid?
5. One from between the mountains?
6. One precise maiden guest?
7. What sealed the marriage contract?
8. What did the bride wear on her head?
9. What did she wear on her feet?
10. What kind of glove did she wear?
11. What style of collar?
12. What was the color of her eyes?
13. What fop was at the wedding?
14. What bashful guest?
15. What waved over the house?
16. What homely gifts did two country cousins give the bride?
17. What did the bridegroom wear on his coat?
18. What did the bride say to her friends when she went away?
19. What star shone on the newly-married pair?
20. How long will their love endure?

VI.

I am a word of 14 letters. Tom and Harry, who were 1, 2, 3, 4, 5, 6, 7, 8 companions, 6, 8 school, were 11, 10, 14 day talking together of the glorious 6, 1, 5, 9, 11, 10, 4 of men, both on 4, 14, 6 and land. "For my part," said Harry, "I admire 10, 6, 12, 11, 13, 14, 11, 7, and 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14 more than many others."

"But," said Tom, "1, 6, 7, 10, 11, 8 you admire 10, 14, 13, 4, 2, 3 as much." My whole is a city of Europe.

Sowing and Mowing.

Be careful what you sow, my boy,
For seed that's sown will grow,
And what you scatter day by day
Will bring you joy or woe.
For sowing and growing,
Then reaping and mowing,
Are the surest things that are known
And sighing and crying,
And sorrow undying,
Will never change seed that is sown.

Be watchful of your words, my boy,
Be careful of your acts,
For words can cut, and deeds bring blood,
And wounds are stubborn facts.
Whether sleeping or weeping,
Or weary watch keeping,
The seed that is sown still will grow;
The rose brings new roses,
The thorn tree discloses
Its thorns as an index woe.

Be careful of your friends, my boy,
Nor walk and mate with vice;
"The boy is father to the man";

Then fly when sins entice!

The seed one is sowing
Through time will be growing,
And each one must gather his own;
In joy or in sorrow,
To-day or to-morrow,
You'll reap what your right hand has sown!

A Small Hero.

We did not know he was a hero, but I think he was, and perhaps after you read this little story you will agree with me.

He was a square-shouldered little boy who lived on our street. His mother was quite troubled because he had such mannish ways before he was fairly out of babyhood. But he was "nobody's baby." He had a pair of blue overalls, such as nice boys on our street wore when they played in the dirt, and when those were on he had a funny way of taking long steps and standing with his feet far apart, as if he were about as tall as his father.

Half a dozen other Tom Thumbs, who also wore overalls and took long steps, chose Charlie for their leader. Instead of calling them Kenneth, and Willie, and Joe, our Charlie used their last names—Knox, Robinson, Clarke, and so on—while they called him MacArthur, or, still better, "Mac." He was happy when he could be "Mac" all day.

These dear little pygmies had a big football which some older brother had worn out, and they "blew it up," and patiently mended it day after day, and kicked it so vigorously that usually the kicker fell backward into the dust, but that was taken as part of the game.

Charlie's mother used to say: "Charlie is a born leader. Oh, if I could only know he would be a good one!" I can tell you, boys, between ourselves, that ever so many mothers are thinking of that very thing.

Well, one day a little chap wandered into our street and began to play with Charlie and his "regiment"—for that is what he called the boys who followed his lead. I do not know what sort of parents or home this bad boy had, but somewhere he had taken lessons in evil, and before he had been with them a half hour, he began to swear, taking the name of the great God in vain. Charlie stopped playing and drew a long breath.

"Did you do that a-purpose?" he asked.

"Yes, and I'll do it again," replied the boy from outside, as he did.

"Robinson!" cried Charlie, to his oldest follower.

"Here!" answered Willie, running to Charlie's side, while the rest of the boys followed.

"He swore," said the little captain, standing very straight and pointing to the culprit, "and we don't play with boys that swear, on this street."

"No, we don't; no, no!" they responded.

"What'll we do with Sullivan?"

"You can't do anything. I'll stay here if I'm a mind to," said the boy, kicking dust toward them.

"Not if you swear when the Commandments say not to," answered Charlie.

"No, sir; not if you swear," echoed the others.

"And we don't want you if you've got bad words inside," added the leader.

"I don't care; men say 'em on the street," said the defiant Sullivan.

"But this regiment don't and you can't play with us 'less you promise never to again."

The boy took up a stone to throw, but as he looked at the six determined little figures he dropped it and turned sulkily away.

"Tell your mother to wash out your mouth with soap-suds," said Willie Robinson.

"And don't you come again till—you's over it," added the captain, as if the dreadful habit were a disease.

They waited until "Sullivan" turned a corner, and then they went on with their play.

But Charlie's mother, who sat beside an open window, could not see to set another stitch until she had wiped the tears from her eyes. But they were not "sorry" tears. MRS. O. W. SCOTT.

Unawares.

(Sent in by F. R., Sydenham, Ont.)

They said—"The Master is coming
To honor the town to-day,
And no one can tell at what house or
home

The Master will choose to stay."
Then I thought while my heart beat
wildly—

"What if he should come to mine?
How would I strive to entertain
And honor the Guest divine?"

And straight I turned to toiling,
To make my home more neat—
I swept, and polished, and garnished,
And decked it with blossoms sweet.
I was troubled, for fear the Master
Might come ere my task was done,
And I hastened and worked the faster,
And watched the hurrying sun.

But right in the midst of my duties,
A woman came to my door:
She had come to tell me her sorrow,
And my comfort and aid to implore.
And I said—"I cannot listen
Or help you any to-day,
I have greater things to attend to,"
And the pleader went away.

But soon there came another—
A cripple, thin, pale and grey,
And said—"Oh! let me stop and rest
A while in your home, I pray;
I have travelled far, since morning,
I am hungry, and faint and weak,
My heart is full of misery,
And comfort and help I seek."

And I said—"I am grieved and sorry,
But I cannot keep you to-day.
I look for a great and a nobler Guest,"
And the cripple turned away.
And the day wore onward swiftly,
And my task was nearly done,
And a prayer was ever in my heart,
"That the Master to me might come."

And I thought I would spring to meet
Him,
And treat Him with utmost care:
When a little child stood by me
With a face so sweet and fair—
Sweet, but with marks of teardrops,
And his clothes were tattered and old,
A finger was bruised and bleeding,
And his little bare feet were cold.

And I said—"I am sorry for you,
You are sorely in need of care,
But I cannot stop to give it,
You must hasten elsewhere."
And at the words, a shadow
Swept over his blue-veined brow,
"Someone will feed and clothe you,
dear,
But I am too busy now."

At last the day was ended,
And my toil was over and done,
My home was swept and garnished,
And I watched in the dusk, alone,
Watched, but no footfall sounded;
No one paused at my gate;
No one entered my cottage door;
I could only pray, and wait.

I waited 'till night had deepened
And the Master had not come.
"He has entered some other door,"
I cried,
"And gladdened some other home."
My labor had been for nothing,
And I bowed my head and wept,
My heart was sore with longing;
Yet, spite of all—I slept.

Then the Master stood before me,
And His face was grave and fair,
"Three times to-day I came to your
door,
And craved your pity and care;
Three times you sent me onward,
Unhelped and uncomfited,
And the blessing you might have had was
lost,
And your chance to serve has fled."

"Oh! Lord, dear Lord, forgive me.
How could I know 'twas Thee?"
My soul was shamed and bowed
In the depths of humility.
And He said—"The sin is pardoned,
But the blessing is lost to thee;
For failing to comfort the least of Mine,
You have failed to comfort Me."



A Royal Guest.

Behold thy King cometh unto thee.—
S. Matt. xxi. : 5.She . . . saw Jesus standing, and
knew not that it was Jesus.—S. John
xx. : 14.To-day I must abide at thy house.—
S. Luke xix. : 5.The Spirit of God lies all about the
spirit of man like a mighty sea, ready
to rush in at the smallest chink in the
walls that shut Him out from His own.
—Geo. MacDonald.A missionary, talking with some lepers
in India about the second coming of
Christ, asked: "Do you think He will
come to-day?" The answer came quick-
ly and earnestly: "We don't know, but
we hope so."Don't we know? He who said to
Zaccheus, "To-day I must abide at thy
house," says to each of us to-day,
"Behold, I stand at the door, and
knock: if any man hear My voice, and
open the door, I will come in to him."
Unless He is already inside—an honored
Guest—He must, even now, be standing
at the door seeking admittance. He isthe tomb, who saw the Master she loved
standing beside her "and knew not that
it was Jesus."An old wood-cut represents Christ as
the Bridegroom appearing to the Bride-
the Soul. He is holding a mask before
His face, and the Bride shrinks back in
fear because she does not recognize her
Lord. Instead of welcoming Him she is
trying to escape, for the beauty of the
loving face behind the frowning mask is
hidden from her sight. Is it not often
so? Christ appears to us sometimes in
all His wonderful beauty, and our souls
are enthralled by that glorious Vision.
But sometimes He comes in a strange
and terrible disguise. Pain, sorrow,
poverty, death force their way into our
homes, and, instead of meeting them
bravely and looking for the love which
is surely hidden behind the mask, we try
to escape. Some valuable gifts they are
sure to leave behind—unless we fight bit-
terly against God's will in sending such
stern messengers—but we can only find
"joy" in tribulation if we are clear-
sighted enough to recognize the Bride-
groom through His strange disguise. If
we do know Him surely we can be strong
and brave enough to hold out welcoming
hands; even though, like
many another wise
physician and surgeon,
He should offer a bitter
cup of healing medicine,
or cut us to the quick.
Instead of shrinking
away from His touch,
let us try to press near-
er, even though we can
only grow like Him
through fellowship with
His sufferings.

"O shun not thou the
Loving Cup,
Nor tremble at its
hue;
There is no bitter in the
bowl
But Jesus drank it
too.
He counts thy tears, and
knows thy pain,
Yea, every woe is
weighed;
And not a cross He bids
thee bear,
But once on Him was
laid."

It is very easy for me
to talk, isn't it? when
my life is all sunshine;
but I dare not hold up
a low ideal, even though
I utterly fail to practice
what I preach.

But it is not only in
dark days that "thy
King cometh unto thee."
In spite of the sorrow
of the world—which we
are apt to think of in a
mass in spite of the
personal troubles which
force themselves on the
attention, there is a
vast amount of sun-
shine in most lives. And,
if the Light of the
world can lighten the
worst kind of dark-
ness, what a glory He

can shed on our happiest hours, for His
Face is as the sun that shineth in His
strength. What can make our hearts more
glad than welcoming our Guest, talking to
Him, quietly listening to His words,
doing Him willing service? Do we al-
ways know Him when He stands waiting
for a welcome? He may not knock at
the actual door of our house like the
poor woman, the cripple or the little
child in the poem. But someone there
surely is within reach, in ministering to
whom we may minister to our King. If
only we always remembered His presence
in our midst what a pleasure the every-

day routine work of life would become.
Then everything would be "worth while,"
and we should never chafe at the ap-
parent dreary monotony of duty. The
"common task" which has to be done
every day would then be always new and
beautiful. Then we could never fret at
the little interruptions and disappoint-
ments which come straight from His
hand; we could never grow impatient
with other people, because we should see
Him in them, and should know that to
be cross or unkind to them would be to
rebel against Him. If we really felt His
invisible presence in the room harsh or
ill-natured words to or about anyone
could never be uttered, we should never
think of indulging in rude or unseemly
behavior before our Royal Guest, and—
most important of all—we should keep
careful guard over our thoughts, know-
ing that they are naked and open to His
sight.

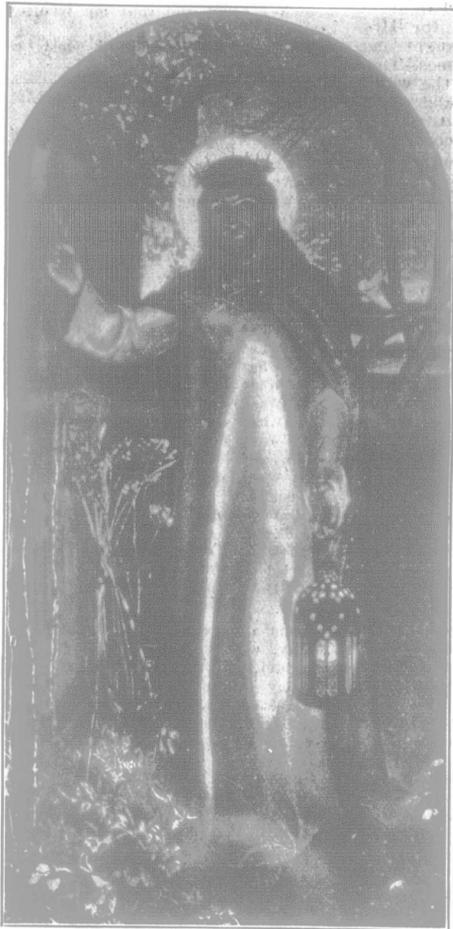
Living always with people whom we ad-
mire and consciously try to copy is sure
to result in our becoming steadily more
and more like them, and the only way of
becoming changed into the image of
Christ is to gaze on Him day after day,
and to reflect, as a mirror, the shining
brightness of His character. That is the
best kind of preaching, too, for every-
body is attracted by beauty; and those
who continually look at the King in His
beauty grow surely—though, perhaps, al-
most imperceptibly—in the beauty of holi-
ness, and so attract others nearer to the
Great Source of soul-beauty. Shall I
tell you of a beautiful life that is being
quietly lived in Toronto? A noble
woman is so eager to entertain the King
royally that she goes out washing by
the day. This she does, not to earn
money for her own necessities, but that
she may be rich enough to receive into
her country house 16 poor girls for sev-
eral weeks each summer. This is not a
second-hand illustration, but an actual
fact that I know of myself. She washes
for a friend of mine, who declares that
her presence in the house is "a real
benediction." Of course it is! One
who sacrifices herself in order to enter-
tain the King so loyally is sure to carry
His presence with her everywhere she
goes. People cannot fail to take knowl-
edge of her that she has been with Jesus.
When the Light of the world lights a
candle, and it burns with such a bril-
liant flame as that, it certainly cannot
be hid. A life lived always with the
Greatest must be great, no matter what
"common" work may spoil the white-
ness of the hands.

What an honor it would have been to
hand our Lord His tools, or to work
under His direction in the carpenter shop
of Nazareth! Well, may not every man,
woman and child work with and under
Him on the farm, in the shop, kitchen
or school? And when Christ dwells in
a human soul the fragrance shed by His
presence, who is the Rose of Sharon and
the Lily of the Valley, whose very Name
is an ointment poured forth, will fill the
whole house with sweetness. As some
aromatic earth says in an Eastern fable:
"I was common clay till roses were
planted in me." Perfumes are not only
pleasant to the senses, many of them
have a healthful influence. MacMillan
says that during a visitation of cholera
in London and Paris, none of the people
employed in the perfume manufactories
were attacked by the disease. And he
also states that the essences of some
flowers—such as lavender, mint, thyme,
etc.—in contact with oxygen in sunlight,
exert a very purifying and health-inspir-
ing influence on the air. So is it with
fragrant lives, they unconsciously purify
the moral atmosphere. Scandal cannot
breathe in their presence, and they touch
with healing power diseased souls, wak-
ing fresh aspirations after holiness.
"As some rare perfume in a vase of clay
Pervades it with a fragrance not its
own,
So, when Christ dwelleth in a mortal
soul,
All heaven's own sweetness seems around
it thrown."

HOPE.

Camera Competition.

We wish to call the attention of our
Home Department readers to our
"Camera Competition," which is now in
progress. If you have a camera, this is
the time to use it. For further particu-
lars, see page 956 of this issue.



The Light of the World.

By Holman Hunt.

your King, and has a right to the best
room in your house, the highest throne
in your heart. The beautiful verses
given above, which were sent in by one
of our readers, show how often He is
refused admittance, even by those who
think He is the One they must delight to
honor. If we live in the future, dream-
ing of the great things we should like to
do if only we had plenty of time and
money, of course we can never catch up
to our opportunities. He is here "to-
day"; we have right in our hands the
opportunity of ministering to our Royal
Guest. Don't let us be like Mary at

EE  EE

Steedman's

SOOTHING Powders

Relieve FEVERISH HEAT.
Prevent FITS, CONVULSIONS, etc.
Preserve a healthy state of the constitution during the period of

TEETHING.

Please observe the EE in STEEDMAN.

WALWORTH,
SURREY,
ENGLAND.

EE  EE

BUY YOUR

PIANO

BY MAIL

Why?

Because at LAYTON BROS. you have an immense stock of the best instruments from which to select. Only guaranteed Pianos or Organs are shipped, selected by experienced musicians. You buy at the lowest possible price, and on the easiest terms. Special discount allowed for cash. No interest charged on time sales.

A large number of used Pianos and Organs are offered at clearing prices.

Send your name and address at once for Free Art Catalogue and full particulars of the 10 days' free trial plan.

Layton Bros.
1144 Peel St.,
MONTREAL, QUEBEC.

Fiery, Itching, Burning, Blistering

ECZEMA



Why be a victim of this distressing skin trouble? Our ECZEMA CURE—a wonderful remedy—we've cured thousands during the past 13 years—will cure you. Don't suffer, but send stamps for particulars and books. Describe trouble fully. Pimples, Blisters, Blackheads, Moth-patches, Freckles, Rashes, Goitre, Red Nose, Eruptions, etc., cured at home. Consultation free by mail. Get Booklet "F." Superfluous Hair removed forever by Electrolysis.

Graham Dermatological Institute.
Dept. F. 502 Church Street, Toronto.

BOOK-KEEPING STENOGRAPHY
etc., taught by mail. Write for particulars. Catalogue free. NATIONAL BUSINESS COLLEGE, Limited. E. J. O'Sullivan, C. E., M. A., Prin., Winnipeg, Can.

With the Flowers.

Narcissi Withering Off.

Dear Flora Fernleaf,—Your articles in the "Farmer's Advocate" have been so helpful that I am turning to you to solve some of my difficulties.

Would you please tell us in your department of the "Farmer's Advocate" (1) why so many Narcissi buds form and then do not mature, but wither before bursting the sheath? I have thought it is because they need to be separated again, or else to be planted deeper. If that is the case: (2) How deep should they be planted? (3) How far apart, and how many bulbs should be in a group? (4) How often should they be separated? (5) What length of time should elapse between lifting and re-planting, and how should they be kept during that time?

The bulbs which I have are Grape-Hyacinths, Narcissus, Daffodils, Crocuses, Lily-of-the-Valley and Tulips. I know that though they receive the same treatment, it varies; but I do not know to what extent. I have also some Parrot Tulip bulbs. Are they more delicate than the more common varieties? I notice they do not multiply nearly so quickly.

Ans.—This tendency to wither off has been a source of disappointment to many ardent Narcissus lovers. It has usually been attributed to hot, drying winds and lack of moisture, yet we have known Narcissi to fail to mature even in rainy season when there was but little sunshine. We have also known them to act provokingly in gardens under the best of care, while at the same time in a graveyard, not far away, on a neglected grave, and, apparently, under most adverse conditions, dozens of the white blossoms were waving in the wind with all the lustiness in the world. Possibly the explanation of the difference lay in the fact that the Narcissus, like many other bulbous plants, resents too much interference. We cannot tell you positively what will prevent the blight, but the following method of culture may rid you of the trouble: Plant the bulbs in September in good turfy loam, in a permanent border where it will not be necessary to disturb them until the bulbs become crowded; once, perhaps, in every four or more years. If necessary to add manure to the soil, let it be so old as to be quite mucky; otherwise manure should never touch the bulbs, nor should it ever be applied in liquid form. Put the bulbs in about seven inches deep and eight to twelve inches apart, and remember to divide them just as soon as they become crowded, as if this is not done they will cease to bloom. When the surface of the ground becomes frozen on the approach of winter, cover the border with straw manure to a depth of five or six inches, raking it off again as early as possible in spring. Narcissi should never be planted in a hot, exposed situation, nor in one in which the drainage is not good. If there are not plenty of spring rains, they should be watered very frequently.

To question 5, would say that Narcissus bulbs should not be taken up at all, except for thinning purposes, or when one wishes to move them to a new place. In such cases they should not be kept out of the ground any longer than necessary. A little moist sphagnum moss will keep them fresh until one can re-plant them again, if not convenient to do it at once. . . . Have not space to-day to treat of hyacinths, etc., but shall try to do so at some future time. As to the Parrot tulips: Yes, they are more delicate than the ordinary kinds, but they are very beautiful.

RE ENGLISH IVY.

A correspondent writes us that she has seen English Ivy growing out of doors near Sarnia, Ont. Sarnia is, of course, in South-western Ontario, one of the mildest portions of the Dominion. We have still to learn that it has been successfully grown out of doors in the more rigorous portions of Ontario, Quebec, or the Northwest; but shall be glad to hear

if any of our correspondents have managed to have it do so.

A FEW SEASONABLE HINTS.

Begin now to root slips and start young plants for your winter window garden.

An occasional sprinkling of ashes about the roots of Sweet Peas will help them. Remember that Sweet Peas, Dahlias, Red-hot Poker Plant and Lilies, in particular, require plenty of water. Soak them right down to the roots whenever the soil becomes dry.

Give annuals plenty of shallow cultivation with a hoe, taking care, of course, not to cut their roots. They will repay you for your trouble.

Shrubs, according to a good authority, should be pruned soon after the flowers are off. Remove only the sprouts which have flowered and any decayed wood or straggling shoots. This will induce a good growth of new wood during the summer, and prepare a copious supply of blossoms next year.

This is the time for resting plants intended for winter blooming. Turn the Calla over on its side somewhere, and give it no water whatever until September. Most other plants require a little occasionally to keep them from dying outright. Don't be alarmed if the leaves drop off; that is what they should do when plants are resting.

The Light of the World.

Many of our readers who cannot find it possible to see Holman Hunt's famous picture, "The Light of the World," while it is on exhibition in the various cities of Canada, will be interested in seeing the copy of it which appears on our Quiet Hour page to-day. Fifty years ago, the man who painted it became seized with the desire to throw upon canvas a symbolical illustration of the great message of the Gospel, the love of God to man as manifested in His Son Jesus. Accordingly he painted his first "Light of the World," a comparatively small picture, which was placed in the chapel of Keble College, Oxford, and which has received the enthusiastic approbation of Ruskin and other artists and art critics. During the next half century, the idea remained persistently with Mr. Hunt, gaining in force and expansiveness as the time went on. He saw faults in his picture and resolved to paint a copy of it, with the defects eliminated. At almost eighty years of age he set to work again, and the result was the present picture, double the size of the original, a picture so strong, so simple, so touching, that, as has been said, "even the chattering" who come to criticize "advance their impertinences in an undertone." The picture was bought by the Hon. Charles Booth, who became so impressed with it that he resolved to have it shown in all of the British colonies, then placed permanently, as a gift to the British people, in the National Art Gallery in London. To this decision is due its present tour through Canada.

"The Light of the World" ranks as one of the greatest religious pictures of all time. The weed-grown garden, the door overgrown with vines, and latchless, signifying that it must be opened from within, tells its own story; while in the attitude and expression of the Christ, the most careless must perceive the infinite patience and persistent love of the Saviour of mankind. As Prof. Archibald MacMechan has said, in the Presbyterian: "You forget as you gaze that this is an affair of canvas and light and purchasable pigments cunningly disposed. You seem visibly in the presence of the majesty of divine love and suffering and mercy. 'Art thou a king then?' Thou sayest that I am a king.' And He will yet rule all kindreds, and tongues, and nations, and peoples."

A song of the farm in the summer-time,
Of sowing and seeds' increase;
And let it with hope and happiness ring,
And carol of birds and sweet odors bring,
And labor and health and peace.

AN EXCELLENT COOK

Recently wrote us: "I tho't I had baked bread enough to have learned all about it, but I got some really valuable and helpful information from your 'Useful Hints.'"

N. B.:

These "Useful Hints" are free for the asking. A postal card will bring them.

Toh OGILVIE FLOUR MILLS CO., Ltd.
WINNIPEG.

WHAT DOES YOUR SCHOOL NEED?

We supply everything from beginning to end, of the most up-to-date kind and at the lowest prices.

Maps, Globes, Blackboards, Library and School Books, etc.

Sole Agents for Andrew's School Desks and National Dustless Crayons. Both the finest made.

WARNER'S Limited
Brandon, Man.
Catalogues and price lists on request.

Portrait of the Late Bishop Baldwin

11 x 15, on heavy plate paper, suitable for framing, together with memoir, the funeral service and sermon on the occasion; price for the two, \$10.; 5 sets, one address, \$1.00; cash with order.

The London Printing & Lithographing Co., LONDON, ONTARIO.

STENOGRAPHY BOOK-KEEPING, etc., thoroughly taught. Complete courses. Catalogue free. NATIONAL BUSINESS COLLEGE, Limited. E. J. O'Sullivan, C. E., M. A., Principal, Winnipeg, Canada.

I WOULD LIKE EVERY WOMAN to write for our New Styles and Samples of \$4.50 to \$12 Suits in cloth, silk, linen and hosiery; also raincoats, skirts and waists, shirt waist suits in lawn, linen, etc. \$2.50 up. Manager SOUTHGOTT SUIT CO. Dept. 99

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

Hello!



Have you heard of the New Century Ball Bearing Washing Machine?

If you use it once you would ring this in on all your friends. It is the acme of perfection—you sit when using it—no handling of the clothes necessary to clean them perfectly—five minutes does a tubful. Costs only \$3.95.

Your dealer can procure them. We will send a descriptive booklet on application.

THE DOWSWELL MFG. CO. LTD.
HAMILTON, CANADA

Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and miscellaneous advertising.

TERMS—One cent per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 25 cents.

BEE SWAX WANTED—Will pay 30 cents a pound for good clean beeswax here. James Durcan, Emerson, Man.

CABBAGE Plants for Sale—Early and late cabbage plants at 50c per 100; tomato, 1c each, or 90c per 100; cauliflower, 1c each, \$1 per 100; all carefully packed. Menlove & Thickers, Virden, Man.

FOR SALE—503 acres rich black loam in the celebrated Pincher Creek district, Southern Alberta. Price, \$12 per acre. Four miles from C. P. R. Apply E. Blaquier, box 683, Brandon, Man.

FOR SALE—One second-hand threshing outfit, all complete, 32-58 cylinder separator, 20-horse-power traction engine (J. I. Case). Has run about 6 months. Apply R. Gamby, Swan Lake, Man.

FOR information about the rich Dauphin country write the Dauphin Land Co., Dauphin, Man., for list of improved and unimproved farms. H. P. Nicholson, manager.

IMPROVED and UNIMPROVED FARMS for sale in Grand View district, Man. Lists upon application to Benj. C. Nevill, Real Estate Agent, m

LAND for sale in the noted Waseley District, containing some of the best wheat land in the Territories. Address, J. F. Middlemiss, Waseley, Assa.

ONE HUNDRED AND SIXTY ACRES, five miles from Swan River. Black sandy loam, sixty acres broken, log buildings. Price nineteen hundred. E. J. Darroch, Swan River. m

U S. 2-gallon cream separator. Guaranteed in perfect order, with all spares complete. Used short time, but good as new. Don't let this escape your attention. If no one in want yourself, mention it to a neighbor who is. Chance to get first-class Standard machine cheap. Price, \$37. Reasonable terms. Write Wm. Scott, Co-operative Society, Winnipeg.

WANTED at once—Salesman in Manitoba and the N.-W. T. to represent "Canada's Greatest Nurseries." Biggest assortment of berry fruits, ornamental and shade trees. Recommended by Experimental Stations at Brandon and Indian Head. Big inducements to energetic men. Pay weekly. Special new outfit, designed for Western men, free. Spring canvases now starting. Write now for terms. Stone & Wellington, Toronto.

THRESHING OUTFITS FOR SALE

A number of rebuilt portable and traction engines; also separators, all in first-class running order. We have practically all sizes and can supply complete outfits, or separate machines, as desired. Low prices and terms to suit.

The John Abell Engine & Machine Works Co., P.O. Box 481, (Limited) Winnipeg, Man.

CIDER MAKING

Can be made profitable if the right kind of machinery is used. WE MAKE THE RIGHT KIND.

Send for catalogue. BOOMER & BOSCHERT PRESS CO., 368 West Water St., Syracuse, N. Y.

STAMMERERS

We treat the cause, not simply the habit, and therefore produce natural speech. Write for particulars. THE DR. ARNOTT INSTITUTE, BERLIN, ONT.

THE LEAVENWORTH CASE.

By A. K. Green.

CHAPTER XXXII.—Continued.

Nestling close to me, she gave herself up for one wild moment to a genuine burst of tears.

I looked at her in uncontrollable emotion. "Oh, Mary," said I, "have I only succeeded, then, in making you miserable?"

"If I had not been taught to love money so!" she said at length. "Oh, oh, they talk repentance and a change of heart! If some one or something would only change mine! But there is no hope of my ever being anything else than a selfish, wilful, mercenary girl!"

That same night she made a discovery which increased her apprehension almost to terror. This was nothing less than the fact that Eleanore had been keeping a diary of the last few weeks. "Oh," she cried, in relating this to me the next day, "what security shall I ever feel as long as this diary of hers remains. And she will not consent to destroy it, though I have done my best to show her that it is a betrayal of the trust I reposed in her. She says that it is all there to show her reasons for doing as she has, and that without it she would lack means of defence, if uncle should ever accuse her of treachery to him."

I endeavored to calm her by saying that if Eleanore was without malice, such fears were groundless. But she would not be comforted, so I suggested that she should ask Eleanore to deliver it to me until she should feel the necessity of using it. The idea struck Mary favorably. "Oh, yes," cried she, "and I will put my certificate with it and so get rid of all my care at once!" And before the afternoon was over, she had seen Eleanore and made her request.

It was acceded to with this proviso, that I was neither to destroy nor give up all or any of the papers except upon their united demand. A small tin box was accordingly procured, into which were put all the proof of Mary's marriage then existing, viz., the certificate, Mr. Clavering's letters, and such leaves from Eleanore's diary as referred to this matter. It was then handed over to me, and I stowed it away in a closet upstairs, where it has lain undisturbed till last night.

Here Mrs. Belden paused, with a look in which anxiety and entreaty were curiously blended. "I don't know what you will say," she began, "but led away by my fears, I took that box out of its hiding-place last evening, and, notwithstanding your advice, carried it from the house, and it is now—"

"In my possession," said I, quietly. "Impossible!" she exclaimed. "I left it last night in the old barn that was burned down. I—you cannot have it, unless—"

"Unless I found and brought it away before the barn was destroyed," I suggested.

Her face flushed deeper. "Then you followed me?"

"Yes," said I. Then as I felt my own countenance redden, hastened to add: "But never mind all this now. The box is safe, and I am anxious to hear the rest of your story."

This seemed to compose her, and after a minute she continued: "On the eve of the day before she left, Mary came to my house to bid me good-bye. She had a present in her hand, the value of which I will not state, as I did not take it. But she said something that night that I have never been able to forget. It was this: I had been speaking of my hope that before two months had elapsed she would so win upon Mr. Leavenworth that she would be able to send for Mr. Clavering, when she suddenly interrupted me by saying: 'Uncle will never be won upon as you call it while he lives. If I was convinced of it before, I am sure of it now. Nothing but his death will ever make it possible for me to send for Mr. Clavering.'"

"But," said I, "your uncle is little past the prime of life, and appears to be in robust health; it will be years of waiting, Mary."

(To be continued.)

Does a Vacation Pay?

Does it pay to regain your cheerful personality?

Does it pay to sip power from its very fountain head?

Does it pay to increase your creative power and originality?

Does it pay to get a firmer grip on your business or profession?

Does it pay to regain your lost confidence by up-building your health?

Do you want to get rid of the scars and stains of the year's campaign?

Will a fresh, vigorous brain serve you better than a fagged, jagged one?

Does it pay to exchange flaccid, stiffened muscles for strong, elastic ones?

Does it pay to get a new grip upon life and to double your power to do good work?

Does it pay to put iron into the blood and to absorb granite strength from the everlasting hills?

Does it pay to renew the buoyancy and light-heartedness, the spontaneity and enthusiasm of youth?

Does it pay to get in tune with the Infinite by drinking in the medicinal tonic from the everlasting hills?

Does it pay to get rid of your nagging, rasping disposition so that you can attract people instead of repelling them?

Does it pay to get rid of some of our narrow prejudices, hatreds, and jealousies that are encouraged by the strenuous city life?

Does it pay to add to the comfort and happiness of ourselves and those about us by being brighter and more cheerful ourselves?

Does it pay to make the most of all the powers that God has given you by bringing superb health and vitality to your aid in developing them?

Does it pay to develop our powers of observation; to learn to read "books in the running brooks, sermons in stones, and good in everything?"

Does it pay to put beauty into the life, to gather serenity and poise from the sweet music of the running brooks and the thousand voices in nature?

Is it better to be a full-rounded man or woman with large views and a wide outlook, or a mere automatic machine running in the same old grooves year after year?

Is it a good investment to exchange a few dollars for a great deal of health and happiness; to economize on that on which the very wellsprings of our being depend?

Does it pay to be free, for a time, from the petty annoyances that vex, hinder, and exasperate; to get out of ruts and the old beaten tracks and take in a stock of brand-new ideas?

Is it better to go to your task with a hopeful outlook than to drag yourself to your work like an unwilling slave; to go through life halting, weak, inefficient, pessimistic, or to be strong, vigorous, self-reliant and optimistic?

Does it pay to save five per cent. of your income by economizing on your vacation this year and break down next year from the continued strain and be obliged to pay fifty per cent. for doctor's bills, besides the time lost in enforced idleness?

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Does it pay the hard-worked, nerve-racked, desk-bound man to lock his business cares in his office or store and be free once more; to exchange exhausted and irritable nerves for sound, healthy ones which will carry pleasurable sensations instead of rasping ones?—[Success.

Contents of this Issue.

ILLUSTRATIONS.

Taking in the Situation on an Alberta Horse Ranch947
Judging Two-year-old bulls at Calgary Show and Sale949
Lord Kimberley (7536)951
Carrie952
Luther Burbank953
Prince Arthur and Charlie955
The Great Simplot Tunnel957

EDITORIAL.

To College of Not?945
The Service of Fairs945
The Mission of the Cream Separator.....945
Regulation of Railway Rates946

HORSES.

The Indian Streak Endures946
On Developing Horses946
Draft Horse Breeding946
Do Geldings Make a Better Appearance than Stallions?947

STOCK.

Prof. Shaw on Stock-breeding947
Range Conditions Changing948
Limitations to Inbreeding948
Bath and West of England Show.....949
Making Shipping Crates949

FARM.

Selection, Care and Marketing of Farm Products950
Rotation of Crops with Grasses950
Travelling for Agricultural Knowledge950
A Famous Plowmaker951
Whiffletree for Six Horses (illustrated)951

DAIRYING.

Rules for the Milkers951
What the Cream Separator has Done for Canadian Dairying951
Cream on Buttermilk952
Caring for Milk on the Farm952
The Process of Milking952
Uniform Marked Weights of Butter.....952

HORTICULTURE AND FORESTRY.

Luther Burbank and His Work (illustrated)953
Fruit-growing in Manitoba953
Tasteful Farm Homes954

POULTRY.

Buff Orpington Ducks954
The Feeding of Chickens954
Raising Incubator Chicks955
Care of Sitting Hens955
Price of Pure-bred Poultry955

APIARY.

Clipping Queens955

FIELD NOTES.

Have You a Camera?; Western Manitoba's Big Fair, Brandon; Horse Show at Winnipeg; Prairie Home Sale; Plowing Match at Bird's Hill956
With the Turning of the Cycle; The Great Simplot Tunnel; Award to Spring Park Nurseries; Amendment to Inspections Act; Investigations at Central Experiment Station957
Organization for Purchasing Supplies; Things to Remember; New York City Milk Supply958

MARKETS959

HOME MAGAZINE960 to 965

QUESTIONS AND ANSWERS.

Veterinary.

Chronic laminitis; abscess; sore necks966
Bursal enlargement; leucorrhoea; lame sheep967

Miscellaneous.

Grass mixtures973
Belgian hares; breeding mare with bog spavin; chickens dying; agreement upon wages974

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

AUCTION SALE OF CLYDESDALES

The undersigned will sell by public auction at ANNABLE'S STABLE, Moose Jaw, N.-W. T., on

WEDNESDAY, AUG. 16, 1905,

33 Imported, Canadian-bred and Home-bred Clydesdale (33) stallions, mares and foals, and fillies. Sale to begin at 2 p.m. sharp. Terms—20% cash, balance 3 months' time on approved joint or lien notes, bearing interest at the rate of 8% per annum; 5% discount where all cash is paid. Please write for catalogues.

PAUL & MACFARLANE, Sprindburn Stock Farm Box 138, MOOSE JAW, N.-W. T.

WOOL

washed and unwashed wool. Address

WANTED. Write to-day and get our quotations on Sack and tags furnished. Address

Brandon Woolen Mills Co., Ltd.
Brandon.

"Just a Little Better than the Best"

describes fully

BINDER TWINE

Made by

CANADIAN CORDAGE & MANUFACTURING COMPANY, Limited

The Longest

The Best Made

The Strongest

The Best Baled

Consequently the Cheapest

Every Ball Guaranteed to the Farmer



Registered Trade-mark on Every Tag.

Your order solicited.

Can ship promptly.

CANADIAN CORDAGE & MFG. CO., LTD.
PETERBOROUGH, CANADA.

A great auction sale of Holstein-Friesian cattle was that held at Syracuse, N. Y., June 8th and 9th, when 140 head of all ages, contributed by a number of breeders, brought an average of \$180 each. The five-year-old cow, Pontiac Netherland De Kol, sold for \$1,000 to H. S. Gordon, Kerhonkson, N. Y. Creamolle 2nd's Princess, nine years old, brought \$600; seven others brought \$400 to \$450 each, and 23 head sold for \$250 and upwards.

CONDIMENT FOR HOGS.

Prof. Henry in his standard work, "Feeds and Feeding," quotes Mr. Theo. Louis, a swine breeder of high repute in the American Northwest, as follows:

"Take 6 bushels of this cob charcoal, or 3 bushels of common charcoal; 8 pounds of salt; 2 quarts of air-slacked lime; 1 bushel of wood ashes; break the charcoal well down, with shovel or other implement, and thoroughly mix. Then take 1 1/2 pounds of sulphate of iron and dissolve in hot water, and with an ordinary watering pot sprinkle over the whole mass, and then again mix thoroughly. Put this mixture into self-feeding boxes or place where hogs of all ages can eat at pleasure."

Hon. W. C. Edwards, Rockland, Ont., writes: Please claim Wednesday, January 10th, 1906, for our second annual sale of Shorthorns.

The English Thoroughbred stallion, Cyllene, sire of Cicero, Lord Rosebery's Derby winner of 1905, has recently been sold for 30,000 guineas (\$157,500). Cicero has won ten races worth \$40,000.

Mr. A. W. Smith, Maple Lodge, Ont., writes: "I recently sold a very nice, thick, red, Shorthorn bull to Mr. Jas. Skelley, Powassan, Ont. The young bull was sired by Sir Wilfred (imp.), and is very short legged and deep bodied. His dam is a grand milker. This is the second time Mr. Skelley has bought a bull from me, and he is well pleased with his purchases. Another handsome roan son of Sir Wilfred went to J. J. Washington, Auburn, Ont., for a syndicate of progressive farmers in that district. He is from the Fair Queen family, has lots of size, and excellent quality of flesh. Mr. D. W. Johnston, of Peterboro, got a good red son of Imp. Knuckle Duster, his dam being a daughter of the first-prize cow in the Dairy Test at Guelph a few years ago, and herself a prizewinner at same show."

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to the "Farmer's Advocate" are answered in this department free.

2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.

3rd.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

Veterinary.

CHRONIC LAMINITIS.

Mare has trouble in rising, and she is very stiff in all legs. She continually taps the floor with one or other of her fore legs. After she has been moving a time the stiffness disappears, only to reappear after rest. P. C. LeF.

Ans.—She has chronic laminitis (founder). Remove her shoes, blister all her coronets, with 2 drams each, biniodide of mercury and cantharides, mixed with 2 ozs. vaseline; clip hair off, rub blister well in. Tie so that she cannot bite the parts. In 24 hours rub well again with the blister, and in 24 hours longer wash off and apply sweet oil. Turn her on soft, damp pasture now, and oil every day. In two weeks blister again, and once monthly after that for three or four months. It is possible even this will not effect a perfect cure, but it will materially benefit her. V.

ABSCESS.

1. A week after castration my colt had an abscess midway between the withers and point of shoulder. It is about the size of a bowl.

2. Would you consider a fifteen-year-old mare that was sound and was put to heavy work, which caused a bog spavin, a fit mare to breed? J. L. Man.

Ans.—1. This is not due to castration, but to a bruise. It must be lanced, and the fluid contents allowed to escape, and the cavity then flushed out twice daily with a five-per-cent. solution of carbolic acid until healed.

2. This mare may produce well, but there is little doubt there was a weakness of the hocks which predisposed to bog spavin, and there is a probability of her producing foals with a similar weakness. If you breed her, select a sire with very strong and well-shaped hocks. V.

SORE NECKS.

One of my work mares had a mass of boils on top of her neck, which caused a large sore under the collar. Two other of my horses are the same now. I have been using zinc pads, and they have not been working on the tongue for some time. RED DEER.

Ans.—This condition is caused by the friction and pressure of the collar, and is very hard to treat without giving rest. Dress the raw surfaces twice daily for two days, with equal parts butter of antimony and tincture of myrrh, applied with a feather. Then apply the following lotion three or four times daily: 1 oz. each, sulphate of zinc and acetate of lead, 1/2 oz. carbolic acid to a pint of water. If possible, work in breast collars; at all events, remove the zinc pads, and wear sweat pads or leather. V.

Pat—"Sure, I'd lay down me loife for ye, Norah."

Norah—"But would yez lay down a carpet for me, Patrick?"

Man (in a hurry)—"I'll give you five dollars to get me to the station in three minutes." Cabman (with provoking slowness)—"Well, sorr, you might bribe me, but you can't bribe that horse."

Bickerdike & Co., Montreal, report the following export shipments of live stock from that port in the week ending June 11th, 1905: Cattle, 3,377; sheep, 540.

At a sale of Belgian draft horses last week at Quebec, ten animals averaged \$767. Best price was \$1,450 for a stallion, bought by the Kanouraska Agricultural Society. Two mares brought \$1,200 each.

BREEDERS' DIRECTORY.

Breeder's name, post-office address, class of stock kept, will be inserted under this heading at \$5.00 per line per year. No card to be less than two lines or exceed three lines.

A. & J. MORRISON, Glen Ross Farm, Homewood, Man. Shorthorns and Clydesdales.

A. D. McDONALD, Napinka, Man.—Breeder of Shorthorns, Yorkshires and Berkshires. Young pigs for sale.

A. D. GAMLEY, Brandon, Man.—Breeder of Leicester sheep and Roadster horses. Stock for sale.

A. B. POTTER, Maple Leaf Farm, Montgomery, Assa., Holsteins, Yorkshires and Berkshires.

BRYAN BROS., Craik, Assa. Breeders of White Rocks and White Wyandottes. Eggs from winners, \$3 per setting of 15.

C. W. TAYLOR, Dominion City.—Barred Plymouth Rocks, Buff Cochins, Black-headed Red Game, White Cochins.

C. O'BRIEN, Dominion City. Buff Orpingtons, Scotch Deer Hounds, Russian Wolf Hounds.

D. HYSOP & SON, Killarney, Man., Landaser Farm, Shorthorns and Percherons.

E. T. GRIFFITHS, Moose Jaw, Assa.—Breeder of Clydesdales and Shorthorns. Stock for sale.

G. W. WATT, breeders of pure blood Hereford and Shorthorn cattle. Choice young bulls now for sale. Cloverdale Farm, 3 miles northeast of Birds' Hill, Springfield Township, Man.

G. T. GRIFFITHS, Moose Jaw, Assa.—Breeder of Clydesdales and Shorthorns. Stock for sale.

G. W. WATT, Pilot Mound, Man.—Short-horns. Stock of both sexes for sale.

H. W. HODKINSON, Neepawa, Man. Barred Rocks. Winners.

H. ENRY NICHOL, Fairview Farm, Brandon, Man. Breeder of Clydesdale horses and Shorthorns, etc.

J. W. MARTEN, Gotham, Wis., U. S. A.—Importer and breeder of Red Polled cattle.

J. G. WASHINGTON, Nings, Shorthorns and Clydesdales. Four choice young bulls. One stallion two years. Good one.

JOHN GIBSON, Underhill, Man.—Breeder of Shorthorns and Tamworths. Stock for sale.

J. MANSFIELD, Rosebank Farm, Brandon, Man. Breeder of Shorthorns. Young stock for sale, both sexes.

JOHN WISHART, Portage la Prairie, Man.—Breeder of Clydesdales and Hackney horses. Young and breeding stock of both sexes for sale.

J. H. REID, Moosomin, Assa.—Breeder of Herefords. Young bulls for sale.

J. M. MACFARLANE, Moose Jaw, Assa.—Breeder of Clydesdale horses.

J. CHILDREN & SONS, Okotoks, Alta.—Duroc Jersey swine, either sex, for sale.

JAS. TOUGH, Lake View Farm, Edmonton, breeder of Hereford cattle.

L. LAKE & BELSON, Grenfell, Assa.—Breeders of Polled-Angus cattle. Young bulls for sale.

L. E. THOMPSON, Deloraine, Man.—Breeder of Clydesdales, Shorthorns, Jacks and Jennets, O. I. C. swine and P. B. Rocks.

PLUM CREEK STOCK FARM.—J. H. Kinnear & Son, Souris, Man. Breeders of Shorthorns. Stock for sale.

R. A. COX, breeder and importer.—Shorthorns, Berkshires and B. P. Rocks. Bredford, Man. Stock for sale.

R. A. & J. A. WATT, Salem P.O., Ont., and telegraph office.—Breeders of Shorthorns and Clydesdales. Imported and Canadian-bred females; also a pair of bull calves.

RIVEREDGE FARM.—Shorthorn cattle, Deerhounds, B. Rocks, B. B. R. Games. A. A. Titus, Napinka, Man.

REGINA STOCK FARM.—Ayrshires and Yorkshires for sale. J. C. Pope, Regina, Assa.

ROBT. SINTON, Regina, Assa.—Breeder and importer of Herefords. Stock, both sexes, for sale.

R. P. STANLEY, Moosomin, Assa.—Breeder of both breeds for sale.

SHORTHORNS and Clydesdales, Wm. Chalmers, Smithfield Stock Farm, Brandon. "Phone at residence.

SHORTHORNS of the fashionable families, John Kennedy, Swan River, Man. (C. N. R.), 1 1/2 miles from town.

THE "GOULD FARM," Buxton, North Dakota, U. S. A., breeders of Red Polled cattle, the dual-purpose breed of America.

TRAYNOR BROS., Regina, Assa.—Clydesdales. Stallions for sale.

THOS. ELLIOTT, Regina, Assa.—Breeder of Herefords.

THOS. DALE, Portage la Prairie, Man.—Breeder of Shorthorns and Berkshires. Young and breeding stock of both sexes for sale.

WM. LAUGHLAND, Hartney, Man.—Breeder of Shorthorns, Berkshires and B. P. Rocks.

WM. DAVIDSON, Lyons, Man., breeder of pure-bred Shorthorns. Young stock of good quality for sale.

W. S. LISTER, Middle Church (Nr. Winnipeg), Marchmont Herd Scotch Shorthorns. Bulls all ages from imported stock. Telephone 1004B.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

LAST MOUNTAIN VALLEY

Steamboat Service now in operation.

Railway Service to Strassburg by July.

Write for Free Books, Maps, etc.



"OPENING OUT NEW FARM."

The finest Wheat Land in North-east Assiniboia. "A section is a fortune." Average crops for five years, 25 bushels per acre.

WM. PEARSON & CO.
WINNIPEG, MAN.

Sharples Tubular SEPARATORS

We want you to know Tubular Cream Separators as they are.

The low can, enclosed gears and ease of turning are shown in this illustration from life. Tubulars have neither oil cups, tubes, nor holes—they oil themselves. They have bowls without complicated inside parts—they hold the world's record for clean skimming, durability, capacity, easy turning and easy washing. They save half the work—greatly increase the amount and quality of butter—are wholly unlike all other separators. Catalog H-188 will interest and benefit you. Write for it.

Canadian Transfer Points: Winnipeg, Toronto, Quebec, St. John, N. B., Calgary, Alberta, Address

The Sharples Co. Chicago, Ill. P. M. Sharples West Chester, Pa.

Whatever adds in even the smallest way to the world's brightness and cheer is worth while. One who says an encouraging word to a disheartened neighbor, gives a look of love to a lonely one, or speaks a sentence which may become strength, guidance and comfort to another, does something worth while. It is always worth while to live nobly, victoriously, struggling to do right, showing the world even the smallest fragments of divine beauty.—[Woman's Life.]

DODD'S KIDNEY PILLS

CURES RHEUMATISM BRIGHT'S DISEASE DIABETES BACKACHE

FOR ALL KIDNEY DISEASES

Do not discontinue the use of our pills until you are cured. The public may rely on the testimonials of imitations. Sold only in bottles.

QUESTIONS AND ANSWERS. Veterinary.

BURSAL ENLARGEMENT.

I have a horse very lame from wind-gall. B. J. M.

Ans.—Give rest, and blister. Take 2 drams each of biniodide of mercury and cantharides and mix with 2 ounces vaseline. Clip the hair off the joint all around, and rub the blister well in; tie so that he cannot bite the parts. In 24 hours rub well again with the blister, and in 24 hours longer wash off and apply sweet oil. Let his head down now, and oil every day. As soon as the scale comes off blister the same way again, and once every month as long as necessary after that. If the lameness does not become less after the second blister, you had better get it fired and blistered by your veterinarian. V.

LEUCORRHOEA—LAME SHEEP.

1. Mare has had whites for a year. The sight of one eye is falling.
2. Sheep go lame on fore feet. I can see nothing wrong. W. J. C.

Ans.—1. This is called leucorrhoea, and is very hard to treat. The womb should be flushed out every second day with 2 gallons of a two-per-cent. solution of Zenoleum or phenyle, and she should get 30 drops carbolic acid three times daily, in feed or drench, until all discharge ceases. The eye trouble is amaurosis, which sometimes results from the uterine trouble and disappears when the latter is checked.
2. Apply warm poultices of linseed meal, and keep the sheep quiet in a clean, dry building. V.

GOSSIP.

Arrangements for the big live-stock show, to be held in connection with the Lewis and Clark Exposition at Portland, Oregon, are already being made by M. D. Wisdom, superintendent of the live-stock section. The exhibition of horses and mules will be held from August 28th to September 8th, and the cattle show, including the exhibits of sheep, swine and goats, will begin September 19th and close September 29th.

By the prize-list issued, it is shown that for horses in the Thoroughbred class there are five prizes given, ranging from \$35 down to \$5. Champion stallions and mares, \$40 and \$25. For German coach horses, special prizes are offered, ranging from \$100 down to \$25; Clydesdales, \$100 and \$50; Percherons, \$150 to \$20.

For the cattle classes, prizes ranging from \$50 down to \$5 are given for bulls, cows and heifers; \$50 and \$35 for champion bulls and cows; \$75 to \$10 for aged herds, and \$100 to \$20 for breeders' young herds. Special prizes are offered by the various breeders' associations, ranging from \$30 to \$5 on the different classes of bulls, cows and heifers.

Sheep and goat division prizes range from \$25 down to \$3, and in the swine division from \$25 to \$2, with specials of \$30 down to \$5.



CHATHAM Incubators

can be depended upon. If the eggs that go into them are fertile they will hatch as surely as the sun rises. Simplicity of working parts makes the Chatham so easy of operation that the women folks and children can run it as well as anybody.

There is no danger of overheating. The regulator is so perfect that it can't "go wrong." No sad experience with roasted chicks if you use a Chatham. There's good money in poultry if you get started right. Buy the time-tried and well-known Chatham and be sure of results. We are so sure of results that we give you two years to pay for the incubator. **No Cash until November, 1905.** Our superb **FREE BOOK** entitled "How to make Money out of Chicks," gives you the whole story of successful poultry raising by incubators. Send for it. 19

The Manson Campbell Co., Limited
Dept. 2 Chatham, Ontario.

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at one cent per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns.

FOR SALE—One breeding pair of Golden Wyandottes, one trio of Indian Games, one pair of Pekin Ducks. Eggs from above for balance of season, \$1. S. Ling, 128 River Ave., Winnipeg.

THE TINLING POULTRY CO.

To the Farmers' Wives and Daughters Especially:

What efforts are you making towards supplying us with poultry this fall? We are able and willing to buy all you can raise of this year's turkeys and chickens (the latter from 4 to 5 months old) and pay you the highest market price. Our agents calling at your door, giving you the cash and taking them away alive, so you have no trouble. Who would like to earn \$25, or even \$250? It is easily done. Set all the eggs you can when the price for them is low. You ought to raise four chicks surely from each dozen, which, in four months' time, will bring you in \$1, and with the abundance of waste grain you have will cost you nothing but your time to look after. Ascertain who is our agent for your territory, and let him know how many he may expect to get. We want at least a half a million birds. Who will help supply them? Whig you all good luck in your efforts. Yours sincerely,

E. C. TINLING, Manager.



drop-head sewing machine, handsome oak woodwork, for \$17.50; a better machine, same pattern, guaranteed for 20 years, sells for \$21.50; machines with ball bearings and extra fine woodwork, cost a little more, but only about half what others charge. Our sewing machine catalogue, fully explaining our different styles, free. Write for it. Windsor Supply Co., Windsor, Ont.

WALLACE'S DISPERSION SALE.

The dispersion sale of Shorthorns of Mr. T. E. Wallace, Portage la Prairie, on June 14th, was quite successful, despite the disagreeable weather and dull markets for cattle. There were about 30 head altogether in the sale, and all were in good thriving condition. The females made an average of \$187, and the bulls \$80 per head, or a grand average of \$128.40.

The list of purchasers and prices follows: Maiden's Blush, J. J. Smith, Hartney, \$195; Vanilla Second, J. G. Barron, \$100; Vanilla of Ellerslie, G. W. Bray, \$115; Maiden of Ellerslie, W. B. Young, \$140; Vanilla Third, D. McVicar, \$210; Portage Blossom, W. James & Sons, \$140; Vanilla Fourth, D. McVicar, \$190; Gem of Lakeside, J. G. Barron, \$140; Vanilla Fifth, W. Morris, \$120; Maiden Third, R. Gibb, \$100; Maiden's Beauty, W. James & Sons, \$135; Vanilla Sixth, W. James & Sons, \$110; Maiden Fourth, Jas. Bray, \$190; Vanilla Seventh, M. Casky, \$110; Maiden Rose, S. Benson, \$200; Vanilla Eighth, M. Casky, \$80; Maiden Fifth, M. Casky, \$85; Bland Lady, J. Ferris, \$70; and Maiden Sixth, D. McVicar, \$75. Bulls.—Portage Lad, W. G. Styles, \$125; Sir William, H. Paul, \$75; Lakeside Lad, A. Kitson, \$55; Sallo Boy, R. Brydon, \$60; Royal Fame, H. Clark, \$90; Edward's Fame, T. Ward, \$75.

TRADE NOTE.

DO YOUR OWN THRESHING.—It is a great point to be able to thresh from the shock. It saves grain and saves handling. This is sufficient to account for the growing popularity of the small or individual thresher, as against the job threshing outfit, with its long train of helpers to be housed and fed. Another point that argues strongly with all farmers who own small threshers is the matter of time. They thresh just when they are ready, whenever the grain is just right, when the weather is fine. Their neighbors must wait until the threshing outfit comes their way, and go into the job with the weather just as it happens to be. For these reasons there is a constantly widening field for the excellent small threshers manufactured by the Belle City Mfg. Co., of Racine Junction, Wis. This line of machinery has become so well known as hardly to need any words of commendation. Individual farmers or neighborhoods wanting to avail themselves of such advantages and such machinery can not do better than to get in touch with the Belle City people. An advertisement will be found in this issue of our paper. A letter of inquiry to the company will bring catalogue and all particulars.

The things you do because somebody else does must be thought out, and really made your own, or they will make a monkey of you.

Attempts at carrying water on both shoulders are apt to lead to getting a douse in the neck.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

Farm Machines for You

There are a hundred reasons—big and little—why the

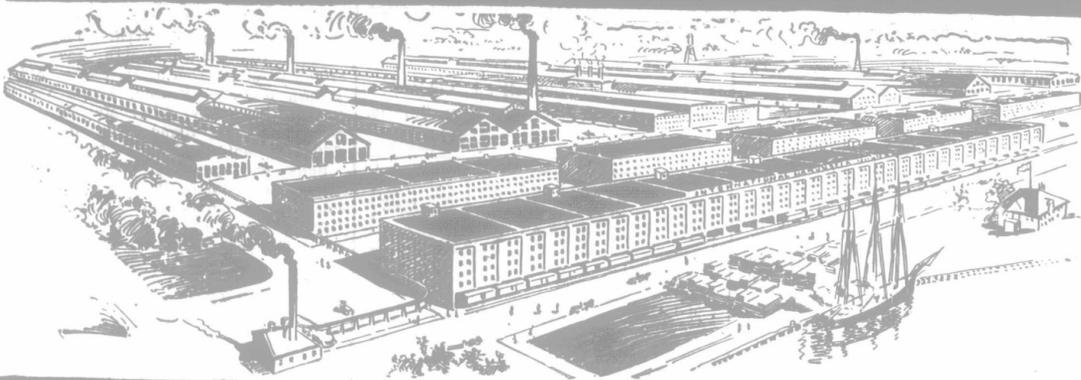
International Line of Farm Implements and Machines

are the **machines for you**, but in its final analysis, the question of most importance to you as a careful buyer is:

Will they give you better service, longer use and greater satisfaction than similar machines of other makes?

That means dollars and cents—profit or loss—to you.

We say that the superior facilities of the International company—superior facilities for securing the world's best materials—superior facilities for manufacturing—enable the company to produce a line of implements and machines that, for general excellence, in every respect, in all that goes to make satisfaction for the buyer, is not equalled in the world. It is a line built on the experience of a lifetime and backed by a world-wide reputation.



It is a line that gives you satisfactory service day by day and year after year, because it is built right for long life and durability.

If you will call on any International dealer, he will be glad to show you the line he carries, and let you **see for yourself** its superior merits.

It Will Pay You To Investigate.

The International lines are represented by different dealers. See them for Catalogues of

McCormick and Deering

Binders, Reapers, Mowers, Rakes, Tedders, Sweep Rakes and Stackers, Gasoline Engines, Knife Grinders, Disc Harrows, Smoothing Harrows, Lever Harrows, Spring Tooth Harrows, Hoe Drills, Disc Drills, Shoe Drills, Cultivator and Seeder and Binder Twine.

CHAMPION

Binders, Reapers, Mowers, Rakes, Tedders, Sweep Rakes and Stackers, Knife Grinders, Binder Twine.

—WORKS OF—

International Harvester Co. of Canada, (Limited)

—AT—

Hamilton, Ontario.

Lost, Strayed or Stolen.

Below is to be found a list of impounded, lost and stray stock in Western Canada. In addition to notices otherwise received, it includes the official list of such animals reported to the Manitoba and N.-W. T. Governments.

This department is for the benefit of paid-up subscribers to the Farmer's Advocate, each of whom is entitled to one free insertion of a notice not exceeding five lines. Notices exceeding five lines will be charged two cents per word for each additional word, payable in advance.

LOST.

RED WILLOW, Alta.—Strayed from the Northern Star Ranch, Sullivan Lake, one buckskin pony, branded star over crescent, and OA, both on left shoulder; also two mares, one dark and one light bay, both branded star over crescent, on left shoulder. Jacques Bros.

MAYTON, Alta.—Strayed or stolen, one sorrel mare, stripe in face, balky, probably stolen, branded D6 (cloverleaf) left shoulder, N D left thigh; one black mare, two years old, spot on forehead; one yearling stud, black, with stripe in face; one brown yearling mare. Benedict Bros.

Strayed from the premises of Frank E. Adams, Dalrymple, Assa., since about March 6th, 1905, black horse, seven years old, branded P on thigh, and I Z on shoulder, scar from barb-wire cut across front of left hock, is also lightly foundered, about 1,200 pounds. Five dollars reward offered for information leading to recovery.

Strayed from premises of Joseph Williamson, Sinclair, Man., bay pony mare, three years old, branded on shoulder, was clipped, and has marks of halter across the nose, black mane and tail. Buckskin stallion, one year old, was clipped, black strip on back from mane and tail, few white hairs on face, black mane and tail. Ten dollars reward offered for information for recovery.

Strayed from premises of P. C. Anderson, Qu'Appelle, Assa., black mare, medium size, three years old, branded Z T on right shoulder, few white hairs on forehead, thickened left hing hock. Bay mare, medium size, square built, four years old, branded Z T on right shoulder, and L on right hip, narrow s ar on left fore leg above knee. Five dollars reward.

Strayed from premises of Ubalde Bechard, Lebret, Assa., since about May 1st, 1905, big bay mare, four years old, white face, forelock cut, left hind foot white, collar mark on top of shoulder. Brown mare, low and heavy set, white stripe down face, three white feet, halter on. Ten dollars reward for recovery.

Strayed from premises of Sipastian Hanowski (N. W. 12-20-42 7 w 2), Meriahilf, Goleley, Assa., since June 10, 1905, mare branded 44 on right shoulder, hind feet white.

Strayed from premises of George McMichael (17-17-18 w 2), South Qu'Appelle, Assa., sixteen months ago, bay Clyde mare, about 1,500 pounds, stripe down face, small white halter mark behind one ear, branded indistinct star on left shoulder. One hundred dollars reward will be paid for information leading to the recovery of the above animal. Black Shetland pony, mare, branded E, quarter circle over, on right hip. Reward will be paid for information leading to the recovery of this animal.

Strayed from premises of J. M. McDonald, Grenfell, Assa., strawberry gelding, four years old, branded R M on right hip. Black gelding, four years old, branded B on right hip, one or both hind feet white. Brown gelding, driver, two years old, barbed-wire scar on left hind fetlock or heel.

Strayed from premises of J. A. Gouin (34-14-11 w 2), Montmartre, Wolseley, Assa., since April 15, 1905, team of sorrel bronchos, well matched, drivers, each about 1,000 pounds, branded J F, quarter circle over, on right shoulder, and V, bar under, U under, on left hip.

Strayed from premises of H. J. Tranberg, Stockholm, Assa., since May 15, 1905, team of black ponies, horse and mare, branded wine cup on left hip, mare slightly bigger, has one white hind foot and little white on face. Ten dollars reward will be paid for information leading to the recovery of the above animals.

(Continued on next page.)

In answering the advertisement on this page, kindly mention the FARMER'S ADVOCATE.

BRITAIN'S BEST BLISTER



It takes time, trouble, knowledge and special chemical apparatus to produce

STEVENS' OINTMENT

as used in the Royal Stables. It is the result of a lifetime's knowledge among lame horses saved up and given to you in concentrated form for use on your lame or disfigured horse. It will surely cure Splint, Spavin, Curb, Ringbone, and all enlargements in horses and cattle.

Price 75c. small, \$1.50 large box. A little goes a long way. Get a box now. If your local chemist cannot supply you, write direct to

Martin, Bole & Wynne, Winnipeg, Man. Western Agents.

SPECIAL BARGAINS

In STALLIONS during next three weeks. We are offering some grand horses for less than half-price, in order to close them out before our new importations arrive. We have several first-class

Clydesdales, Suffolks & Percherons

One beautiful FRENCH COACHER of choice breeding, and two THOROUGHBRED STALLIONS. You can secure any of these at a great bargain by applying at once to JAMES SMITH, manager for

ALEX. GALBRAITH & SON, BRANDON, MANITOBA.

JOHN CHAMBERS & SONS

Holdenby, Northampton, Eng.

Farm over 2,000 acres of land just in the centre of the Shires, and breed the very best and soundest of the

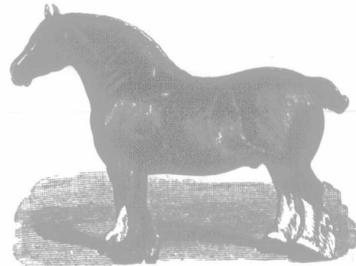
SHIRE HORSE

which from birth are kept in their natural condition, neither forcing nor overfeeding for showing purposes.

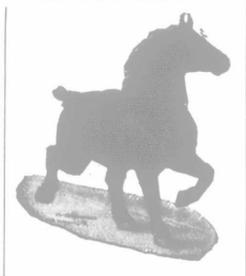
Canadian buyers visiting England are invited to call and see what we have to show them and obtain their stallions and mares direct from the men that breed them.

No fancy prices, and all delivered free Liverpool landing stage. Correspondence invited.

Station—Althorp Park, L. & N.-W. By



America's Leading Horse Importers



At the Great St. Louis World's Fair Won the Following Group Prizes:

Percheron

Get of Sire, 1st, 2nd, 3rd. Produce of Mare, 1st and 2nd.

French Coach

Get of Sire, 1st. Produce of Mare, 1st.

McLAUGHLIN BROS.,

St. Paul, Minn. Columbus, Ohio. Kansas City, Mo.

WORMS IN HORSES AND COLTS

One of the most effectual remedies you can buy for worms in animals is

ST. JOHN'S HORSE WORM POWDERS

They are safe, sure and effectual.

SOLD BY ALL DEALERS.

THE MARTIN, BOLE & WYNNE CO., Sole Proprietors, Winnipeg, Man.

WE CAN SELL THAT FARM FOR YOU

A small advertisement in our "WANT AND FOR SALE" column will be read by thousands of people throughout Canada and other parts of the world. Full particulars and terms under "Want and For Sale" heading in this issue. Address:

THE FARMER'S ADVOCATE AND HOME MAGAZINE, WINNIPEG

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

Lost, Strayed or Stolen—Cont.

Strayed from premises of F. Leippi (20-15-17 w 2), Kronau, Assa., since March, 1905, two colts; two-year-old roan mare, white face, hind feet white, white spots on sides; two-year-old iron-gray mare, white spots on sides.

Strayed from premises of J. W. Crowe (22-20-16 w 2), Avonhurst, Assa., since the beginning of the present year, dark bay horse, four years old, small star on forehead, hollow back, gray hairs on both shoulders, caused by collar, few gray hairs in mane and butt of tail. Ten dollars reward will be paid for information leading to the recovery of the above animal.

Strayed from premises of James Hawes, Pilot Butte, Assa., strawberry roan pony mare, branded N on left shoulder. Five dollars reward will be paid for information leading to the recovery of the above animal.

Strayed from premises of Jas. Smith (18-19-15 w 2), Qu'Appelle, Assa., black colt, two years old, branded 2 X, bar under, on right hip; light bay Clyde mare, four years old, heavy mane and tail, white stripe down face (turning off at nostrils), branded Z T on left shoulder and U on left cheek. Ten dollars reward for recovery.

Strayed from premises of James Buchan, Tyvan, Assa., since May 26, 1905, bay mare, white stripe down face, four years old, left hind leg thick. Suitable reward will be paid for information leading to the recovery of the above animal.

ESTRAY.

ANTHER, Assa.—Strayed to the premises of James Rutherford (10-8-30 w 2) on May 27th, black and gray mares, halters on, weight 1,100 lbs. Owner must prove property and pay expenses.

LAUDER, Man.—Strayed to the premises of Jas. Ramsay (16-5-25) five head of horses, branded K S on left hip. On premises of Fred Buscho (34-4-6 w 2), Roseview, Assa., brown mare, aged, white stripe down face, left hind foot white, about 900 pounds, indistinct brand on left shoulder.

On premises of Mike Buscho (34-4-6 w 2), Roseview, Assa., white gelding, brown spots, 900 pounds, indistinct brand on left shoulder.

On premises of G. H. Bradshaw (36-19-32 w 1st), Millwood, Man., brown mare, about 1,100 pounds, small white snip on nose, branded half diamond, over anchor, on left stifle.

On premises of T. E. Kells (14-28-21 w 2), Strassburg, Assa., bay mare, in foal, branded (design not given).

On premises of Angus Stewart (17-20-14 w 2), Springbrook, Strathcarrol, Assa., bay filly, two years old, no visible mark.

On premises of John Wm. McLeod (36-15-5 w 2), Broadview, Assa., since about the 1st of May, 1905, sorrel gelding, white stripe down forehead, left fore foot white with ringbone on same, branded indistinctly V J on left shoulder, weight about 1,200 pounds.

On premises of P. O. Berg (32-24-26 w 2), Craik, Assa., roan horse branded H F, monogram; black horse, branded H F, monogram.

On premises of Matt Polreis (4-37-22 w 2), Muenster, Sask., since June, 1904, dark brown pony mare, four years old, white face, right front foot and left hind foot white, no brand.

On premises of W. C. Swanston (9-8-22 w 2), Pense, Assa., since May 11, 1905, dark bay mare, about eight years old, about 1,300 pounds, small white stripe down face, little white on left hind foot, wire cut on front leg, of right hind, no brand, heavy mane and tail.

On premises of William B. Radford (N. E. 12-19-28 w 4), High River, Alta., since November, 1904, clear red cow, about four or five years old, brand resembling S, with quarter circle through, with another letter (indistinct), on left hip.

On premises of W. L. Thompson, Spring Coulee, Alta., bay gelding, 1,200 pounds, branded 7 V, combination, on left thigh.

On premises of Harry Sayers (36-18-7 w 2), Grenfell, Assa., dark brown mare, in foal, aged, hind feet white.

On premises of Wm. Hepburn (28-33-8 w 3), Dundurn, Assa., since May 28, 1905, cream mare, three years old, black mane and tail, 1,000 pounds, branded O N E on right front shoulder.

(Continued on next page.)

HORSE OWNERS! USE



CAUSTIC BALSAM.

A safe, speedy and positive cure. The safest, Best BLISTER ever used. Removes all lumps from Horses. Impossible to produce scar or blemish. Send for descriptive circulars.

THE LAWRENCE-WILLIAMS CO., Toronto, Can.

Tuttle's Elixir

\$100.00 REWARD.



Cures all species of lameness, curbs, splints, contracted cords, thrush, etc., in horses. Equally good for internal use in colic, distemper, founder, pneumonia, etc. Satisfaction guaranteed or money refunded. Used and endorsed by Adams Express Company.

SOLD BY ALL DRUGGISTS.

TUTTLE'S FAMILY ELIXIR Cures rheumatism, sprains, bruises, etc. Kills pain instantly. Our 100-page book, "Veterinary Experience," FREE.

TUTTLE'S ELIXIR CO., 66 Beverly St., Boston, Mass. Beware of so-called Elixirs - none genuine but Tuttle's. Avoid all blisters; they offer only temporary relief if any.

LYMAN, KNOX & SON, AGENTS, Montreal and Toronto, Canada.

An Inflamed Tendon

NEEDS COOLING

ABSORBINE

Will do it and restore the circulation, assist nature to repair strained, ruptured ligaments more successfully than Firing. No blister; no hair gone; and you can use the horse. \$2.00 per bottle delivered. Book 2-B Free.

ABSORBINE, JR., for man and \$1.00 Bottle. Cures Strained Torn Ligaments. Cures Varicose Veins. Allays pain quickly. Genuine manufactured only by W. F. Young, P. D. F., 46 Monmouth St., Springfield, Mass.

Canadian Agents, Lyman, Sons & Co., Montreal.



FOR SALE: The

Clydesdale Stallion

FITZPATRICK 3951.

Four years old, bay; face, one fore and both hind feet white.

He is a sure foal-getter, beautifully put up, showy.

of good disposition and broken to harness. Communicate with

WM. MARTIN, or J. W. IRWIN, 811 Union Bank, Box 15,

WINNIPEG, MAN. EMERSON, MAN.

KELWOOD STUD FARM

Importers and breeders of Thoroughbreds. Also Buff Orpingtons and Game fowls.

THE STALLIONS:

"Kelston," Imp. "Abbeywood" at stud. Fee, Thoroughbred, mares, \$25 to issue. Mares from a distance kept at \$2 per month.

DALE & PULFORD, South Qu'Appelle, Assa.

D. FRASER & SONS

EMERSON, MAN., Breeders and importers of Clydesdale horses, Shorthorn cattle, Southdown sheep; Yorkshire, Berkshire, Tamworth and Poland-China pigs.

The Ontario Veterinary College, Limited.

Temperance Street, Toronto, Canada. Affiliated with the University of Toronto. Patrons: Governor-General of Canada, and Lieutenant-Governor of Ontario. Fee \$25.00 per session. Apply to Agassiz Street, F.R.C.V.S., Principal.

Mr. Farmer

Now the seedling is over and the growing grain looking lovely, it makes you feel good—feel like going on with some of the improvements you have figured on. One of these is a power outfit. We have everything in this line you want.



CANADIAN AIRMOTORS, 12 ft., 13 ft., 14 ft., 15 ft., 16 ft. sizes.

STICKNEY GASOLINE ENGINES, 3, 6, 9, 12, 15, 25 h.p.

B. Bell & Sons' Tread and Sweep Powers, all sizes. Pumps, Saws, Grinders, Tanks, Feed Cutters and Root Pulpers.

Write us for prices and catalogues, and state which kind of power you think of installing.

Ontario Wind Engine & Pump Co., Limited, 83-91 Chambers St.

Between Logan & Henry Ave. WINNIPEG.

Advertise in the Advocate

AND GET BEST RESULTS

Make More Milk Money.

If you knew a way by which you could double your profits from your milch cows and at the same time save yourself a lot of hard work, you'd want to adopt it at once. Well the

Empire Cream Separator

will do that thing for you. We want to show you how and why. It's the simplest separator made; has few parts; nothing to get out of order; turns easily; skims perfectly; is easily cleaned; is absolutely safe; lasts longer; gives better satisfaction and makes more money for you than any other—all because it is so well and so simply built. No separator has ever made such a record in popularity and sales—because every man who buys it is satisfied. May our agent call and show you how it works? Don't buy a separator until you have investigated the Empire.

SEND FOR CATALOGUE. Let us send you our new Catalogue. Ask for book No. 12.
Empire Cream Separator Co. of Canada, Ltd., Toronto, Ont.
 Ontario Wind Engine & Pump Co., Winnipeg, Manitoba.



You Can Kill Mustard Absolutely Free

In a field of growing wheat without injuring the grain, through using the

Spramotor

The proof is positive and the results sure. The improvement in the crop will more than repay you for the trifling expense and the investment in the Spramotor. Write for full particulars; free Booklet D.

SPRAMOTOR CO., 69-79 King St., London, Ont. Agents Wanted



THE SPICE OF LIFE.

Have you an acquaintance who is always saying the unfortunate thing and making people feel like shunning him? Most of us have, but instead of having an I-am-holier-than-thou feeling toward such a person, isn't here a chance to get in a little of that charity we all like to preach about?

It is not always greed of gain that drives men to work on and on after they have gained more than enough—it is the law that he who tries to merely provide for his own selfish and lazy wants is apt to lose the power of even doing that much.—[Live-stock World.]

POINTED PARAGRAPHS.

Some men feel more at home when away.

Men admire clever women, but seldom marry them.

If you would succeed learn to know what you can't do.

A pretty girl can teach a man anything but common sense.

Heads of households are the bill-footers of their families.

No man over 30 should marry a woman who isn't a good nurse.

A man's mental balance isn't synonymous with his bank balance.

Marriage of two deaf mutes should render them unspeakably happy.

It is a case of intellectual farming when a man's feelings are harrowed.

If a girl gets but one letter a year she always reads it on the street.

Men bet on horses, but horses never bet on men. Horses have horse sense.

With a male cynic it's liver trouble; with a female cynic it's heart trouble.

At least half the people who go to law are fully convinced that justice is blind.

An exclamation of joy comes 4th when a mother discovers her baby's 1st 2th.

Every time a very young man's liver gets to acting up he imagines he's in love.

If you would be a social favorite study your own faults more and other people's less.

A married man never fails to get his wife's undivided attention when he talks in his sleep.

Young man, don't get discouraged if your best girl treats you like a dog. Perhaps she likes dogs.

Honest, now, doesn't it tickle you to have other men try on your hat and find it too large for them?

The fact that you are foolish enough to give a second thought to the idea that you would like to have time turn backward in its flight and make you a child again shows that you would do other foolish things, even if you were able to avoid the ones you have done.

There is much peculiarity in the Landes district of France, says a writer in the "Sporting Magazine" of 1827. A singular stillness reigns throughout the region; herds of cattle and flocks of sheep and goats watched by shepherds on stilts are almost the only objects in sight, with here and there a large shed to secure the sheep from the wolves. These are natives, and are the chief companions of the foxes. Ladies and gentlemen, old and young, where inhabitants exist, all move on stilts, stumping along with fearless rapidity. In dry weather the sand is deep, in wet like hasty pudding. . . The shepherds are mounted very high in this way, having thereby a wider view over their flocks; and it is said they can more readily see the approach of a wolf.

THIS VETERAN GIVES REASONS

Why He Pins His Faith to Dodd's Kidney Pills.

Worn Out with Chronic Kidney Diseases—The Great Canadian Kidney Remedy Banished His Pains.

ACADIE SIDING, Kent Co., N. B., July 3. (Special.)—Calixte Richard, J. P., one of the most highly-respected men in this part of the country, has joined the great army of those who pin their faith to Dodd's Kidney Pills. As usual Mr. Richard has good reasons for what he does and he states them as follows: "I have been troubled with Kidney Disease for forty years, and the result was I found myself a worn-out man at seventy-two. But after using two boxes of Dodd's Kidney Pills I find all my pains are gone, and I can employ all my days with the best results. I cannot let the opportunity pass of letting the public know the great good Dodd's Kidney Pills have done me."

Dodd's Kidney Pills cure all rheumatic pains by removing the cause—Uric acid in the blood. They put vigor and energy in place of the pain.

Lost, Strayed or Stolen—Cont.

On premises of George C. Petterson, J. P. (4-25-14 w 2), Headlands, Assa., since November, 1904, large red cow, about six years, calved this spring, no visible brand; also red heifer, with no visible brand.

On premises of J. A. Lenzen (N. E. 36-24-2 w 3), Girvin, Assa., since June 1, 1905, black horse, about five years old, brand resembling shamrock on left shoulder, bad barb-wire cut on left leg near joint, newly done; black mare, about four years old, brand resembling shamrock, badly blurred, on left shoulder, barb white on left shoulder, very faint white strip on forehead, small white spot near center of back. Both these horses have heavy mane and tail; animals weigh about 1,000 to 1,200 pounds.

On premises of S. C. Cressman (24-30-2 w 5), Carstairs, Alta., cow with white face, calf at foot, branded three circles on right hip, has mark on lower part of the jaw. Been on above premises since last year.

On premises of Albert Watts (S. E. 6-48-25 w 4), Millet, Alta., since about May 30, 1905, black mare, nine years old, weight 1,000 pounds, branded on lower part of right front shoulder C E D; sorrel mare, 1,100 pounds, white on both flanks, three years old, no brand, has halter on; dark bay mare, three years old, 1,200 pounds, no brand visible, has halter and bell on.

On premises of Jackep Jowske (6-11-4 w 2), Weyburn, Assa., bay mare, 1,400 pounds, has halter on; white mare, 1,450 pounds, has halter on.

On premises of Francis Stewart (24-38-24 w 4), Bullockville, Alta., dark bay cayuse gelding, four years old, no brand, white feet.

On premises of Jay Baker (16-40-23 w 4), Bullockville, Haynes, Alta., buckskin mare, aged, 850 pounds, branded 125, 30, 90, lazy B, on right hip.

On premises of Filipp Steffen (S. E. 30-22-6 w 2), Pearl Park, Assa., sorrel mare, white on face, seven or eight years old, weight about 1,000 pounds, brand resembling L D, monogram, on left shoulder, hind feet and left forefoot white, lump on hock, long tail.

On premises of R. G. Keys (9-18-23 w 2), Fairville, Assa., since about April 20, 1905, roan pony mare, white dash on face, hind feet white.

On premises of James Booth (2-23-12 w 2), Balmatras, Assa., since May 20, 1905, red and white yearling heifer, no brand.

On premises of John Thompson (21-3-31 w 1), Carlevalle, Assa., since May 15, 1905, iron-gray filly, about three years old, branded T on left shoulder, hind feet white.

On premises of George D. Thomas, T. P., 10, Range 25, w 4th, Macleod, Alta., small brown pony, aged, with white patch over left jaw and full glass eye, two white patches on right side of neck, one white patch on right ribs, and a white patch on left ribs, about 11 hands high, hind legs white up to hocks, left front legs white to knees, and right foot white for a couple of inches.

On premises of O. J. Rallis (24-31-25 w 4), Sunnyslope, Alta., two bay mares, branded K I P on left shoulder, one has stripe down face, and halter on.

On premises of E. B. Carbee (19-44-16 w 4), Spring Lake, Alta., since November, 1904, bay mare, six years old, indistinct brand resembling lazy 3, quarter circle under, about 1,000 pounds.

On premises of Joseph Savery (6-5-6 w 2), Estevan, Assa., since about April 1, 1905, bay colt, white star on forehead, no brand.

On premises of William H. Miller (10-12-23 w 2), New Warren, Assa., bay mare, white star on forehead, roan or mouse-colored filly, white face, branded R, reversed, with S, on left shoulder.

On premises of E. S. Winthrop (30-21-2 w 5), Millarville, Alta., bay stud, white star on forehead, branded lazy 8 on left shoulder.

On premises of T. Scheie (S. E. 30-19-30 w 1), Harrowby, Man., since May 30, 1905, red bull, large horns; white bull, large horns.

On premises of Herbert Hill (5-20-1 w 2), Esterhazy, Assa., since the latter part of May, 1905, red-and-white yearling bull.

(Continued on next page.)



Kidney Disorders

Are no respecter of persons.

People in every walk of life are troubled. Have you a Backache? If you have it is the first sign that the kidneys are not working properly.

A neglected Backache leads to serious Kidney Trouble.

Check it in time by taking

DOAN'S KIDNEY PILLS

"THE GREAT KIDNEY SPECIFIC." They cure all kinds of Kidney Troubles from Backache to Bright's Disease.

50c. a box or 3 for \$1.25 all dealers or

THE DOAN KIDNEY PILL CO., Toronto, Ont.

If you want to go to Fort William or Port Arthur Comfortably, Reserve Your Berth Now on The Steamship Express.

DINING-CAR SERVICE UNSURPASSED

THE STEAMSHIP EXPRESS leaves Water Street Station daily at 16.00 o'clock, arrives Fort William 8.19 o'clock, Port Arthur 8.30 o'clock next morning.



R. L. Daly,

City Ticket Agent,

COR. MAIN and PORTAGE AVE.,

WINNIPEG.

Phone 1066.

HIGH PARK GALLOWAYS At present I am offering for sale several bulls from 6 to 20 months old, and a few heifers from 1 to 3 years old, prizewinners and bred from prizewinning stock. Will sell at right prices, and satisfaction guaranteed. Robt. Shaw, Brantford, Ont. Sta. & P. O. Box 294.

SCARCLIFFE FARM HEREFORDS

YOUNG BULLS FOR SALE.

WRITE AT ONCE FOR PRICES.

BING & WILSON, GLENELLA, MAN.

Farmers, why not improve your stock by buying a

RED POLLED BULL?

The best for beef and butter. We have some good ones for sale, and the price is right.

H. V. CLENNING, Bradwardine, Man.

TERRA NOVA STOCK FARM

HERD OF ABERDEEN-ANGUS CATTLE.

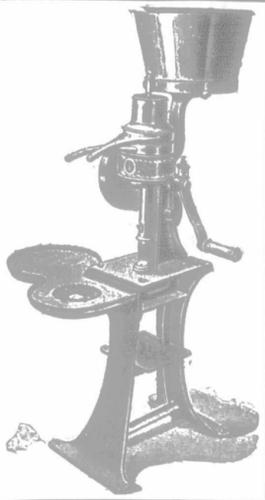
All the best families represented. Some fine young bulls for sale from both imported and home-bred cows. Prices reasonable.

S. Martin, Rounthwaite, Man

Advertise in the Advocate

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

DE LAVAL SEPARATORS



The Standard of Excellence.

DE LAVAL skimming qualities, wearing qualities and catalogued capacities can be depended upon as surely as the Government's bond.

You may "think" the other kind is good enough, but you "know" the purchase of a DE LAVAL SEPARATOR eliminates the element of chance.

Over 600,000 in use, exceeding by ten times all other makes combined.

A post card will bring our catalogue.

The De Laval Separator Co., 248 McDermot Ave., Winnipeg, Man.
Montreal Toronto New York Chicago Philadelphia San Francisco

BARGAINS IN SHORTHORNS

Nobleman (Imp.), a Winnipeg winner, of Nonpareil breeding, and Pilgrim (Imp.), a massive, smooth, red bull; also Nonpareil Prince, a straight Nonpareil two-year-old, winner of first at Winnipeg, 1904, and Fairview Prince, same age, another winner this year, along with

FIFTEEN YOUNGER BULLS

fit for service, is JOHN G. BARRON'S present offering for sale. Mr. Barron is crowded for room, so will dispose of heifers and cows at rock-bottom prices.

JOHN G. BARRON, CARBERRY, O. P. R., FAIRVIEW SIDING, C. N. R.

PATLY STOCK FARM

KILDONAN, MANITOBA.

Having sold my farm, must sell at once all my prize stock, consisting of CLYDESDALES, THOROUGHBREDS and HACKNEYS, SHORTHORNS, GOLDEN WYANDOTTES, INDIAN RUNNER DUCKS, etc.

Among the Clydesdales is the imported 3-year-old stallion Cadet, one of the best ever imported; six young brood mares are prizewinners and two champions, the pick of Colonel Holloway's great stud, two of them in foal to last year's Winnipeg champion, Baron William (imp.).

Thoroughbred stallion Experience, brood mare Nora Howard and two fillies out of her. 4-year-old in training, by Davidson, and a 2-year-old, by Hard Lines.

HACKNEYS—4 choice young mares with foals at side, matched pairs and single drivers.

SHORTHORNS—16, headed by August Archer, brother to the great Ceremonious Archer, champion of America; 6 yearling heifers and two bulls.

End of St. Ry., ST. JOHN'S, WINNIPEG.

J. A. MITCHELL.



Turns mother's drudge into child's play.

Rubs the clothes naturally—the way a woman does washing by hand. Takes the dirt out of wristbands, neckbands, collars and cuffs, just as thoroughly as it cleanses blankets, sheets or pillow cases. Has eight inches more rub than any other machine, and positively will not bunch the clothes. The children think it great fun to operate it—no work. If your dealer doesn't sell it, write

Thomas Brothers, Limited, - - - St. Thomas, Ont.

WHEN WRITING PLEASE MENTION "ADVOCATE."

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

Lost, Strayed or Stolen—Cont.

On premises of William H. Miller (10-12-23 w 2), New Warren, Assa., sorrel stallion, white star on forehead, branded compass on left hip. Above animal been in the neighborhood for about one month.

On premises of T. E. Kells (14-28-21 w 2), Strassberg, Alta., brown stallion, branded (design not given).

On premises of W. Minken (28-28-7 w 2), Theodore, Assa., since May 20, 1905, roan stallion, one or two years old, no visible brand.

On premises of D. Switzer, Abernethy, Assa., since June 3, 1905, dark bay stallion, two years old, white face, large lump on right shoulder, off hind leg white.

On premises of Ed. McCandlish (S. W. 4-13-25 w 4), Claresholm, Alta., since April 15, 1905, cream gelding, about 800 pounds, branded VA, monogram, on right hip.

On premises of O. D. Cook, Lamerton, Alta., since May, 1904, black pony mare, branded 1 1 1 on left hip, about seven years old.

On premises of Gerhard Blomer (28-5-13 w 2), Halbrite, Assa., since May 16, 1905, gray mare, three years old, star on forehead, about 700 pounds, branded U, bar, on left shoulder.

IMPOUNDED.

On premises of Wm. D. Harvey (10-18-11 w 2), Indian Head, Assa., large bay gelding, in poor condition, star on face, hind feet white.

On premises of Wm. D. Harvey (10-18-11 w 2), Indian Head, Assa., small iron-gray broncho mare, branded on left shoulder, leather halter on, and rope around neck.

On premises of J. Schuler (N. E. 20-18-24 w 2), Belle Plaine, Assa., red steer, three years old, dehorned; red steer, three years old, long horns; red steer, one year old; red cow, three years old. There seems to be brands on the left hip of the above animals, but indistinct, also a little white on belly.

On premises of P. C. Cameron (N. E. 18-18-20 w 2), Condie, Assa., since June 3, 1905, light brown horse, dark points, 1,100 pounds, small lump on both front knees, branded A, and inverted L, on left hip.

On premises of Gustav Hesse (S. W. 22-3-6 w 2), Bienfait, Assa., black mare, aged, small white spot on forehead, branded L on right shoulder; bay pony horse, aged, white stripe down face, branded lazy S on left hip, and T O on right hip, saddle marks, hind feet white; bay horse, aged, white stripe down face, branded K I on left shoulder and left hip; gray mare, aged, branded I on left shoulder; bay horse, aged, branded L 4 on left shoulder; dark bay mare, aged, branded Z on left hip.

On premises of Walter Martin (N. E. 36-7-16 w 2), Weyburn, Assa., brindie ox, white spots, ten years old, large horns, 1,800 pounds weight, no brands; red and white ox, eight years old, 1,600 pounds, large horns, no brands.

On premises of Percy R. Hewer (S. W. 30-22-22 w 2), Marieton, Assa., brown mare, white stripe down face, white nose, branded L on left shoulder, nigh front foot white half way to knee, off front foot white above hoof, off hind leg white half way to hock, looks to have cut in front of both hocks.

On premises of D. McKaig (N. E. 22-18-10 w 2), Ellisboro, Assa., broncho mare, seven or eight years old, dark iron-gray, 1,100 pounds, hind feet white, branded T, reversed J, monogram, on left hip, and 24 on left shoulder, and T, reversed J, on right shoulder, rope around neck, lump on right knee; light roan stallion, one or two years old, white face, hind feet white above fetlock, unbranded; gray mare, wire cut on right forearm, branded M, bar under, on left hip, 900 pounds, has foal at foot; bay mare, 1,000 pounds, branded T with small bar and small circle joined on top, on left hip and left shoulder, hind feet white; buckskin mare, 1,000 pounds, bell on neck, white feet, no visible brand; mouse-colored stallion, three or four years old, 900 pounds, branded two joined loops, resembling small written e's, on left shoulder, and M, bar under, on left hip.

On premises of Gustav Hesse (S. W. 22-3-6 w 2), Bienfait, Assa., bay horse, white stripe down face; gray mare,

(Continued on next page.)

Ring-Bone

So common nearly everybody knows it when he sees it. Lameness and a bony enlargement just above the hoof, or higher and on the upper pastern bone, sometimes extending nearly around the part, sometimes in front only, or upon one or both sides. Cases like the latter are called Sidebone. No matter how old the case, how big the lump, how lame the horse, or what other treatment has failed, use

Fleming's Spavin and Ringbone Paste

Use it under our guarantee—money refunded if it fails to make the horse go sound. Often takes off the bunch, but we can't promise that. One to three 45-minute applications required and anyone can use it. Get all the particulars before ordering—write for Free Horse Book that tells you what to use for every kind of blemish that horses have. FLEMING BROS., Chemists, 46 Front Street, West, Toronto, Can.

FOR SALE cheap, a herd of

Shorthorns

Comprising five females and three males fit for service, from 14 to 24 months old. Four cows in calf. Apply

S. W. McINNIS, Box 292, Brandon, Man.

Forest Home Farm.

CLYDESDALES, SHORTHORNS YORKSHIRES and B. P. ROCKS.



Bulls—four reds and one roan, first-class stuff by Manitoba Chief—2004— and Golden Standard—34886—, and out of thick, heavy cows, imp. and Scotch-topped. Females, all ages, for sale. Forest Home is headquarters for Yorkshires. Our

Winnipeg winnings in the last ten years have been greater than that of any other three herds combined. Boars for sale, ready for service. Orders for spring pigs taken.

Prices of cattle and pigs cut to suit times. Roland, C. N. R., Carman, C. P. R., Fomeroy F. O.

ANDREW GRAHAM, Prop.

Scotch Shorthorns

Herd headed by Royal Macgregor, an excellent stock bull and prize-winner of note. Young stock of both sexes for sale.

P. TALBOT & SONS, - Lacombe, Alta. THORNDALE STOCK FARM.



SHORTHORN herd numbers 160, headed by Challenge—30462— and Royal Sailor—37071—, sixteen yearling bulls for sale, and a lot of younger ones; also females of all ages.

T. W. ROBSON, Manitow, Man. Sittyton Stock Farm

SCOTCH SHORTHORNS

Members of this herd won the two grand championships as Regina Fat-stock Show, 1905; also diploma herd 1903 and 1904.

FOR SALE—Twenty young cows and heifers in calf to Sittyton Hero 7th, my great show and stock bull.

GEO. KINNON, Cottonwood, Assa.



Grandview Herd.

Scotch Shorthorns. Herd headed by Crimson Chief—24007— and Trout Creek Favorite. Stock for sale at all times. Correspondence solicited.

JAS. WILSON, Innisfail, Alberta, Farm 3 miles south of town.

Shorthorn Bulls, Heifers and Heifer Calves for Sale.

The get of Sir Colin Campbell (imp.)—28678— and General—30890—. Cows all ages, in calf or calf at foot. Seventy head to choose from. Three Clydesdale stallions two and three years old. Also mares and fillies. Leicester sheep, both sexes. Stock always on hand. m Geo. Rankin & Sons, Hamiota, Man.

Drumrossie Shorthorns—Drumrossie Chief—29832— and "Orange Chief"—28996— at head of herd. Young things for sale at all times. J. & W. SHARP, Lacombe, Alta.

BERKSHIRES

Imported and Canadian-bred
H. M. VANDERLIP, Cainsville
 on T. H. & B. and B. & G. division of Grand Trunk. Telephone and telegraph, Cainsville, Ont.

McKillop Veterinary College, CHICAGO, ILL.

(Chartered 1892.)
LARGEST PRACTICE IN THE WORLD.
 Affording unlimited clinical advantages.

The College building has been recently enlarged and modernized by the addition of new laboratories, dissecting room, amphitheatre, contagious ward, hospital ward and a canine hospital. All the furnishings are of the latest improvement.

There has been added to the curriculum two important courses, Hygiene & Breeding and Veterinary Jurisprudence, making the curriculum most complete.

The College is to-day the most complete and best-equipped institution of its kind in this country, and offers to the student a scientific and practical course a high cannot be obtained elsewhere.

Regular Graduate Course, acquiring the Degree of Doctor of Veterinary Medicine.

Post-graduate Course, acquiring the Degree of Doctor of Veterinary Medicine.

Meat Inspection Course, preparatory to the Civil Service Examination for Government Inspectors. Special attention is given this course, in order to prepare the student for the Civil Service Examination.

Practitioners' Course—Five weeks' advanced work in Medicine, Surgery and Lameness.

SESSION BEGINS OCT. 3rd, 1905.

Write for catalogue and other information.

G. A. SCOTT, V. S., Secretary,
 1639 Wabash Avenue. CHICAGO, ILL.



A burning brand, spark or cinder falling upon

Rex Flintkote Roofing

will burn itself out without igniting the roof.

Let us send you a sample, and you can try it.

"Look for the Boy on every Roll."

The most fire-resisting Roofing known.

Underwriters endorse it.

Mackenzie Bros.
 WINNIPEG.

More Profit From Your Live Stock

If your animals are in bad health or made uneasy by insects, their feed does them little or no good—and feed costs money; and besides, your stock is never in condition. **Chloro-Naphtholeum Dip and Live Stock Disinfectant** will keep your cattle thrifty because it keeps them clean and free from mange, lice and all parasitic skin diseases. Cures contagions, abortions, scours and prevents and cures hog cholera. As a sheep dip it cures scabs, kills ticks and lice—all parasitic skin diseases. To prove this to you I will send you, all charges prepaid, a

FULL GALLON FREE

All you have to do is to write me, now, and tell me the number and kind of stock you own. I do not want you to pay me a penny, nor make any promises, except that you will use the large sample freely for 30 days, entirely at my expense and risk. If, after a thorough trial, Chloro-Naphtholeum Dip proves itself the best vermicide, insecticide and disinfectant you ever saw or used, you can pay me \$1.50 for the gallon. If it doesn't please you in every way—doesn't prove better than you expected—just tell me—your word is sufficient—and I will write you where to send any that is left, at my expense. Surely you couldn't find a fairer or more convincing offer than this, and you can't lose anything by making the test—but you can lose a great deal by delaying. Write me personally today.
E. TAUSSIG, President, West Disinfecting Co.
 14 E. 59th St., New York City

ONE OF MANY Live-Stock Sanitary Commission, Topeka, Kan., Mar. 28, 1905.
 Mr. M. M. Marzess, Vice-Pres. West Disinfecting Co., New York City.
 Dear Sir:—I have been experimenting during the past winter, to a very much greater extent than in the past, with Chloro-Naphtholeum, for the lice and mange among cattle, also for those which are infested with blue or other kinds of lice, also for horses which have the mange, and for hogs. I find it the best disinfectant for all of the diseases mentioned that I have ever used. I consider it far more destructive of vermin than lime and sulphur, and taking into consideration the good effects is far cheaper. I unqualifiedly give Chloro-Naphtholeum my hearty endorsement for any of the diseases mentioned, or where a disinfectant is required. Very respectfully,
M. C. CAMPBELL, Chairman.

If You Have a Farm for Sale

Or Want a Situation, put an Advertisement in our WANT AND FOR SALE COLUMN. Our Want Ads. Always Bring the Best Results.

The William Weld Co., Limited, Winnipeg, Man.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

Lost, Strayed or Stolen—Cont.

young; small black mare, white star on forehead; bay horse, aged; light bay horse, small white stripe down face, white hind stockings; bay mare, aged; black mare, aged, indistinct brand on left shoulder; gray horse, five years old; bay horse, three years old; black horse, three years old, face and hind feet white, white spots on flanks.

On premises of Thos. Ellis (17-17-9 w 2), Wolseley, Assa., bay mare, star on forehead, left hind foot white, branded E on left shoulder, rather old; bay stallion, one year old, not branded, by said mare; roan horse, small star on forehead, branded G on left shoulder, some white on left hind foot, about nine years old.

On premises of O. E. Bossard (N. E. 36-8-16 w 2), McTaggart, Assa., red bull, about a quarter Hereford, one and a half years old, white face, no brand or marks.

On premises of Thomas Rusk, Jr. (S. W. 28-16-23 w 2), Belle Plaine, Assa., bay gelding, seven years old, branded R I on left shoulder, white star on forehead, about 1,200 pounds, white on hind legs, apparently has had some skin disease, also distemper.

On premises of Clayton W. Husk (N. W. 6-9-33 w 1), Cannington Manor, Assa., red-roan bull, one year old, few white spots.

On premises of John Hubernick (N. E. 4-20-7 w 2), Neudorf, Assa., black gelding, four years old, no brand, white face, hind hoofs a little white; black mare, three years old.

On premises of Wm. J. Morrison (N. W. 28-1-2 w 2), Oxbow, Assa., gray mare, about 1,200 pounds, has been worked lately, no brand visible.

On premises of John S. Lytle (14-17-18 w 2), Pilot Butte, Assa., bay mare, between 700 and 800 pounds, white star on forehead, about nine years old, white spot on nose, front feet white, branded E H, with bar, on top of H, on right thigh; pinto horse, between 700 and 800 pounds, about seven years old; one-year-old heifer, red and white; bay mare, has sucking colt, star on forehead, branded O on left side of neck and C R, monogram, or running R on right shoulder.

On premises of S. Shaw (S. W. 28-14-1 w 2), Wapella, Assa., bay stallion, two years old, star on face, hind feet white.

On premises of Jacob Purdy (S. W. 12-2-5 w 2), North Portal, Assa., light bay gelding, about four years old, branded lazy Z, bar under, on left hip, and 1 4, quarter circle over 4, on left shoulder; black mare (tinge of gray), about seven years old, mane and tail dark gray, branded F V, monogram, on left shoulder, wearing halter.

On premises of L. W. Griffin (S. E. 32-14-31 w 1), Moosomin, Assa., dark roan horse, general-purpose, white star on forehead, sore shoulder, white feet, halter on, no brand; bay horse, general-purpose, white star on forehead, sore shoulder, halter on, little white on left hind foot, no brand.

On premises of Glasgow Winter (N. W. 10-16-5 w 2), Broadview, Assa., black horse, halter on, no brand; gray horse, indistinct brand resembling running W on left shoulder, halter on.

On premises of J. W. Hudson (S. E. 12-20-2 w 3), Eyebrow Hill, Assa., red cow, white spots, white face, left horn broken, no brand visible.

On premises of E. S. Andrews (S. E. 30-36-5 w 3), Saskatoon, Sask., pony mare, 14 hands high, bay, black points, white star on forehead, strap around neck, no brand; black gelding, branded T, over T, over TC, on left shoulder, rope hobbles; bay stallion, yearling, hind feet white, no brand; chestnut mare, star on forehead, saddle galls on back, hind feet white, about 15 hands high, no brand.

On premises of W. Brooks (N. W. 2-3-8 w 2), Estevan, Assa., two fillies, bay, appear to be about three years old, about 15 hands high, star on forehead, Clyde built, black mane and tail. One has old wire cut on hind leg, the other has ear split about an inch; both branded 5 C on shoulder.

On premises of H. A. Esplen (S. E. 17-44-15 w 3), Battleford, Sask., small bay pony mare, about 1,000 pounds, about seven years old, branded C 7 on left shoulder, right hind foot white, little tender on front feet.

(Continued on next page.)

Good Health and Success

GO HAND IN HAND WHEN THE BLOOD IS KEPT PURE AND RICH BY

D. Chase's Nerve Food.

Red blood means health, strength, courage, cheerfulness, power of endurance and a well-nourished brain that likes to accomplish things.

The secret of health is, after all, in the blood, for with an abundance of rich, red blood the nervous system is nourished and sustained, the lungs, heart, stomach, liver and kidneys are filled with the vigor and energy necessary to accomplish their work, and there is no room for weakness and disease.

Dr. Chase's Nerve Food builds up, strengthens and invigorates the whole human body, because it actually forms rich, red blood.

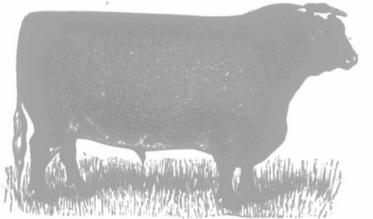
Indigestion, sleeplessness, nervous headache, irritability, nervousness, lack of energy and strength and failure of the bodily organs to perform their functions are almost invariably the result of poor, weak, watery blood.

The use of Dr. Chase's Nerve Food completely overcomes these symptoms, and by filling the whole system with new vigor gives new hope and confidence and replaces weakness and disease with health and strength.

Dr. Chase's Nerve Food, 50 cents a box, 6 boxes for \$2.50, at all dealers, or Edmanson, Bates & Co., Toronto. The portrait and signature of Dr. A. W. Chase, the famous receipt book author, are on every box.

Lump Jaw

Save the animal—save your herd—cure every case of Lump Jaw. The disease is fatal in time, and it spreads. Only one way to cure it—use **Fleming's Lump Jaw Cure**. No trouble—rub it on. No risk—your money back if it ever fails. Used for seven years by nearly all the big stockmen. Free illustrated book on Lump Jaw and other diseases and ailments of cattle and horses. Write for it today.
FLEMING BROS., Chemists,
 46 Front Street, West, Toronto, Can.



Arthur Johnston GREENWOOD, ONT.

Offers the following:

- 5 imp. bulls, all registered in E. H. B.
- 7 high-class home-bred bulls, all by imp. sires, and from imp. or pure Scotch cows.
- 7 imp. cows and heifers.
- 7 very fine heifers of our own breeding, by imp. sires, and mostly from imp. dams.

SHORTHORNS

Still have a few good young bulls to offer. Also an exceptionally good lot of heifers, among which there are show animals. Prices easy.

CATALOGUE.

H. O'GILL & SON, O'GILL, ONT.
 JOHN CLANCY, Manager. Ont.

Can Eat Anything Now.

How many Dyspeptics can say that? Or perhaps you are dyspeptic and don't know it.

Have you any of these symptoms?

Variable appetite, a faint gnawing feeling at the pit of the stomach, unsatisfied hunger, a loathing of food, rising and souring of food, a painful load at the pit of the stomach, constipation, or are you gloomy and miserable? Then you are a dyspeptic. The cure is careful diet; avoid stimulants and narcotics, do not drink at meals, keep regular habits, and regulate the stomach and bowels with **BURDOCK BLOOD BITTERS**, Nature's specific for Dyspepsia.

Miss Laura Chicoine, Belle Anse, Que., says of its wonderful curative powers:—"Last winter I was very thin, and was fast losing flesh owing to the run-down state of my system. I suffered from Dyspepsia, loss of appetite and bad blood. I tried everything I could get, but to no purpose; then finally started to use Burdock Blood Bitters. From the first day I felt the good effect of the medicine, and am now feeling strong and well again. I can eat anything now without any ill after-effects. It gives me great pleasure to recommend Burdock Blood Bitters, for I feel it saved my life."

MAPLE SHADE SHORTHORNS



Three young bulls fit for service. Showing the finest Cruickshank breeding.

Good Size, Quality, Flesh and Bone.

Inspection invited. Catalogues on application.

JOHN DRYDEN & SON, Brooklin P.O., Ont.

Spring Grove Stock Farm SHORTHORN CATTLE & LINCOLN SHEEP.



First herd prize and sweepstake, Toronto Exhibition, 3 years in succession. Herd headed by the imported Duthie-bred bull, Rosy Morning, and White Hall Ramden. Present crop of calves sired by Imp. Prince Sunbeam, 1st Toronto, 1903. High-class Shorthorns of all ages for sale. Also prize-winning Lincolns. Apply on

T. E. ROBSON, ILBERTON, ONT.

PINE GROVE STOCK FARM

ROOKLAND, ONTARIO, CANADA. Breeders of choice

SCOTCH SHORTHORNS and SHROPSHIRE.

W. C. EDWARDS & CO., Ltd., Props. JOSEPH W. BARNET, Manager, on

T. DOUGLAS & SONS,

Strathroy, Ontario.

SHORTHORNS and CLYDESDALES

Present offerings: 12 young bulls of No. 1 quality, ready for immediate service; also cows and heifers of all ages. Also one imp. stallion and two brood mares. Prices reasonable. Visitors welcome. Farm one mile from town. om

MAPLE LODGE STOCK FARM

1854.

15 Shorthorn heifers, sired by imp. bull, and in calf to imp. bull. Also two first-class young bulls. Cows are large milkers. om

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

Lost, Strayed or Stolen—Cont.

In Town Pound, Raymond, Alta., speckled red-and-white steer, four years old, dehorned, double dewlap, bush of tail off, branded 7 5 on left ribs and brand resembling triangle on right ribs; red steer, three years old, dehorned, branded S C on right ribs, and diamond 7 on left ribs, and brand resembling quarter circle on left side of neck; red cow, four years old, branded P on left ribs; bay horse colt, one year old, branded J flying T on right thigh. J. B. Wasden, poundkeeper.

On premises of John Agopowicz (7-20-17 w 2), Hednesford, Assa., since May 22, 1905, four horses; four-year-old roan mare, white stripe down face and neck, between 800 and 900 pounds, no brand; two-year-old buckskin gelding, long white stripe down face, no brand; chestnut yearling filly, white star on face, hind legs white; bay filly, yearling, white star on face.

On premises of Jacob Yung (N. E. 36-16-15 w 2), Qu'Appelle, Assa., since May 15, 1905, black pig, white face, about 175 pounds, short tail; since May 23rd, 1905, sorrel horse, about eight years old, white face, white legs, branded C on right front shoulder; since May 23rd, 1905, reddish-gray mare, with bay colt, about one year old, no marks distinguishable.

On premises of T. C. Bunn, South Qu'Appelle, Assa., red-and-white steer, about one year old; black-and-white steer, about one year old; red steer, about one year old; bay mare, general-purpose, small white stripe down face, branded H B, with quarter circle, on top on left shoulder, and 3 L on left hip, halter on; bay mare, general-purpose, white star on forehead, branded J on left shoulder, halter on.

TRADE NOTE.

THE DEVLIN-TYRRELL CO.—The business hitherto carried on under the name of E. E. Devlin & Co., importers of Chicago Aermotor windmills and pumps, Austin and Howell well-drilling machines, etc., has been changed to the Devlin-Tyrrell Co., with Mr. C. S. Tyrrell, late of the Hudson's Bay Company, as local manager, with offices and show-rooms at 140 Princess St., Market Square.

GOSSIP.

Mr. Graham Galbraith, of Brandon, sailed Saturday, June 10th, on the Cunard liner, Lucania, to select the usual summer importation of horses for the firm. He is probably the youngest, but by no means the least experienced, buyer in the trade. He has made six double trips across the Atlantic, and made the firms purchases when only 21 years old. He will return in September.

QUESTIONS AND ANSWERS. Miscellaneous.

GRASS MIXTURES.

I wish to seed about four acres to hay grasses and clovers. Can you tell me a good mixture to use, including Western Rye grass or timothy?

2. Will alfalfa succeed when sown with grasses, or would Mammoth Red clover be more suitable?

My land here is brownish-black loam, derived largely from limestone; gravelly-clay subsoil, and I have had odd plants of alfalfa growing in my oats for three years—now plowed up. T. W. D. Craik, Assa.

Ans.—You may possibly get a crop from a mixture of grasses and clovers if you give the land good treatment and have a favorable season. We would advise you to try both alfalfa and red clover with Western Rye grass. So little is known as yet about the growing of mixtures in all conditions that one has to do considerable experimental work for himself. If you sow a mixture of grasses alone, we would suggest that you make it equal parts rye grass and brome, about 15 lbs. to the acre—more if the land is high and dry, and less if low and moist. Put the seed in a pretty good depth. Timothy is a good grass where it can be grown, and if you are not in too dry a district, you might use it in the mixture.

I GIVE IT FREE



To Men Until Cured.

Not One Penny in Advance or on Deposit.

I wish you could know for yourself the wonderful effect of the galvanic current on weak and nervous men. I wish you could realize the health and happiness that will be yours when this wonderful force infuses every nerve and vein of your body as accomplished through my treatment. I have been curing thousands every year for forty years, and have proved that my method will cure any curable case. So positive am I of my power that I am prepared to take all the risk, and will give to any man suffering from Nervous Debility, Varicocele, Drains, Lack of Vigor, etc., or from Rheumatism, Lamé Back, Kidney, Liver or Stomach Troubles, the use of my world-famed Dr. Sanden Electric Belt, with Electric Suspensory, absolutely FREE UNTIL CURED. If I fail you don't pay me anything whatever. I leave you to be the judge, and ask not one penny in advance or on deposit. I cannot do more than this to prove the value of my treatment, so if you will call or write I will at once arrange to give you a Belt suited to the requirements of your case, and you can pay me when cured. Many cases as low as \$5, or for cash full wholesale discount. You will also get the benefit of the inestimable advice my forty years' experience enables me to give my patients. This long continuous success has brought forth many imitators. Beware of them. You can try the original, the standard of the world, free until cured, then pay for it.

Call to-day and take a Belt along, or send for one by mail. I have two of the best books ever written on Electricity and its medical uses, and containing several hundred wonderful testimonials, which I also send free, sealed, by mail. Address:

Galt Sure Grip Shingles

cannot be dislodged by the fiercest gale that ever swept the "Hurricane Deck" of a Prince's Palace or a Cottager's Home. Ripe experience of the rigors of this northern climate has passed judgment on the wooden shingle of yesterday. The shingle of the Twentieth Century must be better than wood—it must be metal, and metal only. GALT SURE-GRIP shingles last a life time, and they're absolutely wind, storm, rain and fire proof.

The Classic Kids will tell you all about them.

GALT ART METAL CO., Limited, GALT, ONT.

SHORTHORNS FOR SALE.

Three bulls about 10 months old, two roans and one red; 5 one-year-old heifers; 6 heifer calves, all sired by Imp. Diamond Jubilee. Also a few choice cows carrying calves or with calves at foot. For prices, apply to om FITZGERALD BROS., 21, St. Louis P. O. Glenvale Stn., Hilldale Telegraph Office.

Burnside Ayrshires—One 2-year-old and two yearling bulls; also females of all ages, just imported June 1st, Scotch prizewinners; also a number of imp. and home-bred cows, due in Aug. and Sept. Order a good calf from heavy-milking dams. R. R. NESS, Burnside Farm, Howick, Que. om

Brampton Jersey Herd—We have now for immediate sale ten Bulls, from 6 to 18 months old, descended from St. Lambert or imported stock; also females of all ages. In order to reduce our stock, we are making a special offer. For full particulars, address, B. H. BULL & SON, Phone 68. om Brampton, Ont.

BARREN COW CURE makes any animal under 10 years old breed, or refund money. Given in feed twice a day. Particulars from L. F. SELLECK, Morrisburg, Ont.

YORKSHIRES

We are now able to ship young stock, six weeks and two months old, out of imported and Canadian-bred sows, at prices that should appeal to you, if you want to get some well-bred young stuff. We can supply pairs or trios, not akin. Write us for prices.

WALTER JAMES & SONS, Rossar, Manitoba

MOUNT FARM BERKSHIRES

CHOICE-BRED STOCK now for sale: PAIRS SUPPLIED NOT AKIN Inspection requested, and correspondence invited and promptly answered. O. G. BULSTRODE, Mount Farm, QU'APPELLE, ASSA

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

QUESTIONS AND ANSWERS.
Miscellaneous.

BELGIAN HARES.

Would you kindly tell me where I could get some of the Belgian Leporide?

Assa. A. B.
Ans.—E. H. Bean, Campden, Ont., and Hy. Troy, Campbellford, Ont., advertise Belgian Leporide (hares) for sale.

BREEDING MARE WITH BOG SPAVIN.
Would you consider a mare that had been sound up to fifteen years of age, then threw out a bog spavin, safe to use for breeding purposes? Would the spavin be likely to appear in her progeny?

J. S.
Ans.—The fact that this mare developed a bog at this age should be nothing serious against her as a breeder. Should bogs or bone spavin develop in a young mare, it is an indication that she has a conformation that is peculiarly susceptible to spavin, and would, in all probability, raise colts having the same predisposition. These diseases of themselves are not transmitted, but the conformation of the parts is more or less hereditary and correspondingly liable to unsoundnesses.

CHICKENS DYING.
For some time I had noticed my chickens looking sick. They would gape and appear dumpish. One day I killed and opened one, and, upon so doing, I discovered quite a large growth directly beside the crop, consisting of a hard, yellow matter substance. Likewise, the lungs did not look natural, although they appeared to be all there. The next day I noticed my chicks were not so bright as usual, and that same day one died, and after that they kept dropping off two and three at a time. At times, they would gape and make a sound as though they were in pain, and throw themselves backwards. Some of them seemed to have the diarrhoea, and others again just the opposite. The chicks were hatched in an incubator, and were kept away from the rest of the flock. Now, could it be possible that the chicks had the same disease as the fowls?

Assa. H. E. H.
Ans.—I do not know what the trouble is, unless it is tuberculosis. That is the only disease that I am aware of that would create conditions similar to these.
W. R. GRAHAM.
Poultry Dept., Ont. Agri. College.

AGREEMENT UPON WAGES.
I have verbally agreed to stay with a farmer for seven months at \$10 per month, and also he says he will give me board and lodging through the winter.
1. Do you think this a fair wage for one who has had a little experience in the Old Country?
2. Can the farmer turn me away when winter comes, if only verbally agreed?
3. What can I demand for second year's wage?

V. Q. S. V.
Ans.—1. We are in no position to answer such a question. If a man is worth more than this, his work will speak for itself, and the neighbors or his employer will make him a better offer, but a stranger has always to prove his worth above a nominal wage.
2. It is always just as well to have a written agreement, or witnesses to a verbal one; but, of course, if there is no mutual concord after a time the agreement might be cancelled by the employee—pay wages pro rata. It would not be conducive to the welfare of either party if either were not satisfied with the arrangements, and in such a case, the sooner the contract is ended, the better.
3. If you think you are worth as much as the average man, ask the average wage, but do not lie idle, take the best you can get.

Witmer Stone, one of the heads of the Philadelphia Academy of Natural Sciences, has gathered together what is probably the finest collection of stuffed birds in America.
Mr. Stone was showing these birds the other day to a Pittsburg millionaire. There were thousands of lifelike feathered creatures, ranged in line on line of cases, and Mr. Stone could not help praising them with much ornithological warmth.
"Yes," he ended, "this collection of stuffed birds is worth some thousands of dollars."
"Is it possible?" said the millionaire. "Why, what are they stuffed with?"

FOR SALE: 300 ACRES
of splendid land in the
FRASER RIVER VALLEY, BRITISH COLUMBIA.

Having good roads, plenty of water for stock, and a rich black soil; no part of the land liable to flood, and 170 acres ready for the plow. This property can be sold as a whole or sold in three parts, to suit a purchaser. Namely: (1) 90 acres of prairie land (with 10 acres of high land for residence), (2) 150 acres of land, of which 100 acres is prairie and 50 acres for residence and timber; this includes 3 acres of orchard of 150 trees, all bearing. From the high land a grand view of prairie and river can be obtained. The prairie would pasture 100 head of stock. (3) 60 acres of prairie. All this property is well drained by two ditches and a dyke. The taxes are light, and the property is well worth \$50 per acre. Post office, school, store and railways 4 miles distant. Daily shipments can be made to Vancouver. This is the best offer in British Columbia to-day. Price, 90 acres at \$25 per acre and the balance at \$30 per acre. As so low a price is being asked, the terms are cash, or a large proportion cash. Address:

ALEXANDER BELL, Ellard Block, Columbia Street, New Westminster, B. C.

GALVANIZED STEEL WOVEN WIRE FENCE

After all is said and done, more of Our Fences are in use than all other makes of Wire Fences combined. Our Sales double every year.

HIGH CARBON.

58 INCH
49 IN.
41 "
34 "
28 "
23 "

American Field and Hog Fence.

Elwood Field and Lawn Fence.

IF YOUR DEALERS DO NOT HANDLE OUR FENCES, WRITE TO US.

The Canadian Steel & Wire Co., Ltd.
WINNIPEG, Man. o HAMILTON, Ont.

We call your special attention to our Extra Heavy Fence, all Horizontal Wires No. 9 Gauge. Weighs more per rod, has greater tensile strength than any other Fence on the market

Varicocele—Hydrocele
Cured to Stay Cured in 5 Days.

No Cutting or Pain. Guaranteed Cure or Money Refunded.

VARICOCELE Under my treatment this disease is permanently cured. Pain ceases, stagnant blood is driven from the distended veins, soreness vanishes, every indication of Varicocele is cured to stay cured.

HYDROCELE My treatment for Hydrocele and its complications are obtainable only at my hands. I cure Hydrocele and its complications without pain, without knife, without detention from business, cured to stay cured under bank guarantee.

I cure to stay cured, Blood Poison, Kidney, Bladder and Prostatic diseases, Nervous Debility, Stricture, and allied diseases of men. Remember, others treat these diseases, I cure them and give a Legal Guarantee to cure you or refund your money. My charge for a permanent cure will be reasonable and no more than you will be willing to pay for benefits conferred. My Home Treatment is Successful.

Correspondence Confidential Write me your condition fully and you will receive in plain envelope a scientific and honest opinion of your case, Free of Charge. My books and lectures mailed FREE on application.

H. J. TILLOTSON, M. D., 255 Tillotson Building, 84 Dearborn Street, CHICAGO.

LANDS, FARMS

Several good farms and farm lands, improved, partly cleared, now on the market. Exceptional opportunities in **CHILLIWACK VALLEY**. Dairying, hop-raising, fruit and mixed farming. Particulars on request. Terms to arrange.

JUSTINIAN PELLY, CHILLIWACK, B. C.

For information pertaining to

REAL ESTATE

in CENTRAL ALBERTA, address

E. J. COLLISON, Didsbury, Alberta, Canada.
FARM, RANCH and TOWN PROPERTY.

B. P. RICHARDSON
BARRISTER, SOLICITOR,
NOTARY PUBLIC.

GRENFELL, - ASSA
LANDS FOR SALE.
Solicitor for the "Farmer's Advocate" for the Northwest Territories.

YOUR INTERESTS AND OURS ARE IDENTICAL.

You Want Practical
WELL DRILLING MACHINERY
to develop that
Mineral, Oil or Water

proposition; we have it. Guarantee it to work satisfactorily.

Tell us about the formations, depth, diameter holes; will send printed matter and can save you money.

THE AMERICAN WELL WORKS,
AURORA, ILL., U. S. A.
CHICAGO, ILL. DALLAS, TEXAS.

Fig. 31

Some one says: "There is a deal of satisfaction in kicking about the weather; and why not indulge it? It costs nothing and does no harm."
Guess again, brother. The habit of kicking about what cannot be helped leads to the habit of kicking instead of doing something about what can be helped.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.