

**Dominion and Provincial Affairs.**

**Our Brave Boys in Africa.**

The whole Dominion has been aroused to a high pitch of enthusiasm by the great part played by the Canadian soldiers in Lord Roberts's successful campaign against the Boers. The Canadians were in the very front of the fighting line and it has been acknowledged by Lord Roberts himself that it was due to their hard fighting that Cronje was forced to surrender. The fighting qualities of the Canadians, many of whom had never been under fire before, has been a pleasant surprise and their praises are being sung all over the empire. This glory has not been won without cost. Nine more deaths have been reported, making 28 members of the contingent killed, while a large number have been seriously wounded. Sad as the loss is the Canadians laid down their lives for the empire and the Canadian contingent has been covered with glory.

**Back Them Up.**

The farmers' institute meetings being held throughout the country will soon be brought to a close. These meetings have not been attended as well as they should, for the speakers were mostly entertaining and their messages contained many things for the farmers' intellectual and material benefit. The wide-awake, progressive farmer has his eyes and ears open to the message of every hour, and makes the most of it in the betterment of his farm management and in his business and social relations. The slipshod farmer, if he goes to the meetings at all, goes for a change, to compare the institute speaker with the liar who occupies the soap box at the corner grocery.

**On with the Good Work.**

There is a movement toward good roads in Ontario, caused, mostly, by the energetic and able services of Provincial Road Commissioner A. W. Campbell. By his public addresses and by what he has awakened the people and made them see the folly and loss caused by the ancient statute labor system. The annual picnic, called doing road work, is doomed, but it dies hard. The legislature, at its present session, will pass a bill making appropriations to assist in constructing permanent improvements on leading county roads. This innovation will cause a change in road construction generally and in a short time the statute labor will be commuted, and all the roads placed under the supervision of a competent road builder.

**Wanted, the Right Men.**

"No chance for a poor boy to rise any more," is the wall of a certain class of people. Now I happen to know a school boy whom three or four business men are watching, ready to pounce

upon him and give him a first-class chance in the world as soon as he is out of school. He is poor, a member of a large family, but he is bright, honest, brave, and a "hustler," helping support the family while he gets his education. He is sure of a good job the day he is through school, though the men who have their eye on him are besieged with applications from other boys. It is difficult to find young men with the ability to grasp the constantly expanding problems of business.

**Woodman, Spare That Tree.**

This is a sentiment that is taking strong hold of the people in many parts of Ontario. Too late they realize the fact that by too great a destruction of the forests they have changed the climatic conditions and lessened the fertility of the soil. This sentiment is developed at the institute meetings and information about the preservation of the trees now standing and the best method to cause a new growth from the seed is gratefully received.

**A Magic Fence.**

Yankee ingenuity is on tap anywhere in the United States to outwit monopoly. Farmers around Pendleton, Ind, for example, are said to make successful use of 20 miles of wire fences for a telephone system rather than pay

exorbitant rates. Some \$200 has been spent getting the "system" in working order for a score of subscribers. The fence wire is said to work about as well as copper—except when an occasional cow goes through a fence and breaks the circuit. This scheme is widely used in California and Australia.

**Postal Savings Banks.**

I wonder if all my readers have a full realization of the vast benefits possible by the postal savings bank? The article on another page explains the system fully. The only reason why thousands of money order offices of the Dominion are now without postal savings banks is because officials think much business would not be transacted at them. The truth is postal savings banks are immensely popular, gaining in favor each year and with about \$35,000,000 now on deposit. If you want a government bank of this kind in your town that pays compound interest, talk it over to your grange or club, and then circulate a petition for signatures and send to the Dominion postoffice department.

**Revive the Grange.**

The Dominion grange, in 25th annual session at London, the cradle in which it was born, was attended by many loyal grangers who have stood firmly by the order these many years.

Were half or even a quarter of the granges that have been organized in the Dominion in active operation today, what a spokesman farmers would have before legislatures and parliament? And what an uplift to social conditions and the development of a better and nobler manhood and womanhood among ourselves! Nothing has taken the place of the grange since it lost its great foothold in Canada. The grange was very weak in the states a few years ago, but is now rapidly coming to the front as a power that has got to be reckoned with in the settlement of public questions. Why can't we make it so on this side the line?

**Flying Chips.**

Once more Farm and Home treats its readers to a supplement of eight pages, making an issue of 32 closely packed pages. Not the least interesting of these are the four in the supplement describing the generous offers in which our readers delight; offers which place them among the specially favored people of these days of bargains.

While the Dominion parliament is in session both parties are actively preparing for the general elections which it is believed are not far off. The general belief is that the elections will take place in June next, but some are inclined to the opinion that the government will defer an appeal to the country until next year, when they will have completed their full term.

P E I cheese and butter factories turned out a product last year valued at \$563,000. Prince Edward bids fair to become the Denmark of Canada.

Mr Tarte, the stormy petrel of Canadian politics, is going to Paris to represent the Dominion at the exposition. There has lately been a good deal of talk about Mr Tarte retiring from the government on account of ill health, but he apparently has no such intention.

Cigar manufacturers recently waited on the Dominion government and asked that a law be passed prohibiting growers from selling tobacco to any one but manufacturers. This is an exhibition of commercial piracy almost unparalleled.

The imperial war office has already purchased \$750,000 of Canadian products for use in the South African campaign. So satisfactory have been the shipments of Ont, Que and N B timothy hay, it is expected the British army will be extensive users of it in the future. Fruit jams, flour and corned beef are among the other articles finding popular favor. Government inspection of all articles sent to South Africa has been rigid and the results may be hoped to show themselves by increased trade.

**The biggest list of actual subscribers  
The greatest number of advertisers  
And the largest advertising patronage**

Of any agricultural periodical in the world. That's the proud position of FARM AND HOME to-day. Yet we ought to do even better. FARM AND HOME should go to 500,000 instead of to nearly 300,000 subscribers. It would then be read by 2,500,000 people instead of 1,500,000 as now.

With a little push at once, FARM AND HOME can pass the 500,000 mark this spring. Our special confidential terms to agents and club raisers (sent free upon request) offer bigger inducements than ever. See the four pages of premiums in this issue—Pages 28, 29, 30 and 31. A Webster dictionary free to everyone sending only 75 cents for a year's subscription at the club rate. Three books and the paper three years all for only a dollar! Now is the very best time for this work.

Our advertisers are all right. I admit "ads" only of firms that one can do business with in the knowledge that one will be treated properly. But I do ask you, when writing to advertisers, to say that you saw their "ad" in FARM AND HOME—both that your order may receive the best attention, and that FARM AND HOME may be credited with having obtained it.

Let's all work together to make 1900 the best year yet for the farm and the home, as well as for your earnest friend,

**FARM AND HOME**

# Farm and Home.

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## SEMI-MONTHLY

(1st and 15th of each month)

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RENEWALS.—The date opposite your name on your paper or wrapper shows to what time your subscription is paid. Thus, Jan. 10, shows that payment has been received up to January 1, 1900. February 1, 1900, and so on. Some time is required after money is received before the date, which answers for a receipt, can be changed.

DISCONTINUANCES.—Farm and Home is continued to responsible subscribers until the publishers are notified by letter to discontinue, when payment of all arrearages must be made. If you do not wish the paper continued for another year after your subscription has expired, you should then notify us to discontinue it.

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ADVERTISING RATES.—Eastern or Western Edition, 50 cents per agate line each insertion. Both editions, \$1.50 per agate line each insertion. Discounts for contracts made known on application.

FOR THE CONVENIENCE of its patrons Farm and Home has offices at

27 Worthington St., 204 Dearborn St., Springfield, Mass., Chicago, Ill.

Orders for subscriptions, advertisements, and editorial letters can be sent to either office.

**RENEW NOW** If this date—Apr. '00—appears on the little yellow address label bearing your name, which will be found on the wrapper or margin of your paper, your subscription, which, as the date shows, is paid up to April 1, 1900, expires with this (March 15) number.

We hope to receive your renewal, and count upon you to continue with us for the coming year. We want as many of the renewals now as possible, and as an inducement to renew at once we make the following special offer.

If you do not join a club or form one, we will accept your single subscription at the club rate, and send

### FARM AND HOME

A FULL YEAR

FOR ONLY 35 CENTS,

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As a still further inducement we will send to all renewing at once,

### A DICTIONARY FREE

A full description of this Dictionary, which is the best and most comprehensive of its kind and which none should be without, will be found elsewhere in this number.

Now then is the time to renew. Sit down today, fill out the blank which you will find in your paper, if your subscription expires and send with 35 cents, in postage stamps or otherwise, and receive Farm and Home regularly twice a month for the year to come.

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### SPECIAL PREMIUM OFFERS

Should you prefer other premium than the Dictionary in connection with your subscription, we will send any one of the following, which we offer upon remarkably liberal terms, in connection with Farm and Home one year on receipt of the price given against each.

Three Great Books, Atlas of the World, containing 24 colored maps, Comprehensive Dictionary, 50,000 words, and Samaria at Samaria, the funniest book of the century, postpaid. \$0.50

Unexpected Trouble, an exact reproduction in color of a wonderful \$2.00 oil painting, postpaid. \$0.40

Profits in Poultry contains 352 pages and 134 illustrations, including colored plates, postpaid. \$0.50

Cyclopedia of Useful Information, a most valuable work of 8 volumes, with 136 pages and 100 illustrations, postpaid. \$0.60

Wood's Natural History contains 60 pages, treating of over 120 topics, and 60 illustrations, 12 color logs, postpaid. \$0.50

The Olympia Watch, an accurate and reliable watch, postpaid. \$1.25

A full description of the above premiums, which are exceptionally good value, will be found in our new illustrated Premium List. In addition to the above premiums we would call particular attention to the special offers that have appeared in previous issues, all of which still hold good.

Remember, a year's subscription to Farm and Home is included with each premium, and all remarkable as it may seem, at the very low prices given.

HOW TO SEND MONEY.—Amounts less than \$1 can be safely sent by money order, which you can get at any postoffice, and which costs but three cents, or, if more convenient, in postage stamps. Two-cent stamps preferred. Send \$1 or more in bills, by registered letter, postoffice or express money order, check or draft. A two-cent Revenue stamp should be affixed to all checks and money orders. A money order, or registered letter, costs but a trifle and may be sent at our risk. Make money order, check or draft payable to The Phelps Publishing Co.

Address all orders to: FARM AND HOME, Springfield, Mass., or Chicago, Ill.

## Some Live Farm Problems.

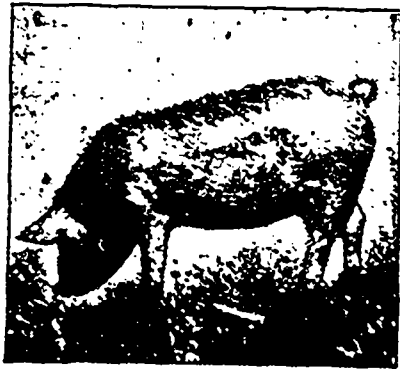
### ALFALFA ON A SANDY SOIL.

C. C. of Mich has a piece of land which is sandy. Heavy winds blow it about. He wants to seed it to alfalfa and as a protection to the clover wants to sow corn broadcast. How much corn should he sow broadcast to the acre? Seven pecks should be enough unless the kernels are unusually large. In that case 8 or 9 pks might not be too much. If sown too thickly there is danger of smothering the clover plants. Alfalfa is very slow in starting and does not attain sufficient growth to afford either pasture or hay the first season. It yields enormously in its native climate after it has become established and can be cut several times in one season. There may be some special locations in Mich where it can be successfully and profitably grown. The Mich exper sta does not report at all favorably on it, as it will not do well on land where the water level is too near the surface, say within 2 or 3 ft. of the surface. On lands having a deep porous subsoil it may succeed fairly well. It would not be advisable to sow any considerable area of it on the start without having had some experience in its cultivation. Much better sow a small plot in an experimental way and see what it will do before sowing any large field. It is a wonderful thing to produce hant in cattle or sheep. Sheep have been known to die by the dozen in a few minutes by drinking water just after coming from the pasture. Spring is the proper time to sow the seed and 15 lbs p a the amount. It certainly is not adapted to a short rotation of crops and would interfere with that system. If it is once established and will live in our climate, it would be advisable to retain it for several years.—[R. Logan Branch Co, Mich.

### A CANADIAN BACON HOG.

The illustration shown herewith is from a photograph from life of a pure-bred improved Yorkshire hog, which, when slaughtered, produced No 1 Wiltshire sides. The animal was one of the hogs in the fourth breed test conducted at the Ont agri college, Guelph. A hog is very difficult to photograph and the picture in question scarcely does justice to the subject. On the whole, however, the characteristics of the Canadian bacon hog are fairly well brought out.

For the production of "Wiltshire sides," the kind of bacon for which Canada is famous, a hog is required possessing the following characters. The jaw should be light and the neck should be of medium length with no tendency to arch on top. The shoulder



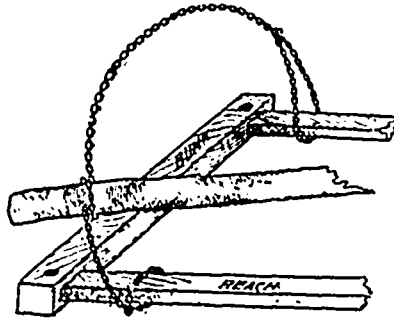
A TYPICAL WILTSHIRE SIDE MAKER.

should be light very smooth and compact on top, and no wider than the back. The back should be of medium and uniform width, and be very slightly arched from neck to tail. The side should possess great length from shoulder to ham, and should be moderately deep. The belly should be markedly trim and neat, with no suspicion of flabbiness. The ham should be full without flabbiness, and the thigh should taper gradually toward the hock, carrying the flesh well down to the hock without wrinkles or folds. The flesh generally should be firm and smooth, with no tendency toward flabbiness at foreflank, belly or ham. The bone should be flat and clean in legs and show no prominence at the side or top of the shoulder. Weight limits are 160 to 220 lbs l w, but the most

desirable weights are from 175 to 200 lbs.—[Prof C. E. Day.

### SECURING A LOAD OF WOOD.

To bind a load of logs to a sled, fasten a chain to the near reach, just back of the forward bunk. Throw the other end of the chain over the load and



BINDING TIMBER SECURELY.

pass it around and under the other reach; also just back of the bunk. Bring it up and fasten to the main part of the chain either by means of a grab hook or by toggling. Now take a stout, tough sapling 2 in in diameter and 8 ft long. Insert the larger end between the chain and the logs on the near side of the sled, with the smaller end pointing to the front. Raise the smaller end perpendicularly, bring it over and bend it down until it is parallel and nearly on a level with the logs. Then by means of a rope or a small chain fasten it to the reach. Next fasten a chain to the off reach just forward of the rear bunk. Throw it over and fasten in precisely the same manner. Insert another sapling, or "twister" as it is called, from behind, and bring it over to the front where it is to be fastened in the same manner as the first. This method of binding, if the chains are tight enough, will hold a load of logs securely over any road and for any length of time. If the chains are too loose, the smaller ends of the twisters will begin to play up and down. Then they must be taken out and the chains tightened. Then the twisters must be inserted and secured as before.—[C. O. Ormsby, Vt.

Judging Seed Corn is what 600 Ill corn growers did at the state univ at Urbana early this month. Meeting under the auspices of the Ill corn growers' ass'n, the object was to teach the farmer how to judge his own corn and to inform him as to the best methods of cultivating the crop. Several hours each day were spent in corn judging, and at the close certificates were granted to those showing proficiency. A number of well-known corn growers and agriculturists delivered addresses on other farm matters.

A Study of Texas Fever and cattle ticks has been made by the Mo exper sta of Columbia several years. Stockmen will be intensely interested in reading the results of the station's experiments to date. Bulletin No 68, which the station distributes free, gives full details and supplements them with several fine illustrations.

A First Class Grass Seeder can be bought for \$10, warranted to be made of the best materials, to sow evenly the entire length of hopper and to give any amount of seed to the acre. Such a seeder will last forever and by evenness in distribution of seed will pay for itself in a short time.

The Stable Floor—There is nothing to take the place of wood for a floor in a tie-up unless it be the natural article, soil or clay. This is the most perfect floor, but hard to keep in good order and consequently not very practical. With ample bedding, cement, concrete or brick would be all right, but it is not safe to recommend any of these, because a bare floor for even a little while would render an animal helpless. The best plan for a tie-up, and I think for a driveway, too, is to lay down scantling just right to nail to, then run in the cement grouting until the spaces are all filled up even. Then spike down the plank floor, and you have an arrangement that you will not be afraid of at all and something that will be rat and mouse proof. The expense for

cement will not be great. With gravel on the spot and cheap labor to assist an expert in mixing and laying, L. R. S. should get floor that will please him at small cost.—[A. A. Southwick, Bristol Co, Mass.

Ha ving Oats—A very considerable advantage has resulted from harrowing the oat field after plants are up. The benefit is due to the loosening of surface soils resulting in the formation of a soil mulch. This mulch serves to retard evaporation of moisture during the period when it is not entirely shaded by plants. That the increased yield occasioned by such treatment is considerable, is shown by the result of experiments at the Neb exper sta. Oats not harrowed yielded 24½ and 32 bu respectively in '98 and '99, while oats harrowed yielded 32 and 36 bu, a gain of 7½ and 4 bu p a.

Helps to Forget Troubles—I can't part with so old a friend as F & H, so here is my last dollar for 2 yrs subscription. F & H has been the means of helping us to forget for a while at least, when perusing its practical, concise, interesting and amusing columns, the darker side of life as experienced during the last few months. And if it can only do that it is not published in vain. F & H returns to its subscribers big interest on money invested.—[C. H. Harding, N W T.

Various cattle breeders' ass'ns are conducting seven-day tests at the homes of the cows. In some instances the ass'n employs a representative of the state exper sta to insure the greatest accuracy. These tests are bringing out some surprising results. But if every reader of F & H, whether keeping pure bred or scrub stock, would test his cows, we imagine some yet greater surprises would be found.

If you have some acres of plants to be transplanted, the investment of \$5 in a transplanter will never be regretted. The modern transplanter is drawn by a team, driven by a man and two boys feed the plants into the machine which makes rows, opens holes, sets the plants, drops a pinch of fertilizer, waters and covers. Transplanters are used for tobacco, cabbage, strawberries and similar crops.

The feeding value of different ears of corn of the same variety varies from 84 to 14 per cent. In this variation lies the possibility of great improvement by persistent seed selection.

In every school section grades should be formed, where farmers' institute work could be carried on at least twice a month. Only a little sacrifice of time and money would be required. We then would have the best of technical schools for young farmers without government aid.—[Jabel Robinson, Elgin Co, Ont.

### OUR ADVERTISERS.

It is the intention of the publishers of Farm and Home to admit into their columns none but reliable advertisers, and we believe that all the advertisements in this paper are from such parties. If subscribers find any of them to be otherwise, we will esteem it a favor if they will advise us, and we will at any time give our personal attention to any complaints which we receive. Always mention this paper when answering advertisements, as advertisers often advertise different things in several papers.

The circulation of Farm and Home for this issue is **350,200 Copies.** Sworn circulation statements on Farm and Home are sent to advertisers every three months and are made a part of each and every contract.

**WANTED, AGENTS.** We want at least one good agent at every postoffice where we are not at present represented, to solicit subscriptions to FARM AND HOME. This is a rare opportunity for men and women out of employment, and even for enterprising boys and girls who wish to engage in profitable work through the fall and winter months. If you can canvass all of the time or part of the time and would make money easily and quickly, send at once for our new terms to agents and complete premium list, which we send free on request. Address: FARM AND HOME, Springfield, Mass., or Chicago, Ill.

A Corner on Insurance.

FIRE AND TORNADO INSURANCE

The Patrons' fire and tornado ass'n was organized about 10 years ago at Olathe, Kan. The total risks Dec 31, 1890, were \$218,000. Total risks Dec 31, 1899, \$1,435,000. This company was organized by the members of the grange and only Patrons can be insured. The average cost for each \$1000 for 5 yrs has been \$11.23, while old line insurance cost on each \$1000 for 5 yrs on the note plan \$22.50, or all cash in advance \$17.50. The grange company raises money only as needed by assessments.

Sec'y I. D. Hibner says: "In the decade ending with 1897, the Continental paid out over 39 per cent of their entire premiums for running expenses, the Globe 44, Glens Falls 40 and German of Freeport 42, while our per cent for the decade just ended is 17. What is the all-important lesson that we should learn from this? Simply that our running expenses can always be reduced to less than half of that of any other company doing business in competition with us, and if we can always select and write our risks with a business caution equal to theirs, we forever have the advantage. The life of the company is the grange. In its folds we were born and there certainly we are safe. Every member is a guardian of our interests and every subordinate grange is a business center for our work. We must live in the grange, and the grange must live and grow with it, may live and grow with it. Show farmers that the grange will improve their financial condition and the powers of organization to accomplish its purpose and you can make Patrons out of every struggling tiller of the soil.

"Insurance is one of the necessities of the present age, with our elegant farm residences and furnished with good furniture. These cannot be rebuilt by neighbors as in the earlier period of our country when all were on a common level, when if one lost a dwelling it would be replaced by neighbors. Stock companies are all right, and everyone, whether farmer or tradesman, should carry some insurance for mutual protection. The object of our grange company is to save money at home and have insurance at actual cost. Every organized grange has one solicitor for policy applications for each of which he receives \$1. The secretary is paid \$2 for eight hours' work. The expenses of the company for 1899 were: Losses paid \$3724, secretary 169, stamps 43, adjustments 28, printing and stationery 73, paid board fees 29, treasurer 24, unearned premium returned 32, collecting assessments 13, president's services 4, miscellaneous 4, total \$4143."—[W. T. McClure, Johnson Co, Kan.

Cheap Insurance is what the Ct Patrons Mutual Fire Ins Co furnishes. Secretary Bacon, at the annual meeting in February, reported \$1,931,000 insurance in force Jan 1, of which \$666,600 was new business last year. Losses last year were \$5112, receipts \$6025, of which stockholders were paid 88 per cent, while only 12 per cent was used for conducting the business and of this amount salaries were only \$475. This is a remarkably successful company.

We want to know where our wheat goes to of late years when we go to mill. We get only 30 to 33 lbs flour and 10 lbs bran for a bushel of wheat.—[G. S. Wilson, Dade Co, Mo.

THE PARIS EXPOSITION is to have a big exhibit of American incubators. The Reliable Incubator & Brooder Co of Quincy, Ill, are offering the new Special Reliable incubator of 300-egg size at the same price as the old-style 300-egg Standard size. The old Standard machine contained egg-turning trays; the new Special has flip-over trays. Detailed illustrations may be seen in the annual catalog which will be sent to all F & H readers on receipt of 1c in stamps by the Reliable Incubator Co.

RAPID ADVANCE in methods of treating diseases and defects of the eye, ear, nose and throat, is illustrated in the wonderful results accomplished by the scientific specialist. Among these is Dr Oren Oneal of 52 Dearborn street, Chicago, who has perfected a system of home treatment that often gives satisfactory results, especially to persons who are unable to come to his office for treatment. His advertisement will be read with interest.

THE AMERICAN AND FOREIGN PRODUCE MARKETS AT A GLANCE

The highest quotations of wholesale prices for standard grades of farm produce in the leading markets of the world on the dates named; poorer stuff lower.

Table with columns for Market (Boston, New York, Chicago, Cincinnati, St. Louis, Memphis, St. Francisco, Montreal, London) and various produce items (Wheat, Corn, Oats, Rye, Barley, Flour, Cotton, Cattle, Sheep, Hogs, etc.) with corresponding prices.

\* P 250 lbs. † P oz. ‡ P cental. § P bx.

Business Side of Farming. STOCK MARKETED FREELY.

General health pervades the markets for all kinds of live stock both west and east. Farmers are picking up moderate numbers of stock sheep and cattle, meanwhile turning off very large numbers of finished meat animals. The domestic and export demand for beef, pork and mutton continues generally satisfactory, and the situation as a whole shows no important change. Hogs have remained close to the 5c level at the big packing centers and a fraction better than that at Pittsburg, Buffalo, Boston, etc, and sheep and lambs are selling at the highest figures of the year.

A wide price range in beef cattle is noted. Strictly fancy steers sell nearly as high as at any time recently, but few of such are offered and the general level of prices is possibly a little lower than a month ago. Farmers are now crowding forward cattle which have been in the feed lots all winter, and some of these are lacking in quality, although as a rule show the effect of generous rations of corn particularly in the central west.

The Movement of Potatoes is liberal, particularly in the northwest, O, N Y and northern N E. Fairly good prices prevail and consumption is liberal. Weather conditions in the south this winter to date have been favorable, as a whole, for the production of early potatoes.

Demand for Dairy Products continues excellent, cheese prices holding well at the top. Stocks are being steadily reduced and offerings of winter made goods are not burdensome. Butter has recovered slightly from recent weakness and the demand is sufficient to absorb current output of creameries and dairies.

Hops at Moderate Prices—It is the quiet time of year in hops, yet a fair business is passing and the market steady compared with the early months of the winter. Home dealers and exporters are conservative buyers, but moderate consumptive demand is noted. Stocks in interior are being whittled down rapidly. A larger proportion of the last crop was held by growers

March 1 on the Pacific coast than in the hop sections of N Y, Wis, etc. Buyers cull sharply and prices cover a wide range, largely 5@8c p lb in the far west and 6@9c in N Y, occasionally more. Indications now point to no material increase in the acreage for 1900 in the east, although this is not so sure in Wash, Ore and Cal.

Farm Stocks of Corn were estimated at \$62,000,000 by March 1, according to American Agriculturist, or 39 per cent of the crop. Present farm holdings are small compared with those of '96 and '97, but of ample proportions compared with the average of the past few years. In the past 12 months over two billions of corn were distributed, including home consumption and exports.

A Tumble in Eggs—This condition is to be expected during March, and no farm commodity is now so uncertain in price. Quotations are largely nominal with a downward tendency under rapidly increasing supplies.

Good Apples, Good Prices—Without special activity the market is healthy, dealers wanting strictly prime stock, while considerable quantities of seconds are available at low to moderate figures.

Big Sale of Cattle—Some 6000 head of young stock, mostly 2-year-old steers, were sold recently at Fort Worth, Tex, to S D parties for \$135,000, an average of 22.50.

Southern Strawberries, chiefly from Fla, are meeting fair sale in northern markets, but must be fine in quality to sell well.

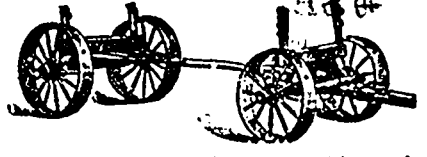
The Loving Cattle Syndicate has secured options on 20,000,000 and 900,000 head of stock in the Tex panhandle, owned by 73 companies. The land is valued at \$1.90 p a and cattle at 21.37 p head. Total value of all the property \$40,000,000. Options have been secured on 30 cottonseed oil mills in Tex to go into the syndicate.

A carefully selected rotation of crops, in which cowpeas play a prominent part, is the first essential to the bettering of worn soils.—[Prof C. A. Moccers, Tenn Exper Sta.

When an orchard has been in grass for some time, the first plowing should be light.

Farm Wagon only \$21.05.

In order to introduce their Low Metal Wheels with Wide Tires the Empire Manufacturing Company, Quincy, Ill, have placed upon the market a Farmer's Handy Wagon that is only 24 inches high, fitted with 24 and 30 inch wheels with 4 inch tire, and sold for only \$21.95.



This wagon is made of the best material throughout, and really costs but a trifle more than a set of new wheels, and fully guaranteed for one year. Catalogue giving a full description will be mailed upon application by the Empire Manufacturing Co., Quincy, Ill, who also will furnish metal wheels at low prices made any size and width of tire to fit any axle.

STEEL WHEELS and HANDY WAGONS of every style and price are made in our mammoth factory and sold direct to farmers. We supply all trucks used by U. S. Govt. Farmer's Handy Wagon Co., Saginaw, Mich.

POTATO MACHINERY. Shows an illustration of a potato masher and text describing its use for growing potatoes.

Makes Your Pump WORK EASY. Yankee Pump Governors make the hardest pump work easy as the easiest. Windmills turn in the lightest breeze. Managing agent wanted for each county. Money in this for you. Write to-day. BANE MANUFACTURING CO. (Dept. Z) 55 W. Washington St., CHICAGO.

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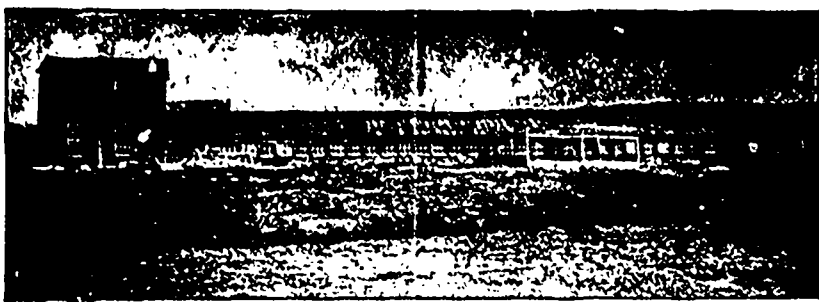
4 TOOLS IN ONE. Shows an illustration of a multi-tool and text describing its features.

Horse's Tail with THIS PREPARATION holds fast. Made of polished metal Can't wear out. Stood the test of 8 years. 500,000 sold. Nothing else as good. Agents wanted. Sample 20 cents. Deo Helms Revally Co., 212 4th St., Deo Helms, Ia.

Soon Saves His Cost. A 12-Year Old Boy. A Labor Saver. Can do more and better work, either in the field or garden, with the HAND CULTIVATOR than three men can do with common hoes. Plows, hoes, cultivators—single or between rows. 100 agents in your town and \$1.25 for catalogue delivered and terms to agents. Urlich Mfg. Co., 42 River St., Rock Falls, Ill.

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Brooder House, Kingston, R. I.

The brooder house shown above is the principal building of the kind at the R I exper sta poultry farm. It is of the continuous pattern, separated into small pens by wire netting, the main building being rather high and with a double roof. High buildings cost more than low ones, but are much easier to keep at an even temperature. All styles of brooders are being tried, from small ones heated by kerosene lamp to the large apartments heated by steam or hot water.

The Poultry Yard.

WARM COOP FOR CHICKS.

The cut shows a desirable coop for very early chickens. The coop is long and sloping and has a hinged sash hinged to the top. The higher half of

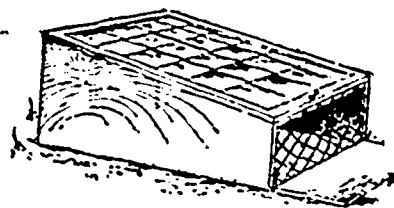


FIG 1. OUTSIDE.

the coop has a tight bottom with slats at its inner edge, as shown in Fig 2. There is no bottom to the rest of the coop, and the lower end has a hinged

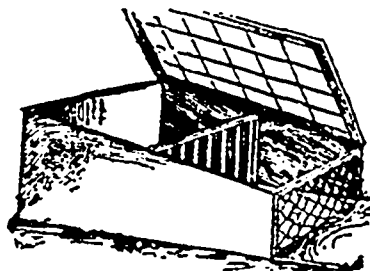


FIG 2. INSIDE OF COOP.

door, and is also covered with one inch mesh of wire netting.

When very cold, the door can be shut up tight and the chicks will have a warm run on the ground outside the slats. When it is warmer the end door can be dropped, giving a protected run, but plenty of fresh air. The hen can be let out into this run when desired. A cloth can be thrown over the glass at night when the weather is cold.

RAISING EARLY CHICKENS.

For the farm in this climate March hatching is early enough to secure well-grown cockerels for the fall shows and pullets for next winter's layers. However desirable it may be to have early birds, nothing will be gained by anticipating the natural order of spring, unless prepared with certain fixtures needful for the comfort and health of the young birds as well as the mother hen.

For success in early and all chicken raising, I would name as positively necessary the following: comfortable housing and judicious feeding during the winter to prepare the hen for her best work as an early layer. Birds stimulated to be great layers in winter will not furnish the best eggs for successful chicken raising in spring. Feeding for eggs for incubation should begin about a month before the eggs are wanted for the purpose. Then, if properly mated, the first sitting of eggs will furnish the most vigorous chicks of the season and the frequent failure of the first clutch to hatch is from the fact that the hens have been fed too high or on fat-forming food, resulting in infertile eggs or weak chicks. In this case the second clutch of eggs may be

all right after the hen has worked off her surplus fat.

The sitting hen should be moved from her nest as soon as she becomes a persistent sitter to a place by herself. I have one room 10x12, three sides of which are boxed in on the floor with partitions, to separate the nests, about one foot square, with sliding doors. On a few china eggs the hen sits until we have two or three well-established sitters, and place the eggs under all at the same time and at hatching I put all the chicks with one hen or in the brooder and these idle hens, if they have been well cared for, can take each another sitting. Every morning at a regular time these sitting hens are pulled off their nests for feed and water and exercise and put back again in ten to twenty minutes, and fastened in for the next 24 hours. They do not leave the room at all. Early chicks will stand lots of cold weather if they can run in often to be brooded.

They should have free access to a dry feed of cracked corn and oatmeal, and as soon as they can swallow whole wheat let them have a supply daily and twice a week some table scraps, finely chopped raw cabbage or boiled potatoes and skim milk for variety, with pure water at all times and a little dish of sharp sand to pick at. All feeding should be in narrow troughs, so they cannot scratch it out, or get into it very much, and all vessels as well as the coop or brooder should be kept clean and sweet. Feed regularly, but don't overfeed. Warm and dry coops are a positive necessity in raising early chicks. Very much of success in this line lies in supplying the conditions which are furnished by nature later in the season, when the chicks can have the free run of the yard and grass plot.—[Mrs J. C. Plumb, Wis.]

TURKEY TALK.

The Mammoth Bronze turkey is considered the most healthy it is not necessary to house turkeys. If they can be kept in a sheltered place where they roost they will be all right. No doubt on a plain where the wind blows and there is no shelter it would be well to put them in an open building facing the south. Corn and oats are the best foods for turkeys.

One of the main things to guard against is not to keep your turkeys too fat. The majority of turkeys are usually too fat to be healthy. It is not necessary to give them warm water to drink. The quicker turkey eggs are set after being laid, the better. You can keep them several days, however. There is no way to test an egg laid by a turkey, or any other egg for that matter, until after placing it under a heat of 100 to 103 degrees for at least 24 hours. The present price of turkeys depends entirely on where they were raised and of what quality. Prices in Feb ranged from 12 to 30c p lb. One of the best ways to keep vermin out of a poultry house is to paint all the parts that can possibly be painted, at least once a year with crude carbolic acid.—[J. F. Crangle, N. Y.]

For Early Poultz—The directions I or anyone else may give about turkey-rearing will seem impracticable after trial to the careless, sloppy class who fall in everything. Turkeys require a more tender nursing than chicks or ducks. A large warm, dry place must

be given the mother turkey with her brood. Emphatically it is the first requisite, after which the food and manner of administering must be considered. Fresh water or milk, always with the cold edge taken off, should be within easy reach of the little ones and kept free from dirt and litter. Feed the first week the curd of milk mixed with one-third its bulk of hard boiled egg. Then some corn meal may be add-



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and Almanac for 1900, two colors, 100 pages, 110 illustrations of Fowls, Incubators, Brooders, Poultry Houses, etc. How to raise Chickens successfully, their care, diseases and remedies. Diagrams with full descriptions of Poultry houses. All about Incubators, Brooders and their kind Fowls, with lowest prices. Price only 15 cts. C. C. SHOEMAKER, Box 518, FREEPORT, ILL.

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Incubators and Brooders. The World's Famous Flower City 30 Day Free trial machines are now sold at wholesale prices. Valuable catalogue, 10c. F. C. Incubator Co., Rochester, N. Y. Men. this paper.

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DEATH TO LICE on hens and chickens. 64 p. Book Free. D. J. LANBERT, Inc. 204, 4th Ave., N. Y.

THE CROWN Bone Cutter bones. For the poultryman. For cutting green bones. Best in the world. Lowest in price. Send for circular and testimonials. Wilson Bros., KANTON, PA.

ed, sprinkled well occasionally with black pepper. Bread and milk may also be given with good results.—[S. E. D., Ellenville, N. Y.]

THE USEFUL R I REDS.

The farmers of the famous R I poultry district have for at least 20 yrs been keeping a distinct variety of general-purpose fowl known as the R I



SINGLE COMB R I REDS.

Red, now becoming quite popular in many parts of the country. At the recent Boston show, nearly 100 specimens were shown, while at the show in Chicago there were only 30 Reds, the breed not being well known in the middle west. They are a solid, meaty fowl with short thighs, long breastbone, deep yellow skin and light pin feathers. Eggs are large and of a beautiful dark reddish brown, the number per year being about the same as produced by Plymouth Rocks, W andots and other breeds of medium size. They are good sitters and mothers, and of quiet disposition. Eggs hatch well and chicks are unusually hardy. The color preferred is a clear, dark red.

Thorough Work for Lice—Give the chickens' quarters a thorough renovating before cold weather sets in. 20 gals water add salt to form a strong brine. Old brine can be utilized for the purpose. Use boiling hot. Let it enter every crevice. If well coated with salt crystals one application will last 4 or 5 yrs. Remove roosts, pass them lightly through the fire, coat with coal oil or brine and replace. This treatment is much more efficient than a lime wash. Make an emulsion of lard and coal oil, treat each fowl thoroughly, applying to those places most frequented by mites or lice, before allowing them to enter the renovated quarters.—[A. C. McPherson, Athens Co., O.]

Piano Box Coop—We had a large piano box, tacked tar paper on back and ends and set it in an angle made by a high board fence and an out-house. In the slope of the front, which was to the south, John fitted two half windows. He also put in roosts and fixed a sliding board under the roosts to facilitate cleaning. We had some chicken wire which we had used around the porch to keep the babies from tumbling off, and did not now so we made a small yard, possibly 15x 18. The outlay was I think 95c.—[J., Ill.]

A Watering Device for either old or young fowls can be made by boring a hole in a block of hard wood. It is easily cleaned and will not tip over.—[Ethan Brooks, Hampden Co., Mass.]

Get Ducks Hatched as early as possible, for market, and crowd them to the last notch with feed to produce rapid growth. Of course you must see that they have green food and water whenever they wish it; for while they do not eat much green stuff, as compared with other poultry, some is essential to their health.—[E. C.]

Uniting the Branches—There is much said about the necessity of specializing in the poultry business, but the fact remains that nearly all the successful poultry men are uniting the egg and market poultry branches. The necessity for keeping up the plant the year around, and employing all the time and facilities seems to make it necessary to raise broilers and market chickens as well as layers. Besides, the broiler men who depend upon others to furnish satisfactory eggs for hatching are likely to be disappointed.

A Needed Reform. POSTAL SAVINGS BANKS.

Postoffice savings banks, where money is received and forwarded to the seat of government, for government use, have been a great success in England, Canada and elsewhere, many years. In England, anyone from a child of 7 yrs and upward can become a depositor. They have only to go to any postoffice and ask the postmaster or postmistress for a depositor's application form, which they fill out there and then, at the same time making a deposit, the minimum being as low as one shilling or 25c. This is accepted and a depositor's book signed and stamped in usual form is handed to the depositor. In three days he receives a notice from the home office at London, saying his application has been received and is recorded. From that time on, he can deposit whatever sum he likes over 25c and as often as he likes. Acknowledgment is made in every case by the London office in addition to entry in the depositor's book. If a depositor wishes to make a withdrawal, he asks for a withdrawal form, on which he states the amount he wishes to take out. This form is slipped in any letter box or office and in three or four days he receives notice from the London headquarters, which he takes to the local office where he stated he wished to make his withdrawal. The postmaster has also been advised and on producing book and the signature which he has to make, the amount is handed out and at the same time put down in the withdrawal column of his bank book. On the anniversary of the day the account is first opened, the depositor's book is sent to the head office in an envelope obtained at any postoffice for the purpose. At the London office the books are audited and 2 1/2 per cent added to the amount on deposit. This is done annually which of course means compound interest.

To further meet the people who cannot spare 25c at one saving, stamp forms can be obtained for holding stamps to the amount of 25c, thus giving the people the opportunity to save at least 1c if not more. This means a big revenue to the government in stamps alone. When stamps to the amount of 25c have been put on the form, it can be handed in with bank book and 25c is credited to depositor. Here is where the encouragement to study thrift first sets in. A child when once taught to try and save at least a cent will try more and more as his account increases, and to-day many can say it was their little postal savings bank account which gave them a start in life.

While a child of 7 yrs may become a depositor, he cannot make a withdrawal before 21 yrs of age without first going before a magistrate with parents or guardian showing good cause for the withdrawal. In 14 yrs a nice little sum accumulates and has been the means of starting many out in life with good prospects. Why can't the American farmers, with one accord, demand at least one stepping stone to thrift? Why cannot our government give to the people the profits derived from public money instead of giving to the money trust what is justly and honestly the people's money? Very recently over 150 million dollars was lost by the people because the money trust made a squeeze on various banks, when they knew a weak point.—[J. H. Denyer, Northampton Co., Pa.]

A CLEAN GARDEN is a satisfaction to the eye and is profitable as well. But few realize how handy modern garden tools are when the garden is planted in straight rows. These implements have adjustable handles they can be used for plowing, raking, seedling, cultivating, weeding and harvesting. They are very durable, either hand or horse power, and low in price. The latest in improved garden machinery is the Planet Jr combined hill and drill seeder and double-wheel hoe, cultivator, rake and plow. This implement, as well as all the standard styles, is illustrated and fully described in the Planet Jr catalog, which our readers can secure free of S. L. Allen & Co of Philadelphia, Pa.

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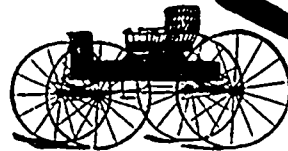
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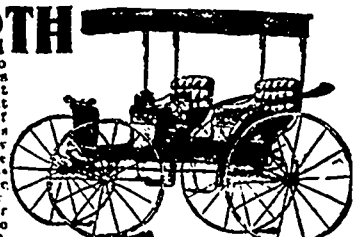
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The Globe Incubator will hatch all fertile eggs. It is easy to operate; any ordinary intelligent boy or girl can handle it. Our large 32 page catalogue sent free to any address. It tells all about the improved Globe Incubator, Improved Globe Hatcher, Improved Globe Water Heaters for Poultry Houses, Wire Nets for Poultry Yards, best strains of pure bred fowls and poultry supplies. Write for it immediately. It only takes a postal card. Address: G. C. SHOEMAKER, Box 221, Freeport, Ill., U. S. A.

DON'T WORRY about results in hatching chickens or about the success of the poultry business. Buy The Petaluma Incubator and set your mind at rest. It will turn all imperfect fertilized into positive success. Results perfectly. Hatched each person's own. \$20.00. We pay freight in the U. S. Catalog free. Petaluma Incubator Co. Box 7, Petaluma, Cal.

MILLHOOK POULTRY FARM. What is it, what it has and what it has done. For the benefit of our customers old and new three things will make your valuable points on the poultry industry have been gathered together and published in "POULTRY FOR PROFIT". It is an splendid guide for the beginner and a valuable assistant to the experienced breeder. Many valuable recipes; illustrations taken from life. Features poultry from start to finish. Send for 10 cts. THE J. W. MILLER CO., Box 161, Freeport, Ill.

Dairy and Creamery.

YOUNG STOCK AS BREEDERS.

It is an accepted fact that the successful operation of any large machine depends upon the proper mechanism and adjustment of each part making up the intricate whole. Like an engine with a fly wheel that is not perfectly balanced, so the animal organization faulty proportions is only able to perform its work to a moderate extent. The defective parts of such an animal, when taxed to its full capacity, become a source of danger that involves the entire system. Offspring of very young animals with an immature system, or one that is imperfectly developed, inherit this condition and are thus predisposed to the evils arising from the lack of strength and constitutional vigor. Such effects are not always apparent in a single generation, but if the practice of breeding from immature animals is continued for successive generations, unfavorable results are liable to be produced.

In face of these facts, how universal is the demand for young bulls. A breeder with a mature bull for sale seems forced to dispose of him at a low figure, or sell him for beef. Is not this a mistake? Undoubtedly all who read this can recall the name of some Guernsey bull that was disposed of when from 3 to 5 yrs of age because he was an old bull or because the breeder had many of his calves, and yet later as these calves developed and proved of worth, the breeder was first aware of the bull's value as a sire. It is not the mistake of an individual breeder that prompts us to call attention to this fact, but it is a realization of the effect which the aggregation of such practices will have on the breed in general. Let us hope that during the twentieth century, now opening, we may expect to see a better appreciation of the value of good sires and the hope that their years of usefulness will be extended and their value meet with greater favor in the market. [Secretary W. H. Caldwell, Guernsey Cattle Club.

Getting a Big Milk Flow—If the best production a cow is capable of accomplishing is to be obtained, you must from the first 30 to 45 days after calving procure her largest possible flow of milk, regardless of quantity of butter fat contained in the milk. If you are keeping her for butter making, and if she is a cow of a breed whose habit it is to produce butter fat, when she begins to shrink in her flow, her milk will be enriched proportionately. Unless you bring the cow to her highest production within that time, her total production until next calving will be materially decreased. —[Valancy E. Fuller, N. Y.

Salting the Butter—Beware of salt that does not dissolve immediately. It is liable to remain undissolved and make the butter grainy unless an extra amount of water is left in the butter, which would be a fraud. Be sure to use enough salt to saturate the water remaining in the butter, even if you have to work out some of the brine. If you do not, the butter will contain only a weak brine and will not keep well. If just enough water and no more is left in the butter to dissolve the salt, so that no brine is worked out, the weight of the salt is added to the unsalted butter. No "brine salting" method, so-called, or other method of salting butter yet made public, is equal to the method here described, or as economical. It is practical and scientific brine-salting. Butter may be taken out of the churn and salted in a bowl or on a table. —[C. D. Curtis.

Basement Barns are useful, because labor is high and scarce. A man can feed very many more cattle, fully twice as many as can be fed when feed has to be carried about instead of being thrown down. This is the greatest advantage of them, but roofing is also very costly and the same roof answers for barn and stables. But I don't like them; they are damp, often dark and always hard to ventilate. This is the worst of them. When they are very large it is utterly impossible to have a constant motion of air, which means a constant change of air, and in my

opinion cattle cannot be kept healthy for a long time without plenty of fresh air and constantly changing. I cannot believe that cattle can be kept healthy for any considerable time without plenty of light, a light contributes to cheerfulness, and I am of the opinion that cheerfulness is absolutely necessary to perfect health in man or beast. Cattle were intended by nature for the open air, and the nearer we can keep them to that state without too much waste of flesh, which means waste of feed, the better their health will be. I am also of opinion that great numbers of cattle in one building can never be as healthy, when kept long so, as when they are comparatively isolated. Get as near to natural conditions as possible, consistent with economy. I prefer to give a little more feed and more fresh air for fattening cattle to be slaughtered, at, say, 3 yrs, it is best to keep warm; but for breeding stock I hate big basement barns, and I don't want to buy breeding cattle out of them. I mean big basement barns especially. —[Arthur Johnston, Ontario Co, Ont.

Farm Separators are steadily gaining ground in Blackhawk Co, Ia. The Moody system creamery at Nashua is making about 2000 lbs butter daily. Every pound comes from farm separators. There are 156 farm separators in use tributary to this creamery and all patronize this creamery. The system has been adopted by several creameries in the west and no doubt many more will follow. Buttermilk for feeding purposes, much better butter and a saving of at least 4 per cent in hauling and making are features that will carry the system to success.

A Promising Onion—In another column will be found the advertisement of Vaughan's Red Globe onion, which is one of the most promising varieties now on the market. It is genuine Connecticut grown seed and we advise our readers who are interested to look up the ad.

Cost a Little More But!

A Sharples Farm Cream Separator may cost just a very little more than others, but it's worth many times more. A \$75 machine that lasts but a year is over seven times as dear as a \$100 machine that lasts ten years. That is why we build the best farm separator that money and brains will produce.



Send for Catalogue No. 58. The Sharples Co., Canal & Washington Sts., West Chester, Pa. P. M. SHARPLES, CHICAGO, U. S. A.

Figure it Out.

If you own four cows can you afford to be without an

Empire Cream Separator?



It costs about the same as a good cow (with nothing for feed), yet increases the output of butter by 25%—better butter, too, that brings higher prices. Have you thought of this? Write us to-day, and we will send you an illustrated book on butter making and separators. U. S. BUTTER EXTRACTOR CO., 226 High Street, Newark, N. J.

1900 "ALPHA-BABY" CREAM SEPARATORS

Great as has been the previous superiority of the "Alpha" De Laval machines to other separators, the 20TH CENTURY "Alpha" developments place them still further above the possibilities of attempted competition from anything else in the shape of a cream separator.

Table with 2 columns: Model Name and Price. Includes Old Style "Hollow-Bowl" Baby No. 1 (150 lbs, \$50.00), Old Style "Strap" Humming-Bird (175 lbs, \$50.00), Improved "Crank" Humming-Bird (225 lbs, \$65.00), Improved Iron-Stool Baby No. 1 (325 lbs, \$100.00), Improved Iron-Stool Baby No. 2 (450 lbs, \$125.00), Improved High-Frame Baby No. 2 (450 lbs, \$125.00), Improved High-Frame Baby No. 3 (850 lbs, \$200.00), Improved Dairy Steam-Turbine (850 lbs, \$225.00).

Send for "20th Century" catalogue. THE DE LAVAL SEPARATOR CO. RANDOLPH & CANAL STS., CHICAGO. General Offices: 1102 ARCH STREET, PHILADELPHIA. 74 CORTLANDT STREET, NEW YORK. 103 & 105 MERRIM ST., SAN FRANCISCO. 327 COMMISSIONERS ST., MONTREAL.

COMPETITORS HAVE FRANKLY ADMITTED THAT The Improved U. S. Separators ARE THE BEST SKIMMERS ON THE MARKET.

We illustrate herewith our new corrugated bowl, which is giving such perfect satisfaction, and which does not require hot water to flush. A small quantity of skim milk does the work thoroughly—more so than competitors that have central tubes and a multiplicity of discs for the cream to stick to, as the U. S. has neither. Competitors, in their efforts to find something to check the Victorious Progress of the United States, have tried to make a big bugbear of using hot water to flush the bowl, but now this, their last criticism, is overcome, and they are at last to know what to harp on to prejudice purchasers against the Improved U. S. and reduce the constantly increasing sales. Write for our 1900 or "New Century" catalogue giving full particulars. VERMONT FARM MACHINE CO., Bellows Falls, Vt.



SAVE YOUR MONEY. Every ounce of butter fat (cream) which escapes into the skim milk is money lost. The culture and rig get it, but you can't afford to feed them on cream. Our Improved Patent Aquatic Cream Separator takes out all the cream in 20 hours' time. Note the best creamery maker's cost less than half as much. For 1 cow up to 40. Price, \$1. to \$11. Write for FREE catalogue and testimonials. We want reliable agents in every locality. Aquatic Cream Separator Co. 177 Factory Sq. Waterville, N.Y.

HARRISON'S FEED MILLS We offer you the best mill on the market as such a low figure that it will pay you to write us. Our mills have been on the market 50 years. They are the best constructed, least complicated and most grinding mills yet produced. Mills sent on approval. Prices cover freight. Send for illustrated catalogue. HARRISON, LEONARD B. HARRISON, 10 Third St., New Haven, Conn.

AN ACRE OF CORN and its possibilities under the Silage system—bring the theme of "A BOOK OF SILAGE" By Prof. F. W. WALL, of the University of Wisconsin, recently named in a volume of 126 pages and now being sent out by the U.S. Dept. of Agr. FREE, G. is unquestionably the best book yet introduced on the subject. It includes: I—Silage Crops. II—Silage. III—Silage. IV—Feeding of Silage. V—Comparison of Silage and other Feeds. VI—The Silo in Modern Agriculture, and many valuable tables and condensed ration for feeding stock. They are going rapidly. To avoid disappointed inquiries the Price is 10c. only or stamped. SILVER MFG. CO., Salem, Oh. O.

STEEL LAND ROLLER THE BEST, CHEAPEST AND MOST DURABLE. We also manufacture Grain Thrashers and Separators, Sugar Cane Presses, Hand and Power Corn Shellers, Calliope Mills, Hand and Power Flour Mills, and other Agricultural Machinery. 1-Horse Cultivator, Empire Reverser, Hay Maker, Wood Saw, etc. THE MESSINGER MFG. CO., Tatem, Pa.

PARALYSIS Locomotor Ataxia conquered at last. Actors paralyzed. Specialists amazed at recovery of patients thought incurable, by DR. CHASE'S BLOOD AND NERVE FOOD. Write me about your case. Advice and proof of cure FREE. DR. CHASE, 224 N. 10th St., PHILADELPHIA, PA.

FARM FENCE, 12 to 24 cents per rod. Box 17, Buchanan Fence Co., Smithville, Ohio. BINDER TWINE Farmers wanted as agents. AUGUST POST, Moulton, Iowa

Cattle, Sheep and Swine.

BREEDING AND FEEDING.

The greater the variety of food for pigs the better. Dairy by-products are excellent and lessen the danger of digestive troubles.

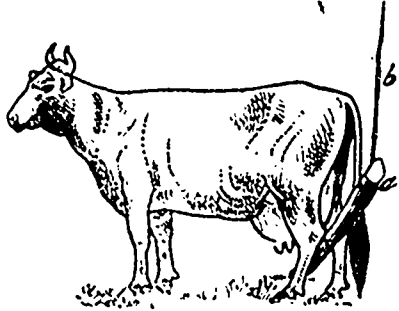
The great cause of rheumatism is dampness, and many pigs become affected with it at this season of the year.

Don't forget to plant a few peas for the pigs this spring, an acre in your meadow or among some stumps in the grain fields; they will get a good start for fall fattening.

To kill lice on cattle, boll potatoes with skin on, remove potatoes from the water, let it cool and rub the stock over with the boiled potato skin solution.

CURE FOR KICKERS.

To keep a cow from kicking while milking, tie her in the stall. Tie a rope to a post and the other end to one end of a rail. The left leg should be in



AN ANTI-KICKING DEVICE.

front of the rail as illustrated. If she tries to kick, she only strikes the rail end and will not be likely to try it many times.

THE ANGORA GOAT.

The native home of these goats is in Turkey in Asia Minor. They are highly prized, not alone for their fleece, but also as food. Their fleece when clean is of glittering, snowy whiteness.

The dams are indifferent mothers, leaving their kids for many hours at a time. If a kid is dropped in cold weather and not cared for by the herdsman it is liable to die.

Many breeders use Angora males for grading up common goats. Half bloods as well as pure bloods are very good eaters, having a sweet, juicy, gamy taste.

elevation the man who expects to make a fortune out of goats will probably be disappointed. They require a great deal more attention than most accounts that we have seen would lead one to believe.

The first goats brought into this country years ago sold for \$1000 apiece. It is very difficult to get pure blooded stock. In the native home of these goats we understand there is nothing like the attention paid to preserving the purity of breed which we should here regard as indispensable.

The Liver Fluke of sheep is found in nearly all of the humid climates throughout the civilized world. It appears as an epizootic some seasons, usually following prolonged rain.

Persian Sheep I have found hardy and good mutton makers. Have sold all my surplus rams at \$40 to 50 each. A grade flock made a net profit of 50 per cent during five successive years.

The Piggery Building should have dry walls, dry beds, dry floors and in fact be dry throughout. Dampness is a great cause of unthrifty and rheumatic pigs, nearly as bad as injudicious feeding.

Rye Straw is good bedding for stock and that is about all it is good for. Green rye is a very good winter feed and is considerably used in California.

The Third importation to the herd of Kirk B Armour was made early this month, consisting of 100 head from the most noted herds of England, including three from the queen's herd and ten from the herd of Admiral Britten.

Bloody Water is a disease which is not clearly understood. It shows itself on farms where drainage is very poor or where the soil is of a peculiar formation, so that the food which is obtained from this soil, whether green or cured, when eaten by cattle is followed by this disease.

on pasture they should be taken from it and placed on dry food and bran mashes.—[Prof S. B. Nelson, Wash Exper Sta.

To Grow Good Crops the soil needs light, heat and moisture, as well as fertility. With proper preparation before planting, these conditions are secured.

A SURE LICE KILLER—One of the standard remedies for chicken lice is Lee's lice killer, made by the George H. Lee Co of Omaha, Neb.

A Few Days' Brew Of Deadly Uric Acid.

In a few days you may brew enough uric acid in your body to produce death. Your kidneys are your only salvation.

So, when your kidneys are weak or out of order, you can understand how quickly your entire body is affected, and how every organ seems to fail to do its duty.

Uric acid poison irritates the nerves, and causes rheumatic pains in joints, muscles and limbs, catarrh of the bladder, headache, backache, stomach and liver trouble, shortness of breath, heart trouble, dizziness, nervousness, irritability, lassitude, loss of ambition, weakness and wasting away.

Red brick dust and similar elements in the urine are also caused by various salts of uric acid.

The cure for these troubles is Dr. Kilmer's Swamp-Root, the great kidney remedy.

It instantly relieves the congested, overworked kidneys, and gradually brings them back to health.

Healthy kidneys keep down the excess of uric acid, and you soon feel the benefit in new health and strength.

Swamp-Root should at once be taken upon the least sign of ill health. It will make you well and is for sale the world over in bottles of two sizes and two prices, fifty-cent and one-dollar.

Swamp-Root is used in the leading hospitals; recommended by skillful physicians in their private practice; and is taken by doctors themselves who have kidney ailments, because they recognize in it the greatest and most successful remedy for kidney and bladder troubles.

To prove its wonderful efficacy, send your name and address to Dr. Kilmer & Co., Binghamton, N. Y., mentioning this paper, when you will receive, free of all charge, a sample bottle of Swamp-Root and a valuable book, by mail, prepaid.

Advertisement for various tools and machinery including a \$10.00 tool, a \$11.00 tool, a \$24.75 to \$32.50 tool, a \$2.50 tool, and a \$18.90 tool. Includes descriptions and prices for each item.

Advertisement for 'MOTHER, WHERE'S THE SHEARS?' featuring a pair of shears. Text describes the quality and availability of the shears, mentioning 'MAHER & GROSS' and 'RAZOR STEEL'.

NO crop can grow without Potash. Every blade of Grass, every grain of Corn, all Fruits and Vegetables must have it. If enough is supplied you can count on a full crop—if too little, the growth will be "scrubby."

Send for our books telling all about composition of fertilizers best adapted for all crops. They cost you nothing.

GERMAN KALI WORKS, 93 Nassau St., New York.

Advertisement for 'FERRY'S SEEDS'. Includes a large illustration of a seed packet and text describing the quality and variety of seeds available, such as garden seeds, corn, and other crops.

Grape Vines

Descriptive and Price List free. Currants, Gooseberries and other Small Fruit Plants. Extra quality. Warranted true. T. S. HUBBARD CO., FREDONIA, N. Y.

EVERGREENS Best Quality, \$1.00 to \$10.00 per 100. Also Full Nursery Stock. Fully Big Spring Bargains. Agents Wanted. Catalogue FREE. Dr. HILL, Evergreen Specialist, Dundee, Ill.

SEED DUE BILL FREE

To get new catalogs to test my seeds, I will mail my 1900 Catalogue, filled with more bargains than ever and a Due Bill good for 10¢ worth of seeds for trial absolutely free.

Your Garden.

Does it need renovating? Then buy Guaranteed Seeds

For your Spring planting from DELANO SEED CO

LEE PARK, NEB. Catalogue for the asking

Large and Small Fruits.

WINTER WASHES AND SPRAYS.

These are used for two purposes, i. e., to kill the winter spores of fungi and for insects. Among the latter are many of the scale insects as well as a few which hibernates under the rough bark of trees. The San Jose scale is taking a prominent place of late and is the most destructive insect which fruit growers have to fear. Twenty-five per cent kerosene and water used on a bright sunny day will kill it. Crude petroleum also promises to be effective.

The most popular insecticide in Cal for the San Jose scale is the lime, sulphur and salt mixture applied as a winter wash, or a coarse spray before the buds break. This is made of 50 lbs each of unslaked lime, sulphur and salt and 150 gals of water. Slake the lime, add the sulphur, cover with water and boil briskly for an hour or until the lime and sulphur are all dissolved. Then add the salt and boil for 15 or 20 minutes. When ready to use dilute to 150 gals. A mixture somewhat similar is made by using 7 or 8 lbs copper sulphate in place of the salt.

The resin wash is another favorite on the Pacific slope for scale insects on citrus fruits and plant lice. Place in a kettle 20 lbs resin 5 lbs of 78 per cent crude caustic soda and 2 1/2 pts fish oil with sufficient water to cover to a depth of 2 or 3 in. Boil for about two hours. Dilute to 33 gals with hot water for a stock mixture. When ready to use dilute to 100 gals.

For the oyster shell bark louse so common on apple trees, scrape the trunk and larger branches with a hoe and then apply with a stiff brush this solution: Dissolve 2 qts of soft soap or 1/2 lb hard soap in 1 gal boiling water, to seven parts of this mixture add one part of crude carbolic acid. Spray with kerosene emulsion in May or June after the young lice have hatched. The pear psylla is an insect which winters in the mature state under the bark and in crevices. A 25 per cent kerosene and water mixture is only partly effective. George T. Powell of N Y has tried spraying with a plain, thin whitewash, or bright warm days when the insects had crawled out of their hiding places, and with satisfactory results. The bud moth is another serious pest in some parts. Spraying with paris green just as the buds are swelling and before they open is the most satisfactory method of control. For the peach borer a coating of skim milk and hydraulic cement has been tried. This is mixed up like paint and applied with a brush at the base of the tree. It sets very quickly and makes a coating through which the young larvae cannot bore.

Many fungous troubles are easily treated during the winter and spring. Where apple scab is bad give a spraying during March with copper sulphate at the rate of 4 lbs to 50 gals of water and another application just before the buds break. Never use this on foliage, as it will burn the leaves. This is a

standard remedy to use for most kinds of scab, rusts and rots of apples, pears, plums, peaches and grapes. Supplement the work by gathering and burning all leaves, dried and mummified specimens of fruit.

It is a common practice in gardens to go over the grapevines with a wash, put on with a brush. Bordeaux mixture is used. It is made by dissolving 6 lbs copper sulphate in 25 gals water and slaking 4 lbs lime and diluting to 25 gals and then the two are mixed. This is the spraying formula, but for the wash only half the quantity of water should be used. There is no harm in using more lime. Some add flowers of sulphur or thicken the mixture with fresh cow manure to give it more consistency. Where black rot of grapes is very destructive the vines should be washed in the spring with a 50 per cent solution of sulphate of iron. Before spraying with bordeaux mixture when the leaves appear.

MULCH FOR STRAWBERRY BED.

The particular kind of mulch which a strawberry grower may use often depends more upon the ease with which it can be secured than its suitability as a protective material. Mulches of three kinds are used in la. Oat or wheat straw, prairie hay, barnyard litter, which may include a mixture of manure, corn stalks and straw or hay.

All things considered, I believe that oat straw is the best material to use. It has this objection—that if much chaffy material is included in it, the ground may be seeded with oats to a disagreeable extent. If straw manure is used, on the other hand, the bed may be seeded with noxious weeds, which add considerably to the expense of care and cultivation. Prairie hay, so far as weeds are concerned, is perhaps a more desirable covering, but if the bed is of considerable extent the cost of covering is materially increased as compared to the straw mulch.

In the fall, after threshing time, the straw can be bough in the stack at about \$1 a load, while prairie hay will cost between \$5 and 6 a load. It would seem, therefore, that the advantages are mainly on the side of the straw mulch. Another objection to the prairie hay rests in the fact that it lies closely on top of the plants and in the case of heavy sleet storms is more apt to favor injury from smothering than is straw.—[Prof John Craig, Ia Agr'l College.

MAKING BORDEAUX MIXTURE.

When properly made, bordeaux mixture is the best remedy for apple scab and the different fruit blights, rots, rusts and mildews that is now in use, but if improperly prepared it may be very unsatisfactory in its results. The formula is 6 lbs copper sulphate or blue vitriol, 4 lbs slaked lime and 20 gals water. Put the copper sulphate in a splint basket or bag and hang it in a cask or tub containing several gallons of water and it will dissolve in a few hours. Put the lime in another tub and pour on a little hot water, having plenty more at hand to add as the lime slakes to prevent burning or drying out. When slaked slowly in this way the lime will be very fine and free from lumps and not apt to clog the nozzle in spraying.

Dilute the copper sulphate solution to 25 gals in one vessel and the lime mixture to 25 gals in another and pour the two together. Don't try to prepare the bordeaux mixture in any other way. It is less work to fill up the spray tank with water and then add the lime and the copper sulphate mixtures, but you can't get good results from bordeaux mixture prepared in this way. If you have a large amount of spraying to do, slake 20 lbs of lime at once, which is enough for six times, and dilute to 24 gals. Then measure out 4 gals of the mixture for each 50 gal tankful. In the same way, dissolve 24 or 26 lbs sulphate of copper in as many gallons of water and take 6 gals for each application. Put in 1/2 lb paris green to every 50 gals and you will kill the tent caterpillar, codling moth, potato bugs and other eating insects.

Strawberry Prospects are reported as discouraging by many growers. The dry summer and fall prevented a good growth of vines, although in some cases the growth was sufficient. Fruit buds have not been made and it will be im-

possible to supply this deficiency this spring. Those who have been able to irrigate have obtained a good growth of vines and have every prospect for a fair crop. Irrigation seems to be as valuable to secure a good growth of plants as to stimulate a heavy yield of fruit.

A Good Cooking Cherry is the May Duke. It is suitable for home use or for market, very productive, tree healthy and the fruit mildly acid, ripening over a considerable season. Fruit is roundish and bright red, stones small. Flesh is red, tender, very juicy and sub acid. Season middle June.

The Wealthy Apple is a vigorous grower, very hardy and productive. The fruit is handsome when well colored and of fair quality. It is from medium to large in size, roundish oblate, slightly conical. The skin is whitish yellow, mostly overpread with dark red. The flesh is white and juicy and of fair quality. Season Oct to Jan. It is an annual bearer and does well in localities where many other sorts will not thrive. One of the hardest varieties grown. The Elenheim Pippin, another good variety, is very large, roundish oblate, skin bronze and colored on the sunny side with red. The quality is good. Season Nov to Feb. In some sections the tree is not turfity. It likes good, light, warm soil. The tree is a regular and good bearer.—[Prof W. S. Blair, N S School of Horticulture.

Saw Flies on Strawberry Plants—J. F. S.'s strawberry plants have been eaten by a very small, pale-green worm, probably a saw fly. Spray with a rather strong kerosene emulsion; or apply white hellebore through a rose sprinkler watering pot.

Bordeaux Mixture Applied to Plums is liable to injure the foliage of the Japanese plums, but no better fungicide for spraying this class of fruit is known. To avoid injury, use a very dilute mixture.

The Home Garden should always contain a plot of strawberries large enough in size to supply the family plentifully all through the berry season. It is well to have an excess, for when company comes they always like strawberries and cream and the good housewife does not like to cut the allowance of her own family, be they friends ever so near and dear. So plant enough to go around. Strawberries are not as hard to grow as some seem to think. Set in hills 20 to 24 in apart each way and let them mat over the ground to some extent.—[A. W. Springer, Tipton Co, Ind.

Peach Frauds—The Daniel Boone, Deaconess and Saint Clair peaches are frauds. They have been sold extensively at high prices in some sections by the use of highly colored plates and talk, but prove to be either worthless varieties or old, standard sorts, which were bought and relabeled. One buyer found that his bore two kinds of labels—the variety bought and Elberta, which had not been removed.

SPRAYING FRUIT TREES. The question of spraying fruit trees to prevent the depredations of insect pests and fungous diseases is no longer an experiment but a necessity.



Our readers will do well to write Wm. Stahl, Quincy, Ill., and get his catalogue describing twenty-one styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which contains much valuable information, and may be had for the asking. Potatoes—Early Harvest, Helron, Rose Queen, Boyce, Carman, 25 kinds, C. W. Ford & Co., Farmers, N. Y.

**There is no other Seed Catalogue so helpful in plain, practical hints as Burpee's Farm Annual**

It tells the plain truth about all the best seeds that grow, including rare New Creations which cannot be had elsewhere. It also offers useful new Leaflets and two "Vest Pocket Guides to Culture," all given FREE.

Write for the Catalogue TO-DAY! W. ATLEB BURPEE & CO., Philadelphia.

**VAUGHAN'S RED GLOBE ONION SEED** (Connecticut grown.)

Every onion of true globe shape and darkest red color. This **RED GLOBE** is crowding all other red onions out of the market everywhere. It will bring 10c. more per bushel and our seed will yield 50 Bushels more per acre. Small necks; round as a ball.

**VAUGHAN'S GENUINE CONNECTICUT ONION SEED**

has been carefully raised by growers who know their business. It produces crops which sell while others rot on the dump. Regular price, \$2.00 per lb. Our special price of \$1.65 per lb. if you mention this paper. Our 1900 Annual, "Gardening Illustrated," full of reliable information, mailed FREE.

**Vaughan's Seed Store,**  
New York—44 Barclay St. Chicago—84 Randolph St.

**Cabbage Seed That Grows**

There is no doubt that the most improved variety of Cabbage is the Improved Early Jersey Wakefield. Undoubtedly the most and earliest strain known. The result of years of careful selection, both for earliness and perfect heads. Especially valuable to market gardeners. 50 pkts. 1 lb. each 60c. 1/2 lb. each \$1.50 lb., all prepaid. Hammond's Danish Ballhead. A new leader of large, compact heads. My seed imported direct from H. Wibelius, Denmark. Guaranteed absolutely true to name. See catalogue for cash prices. Price same as above. Catalogue free.

Harry N. Hammond, Seedman, Box 12, Flint, Mich.

**He Knows Who Hoes**

The value of careful planning for the sowing Now is the time to plan. Send for the new 1900 Catalogue of the famous

**Gregory Seeds**

—the practical seeds for practical growers. Grow, selected and tested by experts. Every one of our seeds guaranteed standard varieties and novelties fully described in the new catalogue. Send for it.

J. J. H. GREGORY  
a 207,  
Market Street,  
Evanston,  
Ill.

**THE MILLION DOLLAR POTATO**

"Most talked of potato on earth! Our Catalogue tells—so also about Salzer's Earliest Six Weeks' Potato. Largest farm and vegetable seed grower in U.S. Potatoes, \$1.30 and up a lb. Send this notice and 5c. stamp to Big Catalogue F 37.

**JOHN A. SALZER SEED & LA CROSSE WIS.**

**HAYSON'S PEACH TREES**

and Strawberry Plants by the hundred or million. We yield to no one in varieties and quality of stock. Ask about Violets, Peaches and Strawberries, Plums, Apples, Apricots, etc. Illustrated.

Box 27, Berlin, Md. Catalogue mailed FREE.

... OUR NEW ...

**Premium List.**

Our Complete Premium List for 1899-'00 is now ready and will be sent free to any address in the United States or Canada, on application.

It is handsomely illustrated and contains upwards of 200 useful and valuable premiums, and some of the greatest and most astonishing offers ever made by responsible publishers.

Now is the time to get up clubs, and by doing a little work for Farm and Home you may secure one or more of the many good things offered, free of cost.

Sample copies and everything necessary to a successful canvass, sent free on request.

Address  
**FARM AND HOME,**  
Springfield, Mass., or Chicago, Ill.



Gardening Under Glass.

EARLY MELONS AND CUCUMBERS

Very early melons and cucumbers can be secured by starting the seeds under glass in a greenhouse or hotbed. The young plants are difficult to transplant, and if the roots are disturbed to any extent they will not grow well. A common practice is to cut pieces of tough, old sod into 5-in squares and 5 or 6 in deep. These are inverted on the manure of the hotbed and placed close together. A half dozen seeds are planted in each and the plants allowed to grow until ready for setting in the field. Old berry baskets are also used, being filled with good rich soil and placed closely together in a mild hotbed. In transplanting, a sharp knife is used to cut them to pieces when they are slipped away from the mass of earth and plants without disturbing the roots.

The seeds may also be planted in 4 or 5-in pots. The pots are usually set on a board to prevent the roots from running through the hole in the bottom into the manure or soil below. The pots are surrounded with moss or earth to prevent their drying out. Give a thorough wetting before transferring to the field or garden. Mark out the rows and hills and mix in each hill a large shovelful of well-rotted manure, for all plants like cucumbers, melons and squashes are slow of root growth at the start and want plenty of rich feed close at hand. With a trowl make a hole of suitable size and depth to hold the plants. Remove from the pot or basket and set in carefully about 1/4 in below the surface of the ground. Draw up some fine soil around them and firm compactly.

GROWING EARLY VEGETABLES.

Half the fun in gardening is to beat your neighbors in having the first of any vegetable. To do this it is necessary to have the plants well started before setting them in the open ground. Tomatoes, peppers and egg plants will not amount to much in the northern part of the U S unless started under glass. Sow the seeds in March thinly in rows in the hotbed or in boxes or pots in the house. Early cabbage, cauliflower, lettuce and celery are all started in the same way. After the plants have the third pair of leaves they should be transplanted.

Tomatoes, egg plants and peppers make stronger, stockier plants to be transplanted twice before being set in the open ground. Some successful growers do not transplant tomatoes from the seed bed until setting out permanently. They get long, spindling plants, which are set by digging a trench and covering the roots and stem with the excavation of 2 or 3 in at the top. However, we prefer short, strong, stocky plants.

Cabbage, cauliflower, celery and lettuce will give better returns to be transplanted once from the seed bed before planting out. Secure some soap boxes and cut them in two lengthwise, making shallow flats 2 1/2 or 3 in deep. Fill these level full of soil and set all plants in them from the hotbed, marking each box with the variety it contains. These boxes should then be set back in the hotbed or in a cold frame. Give the plants an abundance of air on mild days by raising the sash at the back. As the weather gets warmer, the sash may be taken off during the day and left up a trifle at night to harden the plants. Water frequently with tepid water and do not force too rapid a growth.

HOW TO MAKE A HOTBED.

A hotbed is usually made in a pit or excavation 2 to 2 1/2 ft deep, 6 ft wide and as long as needed. The pit is better if built up of brick and mortar, but it may be lined with boards or plank. The front should be about 1 ft above the surface of the ground and the back 6 in higher. It should be located in a dry, well-drained spot facing south or east. Hotbed sashes are usually 6x3 ft, and one or two will give enough plants for a family. Crosspieces should be placed for the sashes to slide on to facilitate opening and shutting the frames.

Provide a quantity of fresh horse manure from the stables and add to

this, if it can be had, one-third to one-half bulk of leaves or fine litter. Mix them thoroughly, tramping down the mass in successive layers to form a large pile so that fermentation will proceed. In two or three days, fermentation will be apparent by the escape of steam from the heap. Now turn again and allow the heap to remain two or three days until the second fermentation begins. The manure should then be put in the pit and tramped down firmly in layers to a depth of 2 or 2 1/2 ft. Then put on the sashes and keep the pit closed until the heat rises.

In a few days, it will subside to 90 degrees or less when the soil should be put on to a depth of from 6 to 8 in. Soil should be of well-rotted sod or good garden soil, mixed with a third fine, old manure. Sow the seed thinly in drills 3 or 4 in apart, and as soon as out of the seed leaf, thin out or transplant. Air must be given every mild day by raising the sashes at the back. Water with tepid water whenever necessary and during cold nights or a snowstorm keep the sashes covered with straw mats or board shutters.

For a hotbed made late it is not necessary to use such a depth of manure. Hotbeds may also be made on top of the ground by piling up the manure and setting the frame on top of it. The pile should be 1 ft larger all around than the size of the frame and the manure should be banked up around the frame to keep out the cold. In place of glass a frame covered with plant cloth or oiled muslin may be used after severe freezing is past.

For Table Decoration there is nothing superior to a potted strawberry plant, in a clean pot with bright healthy foliage, bearing a few ripe berries and some blossoms. Such plants bring from \$1 to 2.50 about Easter time, while the berries are worth as high as 4 to 5 per qt.

Strawberries for Forcing should be fruited in 6-in pots. Do not allow the young plants to become pot bound before the last shift to the 6-in pots. They must be grown near the glass, and for best results should have a house devoted entirely to them. Water twice a week with liquid manure and keep the berries off the ground. Cork chips are good to put on top of the earth in the pots, but a piece of wire screen is the best to use.

To Sprout Sweet Potatoes, if desired to hurry the sprouting, select a warm sunny exposure in a light, sandy loam. Remove the soil 1 ft deep from as large a space as intended for the bed. Fill about 6 in with fine, rotted stable manure and cover with about 3 in soil. Place the potatoes on the bed, not allowing to touch each other. Cover with about 2 in of loam sand. If desired to protect and force the plants, put a board frame around the bed and cover with glass sashes. Keep the bed well watered. After the plants are up 3 to 4 in high and have good roots, they may be removed from the potato by pulling loose, holding the potato firmly in its place with one hand. In this way the parent potato will send out plants for some time. Select a good, sandy loam if possible for growing the potato, set in rows 4 ft apart and 1 ft in the row. Throw up a bed of two good furrows and plant on top of the bed after patting down with a hoe or with light roller. [A. E. Kuyler, Charleston Co, S C.]

Allowing Plants to Freeze before bringing them into the forcing house is advisable with strawberries, rhubarb and many hardy plants. Freezing kills the red spider and other injurious insects on strawberries. Then, too, after a complete rest and dormant condition such as freezing gives, the plants seem to start off and grow with more vigor and strength. Strawberries will bear, however, without any period of rest, but are not as vigorous.

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Forestry Matters.

ON RAISING HARDWOOD TREES.

Please give information on cultivation of walnut, hickory and white ash, says J. P. of Ont. My observation leads me to conclude that walnut, hickory and white ash all require pretty good and fairly moist land to grow well and to have timber of good quality. I know of three walnut trees, standing for 70 yrs in open land many rods apart on dry gravelly ground, and they are apparently but little larger in size than when I first knew them. A foot from the ground they are not 2 inches in diameter. I think it has during my lifetime taken these trees about 20 yrs to grow 1 inch in diameter. Some 60 yrs ago, a Rochester (C. H.) friend planted oak acorns on dry, sandy land and at end of half a century the oaks were very small. I think very few were 3 inches in diameter and most 2 in or less. The experiment was a failure. Gray birches, pitch pine or perhaps white pine would have been a success on that land. Walnut, hickory and white ash are not rapid growing trees, especially on poor dry soils, but on good, moist land grow very well.

Trees, like farm crops, should have each species on its proper kind of soil. White ash seed I would sow or plant soon after gathering, covering about 1/4 or 1/2 in. Nuts I would do the same with unless I feared squirrels or other nut lovers, or that the nuts might need cracking in spring. In such case I would bore the bottom of a box or barrel quite full of holes or cover the open bottom with fine wire netting and put the nuts with dirt into the box or barrel and sink it in the ground to the depth to which the nuts and dirt filled the box or a little more. The object being to keep the nuts from drying and submitting them to the action of the frost without being in standing water. If the frost has not in the least cracked the shells, I think just a little cracking of the shells might be advisable before planting.

It is well to seed liberally, as tree seed is not always sure to come up. Lightly cultivating the land between the trees promotes their growth, but most of the land on which timber is to be grown is too rough for cultivation. In much of the cheap land in New England, the white pine is the most profitable tree to grow, but on limited areas the chestnut is the more profitable. The hoop-pole question is important as regards the thinning of the young plantations of walnut, hickory and white ash. I am not certain as to the exact distance between the trees in order that the first thinning may make hoop-poles. I plant pines so as to have the young trees 4 ft apart each way. I think 4 or 5 ft apart each way the most profitable distance for hoop-poles. This cut so as to keep those to be grown into large trees growing at a good rate and prune carefully so as to grow clear lumber in the butt logs. Study your ground in order to find what species of trees to grow upon it in order to secure the most profit.—[J. D. Lyman, Rockingham Co., N. H.]

Lack of Humus in the soil will prevent trees withstanding drought. I began a system of cultivation with the idea of incorporating humus in the soil by growing and plowing under crimson clover, and by early culture in spring and as much as possible during the season, until the tree is well grown, which is about July 15 in New York state. High tillage makes it necessary to cover the ground for the balance of the season. This is done by sowing crimson clover as soon as cultivation ceases. This covering tends to hold nitrates and by plowing in the clover in the spring humus is supplied the soil. Peas are not as good as crimson clover, as they freeze earlier. If clover will not grow, a mixture of ryegrass and peas will do. The aim is to have living plants in the orchard all winter.—[G. T. Powell, N. Y.]

Felt strainers for maple syrup making cannot be made at home. They are a thick, white felt bag.

Boil syrup at 215 degrees and test with an accurate thermometer. Syrup must be at that temperature to give satisfactory results in straining. Two strainers are necessary, as they have to be rinsed several times a day.

The Sugar Bush.

GATHERING THE SAP.

In large sugar orchards the sap is usually gathered with a team, using a 5-hbl tank mounted on a sled or wagon. Modern tanks are low and long, easier to pour the sap into and less liable to tip over than the old-fashioned high tierce. The gathering tank I use is about 5 ft long, has two openings on top, one a receptacle to drain ice and the other contains a large tin strainer. There is also a 1 1/2-in T-shaped iron pipe in the end for drawing off the sap. I placed a piece of 1 1/2 in hose 2 1/2 ft long on each end of the T, hanging the loose ends to a nail on the top of the tank with a loop of cord when not in use. On arriving at the sugar house, drop the hose on the side next the building into an open trough which conveys the sap to the storage tank. In driving up from the opposite direction, of course the other hose would be used. I use a sled shod with 3x3 white maple shoes.—[P. J. Johnson.]

A Good Sugar Thermometer is quite necessary for the evaporator, or the sugar pan. It should be held upright by a wire in the syrup end of the evaporator so as to be seen at a glance when standing at the syrup faucet. One has to work lively handling strainers, syrup cans, etc. when running a large evaporator, and has no time to drip syrup from the dipper to see whether it "hairs" or "leather aprons," the old-fashioned way, but must open the faucet at 219 degrees and close it at once when the temperature falls. The thermometer is also just as necessary in the "sugaring-off" pan, telling when the sugar is just right for soft tub or ball, for the sugar party of young people to eat on snow or for hard cakes.—[P. J. Johnson, Windham Co., Vt.]

Maryland—A large amount of fall plowing was done in early winter, as the weather favored outdoor work. Wheat is in good average condition. An

abundant supply of ice has been secured.—Harford Co farmers use clover extensively as a green crop to plow under. Creameries are becoming numerous and profitable. The Norriaville creamery paid \$1.12 per cwt for 4 per cent milk during Jan. Good cows sell at 40

to 50. Prospects for profitable farming are brighter than for several years.—The Harrison nurseries of Berlin are said to be the largest growers of peaches of anyone in the country. They have 1,500,000 budded trees of over 60 leading kinds in their nurseries.

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The Practical Farmer on the MAPES POTATO MANURE in the prize potato contest: "During the past five years there has scarcely been a recognized authority on potato growing who has not stated as a result of practical experience that a commercial fertilizer like the MAPES POTATO MANURE excelled stable manure in economy and in the yield and quality of potatoes."

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"The MAPES POTATO MANURE was really the first manure to make a reputation in this country, and the first to demonstrate the superiority of a really high grade, properly prepared fertilizer over stable manure for potatoes. Before this time not one grower in a hundred would use anything but stable manure for this crop, and now for many years past there are few large growers who do not prefer a fertilizer like the MAPES POTATO MANURE to any farm manure for potatoes, particularly when the highest quality is desired."—American Cultivator.

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We have been using the MAPES POTATO MANURE for eight years, indeed we do not care to use anything else for potatoes, and have never been disappointed yet. We do not have scabby potatoes as we used to do with stable manure.—Wilmer Atkinson, Farm Journal.

Note: Mr Atkinson has now used the MAPES POTATO MANURE, one car upward per year, for 12 years.

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"If I use 500 pounds per acre MAPES POTATO MANURE, do you think there is any danger of the crop becoming fired in case of dry weather?"

"Not the least danger is there that 500 pounds of potato fertilizer of high grade will injure the crop, no matter what the weather might be. The question as to how much fertilizer may be profitably used on potatoes is one the Rural New-Yorker feels it has a right to answer with authority. For many years—as the 'New Potato Culture' records—we have tried experiments to throw light upon this question. We have used all the way from 300 to 1200 pounds to the acre, and the emphatic result has been that up to 1750 pounds the largest amount has been profitable."—E. S. Carman, Editor Rural New-Yorker.

The prices of the MAPES MANURES were reduced Jan 1, 1899. The prices have not been advanced this year. While the advance in fertilizing materials has been more than enough to justify us in raising the prices of the MAPES MANURES, we have decided to make no change. We prefer to give our customers the benefit of the favorable contracts made by us before the market advanced, and believe they will show their appreciation by a sufficient increase of orders in compensation for the greater cost of later purchases.

Send free pamphlets on the growing of tobacco, truck, fruits, farm crops, oranges, pineapples, truck in Florida, etc. Apply to local dealer or to

The Mapes Formula and Peruvian Guano Co., 143 Liberty Street, New York.

The highest prices obtained for tobacco crops in Mass and Ct. reported in the press the past year (1898) were grown with the MAPES TOBACCO MANURES.

Manures and Fertilizers.

THE SPECIAL NEEDS OF CROPS.

There is a kind of farming where natural fertility, however great, is inadequate to meet the special needs of the crops grown. In the growing of these, as in market gardening, the farmer should consider both yield and quality. These characteristics are only perfectly acquired by the particular crop when an abundant supply of plant food is available; a deficiency of food results both in reducing yield and quality and hence market value, while in the case of the other crops the result of a deficiency of food is found mainly in yield, the returns being measured by the size of the crop and not by its quality. Fortunately, most garden crops belong to a distinct class, which possess a low fertility value and a relatively high commercial value.

If it is remembered that the sale of crops is virtually a sale by the farmer of so many pounds of nitrogen, phosphoric acid and potash, in crops of this sort, the constituents are sold at the maximum price, and therefore the cost of the plant food applied, although the amounts used may be regarded as enormous, is but a small proportion of the value of the increased crop. Take asparagus, for example, the market value of this crop is in large part governed by the size, succulence and sweetness of the edible shoots, spindling shoots, or any bitterness or stringiness, is accompanied by a lower market price. This perfection of quality can only be attained when the plant has at its disposal an abundance of all forms of plant food during the entire period of its growth, and fertilization which sometimes amounts to one ton per acre of a high-grade mixture will bear no adequate relation to the total value of the crop from that acre. An application of \$50 worth of plant food will often prove more profitable for asparagus than an application of \$2 worth to a crop of wheat, though the conditions of growth in both cases are such as to cause an increased yield, corresponding to the applications made.

It is for crops of this character that the natural fertility of the soil, however great it may be, is not adequate; the peculiarities of the crop require that special kinds and forms of plant food be supplied. The crops are artificial rather than natural and require a forcing beyond that possible from natural stores in the soil.

Many advocate the exclusive use of barnyard manures for crops of this character, but they cannot economically meet the situation as well as the commercial fertilizer, because it is not possible to so readily adjust the supplies of plant food in them as to result in the greatest and most perfect production, besides if they are as good the supplies are inadequate and too expensive. It is here that fertilizers must be used, and in constantly increasing quantities and definite knowledge concerning their character and methods of use is especially demanded, for not only is there a larger consumption each year, but the consumers are demanding quality of product also, which can be met most surely and economically by artificial supplies of plant food. Director E. B. Voorhees, N J Exp Sta.

FERTILIZING THE ORCHARD.

Richness of soil in plant food is just as important in an orchard as elsewhere. Too often the orchard is neglected in this respect and no orchard can go on giving profitable returns for a long series of years without being fed. This must be done by applying manure among the trees, as it is not possible to rotate. One of the best manures for fruit trees is the manure from the horse stall. It is hardly possible to improve upon it for general fertilizing. Spread it under the trees in liberal doses in winter or early spring. If the trees are large, cover the entire ground except a foot around the trunks. Thus scattered, it encourages rootlets to fill the soil completely and add to the strength of the tree. If the poultry house is in or near the orchard and the poultry yarded therein, they will greatly increase the fertility of the soil by their droppings and perhaps keep in check the insects that sometimes play sad havoc with the crop of fruit. In this section of country a low shrubby manner of growth is desirable, as it

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shelters the trunk from the blistering rays of the mid-summer sun. For the same reason a moderately thick top should be grown. The vitality of all fruit trees must be A No 1 if they are to be of any value. The extreme changeableness of the weather renders it absolutely necessary.—[A. N. Springer, Tipton Co, Ind.

Care After Fertilizing—A soil in first-class physical condition and well stored with plant food will respond more liberally to a heavy dose of fertilizers than one run down or worn out. Fertilizers in themselves cannot make a good crop when surrounding conditions are unfavorable. If the season is too wet or too dry, too cold or too hot there will be a partial or complete failure. If the land is not well worked, the plant roots are retarded in their action, and being confined to a narrow space in their search for food, growth becomes stunted and a perfect yield impossible.—[Bryan Tyson, Moore Co, N C.

The Soil Is Like a Bank. It continually drawn upon without replenishing it will soon become bankrupt, hence the wise farmer will see that he at least maintains an equilibrium by depositing annually what is drawn out. This guards against the gradual removal of plant food. After a soil has once become run down, it is a very difficult matter to build it up again. It is a far more economical plan to gradually increase the productive capacity of the land.

Unleached Wood Ashes, which used to constitute the chief supply of potash, are now to be had in sufficient quantity to supply the demand for potash. Ashes are one of the safest and best sources of potash for most crops and soils. The most economical source of supply for potash is now generally considered to be German potash salts of which kainit contains about 11 per cent of potash.

The Next Best Thing to fertilizers and manures is to tickle the soil by frequent cultivation.

The Farmers' Produce Ass'n was recently organized at Wyoming, Del, to cover Kent Co, with A. N. Brown president and E. G. Packard of Dover as secretary. President Brown says: "We propose to ship our own produce and to have our own dealers in the markets where our produce is to be sold. We will build our own cold storage plant and our own canning factories if need be. We will control our own produce, and if there is no profit in selling it in the green state, we propose to manufacture it and sell the finished product. We have fixed the price at which we will grow tomatoes for the canneries at 15c per 3-lb basket, the standard peach basket of Del. Instead of selling them by the ton as heretofore. We have 200 members enrolled and expect to have 1000 before shipping season opens. A similar organization has been effected in Sussex Co and the organization of one in New Castle Co is under way."

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SECOND PRIZE ESSAY—\$15.

Ten years ago, when a young man of twenty-five, I bought a farm of 150 a along Lake Champlain. I had to pay \$3000 for it. Once it had been a good farm, but now it was all run down with no fences and the land was full of foul weeds. Friends advised me not to eat it, saying I never could make a living and I would certainly lose all I had been able to save.

After buying a team and three good cows, 10 fine large sheep and what machinery it takes to run a farm, I had only \$300 to pay on my place. The hay was so poor I plowed all I could the first year and planted a lot of corn. I raised 500 bu corn. The hay was poor, so I took 20 horses to winter at \$20 a head. I fed them hay once a day and all the straw and corn fodder they cared to eat. They came out hog fat. My best hay was drawn out in the woods and traded for shingles and cedar posts. In the spring, found I had made \$400 on the place. My wife raised 40 turkeys, these we sent to Boston and they brought \$50, and 100 chickens brought \$50.

The second year, in March, I set out 30 bu potatoes on crates. These I put on racks in the hen house. In very cold weather I had to keep a fire. I had to sprinkle these every day. As soon as the ground was dry I set these out. My ground was well enriched with plenty of fertilizer. I took good care of these and July 1 had large, ripe potatoes. The first brought \$1.25 per bu, then down to \$1. I cleared \$100 after paying for everything and buying groceries to last all summer. I raised lots of pigs and sold them. One hog brought \$30 for her pigs in one year.

I set out a nice strawberry bed, a lot of red raspberries and there were all kinds of fruit on the farm. Every spare minute I was cutting brush and trimming trees. I plowed under the weeds for 2 yrs and this killed them and when they rotted helped to enrich the soil. After the second plowing I seeded it all down. The second winter I took the horses again and made \$400. The next summer I built woven wire fences on most of the place. Hay was high that year and I had 30 tons to sell. My hay, grain and stock I traded for hay brought me in \$500.

I raise all kinds of grain. I have about 50 bu wheat; 5 bu will buy a barrel of flour. Wheat is the best feed for hens to make them lay in winter. I keep 100 hens and these lay all winter. I sprouted potatoes every year, for this came when there was not much work to do and they always brought cash when there was kind of a dull time. I had a dairy of 15 good cows. I bought a separator and printed my butter in round bricks. These were rolled in tissue paper. I had customers for all I had at 25c p lb. This made a nice profit.

I bought young calves of neighbors who were going to kill them. I fattened them on milk and linseed meal and in six weeks they would bring \$7 or \$8. I always had some stock to sell. These are always kept in fine shape and bring a good price. I send my team to work when I can get a chance to earn money and by doing this I am never out of funds. By hard work I have saved \$2000, built good fences, shingled three barns and large house, built ice-house, the weeds are nearly gone, have a flock of 50 sheep, 10 hogs and 4 horses. This may seem easy to some, but I did not loaf around and preach hard times. I am out of debt and don't intend to ever get into debt. All this I have done in 10 yrs.—(C. F., Addison Co., Vt.

The largest shipment of farm machinery ever made from this country left Philadelphia last month for Russia. Over 300 freight cars of machines were packed in the steamer Crews, valued at \$1,000,000.

Our Friend the Hog.

BACON PRODUCTION IN CANADA.

The ideal hog of the American packer is very different from that of the Canadian packer. American packers supply a market which is quite different in its requirements from that supplied by Canadian packers. In the English market, therefore, Canadian bacon of the best quality does not come into direct competition with the bulk of American bacon, but has to try conclusions with the bacon of Ireland and Denmark.

Canada's export staple in pork products is what is known as "Wiltshire sides," and London is the home of this trade. The market is limited and extremely fastidious. The light sides which may be very desirable in some sections, or the heavy, fat bacon which is required in other parts of the country, cannot be sold in London at any price. It must be just right, or London will have none of it. It therefore taxes the skill of the Canadian packer and feeder to retain the foothold already won in the English market, and their only hope rests in keeping competitors out by the superior quality of Canadian products.

Unfortunately, Canadian bacon is not always first class in quality. A considerable number of farmers still persist in producing the wrong type of hog, though there has been considerable improvement in this respect of late years. But there is another and a more serious problem to face. The peculiar method of curing bacon for our English trade appears to have a tendency to develop softness of the fat, unless the hogs have been carefully fed. We have not as yet got to the bottom of this matter, though we know that some foods are more conducive to producing firm bacon than are others. Owing to its cheapness, a great deal of corn has been fed to hogs of late years, and this food is claimed by our packers to be largely responsible for producing soft bacon. Experiments conducted both in Denmark and at the agricultural college at Guelph go to show that there is considerable truth in this contention, though it has also been shown that there are other things that will produce softness.

So far as our knowledge goes, it seems important that the growing pig should have plenty of exercise until it reaches at least 100 lbs 1 w. If it has been properly fed and managed up to this time, there seems to be little danger of producing softness even by feeding corn. The less exercise available the greater the care necessary to provide muscle-forming foods. Of the foods which have been more thoroughly tested, skim milk, whey (fed in moderation), barley, peas and wheat middlings seem to be the safest so far as quality is concerned. In our recent experiments, barley has been fed exclusively to hogs from the time they were 3 mos old until ready for market and produced bacon of excellent firmness. A mixture of three parts ground peas to one part wheat middlings by weight, fed as above described, gave equally good results. Exclusive corn feeding, however, for the same period gave bacon of very soft and undesirable quality.

In other experiments we have fed corn to hogs that had plenty of exercise and a light meal ration up to the time they had reached about 100 lbs 1 w, and to hogs which had very limited exercise but had received a mixed grain ration with skim milk until they reached about 100 lbs 1 w, and no evil results were noticeable. From 2 to 3 lbs of whey to 1 lb meal also seemed to have a tendency to prevent softness.

Many of our farmers have been rearing hogs on clover during the finishing period and this practice has also been blamed for producing soft bacon. Results of tests have not been conclusive upon this point, but it would seem as though a fair allowance of mixed meal while on pasture has a tendency to correct any injurious effects of the clover.

For winter feeding, roots are becoming very popular, especially mangels. They are fed both raw and cooked, but we have no reliable data as yet regarding their influence upon the quality of bacon.

Practice varies greatly, but we may sum up approved methods about as follows: For young pigs after weaning, skim milk and middlings, often mixed

with a little bran or finely ground oats, form the staple. A few roots are introduced into the food at an early date to accustom the pigs to eating them, and the quantity is gradually increased until by the time the pigs are between 3 and 4 mos old they are getting rather more roots than meal. By the time the pigs are 3 mos old, barley may be added to the ration, and for the finishing period of 6 or 8 weeks a mixture of peas, barley and middlings is excellent. If the skim milk can be continued, all the better for both gains and quality. The description just given applies more particularly to winter feeding. Spring litters commonly go from roots to a clover pasture and do best when supplied with about a half ration of meal. It is regarded safer as regards quality if the hogs are given about six weeks of exclusive meal feeding at the close.

Some of our good feeders have adopted the plan of feeding meal dry or mixed with pulped roots, especially during winter. So far as we have tested it the results seem favorable, and it seems reasonable to suppose that when food

is moistened the hog is often forced to take more water into his stomach than is good for him. We have had less trouble with "pot bellies" when meal and water were given separately.

The above constitutes a somewhat rough summary of some of our commonest methods and difficulties in hog feeding. As stated before, the practices of Canadian farmers are anything but uniform and we have still very much to learn. It can easily be seen that cheap gains do not constitute the sole end in view, for the very existence of our export trade depends upon the quality of our product, and the problem of improving the quality of our bacon is attracting the greatest attention at the present time. The proper type of hog and the right kind of food are both necessary to produce the kind of bacon which our English trade demands.—[Prof G. E. Day, Ont Agri College.

An Automobile Plow is said to have been invented by a Dr R. J. Gatling that can be operated by one man and will do the work of 3 men and 12 horses.

AN APPEAL TO HUMANITY

We need your assistance in announcing to the world the GREATEST REMEDY that Science has ever produced, and you need our assistance to secure relief for yourself and friends through SWANSON'S "5 DROPS."

A REMEDY SUPREME As surely as the American Navy has conquered and will conquer all that opposes it, so will "5 DROPS" unfailingly conquer all diseases like Rheumatism, Sciatica, Neuralgia, Lumbago, Catarrh of all kinds, ASTHMA, Dyspepsia, Backache, Stomachicosis, Nervousness, Heart Weakness, Toothache, Earache, Creeping Numbness, Bronchitis, Liver and Kidney Troubles, etc., etc., or any disease for which we recommend it. "5 DROPS" is the name and the dose. "5 DROPS" is perfectly harmless. It does not contain Salicylate of Soda nor Opium in any form. The Child can use it as well as the Adult.

Read carefully what Mr. L. R. Smith, of El Dorado Springs, Mo., writes us under date of Nov. 27, 1897, also Martin Bowers, of Carleton, Ohio, under date of Dec. 14th, 1897:

NEURALGIA I do not know how to express how wonderful I think your "5 DROPS" medicine is. I was suffering intensely with NEURALGIA and thought for a month that I would have to die. One day a lady called to see me and brought me an advertisement of your "5 DROPS." I resolved to try it and sent for a sample bottle. Have been taking it for three weeks and have not had an attack of suffering since I took the first dose. I believe it has saved my life. This statement is entirely true. I shall also take pleasure in recommending your "5 DROPS" for the cure of NEURALGIA.

RHEUMATISM Your "5 DROPS" came to hand on the 11th of last month and was glad to receive it for I was suffering at the time with neuralgic pains. The first dose helped me out of my pain on short notice. Bless the name of God for it. It will do all you say it will, and more too. I had severe pains all over my body, when night came I could not sleep. The worst pain was in my left leg. I could not put my foot to the floor without suffering great pain. Have used four different kinds of medicine for RHEUMATISM and got no relief until I got your "5 DROPS," which gave me immediate relief as above stated. MARTIN BOWERS, Box 51, Carleton, Ohio, Dec. 14, 1897. 30 DAYS To enable sufferers to give "5 DROPS" at least a trial, we will send a sample bottle, pre-paid by mail for 25c. A sample bottle will convince you. Also, large bottles 50c dozen \$4.00, 6 bottles for \$1. Sold by all druggists. AGENTS WANTED in New Territory. Don't wait! Write now! SWANSON RHEUMATIC CURE CO., 100 to 104 Lake St., CHICAGO, ILL.

MONEY IN POULTRY
A Colossal Contest Instituted by American Agriculturist Week-End—Orange Judd Farmer of Chicago, American Agriculturist at New York, and the New England Homestead of Springfield—to bring out practical experiences to increase the profit and lessen the work of poultry culture.
Prize List Headed by \$500.00 IN GOLD!
Contributed by Orange Judd Company, publishers of said weeklies. Other prizes are offered worth \$2,000.
TOTAL PRIZES \$3,000 IN VALUES.
Keeps of poultry on both a large and small scale, the poultry press, etc., are enthusiastic over it.
BASIS OF AWARDS
Not for the biggest profit. It is for the most accurate record of methods and results. A large number of special prizes. Winners will earn from \$10 down to \$1 per hour for time spent.
CONDITIONS
1. The record shall run for one year from April 1, 1900.
2. Anyone who keeps 10 or more fowls may enter the contest, provided their subscription to our paper is paid in October, 1899, or beyond.
3. The book for record, methods, etc., makes the whole thing plain and simple, so easy that anyone may readily win some of the hundreds of big prizes. The book gives premium list in full, rules, etc.
TO ENTER THE CONTEST
Price of paper alone, six months, April 1 to October 1, 1900, \$ .50
Price of Contestants' Record Book alone, \$ .50
"Profit in Poultry," best poultry book in market; 352 pages, 124 illustrations, illuminated covers, 16 color plates of leading breeds, price of this book alone, 1.00
Total value, \$2.00
All For Only 50 Cents
By writing to Poultry Editor, Orange Judd Co. agency, Enclosed find 50c. for which send your Weekly, Money-in-Poultry Record Book, Profit in Poultry, also enter my name as a contestant. Sign your name, post-office, county and state. To avoid delay, address our office nearest you.
ORANGE JUDD COMPANY, Publishers,
NEW YORK, 20 N. 2nd St. CHICAGO, 100 to 104 Lake St. BOSTON, 20 N. 2nd St.

Canadian Farm Affairs.

THE GRANGE ANNIVERSARY.

The 25th annual session of the Dominion Grange of Canada was held at London, Ont., last month. Master Jabel Robinson of Middlemarch delivered an inspiring address, urging education, organization and co-operation as the great need of the farmers of to-day.

Of recent years the order has extended into Manitoba. The Grange organization now consists of about 75 flourishing subordinates, many of which have substantial grange halls. While no granges have been organized during the year, none have surrendered their charter.

Master Robinson outlined why the Grange was not as strong as it used to be, criticised the fact that farmers are too easily satisfied as to legislative matters, urged the importance of united work, congratulated Patrons on the opening up of the British market to Canadian produce and urged Patrons to produce the choicest produce.

The Quebec Pomological Society met at Granby Feb 21 in seventh annual session. Discussions hinged chiefly on the apple crop and several of the best-known experts in the Dominion were among the speakers.

Keeping Boys on the Farm—Much is written about keeping boys on the farm, but we cannot see why boys who have a dislike for farm work and who are always longing for something different should be compelled to pass their lives on the farm.

Quebec Apples of late fall and early winter varieties are more profitable than other sorts. These include Alexander, Wolfe River, St Lawrence, Winter St Lawrence, Wealthy, Fameuse, Switzer, McIntosh Red, Canada Baldwin, Scott's Winter, Golden Russet, Canada Red and Northwest Greening.

New Brunswick—There is every sign that 1900 will be a year of prosperity for the N B farmer. The winter has been mild and stock has wintered well. Grass roots were not injured by fall frosts and this would indicate another large hay crop.

meeting in Fredericton in late Feb and early March. The discussion took a wide range, but all in the interests of farmers. Some seemed inclined to sneer at the poultry industry, but only a very few took that view.

Speaking from Experience, both as a farmer and an orchardist in Que. I can safely say that apple orchards of proper varieties, taking one year with another, pay at least fivefold better than mixed farming.

Rock Elm tree cultivation is inquired about by J. P. of Ont. I am not certain what tree J P means. A French-Canadian chopping for me calls the tree known in N H as buttonwood a rock elm.

While Not in the Trust, the Bowker Fertilizer Co bought its raw material before the rise and is therefore able to sell its Stockbridge manures and Bowker fertilizers at practically last year's prices.

The three maritime governments are said to have agreed on a plan for the establishment of a joint technical college where agr is to be a leading feature.

F & H is now filling a long-felt want with a strong tendency toward uniting more closely the natural bonds of friendship and commercial intercourse which should exist between two great, progressive countries.

ACME PULVERIZING HARROW. Meets the most exacting requirements of all soils for all crops under all conditions. Crushes, cuts, lifts, pulverizes, turns and levels. Made of Cast Steel and Wrought Iron—lasts always.

KEYSTONE Adjustable Weeder and Shallow Cultivator. Can be expanded to 7 1/2 ft. Can be narrowed to 30 inches.

POINTS OF SUPERIORITY OVER A STRAIGHT FRAME WEEDER: It is adjustable both as to depth and width. Can be narrowed to 30 in. and expanded to 7 1/2 ft. When narrowed up to 30 in. it can be used between the rows, working close to the plants.

From Manufacturer to You. The original and still THE BEST HARROW of the kind. Of best seasoned white oak. Teeth of best all tempered steel.

AUTOMATIC WEEDER AND CULTIVATOR. A time, labor and money saver. Kills all weeds on any kind of crop—any kind of land.

CHAMPION EVAPORATOR. For MAPLE SYRUP and SUGAR. Has a corrugated pan over firebox, doubling boiling capacity and saving fuel.

"As you sow so shall you reap." BEFORE BUYING SEEDS, PLANTS, BULBS OR FRUITS, SEND FOR DARCH & HUNTER'S CATALOGUE.

THE G. H. GRIMM MFG. CO. 24 Wellington St., MONTREAL.

Windsor Salt. Gives to butter that delicious sweetness and freshness which brings the high price. Perfectly pure; natural crystals—try it.

FREE BEST FENCE MACHINE MADE. To first purchaser in each neighborhood of not less than 2000 lbs. of coiled spring wire at market price.

IT DOES DOUBLE DUTY. The "PLANET JR." No. 4. Combined Hill and Drill Seeder, and Wheel Hoe Cultivator, Rake and Plow is the ideal hand all purpose tool for the small or private gardener.

## The Truck Garden.

### STANDARD VEGETABLES.

The multiplicity of varieties in seed catalogs is confusing to the average buyer. The majority of seedsmen are often interested in introducing some new variety which they boom up above all others, or they may have an over stock of seed and hence say more than the facts really warrant. The following kinds are most largely grown and are generally safe to plant in any section, although some vegetables do better in one locality than in another:

Wax or butter beans, Black, Golden and Wardwell's Kidney Wax, green or snap beans, Red Valentine, Six Weeks and Early Mohawk, beets, Egyptian, Eclipse and Edmund's Blood Turnip, cabbage, Jersey Wakefield for early, All Seasons for medium and Flat Dutch or Drumhead for late; cauliflower, Snowball for early and Algiers for late; carrots, Danvers, Chantenay and Long Orange, celery, White Plume for early and Giant Pascal for late, New York Purple egg plant, sweet corn, Cory for early, followed by Crosby and Potter's Excelsior, and for late, Stowell's Evergreen and Country Gentleman, cucumber, White Spine and Long Green; lettuce, for cutting or loose heads, Black-seeded Simpson, for cabbage or head sorts, Deacon and Hanson.

Muskmelon, salmon-colored flesh, Emerald Gem, Delmonico and Paul Rose, green flesh sorts, Netted Gem, Hackensack, Jenny Lind, watermelons, for early, Phinney's, Vick's and Fordhook Early, main crop, Kolb Gem, Seminole and Dixie, onions, Yellow Danvers, Red Wethersfield, Southport White Globe and Pritzaker; peas, early, American Wonder, Little Gem, Nott's Excelsior and Gradus; second early, Heroine and Telephone, main crop, Stratagem and Champlon of England; spinach, Long Standing or Thick Leaved; radish, Scarlet Turnip, Long Scarlet, French Breakfast, White Vienna; squash, White Bush Scallop, Summer Crookneck, Boston or Orange Marrow, Hubbard, tomatoes, Dwarf Champlon, Acme, Perfection; turnips, Purple Top Strap-leaved, Purple Top White Globe and Yellow Aberdeen.

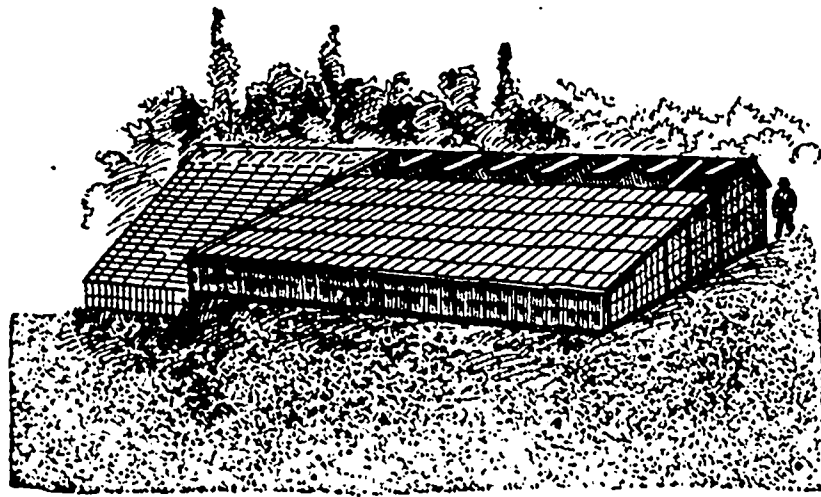
### WHERE TO RAISE TOMATOES.

The best soil for tomatoes is a rich, deep, sandy loam. The next best is a deep, rich, gravelly loam, but if the gravel comes too near the surface, the crop in dry seasons will be light. Such soils are usually dry and well-drained in their natural condition, and take in the heat of the sun more than heavy soils. Muck soils may sometimes grow good crops of tomatoes if well drained; but they are apt to grow too much vine and the fruit does not set early and freely, so that the crop comes in late, and consequently is seldom profitable. Clay loam may be made in fair condition for a crop by good under drainage, using 3-in tile put in 3 ft deep and not more than 30 ft apart.

Heavy clay soils should be avoided, as they will not be profitable to grow tomatoes on. Those who have no other soil and wish to grow good tomatoes for family use should choose as dry a piece of land as they have and mark out the size they require. Then draw on four square yards of medium fine sand to each rod of land; also a load of well-rotted manure, and if it can be obtained, a load of muck. Spread evenly over the piece and work it in with a horse cultivator 3 or 3 in deep; plow it up and work again with harrow and cultivator until the soil and other material are perfectly mixed. Use the same land every year and work it a little deeper each year until it is worked 12 in deep, adding more sand if necessary, about half sand on such a soil would not be too much when well mixed.—[S. H. Mitchell, Ont.]

### HANDLING THE MANURE.

Stable manure forms the bulk of fertilizer used by Long Island and Jersey truckers and all market gardeners who can get it at a reasonable price. The fact that it is bulky and expensive to handle has no weight with them. They know from years of experience that the results of its use in liberal quantities is positive, beneficial and profitable, and enables them to use the



Improved Vegetable Forcing House.

same land in hoed crops for years in succession without seeding to grass.

In a dry season on land which has been cropped for several years, there is not the danger of a crop burning up that is grown with manure as where only commercial fertilizer is used. The coarse, strawy part of the manure, or humus, is what gives it this value. The same results can be secured by plowing under a good growth of crimson clover, cowpeas or vetches.

Truckers near New York always compost the manure for one to six months. They buy largely by car or boatload and place it in immense heaps, packing it down firmly with the horses and carts. The composted manure gives quicker results, and does not produce such a rank, succulent growth.

The manure may be spread broadcast and plowed under, spread after plowing or harrowed in, or placed in the hill or drill before planting the seeds or setting the plants. All of these methods and combinations of them are practiced on good truck farms, some being better adapted to one crop than to another.

On land not too rolling the manure may be broadcasted in the winter in order to help along the spring work. Not much will be lost in leaching or washing, and if spread now it will be possible to plow and plant at the earliest possible moment when every day counts big.

### A MODERN FORCING HOUSE.

Market gardeners near large cities have found economy the watchword of success. Economy is applied to space, particularly where vegetables are grown under glass, which is about the only way they can now be grown profitably, or rather it is the most profitable branch of market gardening. And then it is only profitable where every inch of soil is at all times producing something.

Lettuce is the leading crop grown on benches under glass by market gardeners, and it is one of the most profitable, owing to the fact of its being a continuous one, as it is grown throughout the year. For what might be termed the first crop, the seed is sown about Aug 15 in the open ground or in cold frames. These are transplanted into houses about Sept 20 and the crop is ready for marketing by Nov 1. The first crop is considered the most profitable, as solar heat is all that is required to produce it. For a succession, seed is sown at intervals of two weeks in order to have plants at all times in readiness for setting, and it must be understood that all the houses are not all at the same time, but at such periods as will afford heads at all times.

When the plants are set, radish seed is sown in alternate rows, and between the plants in the rows; as these grow quickly, a crop is secured before the lettuce will need all the room. It requires from six to eight weeks to produce a crop after the plants are set. The yield of lettuce in a greenhouse is about three plants to the square foot, each crop, and three crops can easily be secured during winter. As the wholesale price is about 50c per doz, it is easy to estimate the value of a crop and the returns from a greenhouse during winter. The profits of a crop would be difficult to estimate, as how the business pays depends wholly upon the gardener, his attention to his business and his ability to manage it. The forc-

ing house portrayed herewith is a fair sample of what is in general use. Details as to various plans of forcing houses can be found in Prof Taft's book on Greenhouse Construction.

No one can garden successfully who attempts to force nature too far by disturbing the soil while it is mucky. It should never shine when turned by the slippery plowshare, or become compact when pressed firmly in the hand, as the hot sun that will soon follow must bake and harden the surface, rendering it lumpy and difficult to disintegrate. No amount of labor with cultivator or hoe will cure the evil which must inevitably follow if this plain, common sense rule be violated, and its observance is therefore of the greatest importance.—[E. F. Wetstein, Jefferson Co, Ky.]

For a Market Garden a rocky soil should be avoided, as deep cultivation is necessary and a clay subsoil is a drawback, as, unless underdrained, the land will be cold and late. The proper soil will have a sandy or gravelly bottom, and the location, if one may have a choice, will be with an eastern or southern exposure. The difference between a southern and northern exposure is often a crop a year, and because the land to the south is available earlier a first crop can be gotten out of the way in time to have a second follow.—[Miss Mary E. Cutler, Worcester Co, Mass.]

**Cabbage Maggot.**—There is no known rule for protecting cabbage from this pest. It is certain that any treatment of the seed before sowing will not have any influence in doing it. Where we cannot raise the early crop because of trouble by the maggot, we can raise a late crop, by not sowing the seed until after the season is past of the fly that lays the eggs, which in this region is the latter part of May or early June.—[Frank Wheeler, Middlesex Co, Mass.]

**Endive** is a particularly valuable vegetable, because it can be had at a time when such things are rare. The outer leaves must be tied up carefully to make the center of the head bleach. When this is done, the center is white and crisp at the end of a week or so and may be used for a salad as we use lettuce or may be cooked in various ways like spinach.—[Eva Gallard, Pa.]

**Beans Quiet But Firm.**—Offerings are restricted and high prices prevent active bidding. Some talk of smaller imports from Europe, and this should prove a strengthening factor.

**Artificial Hotbed Heat.**—Take as the crude materials, 500 lbs straw, 3 bu powdered quicklime, 6 lbs muriatic acid and 4 lbs saltpeter. Spread 3 or 4 in of forest leaves or old hay in the bottom. Upon that spread 3 in straw, tramp down and sprinkle with one-third part of the quicklime. Dilute the 6 lbs muriatic acid with 20 gals water and, by means of an old broom sprinkle the bed with one-third part of the solution. Make another layer of 3 in of straw, applying quicklime and the solution as before. Repeat for a third layer of straw, and upon it sprinkle the 4 lbs saltpeter dissolved in 30 gals water. Place the box in position, bank up outside, within the

box spread 3 in rich, finely pulverized earth and then put on the sash. A heat will soon be generated which will continue for two or three weeks.—[Exchange.]

The garden should, and to be made profitable must have the best spot on our farm. It is useless to expect choice vegetables planted on soil that is not in tith and fertility to grow 80 to 100 bu corn p a. By all means make your garden the richest spot on your farm, give it all the composted manure you can, incorporate it well into the soil, protect it from chickens and look out for insect enemies and you will find it the most profitable crop on the farm, adding comfort and health to the family.—[Godfred Winkler, Mo.]

To raise early melons, cucumbers, etc, break the top of an egg shell and make a little hole in the opposite end with knitting needle. Fill shell with rich soil and place one seed in each shell. Put shell in a box of warm sand in the house. Transplant in settled warm weather.—[Mrs G. M. Latimer, Lincoln Co, Nev.]

Worms on cabbage can be prevented by dampening wood ashes with coal oil and sprinkling on the plants while wet with dew. Two or three applications may be necessary, but it will clean them out.—[V. W. Jones, Tarrant Co, Tex.]

### CHAT WITH THE EDITOR.

For bulletin on keeping milk fresh 91 days, W. A. F. should write to the Director, W. Va. Expt. Sta., Morgantown, W. Va.—E. F. S.: Alfalfa seed is sold by all our western seed advertisers.—Mrs S. H.: Many plans are printed in a bulletin by the Neb. expt. sta. at Lincoln for making a homemade windmill. Write to the director for one; it is free.—E. C.: I know of no instance in which blamuth compounds are used for the preservation of elder. Borax, benzoic acid or salicylic acid are frequently used in preserving beverages, but their use is not to be recommended. Compost your hen droppings with about eight times their bulk of muck and keep under cover.—M. E. O.: Elephant Ears plants are sold by nearly all florists and seedsmen that advertise in F & H.—Mrs T. A.: Gopher exterminating remedies are sold by George H. Lee Co of Omaha, Neb.—Mrs P. M. C.: The climate at Great Falls is as severe as anywhere in Mont. The expt. sta. at Bozeman recommends as best apples, Duchess, Wealthy, Tetofsky and Yellow Transparent. Give winter protection by wrapping white paper or burlap around the trunk and stems.—Mrs Foss, Kan.: The Kan. expt. sta. does not recommend sowing red clover on a run-down pasture. Any hard-wood ashes would probably do as well as hickory in your recipe.—J. McG.: Hay presses are sold by George Eriel Co of Quincy, Ill.; Keystone Mfg Co of Sterling, Ill.—W. H. M.: Reliable books on rose culture are The Rose, by Elwanger, price \$1.25; Parsons on the Rose, price 1; Secrets of Rose Culture, by Hatton, price 50c. Books on grafting and budding are: Thomas's American Fruit Culturist, price 25c; Practical Fruit Grower, by Maynard, price 50c. These books are all sold by the Orange Judd company.

ONE OF THE BEST among the many makes of separators is the Empire, made by the U S Butter Extractor Co of Newark, N. J. While the Empire costs no more than other separators, it is made of the very best material. This is evidenced by the fact that its sales in 1899 were 20 times greater than in 1898. Nothing is sacrificed to cheapness in its manufacture.

FENCING MATERIAL at this season interests a hosts of readers. Our friends should send to the Hartman Mfg Co of Elwood City, Pa. for their catalog. Not only are farm wire fences illustrated and described, but their well-known steel rod picket fence with ornamental steel gate is of interest. The steel rod fence is strong and durable, and while it costs no more than a wood picket fence, will greatly outlast it.

FENCING MATERIAL is much cheaper when bought direct from manufacturers. The catalog of the Advance Fence Co, Old street, Peoria, Ill., illustrated and fully descriptive, is free and will save money over retail prices. This enterprising and reliable concern does an extensive business through grange and other co-operative bodies, and is therefore in a position to fill every want.

A HANDSOME CARRIAGE can be bought for a very reasonable figure of the Elkhart Carriage and Harness Co of Elkhart, Ind. Their handsomely illustrated 150-page catalog shows the popular styles of carriages and harness. Prices are low, as business is done direct from factory to purchaser. The Elkhart Co are the largest manufacturers of carriages in the country, have been in business 27 yrs and are bound to give their patrons satisfaction.

Plants and Flowers.

CARE OF INDOOR SEEDLINGS.

Seeds of pinks of all kinds, aster, petunia, verbena, pansy, and in fact all of our garden flowers that transplant well may now be started indoors, and the season of outdoor bloom thereby lengthened for many weeks. Use shallow boxes of good garden soil, cover the seeds lightly, then press the soil down firmly and evenly with a bit of board or something with a smooth, flat surface. Some advise covering the boxes until the seeds germinate, but with me it causes the soil to mold. Watch that the seeds do not dry out. The boxes may be kept in a warm place until the little plants begin to appear, then place immediately in a sunny window. Keep the soil moist without over watering. Too much moisture or too much warmth will kill the little plants by causing them to damp off. Transplant before they crowd much.

Pinks and pansies like a cooler place than most of the others; much warmth causes them to spindle and also encourages insects. Look out for the gray mite and aphid. The latter can be prevented by sprinkling tobacco powder over the little plants. It is cheap stuff and can be had of a florist or dealer in florists' supplies. Watch for the mite. Its appearance can usually be detected by a gray appearance of the upper side of the leaves, but the insect and its eggs are usually found on the underside. Make some whale-oil soapuds, not very strong, and with the hand wet in the suds brush over the little plants so as to wet the leaves thoroughly, especially on the underside. If only a few plants are affected, pull them up and throw them away or separate them from the others. Several applications of the suds should be made. It will not harm the plants unless made quite strong. Remember that this insect never flourishes in a cool, damp atmosphere. Plenty of moisture on the foliage without overwatering the roots is both remedial and preventive. This rule applies to all plants infested by this insect. It is the worst greenhouse pest. If you suspect its presence, but cannot find it with the unaided eye, use a magnifying glass. It is flesh-colored, egg-shaped, usually with two dark spots on the back.—[W. F. Heath, Cheshire Co., N. H.]

SPINDLING GERANIUMS.

In spring, there are usually several spindling geraniums, which are of little use for bedding out in the ordinary way, or to keep for another season's blooming. This long, slender growth with few branches is caused by overcrowding and continued blooming without having the ends pinched back. Having experimented with such plants for several years, I have found a novel way to treat them and can sometimes make a good-sized bed of geraniums from one plant. If the plant has but one stem, a bed cannot be made from it alone, but if there are three or four long branches the plant will yield readily to the treatment.

Set the plant in the center of the bed, placing it quite deep, so that the branches can be laid flat on the ground without breaking. Spread them in different directions, pegging them down close to the ground for their whole length. Grown in that position, they send out a shoot from each joint, the latent buds being always already to grow under favorable circumstances. Each new shoot will grow upward, there being no side shoots except those produced later from the upright plants. All the shoots having an equal chance for light and sunshine, there are a much larger number of flowers produced from the plant. Roots start out from each joint where it touches the soil, so that in a very short time dozens of plants are growing where one was planted, which is one secret of the success of the plan.

There are many roots to support the plant, each shoot being partially dependent on its individual root instead of all drawing support from one root. In fall such plants can be taken up, divided and placed in the cellar, but should not be divided too small, doing better if left as large as can be handled easily. In spring they can be separated in small sections, each with its own root, and bedded as usual. Plants with

one stem can be treated in the same way, making a bed in combination with other plants.—[Lena A. Holmes, Ill.]

SOME SWEET PEA POINTERS.

These lovely flowers have seemed to deteriorate and in some instances go back to the old-fashioned wild sweet pea. There are different causes, but I think one serious cause to be poor seed. There has been such a demand for sweet pea seed that a great many have sold great quantities of cheap seed and these will not produce the finest flowers. I have raised sweet peas in quantities several years and have purchased seed from different parties, and I have found out that a great deal depends on the seed. I always cut the blossoms for market so that I must necessarily depend upon others for my seed. Last summer I planted two rows 200 ft long of three varieties, red, white and lavender. I purchased the white seed from two different firms, but the seed was the same variety. Just one-half of these white peas yielded an immense amount of blossoms on long, stout stems during the whole season. The rest of the white ones never brought me in a nickel; the blossoms came out on little slender stems about 2 inches in length and the vines made a miniature hedge. Little vines started out at every point, the same way with the lavender, and they were all planted in the same row.

The Firefly was the most magnificent sight I ever saw in the shape of sweet peas. I cut them twice a week, and the last cuttings were as fine as the first. I could cut the single stems all the season without taking part of the vine to make them long enough, as I must on some other varieties late in the season. I never plant sweet peas in the same place 2 yrs in succession, nor ever in shade or near big trees. I get the seed in as early as possible in spring and fertilize with ashes and commercial fertilizers in the row on moderately rich ground. I purchase seed as soon as the catalogs come in before the best seed has all been sold. I love to raise sweet peas.—[Mrs John Galliard, Erie Co., Pa.]

FOOD FOR POT PLANTS.

The great demand for plant food which is in convenient form for use and is also cleanly, has caused many such articles to be placed on the market. Most of these are very good, but one can prepare them at home, making the cost less while they produce the same results. The following are both used in the water given the plants, though they can be used dry by digging a small quantity into the soil around the roots. The former method is safer, however, as one can more easily tell what quantity is being used.

Take a gallon jar and fill it with bones, packing them in closely; then add one cup of potash which will fill in among the spaces. Cover with water and set away for a time. Before long the bones will all be dissolved and the substance in the jar will resemble soft soap. A tablespoon of this, dissolved in the water given each large plant will be a suitable dose; other plants being given a quantity suitable to their size. The following formula will also be found good: To 1 gal hot water add 4 oz white sugar, 16 oz sulphate of ammonia and 8 oz nitrate of potash. When dissolved, place in bottles, cork tightly and use a tablespoon and a half in each gallon of water used on the plants. Water only the soil, as many of these fertilizers are too strong for the foliage, leaving unsightly spots on it.—[Marion Meade, Ill.]

SOWING FLOWER SEEDS.

Now is the time to start primroses, gloxinias, maurandia, smilax and the like. Procure cigar boxes and with gimlet or knife make a couple of holes in the bottom of each. Then put in coal or broken bone, then a layer of dirt, and having sifted in the final layer press it down. For this purpose, as well as for leveling the surface of the soil, use a pasteboard a trifle smaller than the box.

After preparing the soil and wetting it somewhat, sow the seed, sprinkling on just enough dirt to cover. If the seed are only one-sixteenth inch thick, cover one-eighth inch and in like proportion all others. After sowing, press the soil gently to make firm and exclude air.

Germination will be hastened several days. Don't water too much. Many persons fail with primroses, cobaeus and other flowering plants simply because they over water. Keep the soil not wet but moist, to do which do not pour water on the surface and produce floods, but set boxes in a dish of water. Owing to the holes in the bottom of them and the "subsoil" of coal or bones, all the water that is needed will be quickly absorbed; but best of all there will then be less likelihood of the plants damping off—a thing which they are otherwise apt to do, primroses and clematis in particular. [Fred C. Sibley, Otsego Co., N. Y.]

STARTING EARLY FLOWERS.

Some varieties of flowers must be started indoors in order to get them to bloom before frost, while other sorts will flower in early summer if started early enough. Cosmos, single dahlias, chrysanthemums, heliotropes and geraniums are of the first class and will not give good results if planted in the open ground. Aster, balsam, carnation, marigold, petunia, phlox, salpiglossis, stock and verbena all do better to be started indoors and transplanted.

Sow the seed in shallow boxes in the house or in the hotbed and label each variety, or you will have a nice mixup later in the season. Cover the seed lightly, put the boxes in a warm place and protect from direct sunlight. Cover with a glass to prevent the soil drying out too quickly, and use care in watering, so as not to wash out the fine seed. A camp paper may be put on top of the soil and the water poured gently on this. After the plants put out the third pair of leaves they should be transplanted to other boxes and not set in the open ground until of suitable size.

For Planting Trees, dig generous-sized holes and deep down in well-drained land and shallow in wet places. An adequate amount of well-composted material should be used about the roots. An annual top-dressing should be applied to produce the best effect, both in tree and leaf.—[O. B. Hadwin, Worcester Co., Mass.]

Coarse grass such as timothy does not do for lawns. A good mixture consists of equal parts Kentucky blue, red top and white Dutch clover, sown 3 to 4 bu p a.

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Words by WALDO.

Music by C. H. R. MILLER.

*allegro*

1. Down near the rus - set up - plo tree, close by the old stone wall,  
2. Oft have I sought this spot so fair, dreaming of your dear eyes;

*Moderato*

Love, let us stroll or bide a wee watching the shadows fall; . . . Clear rings the thrush's ves - per lay, soft  
See - ing the love - light shining thro' clear as the sun - lit skies; . . . To watch the ros - es bloom for me so

blows the even - ing air; One lit - tle word will you not say, making the whole world fair?  
fair or white or red; Long - ing to tell my love for thee, thrilling with hope and dread.

**REFRAIN.**

Tell me, my sweet - heart, tell me true, what will your an - swer be? My heart and love I of - fer

you, here 'neath the ap - ple tree; Whisper, my love, that one sweet word, sweetest of all that

man hath heard, Whis - per a - gain and your love con - fess, that one lit - tle, dear lit - tle wee word, yes!

*rall.*

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### A WORD SOCIAL.

As it was a church social that they were planning, the committee did not wish to, have any amusement which could be criticized as unsuitable for the

occasion. They originated a "word" social, in which some instruction upon the Bible could be acceptably introduced.

The following notice was sent to the local newspaper, and also read from

several pulpits: "An original word social will be given at the town hall in Allensdale, Dec 21, for the benefit of the church. Everyone is cordially requested to be present; and each one is invited to be prepared with a quota-

tion containing the word, 'Word.' Refreshments will be served, to which the church ladies are asked to contribute." The invitations, which might have been distributed at the opening of the social, to be used only for reference, or omitted entirely, were given out as far as possible by the committee; and an urgent personal invitation added. Economy of expenses being an object of consideration, these invitations were designed by some of the young artists, who spent together a pleasant evening for that purpose. They were made of very thin cardboard, doubled once to form a booklet. Upon the outside were printed in colors the name and date of the social and the place in which it was to be held. At the top of the inside page was written, "How sweet are thy words unto my taste." (Psalms 119:103.) Also the following list of Old Testament books: Genesis, Exodus, Numbers, Joshua, Judges, Samuel, Esther, Psalms, Proverbs, Isaiah, Ezekiel, Daniel, Obadiah, Jonah, Haggai, Malachi. These, it was thought, would contain as many letters as the number of people in attendance. If a smaller number were there, a corresponding number of words would be omitted. The reason for choosing these particular books was that they contained enough letters, allowing one to each person, to form a pleasant sized group of people. At the bottom of the invitation was printed in small letters, "Please retain this for reference during the evening." It was planned that enough should be designed so that each guest might be given one.

Each one to arrive was greeted cordially by the committee, and extra effort was made by them, as well as by several social people, privately appointed, to establish a general feeling of sociability, and to especially look after strangers and people of a retiring nature. After the nicely prepared program was completed, the guests were invited to give the referred to quotations. Many responded; some were from the Bible, and others from well-known authors.

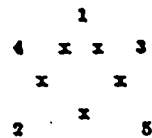
Then the chairman announced that the visitors were requested to form themselves into the titles of the books, by each representing the letter given him. These titles had been printed previously in large capitals on strips of cardboard and as many as were needed were cut into squares, a letter on each one. These were distributed with a little discretion, as the children were given letters forming one or more books by themselves. A prize might have been offered to the group forming the first book and a so-called booby prize to the one forming last.

When the animation had subsided, and the books were all formed, the people were asked to retain their grouping (they had been seated as soon as the word they represented was formed) during refreshments and while a brief address was given upon the meaning of the names, also an outline of the books they personated. This lasted perhaps five, surely not over 10 minutes. Then refreshments were served, after which the guests soon departed. Each was pleasantly bidden good-night by the committee, who embraced the opportunity to give a cordial invitation to the coming social they expected to hold a couple of weeks later.—[Lillian Scarle.

### OUR PUZZLE CONTEST.

SECOND INSTALLMENT FOR MARCH.

2. PERFECT DIAMOND—1, A consonant; 2, to limp; 3, a beverage; 4, a genus of grasses; 5, a vowel.
3. A FIVE-POINTED STAR—



From 1 to 2, a small, hard tumor on the skin.

From 2 to 3, mutilated.

From 5 to 1, extended.

From 3 to 4, a born serf.

From 4 to 5, an amphibious animal.

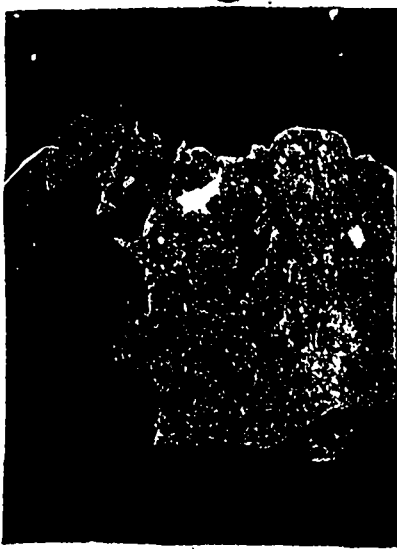
4. ANAGRAM (one word)—

I VILIFY IN TEN.

5. CHARADE—My first is a public house, my second is an exclamation denoting contempt, my third is a ravine, and my whole is a free-thinker.

6. BIBLICAL—Where is the word mother first mentioned in the Bible?





'MOST BEDTIME. A QUIET HOUR.

A restless or convalescing child may be kept contented and happy, which means rest and quiet for the weary mother, with a lead pencil and composition book. Take the book and letter the pages, giving four pages to each letter, put the letter on each page, in the center at the top. Fancy letters in colors will please and interest the child more than common black ones. Beneath each letter write a subject; for instance, on the first page Fruits, on the second Toys, on the third Books, and on the fourth Flowers.

This will take the A's. Now let the child take the book and pencil and fill the pages, as nearly as possible, with the names of all the articles, beginning with A, under each classification, that she can remember or that are her favorites. Other letters of the alphabet should follow in regular order, till the book is filled. More pages might be given to each letter, giving a greater variety of headings, such as Lakes, Rivers, Towns, Animals, Authors, Birds, Proper Names, etc. This will furnish topics for perhaps several books, therefore employment for many otherwise weary hours. Do not spoil the sport by keeping the child at it too long, but put the book aside the moment it loses its charm. It will then seem new for another time. Buy a box of colored pencils, the ones that come six colors in a box, not the very cheap ones, for they are of a poor quality, breaking easily. Let them use these when they tire of the black ones, and they will enjoy it much better. Or, teach them to make their capitals with the colored pencils and the others with the black. Take time to look over their work occasionally and praise or criticize, as needed. It will only take a few moments each time and will insure you many a quiet hour for rest or reading, that otherwise would be disturbed by the child's restless movements.—[Hale Cook.

HELPING WITH THE LESSONS.

There was a hopeless wall from the corner where Janet sat studying her geography lesson. "I have to learn the capitals of all these western states for to-morrow; and I've studied and studied, but I just can't remember 'em!" she cried, desperately. Mamma looked up from her sewing. "Bring your book here, girlie," she said, pleasantly. Janet came forward eagerly. "Just try me, mamma," she coaxed, "and see how many I can tell." So they went over the list of states together, but alas! Janet could not name a single capital city in its proper place. Some of them she could not even pronounce correctly. She had always lived in New England, and was not familiar with names of places in the far west. At this point a happy thought came to mamma. "I wonder," she said, reflectively, "if I could give all these capitals correctly. You know," she added in response to Janet's surprised look, "the western states and capitals have been greatly changed since I went to school. Suppose you hear me recite the lesson now, girlie, and we'll see who can learn it first." Janet laughed. The geography lesson had assumed a delightful aspect.

She took the book and stood before her mother, with smiling alacrity. Poor mamma! She hesitated and guessed and blundered at every answer; and Janet, her eyes aglow with sympathy, became deeply absorbed in aiding the efforts of her struggling pupil. "Begins with a C and ends with an e," she suggested, artfully, when mamma became hopelessly stalled at Wyoming.

They slowly and laboriously traversed the long list together, and then it was Janet's turn to recite. What was her joy and mamma's surprise to find that she could give nearly every answer promptly and correctly! A little more drilling on both sides, and the troublesome lesson had been quite mastered. This experience may serve as an illustration of a principle in helping with lessons. The mind of a discouraged child is passive and unresponsive. You cannot then help him if you remain above him on your heights of knowledge and years. Come down and be a child and play with the lesson. His attention thus pleasantly fixed and his courage restored by sharing the burden with another, the little mind opens freely and fully to the lesson.—[Adelaide Davis Reynolds.

A LITTLE OPTIMIST.

"What is an optimist?" Willie asked— (He was reading the Daily Press). "An optimist why, I know that; just see if I don't," said Bess. "An optimist—well, when it rains real hard. So he can't go out doors to play, is one who don't fret 'cause it storms, but finds fun right in the house that day!"

ADELBERT F. CALDWELL.

PLANTING.

Plant a king's scepter, what will grow? Goldenrod. Bury a puppy, what will grow? Dogwood. Bury a broken bone, what will come up? Boneset. Plant a dandy, what will grow? A coxcomb. Bury part of an animal, what will come up? A cowslip. Plant a breeze and what will you reap? A wind-flower. Plant a girl's crowning glory, what will come up? Maidenhair. Plant sunrise, what will you reap? Morning-glory. Plant what is worn in a convent, what will you reap? Monkshood. Plant money, what will grow? Mint. Bury a cow, what will come up? Milkweed. Bury your hand, what will result? A palm. Plant Cupid's arrow and reap what? Bleeding heart, or love-les-bleeding. What plant grows when the thermometer registers zero? Ice plant. Bury a Richmond caterpillar, what vine will grow? Virginia creeper. Plant a popular shellfish and what will grow? Oyster plant.—[Sarah E. Wilcox.

Making Home Attractive - In reading an article recently on farm life and how to make it pleasant, I was impressed with this thought: That there were many farmers' wives whose lots were certainly not to be enviously desired, and that it was almost always to some extent at least the fault of both husbands and wives. Carelessness upon the part of the husband and doggedness, or a disposition to suffer and say nothing, upon the part of the wife, is the starting point of it all. When John married Susie, his intentions were good and he would have laughed to scorn the idea of his being a tyrant, yet to some extent that is what he has grown. He has all the improved tools for caring for his crops to lessen labor and increase the income and add enjoyment to his work. In the house, there is a great contrast, nothing for the wife to work with but the very primitive tools. No handy conveniences, and the wife must make a hundred steps where a dozen ought to suffice. For instance, in so simple an operation as making biscuit, how many there are who must make many needless steps! First, the flour must be brought from somewhere outside the kitchen, next the milk from somewhere else, then the lard will be found far distant, the soda, salt and all call for extra steps to get them and also to return them. The possession of a kitchen cabinet will do away with all these extra steps and give much-needed time for other duties or pleasures. It is pos-

sible for the housewife to have such conveniences as to make her desire for the culture of music and the beautiful in every respect much more easily gratified. Try it, my brother farmers, and be convinced!—[A. N. Springer.

For Croup—A good remedy for colds and croup is tobacco and lard stewed down, then rub on chest and under armpit. Use a flannel cloth. Leave cloth on chest. By morning child is well. Sure cure.—[Scotia.

Salve for Burns—The following is a fine salve for burns, cuts, swelling or piles, also for frostbites: One handful of tansy, 1 tablespoon lard, 1 teaspoon carbolic acid, five cents' worth of sugar of lead. Put 1 qt water in a pan. Add tansy and boil half hour. Strain and add the other ingredients and boil until a thick salve is formed. When cold it is ready for use. Before using wash well with Ivory soap and apply salve. [Scotia.

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Her Father: No, young man, my daughter can never be yours. Her Adorer: I beg pardon, I don't want her to be my daughter; I want her to be my wife.

Patents, and How to Make Money Out of Them, is the title of a book by a New York lawyer, W. B. Hutchinson, published by the D. Van Nostrand company of 23 Murray street, New York city. The volume is divided into three "books" or departments and an appendix, as follows: Patents generally, patent office trade practice, trade-marks, copyrights; patents commercially considered (what to invent, how to invent, sale of patents, etc.) and a few legal forms. It is a well printed and substantially bound book and sells for \$1.25.

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STITCHES

A SEWING LESSON-V.

In the last lesson you learned a neat way of hemstitching, but some like the stitch shown in Fig 19 better. It looks very nice on the right side, and while it shows more on the wrong side than the other way, the stitch is so pretty that you will enjoy making it. Prepare the linen as in the last lesson and start just the same way, putting the needle into the fold or hem first, then under four or five threads, being sure to keep the thread under the needle when you draw it through, which must be done tightly to hold the threads close together at the top of the stitch. Then put the needle into the fold and look at the last stitch in Fig 19 to see if you have done it right. There you will see finished stitches and one just started.

Do you know that you have been making one kind of buttonhole stitch and that if you are not afraid to take one or two steps more you will be making a "really truly" buttonhole? You think it looks hard, but let me whisper to you that no one, not even mamma, when she first tries can make a good buttonhole. That is encouraging, isn't it? So let's start right away, then we will have plenty of time for practice. First make a slit in the cloth a little longer than the width of the button and make it with one even clip of the scissors so the edges will not be jagged. Some overcast the edges to make it stronger, but a better way is to run a thread like that you are going to work the buttonhole with around the slit, a long stitch at the sides and short at the ends, as in Fig 20. This thread will help to keep the stitches even, too.

Do not break off the thread, but put the needle through the slit and bring it out just under the end of the long stitch. Before drawing through, take the thread from the needle in the right hand and carry it around under the point of the needle. Look at Fig 20 if you are puzzled. Push the needle through and draw up the thread so the knot will be at the top of the stitch and you will see what you have done in Fig 21. And that is really all there is to it. Fig 22 shows a finished buttonhole with three or four straight stitches across the inner end to strengthen it so the button will not tear it. Some make both ends like that, but I do not think it looks quite as well.

The buttonhole you have just finished is to be used where the button sews

stitches. Be careful in working the rounding part to keep it as even as you can.

If you are making a row of buttonholes, it is a good plan to measure the exact distance from the edge you wish them to be, and baste a line for the outer ends, then baste another line for the inner ends. The straight stitches on the inner end of Fig 22 may be omitted and both ends finished alike if you prefer. Now you have learned the way all you will need further to make a successful buttonhole maker will be practice and lots of patience.--[B. A. W.]

PINCUSHION COVER.

This design is suggestive of the pastime of the young entomologist for whom it is designed. Use No 30 spool thread and a fine crochet hook.

Make a chain of eighty-six stitches. The open check made by two trebles separated by two chain is called a space; the solid check of trebles is called a square.

1st row—One tr in 8th ch, \* two ch, miss two ch, one tr in next ch, repeat from \* across row, twenty-seven spaces in all. Hereafter at beginning of each row ch five, and place last tr of each row in 3d of five ch of previous row.

2d, 3d, 4th and 5th rows—Like 1st (twenty-seven spaces).

6th row—Thirteen spaces, one square, thirteen spaces.

7th row—Nine sqs, one sq, two sqs, three sqs, two sqs, one sq, nine sqs.

8th row—Eight sqs, three sqs, (one sp, three sqs) twice, eight sqs.

9th row—Five sqs, one sq, two sqs, three sqs, (one sp, three sqs) twice, two sqs, one sq, five sqs.

10th row—Six sqs, one sq, one sp, four sqs, one sp, one sq, six sqs.

11th row—Seven sqs, five sqs, one sp, one sq, one sp, five sqs, seven sqs.

12th row—Eight sqs, four sqs, one sp, one sq, one sp, four sqs, eight sqs.

13th row—Eight sqs, five sqs, one sp, five sqs, eight sqs.

14th row—Like 13th.

15th row—Nine sqs, four sqs, one sp, four sqs, nine sqs.

16th row—Six sqs, one sq, two sqs, four sqs, one sp, four sqs, two sqs, one sq, six sqs.

17th row—Seven sqs, two sqs, one sp, two sqs, one sp, one sq, one sp, two sqs, seven sqs.

18th row—Nine sqs, two sqs, one sp, three sqs, one sp, two sqs, nine sqs.

19th row—Eleven sqs, five sqs, eleven sqs.

20th row—Eleven sqs, two sqs, one sp, two sqs, eleven sqs.

21st row—Like 20th.

22d row—Ten sqs, seven sqs, ten sqs.

23d row—Nine sqs, one sq, two sqs, three sqs, two sqs, one sq, nine sqs.

24th row—Seven sqs, two sqs, two sqs, two sqs, one sp, two sqs, two sqs, two sqs, seven sqs.

25th row—Twelve sqs, three sqs, twelve sqs.

26th row—Eleven sqs, one sq, three sqs, one sq, eleven sqs.

27th row—Ten sqs, one sq, five sqs, one sq, ten sqs.

28th, 29th, 30th, 31st, 32d rows—Twenty-seven sqs each.

BORDER.

Trefoil Two tr in 3d ch from hook, keeping last loop of each on hook and working off two loops at once, (five ch, three tr in same ch as 1st leaf, keeping last loop of each on hook and working off two loops at once) twice.

Cross tr as follows: Thread twice around hook, hook in work, draw thread through, over, draw through two stitches, over, hook in work, draw thread through, over, draw through two stitches) three times, two ch, one tr in middle where lower arms join.

Picot as follows: Five ch, fasten with s c in first of ch.

First round—Five ch, one trefoil in 3d of five ch, miss one tr, one d c in next tr. Repeat from beginning of row all around. On the two shorter sides, at diagonally opposite corners, make the d c in two trs in succession. At each corner make a cinquefoil (five leaves) instead of a trefoil. Each trefoil is thus joined to the preceding at the end of first leaf, one ch, remove hook, draw loop through five ch of preceding trefoil and proceed, five ch, etc. (See trefoil.)

2d round—Five ch, \* one tr in stitch joining trefoils, two ch, one tr in five ch, two ch. Repeat from \* all around. Make two trs separated by two ch

over the five ch loops of cinquefoils at corners. Join in 3d of five ch.

3d round—Three ch, or tr in first tr, five ch, one tr in last tr made, \* two ch, one cross tr in next two trs, repeat from \* all around. At each corner make six cross trs nearer together, putting first lower arm of each in same tr as last lower arm of preceding.

4th round—One d c in two ch, two ch, two tr, keeping last loop of each on hook and working off two at once, (one picot, one ch, one leaf like last two of trefoil) four times, one ch, one d c in top of next cross tr, one ch, \* (one leaf in cross tr, one picot, one ch) four times, one leaf, one ch, one d c in next cross tr, one ch. Repeat from \* all around. At each corner, after making cluster of leaves in first of six cross tr, make one ch, one d c in next cross tr, one d c in two ch, one ch, then next cluster in two ch, between cross trs exactly on corner, one ch, one d c in two ch, one d c in cross tr, one ch, and proceed as before to next corner. All the corners are alike. [Sarah E. Wilcox.]

LADY'S CROCHETED HOOD.

Recently I finished a hood for a lady that was very pretty, of nice shape, and is easily made. Crochet a ch long enough to reach from the top of the head to under the chin, for average sized heads seventy-five stitches will be sufficient.

1st row—One s c in 4th st of ch, ch three, three tr in same st, \* miss three ch, st, one s c in next st of ch, ch three, three tr c in same st, repeat from \* across the row. There should be sixteen sh.

2d row—Ch two, one s c under three ch of sh of 1st row, ch three, three tr c under same three ch, one s c under three ch of next sh, ch three, three tr c under same three ch, repeat across the row.

3d and 4th rows—Like 2d row.

5th row—Sh in sh for fifteen sh, one s c in 18th sh, turn, ch two.

6th row—Sh in sh.

7th, 9th, and 11th rows—Like 5th row.

8th and 10th rows—Like 6th row.

12th row—Sh in sh for eleven sh, one s c in twelve sh, ch two.

13th row—Like 5th row.

14th row—Like 12th row.

15th row—Sh in sh.

16th and 18th rows—Like 12th row.

17th and 19th rows—Sh in sh, fasten yarn and break off.

This completes one side of the hood. Make the other side exactly the same, and join the rounding parts with hook and yarn in s c.

Around the face, work one row of tr c with one ch between, turn and over these tr c work six d c, two d c on ch one, and six d c on next tr c, so on across the front. Work these d c on the long part of the tr c, holding the work sidewise and turning the work as necessary.

Between each two rows of d c in the ch one that has no d c, work one s c, three ch and four tr c all across the front, now one s c in each tr c with three ch between, also one s c in ch three.

Work around the neck as follows:

1st row—One row of sh.

2d row—One s c, two d c, three tr c, two d c, one s c, all under three ch of sh of 1st row.

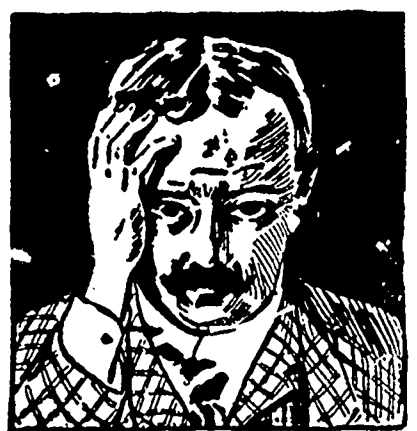
3d row—One s c in first d c, three ch, one s c in next d c, three ch, one s c in each of three tr c with three ch between, one s c with three ch between in the remaining two d c.

Gather in at the neck to fit, add a bow of ribbon there and also on the top, add ribbons for strings or crochet strings three shells in width, and as long as desired.

The above hood, without lining, requires two and one-half skeins of Saxony yarn, and two and one-half yards of ribbon, unless crochet strings are used, when one yard less is required.

The lining may be crocheted in d c or tr c, either shaping the sides as directed for the outside, or crochet a piece long enough to reach over the head and fasten together at the back. A lining of some woolen goods of a contrasting shade from the yarn would be pretty. The lining must be put in carefully.—[Emma Clearwaters.]

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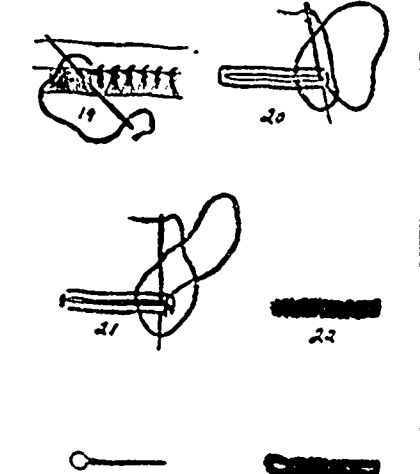
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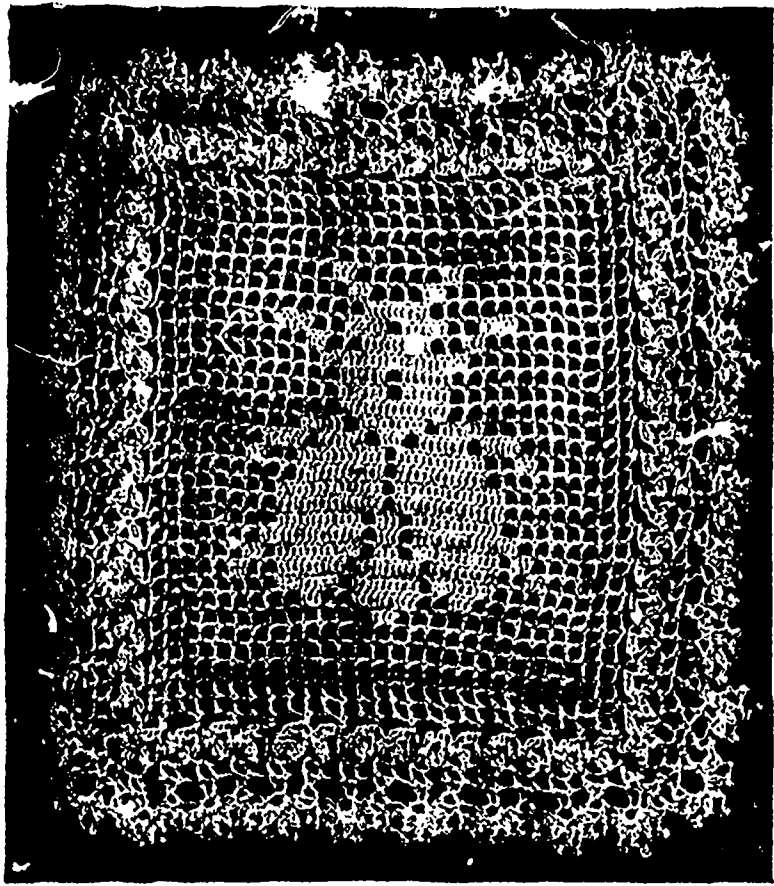
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through or on cotton, silk or woolen dress goods. For jackets or any garment where cloth buttons or those with a shank are used, Fig 24 is best. The rounding part at the outside end is cut first and rounded nicely with a siletto if you have one, then the slit is made. Instead of making the long stitches around the buttonhole, thread the needle with a coarse thread the same color as that used in making the buttonhole, make a knot in it, bring it up through the cloth at the inner end of the slit and cut it off to three or four inches. Hold it close to the slit with the left hand and work over it in making the buttonhole stitches. Finish off the inner end with several straight

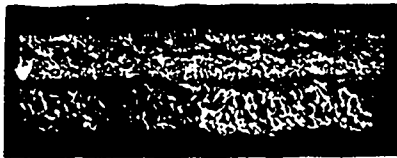
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"Entomologist" Pincushion.—See Opposite Page.

NOVELTY BRAID EDGING.

This pattern makes a very pretty trimming for underwear, etc. and if colored braid is used it will be found very effective as apron trimming. Take



a strip of the ordinary finishing braid the desired length and use No 40 cotton thread with fine steel hook.

1st row—Fasten thread in first loop of braid, one s c in 2d loop and repeat to end of braid, then turn.

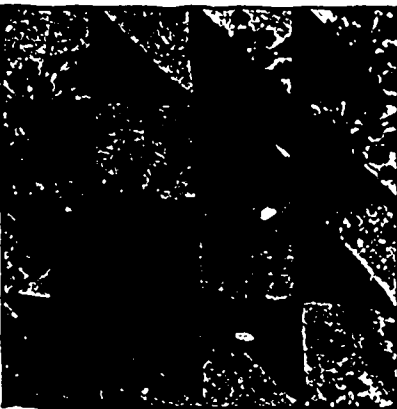
2d row—Three d c in 2d stitch, fasten with a s c in 3d stitch, three d c in 5th stitch, fasten with s c in next and repeat to end of row, turn.

3d row—Three ch. fasten with s c between 1st and 2d d c, three ch, fasten with s c between 2d and 3d d c, repeat to end of row.

For the insertion, make one row upon each side of braid like 1st row upon edging.—[Cora Gibson Hammond.

BASKET PATCHWORK.

This pretty quilt design is from Miss Annie L. Smith, Hartleton, Pa. She



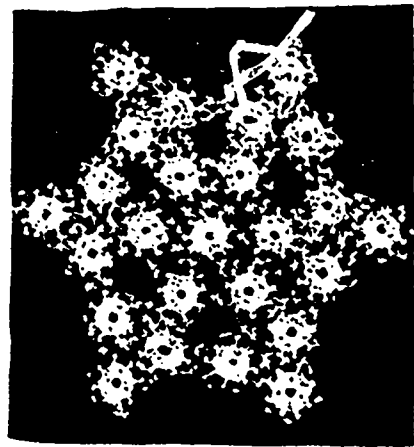
writes: "The best effects are obtained when dark and light colors are used to form a contrast."

What letters should physicians use in their practice?—Q.R.

DOILY.

To make a small wheel, ch eight, join, twenty-four tr, join, work two knot sts, fasten in 3d tr, two knots, skip three tr, fasten, continue around wheel, join, break off thread, fasten neatly.

Make four wheels, join as shown in illustration to form a diamond. Make six diamonds, join to the center wheel as seen in illustration. Further direc-



tions seem unnecessary, as anyone can see how the wheels are joined.—[L. B. Sebring.

Dyeing Sheepskins—If the sister who asked for a good recipe for dyeing sheepskin rugs will try the following, I will venture to say she will be more than pleased at the result: Take any good dye for wool (I use diamond dyes) and dissolve as directed on package; weigh the article to be dyed, and use as much as the package says, have the dye bath in as large a vessel as you have, tie strings to each corner of rug, and lower it into the boiling dye bath, being careful not to allow the hide to touch the dye. The wool will dye readily if you lower it into the bath and move it according to your discretion, so as to allow the dye to penetrate to every part alike. You will see that two persons can do this more conveniently than one.—[Beth.

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MY WISH.

Whenever I see the evening star, Far up in the sky so blue, Then over my shoulder I look and wish— Shall I tell you I wish of you?

I count the stars till they've numbered seven, And then to these chosen few I give the dearest wish of my heart— Shall I tell you I wish of you?

I wish all sorts of impossible things, Just as all foolish girls will do, And then as I think of that clear gray eye— Shall I tell you I wish of you?

I think as I look at the stars so bright, Of all that is good and true, And I think of that strangely bewildering smile— And then I wish of you.

Oh, what is my future going to be? Oh, what if my wish should come true? Ah, well, it is only God can direct, So again I'll wish of you.

ADELE V. RICHIE.

THAT LITTLE BOY OF OURS.

I love to watch the gathering fowls, And hear the lowing kine, To start the morning-glory sprouts And train the columbine. I love to see the apple bloom— Acres of fragrant flowers,— But what were all the joys without That little boy of ours?

I linger by the buzzing bees And watch them boom along, In tune with lilting orioles With silver throats of song, But what are echoes in the wood, Or in the leafy bowers?— I hear a laughing baby voice— That little boy of ours.

The lambskins bleating on the green, Lost in the April fold, How tenderly I gather them Into the cheery fold, But when that baby voice I hear In chill or sunny hours, Then I'm the shepherd of a child— That little boy of ours.

And in my arms I gather him, I fold him to my heart, And kiss the baby forehead white, Where sunny ringlets part; And all the happy farmer's pride— The crops, and bees, and flowers— Are all forgotten while I kiss That little boy of ours!

J. A. COLL.

WHY BOYS LEAVE THE FARM.

Roy Morris in F & H for Feb 1 asks why boys leave the farm. I am a farmer boy myself and speak from experience. It has been my observation that too many farmers use their boys like a horse or a piece of machinery. They put the boy to work in the field before he is big enough to reach the plow handles, and drive him around at everything, until finally, before he reaches his 20th year, he is a stunted, round-shouldered, worked-out old man. How can a boy entertain anything but dislike for farm life under such conditions? A farmer boy's isolation from society is another thing that tends to drive him from the farm. Farmers as a rule are too independent and too much engrossed with their own affairs to care anything for society, so the boy is kept away from that recreation, and even at home he has no papers or books to read, as so many farmers think they know too much to learn anything from papers. There are other boys that leave the farm because they are ambitious to enter some business or profession. I do not believe it is right to try to keep such boys on the farm. They are generally of the stuff of which our great men are made.—[Hawkeye Hank.

Some farmers laugh at book farming, as they call it. The way their fathers did is good enough for them. But the observer will see a great difference between their farm and the so-called "book farmer's." This is one thing that

takes the boys from the farm. They have no books and papers to read, and no time to read them if they had a well-stocked library at their disposal. It is nothing but the old-fashioned farming or drudgery from morning till night. I know a farming district where one winter they had a literary society, and the young people took the chance and learned a good deal, and when spring came some were in favor of continuing the society, but the old farmers shook their heads and said that "the boys wouldn't have time to attend, that they wanted them to work instead of such tomfoolery." These same farmers wonder why the boys will persist in leaving the farm.—[Alter Eg.]

SHORT TALKS.

Limitations—We are not qualified to judge others. We know not their motives, nor the limitation of man's inheritance and where, at a just, equal basis, life begins anew on its own path of responsibility. If this natural life were all, well and truthfully could I say, "Ah, creation, what a sin!" Oft through force of circumstances we are forced to do heavy labor that our very construction proves is not ours. It is easy to give advice, but what does it all amount to? What can we accomplish if we lack or are deficient in the necessary qualities? We cannot climb out of these creative spheres, but lack or weakness in these qualities creates an interference that prevents us from grasping the necessary ideas that lead to the step from which to attain success.—[Senis.

Fun Enough—Bachelor, I do not blame that girl for not staying single just to accommodate you. I suppose she had fun enough and then when she saw someone she liked better than she did you, she would not wait behind with you any longer. Remember, all girls are not deceitful.—[Truro.

Dear girls, have any of you a "laugh" which doesn't suit the family? Well, I have. Instead of its being a sweet little giggle, it's one mighty roar; which I'm told is very unbecoming to a young lady. Please tell me how to bring it down a pitch or two.—[Phoebe, Utah.

I agree with A Young Maid in regard to speaking of old maids and bachelors, for we don't know whether we will be one or not.—[Wild Cowboy.

While our good actions are liable to be forgotten by the people, yet our bad deeds seem to linger in the minds of some, regardless of what we afterward do.—[Pa Smarty.

For amusement our young people learn dialogs, recitations, etc. We find very much enjoyment in the practice, and when we get several in readiness, we give an entertainment. We are now learning a play, Timothy Delano's Courtship.—[Jenny Lind.

It should be the one thought of the young husband or wife only to see the better nature of the other and in that way help to overcome each other's faults. Keep up your courtship even as you grow older and you will feel young by it.—[Illinois Cousin.

Right?—Here is a little experience of my own. While away on a visit last summer, I met a young man and entertained him a few evenings. On the evening before I came home he said one or two things which I thought entirely out of place, and I became angry, using some pretty hot words, which I saw hurt him very much. I knew I should not have said it, but was too proud or hateful, if you wish, to apologize. But after I came home I wrote him an apology and received a very kind note in return. Now, did he think me immodest? Say, Bachelor, did I do right?—[Leta.

Stepmothers—With regard to stepdaughter's inquiry, I would say women suffer themselves to become stepmothers for different reasons. First, selfishness, not caring for the welfare of their stepchildren so a home and desired marriage are obtained for themselves. I think this class as rare as the unnatural own mother, as almost every stepmother takes some interest in and desires to promote the welfare of her husband's children. Still there are a few of this kind. Second, kindness and sympathy. A woman is moved by a man's loneliness and the destitution of

motherless children, and resolves to supply the needs of both, and takes upon herself a burden which, notwithstanding the willingness of the spirit, the flesh is unable to bear. Third, ignorance of the trials and responsibilities assumed until too late. But stepdaughters, granting that you have had occasion to complain, may I not remind you of the old adage, "A half a loaf is better than none." It is the greatest misfortune that can befall a family of children to lose a good father or mother, still it is the fate of some, and although the home can never be again to them what it has been or all it was, is it not well that someone comes in and does all that it is possible to do? Should not the stepmother have credit for all the good she does do, and not be too severely criticised for her faults? For even own mothers are not perfect. [E. M. H.

More Vivacity—Water Lily, you seem to have brought the house down on you for loving your teacher; but never mind, that is all right, as all school children should love their teachers, and it is only natural that the teacher should love his or her pupils, otherwise a teacher has no business in the school room, he should be "leaning on a hoe." As to the term fast as often used in the Council and as applied to girls who are of a lively and good natured disposition, I think it is a misnomer. Because a girl is full of vivacity and is not afraid to look at or smile when meeting a gentleman friend, is no evidence that she is on the road to degradation. The girl of this disposition, coupled with a certain amount of modesty, is the one sought after by nine out of every ten men who want a real helpmeet. But having "fellers" at 14 is quite another matter. No girl should have a beau until she is at least 20, as most girls are not matured enough before this age to know what they are about, as one said to the writer when he was a kid of 20, trying to persuade her to marry him. Plow Boy, your idea is very good, but it reminds



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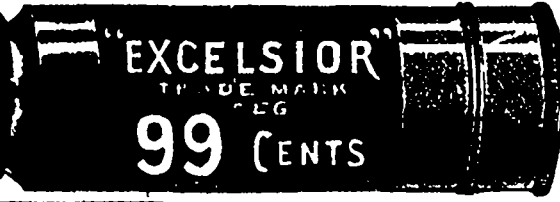
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me of the shoemaker who, wishing to cut the tail off his dog, began by clipping an inch each day so as not to hurt so much. Why not eliminate tobacco at once and be done with it? I know it can be done, as I have "been there" myself. All it requires is a little backbone.—[L. Ranchman,

**Good Stepmothers**—In one family near me there are two children and they get along better with their stepmother than they did with their own mother. Another woman (widow) married a man with five girls, and they get along nicely. Children, if they are let alone as they are with their own parents, would not find so many bad stepmothers. I have seen some bad own mothers and have heard them say, "I will whip you to death," or "I will skin you alive." If a stepmother would say such things as that, the whole kins people would be up in arms. As it is, it is thought nothing of. I think if we look the ground all over, we will find more good than bad stepmothers.—[Mrs J. H. L.

**Not Deceitful**—O ye deceitful girls! Have mercy on the poor men. Think of the furrows caused by the tears running down the cheeks of the Bachelor and others! Their letters made me stop breathing? No, only long enough to think whether I am deceitful, and I came to the conclusion that I'm not. Now, I'll admit (providing they do the same regarding their own sex) that there are girls who will win the love of a man for amusement. I believe "that which gives pain to others deserves not the name of pleasure." Very often though, men, by mistaking friendship for a warmer feeling, cause their own sorrows. There are men conceited enough to believe that every girl is in love with them. Supposing a girl has several admirers and she does not care particularly for any certain one, but divides her attention among them, yet each one fancies himself the favored one and—well, is she deceitful? Plow Boy, I think we ought to join you, for your plans for improvement would be of benefit to us all. However, I will remark that I thought of this same thing long ago and have had some experience and shall be glad to hear of yours. [Coddle's Sister.

**An Opinion**—M. R. Rouse, how to be divinely great is too deep for me to discuss, but I have an opinion and it is this: One way to be divinely great is simply to do our duty day by day regardless of what we ourselves would rather do; but what we know to be our duty to others. I think this requires more true moral courage than to go out in the world and perform some grand deed.—[Nellie Bly.

**One Stepmother**—Two Stepdaughters' letter made me very anxious to tell them what I know of one stepmother. She married a man with three little girls who had been woefully neglected in early life as to the training that would make women of them. They had never received any educational advantages, living so far from school it was impossible for them to attend. She began a regular home instruction course with them until she had helped their father to win a position where they could send the girls to a good school. They are now all in a good seminary, one of them almost ready to graduate, the stepmother doing all the work on a ranch in order to give those girls a chance in life, which no one

doubts they never would have had without her help.—[Nellie.

**Harmless Pleasure**—I consider it a pleasure to once in a while hug and kiss a young lady that I have been keeping company with, and do not see any harm in it. Now, my F & H friends who write for the public in general to read through the Council, I ask you to be honest and candidly think the question over before you commit yourselves. I am a member of the church, belong to the young people's society of a membership of 50, and think it an honor to profess to be a Christian and hold the friendship of any good honest men or women, young or old. I like to see young people enjoy themselves.—[Coddle.

**THE WIFE'S WELCOME.**  
The hearth is sweet, the fire is bright,  
The kettle-sings for thee,  
The cloth is spread, the lamps are light,  
And hot cakes smoke in napkins white,  
The boy sits on my knee.

Ah, ha, along the crisp walk fast  
His well-known step doth come!  
The bolt is drawn, the gate is passed,  
The babe is wild with joy at last.  
A thousand welcomes home!

Mrs F.

**Tongue Work**—Amateur, if your pictures are really good, all you have to do is to use a little more "tongue work" and in the long run all will be well, for your friends will find out that the cheap picture fades very soon, as it is mostly all print and but little crayon. Now my dear Two Stepdaughters, don't speak so harsh about stepmothers, because I'm one, and I try to better things instead of making them worse. My stepdaughter played the lady and I was the "hired girl" for her. See how good I was?—[Mrs D. R. Clarke.

**Inquiring Friends**—Bessie P., the best way to learn sewing and dress-making is to "apprentice" yourself to a dressmaker. The cities and large towns have sewing courses in school. We are now publishing simple sewing lessons for beginners. A good way to become a "good conversationalist and to get over being bashful" is to go out walking with a little child and try to interest it and "explain things."—Mrs D. J. McDougall, Sandon, B. C. has an old church of England prayer-book dated 1738, but we think it has no value.—Mrs M. E. M., any of the large histories give quite detailed accounts of the landing of the Pilgrims, their hardships, etc. Since you live in a large city, your city library would seem to be an ideal place for finding what you want.—The Rose of Sharon quilt pattern is asked for by an Ontario reader.—"Will someone who has had experience tell how silk worms are raised and care required?" asked M. S. H.—Mrs W. A. M., the "crochet alphabet" and lessons for beginners were given in our issues of Oct 15 and Nov 1.—O. R., the Morning Call is a Harrisburg (Pa) daily, also the Evening Telegraph.—J. O. W., Bohemia is a division of Austria-Hungary. It produces linens, glass, woolsens, paper, porcelain, beer, iron, lead, silver, alum and graphite, cereals, coal and other manufacturing and natural productions. The language of the majority is Czech, but about 35 per cent speak German.

In reply to Miss Allie Hines, Senator William P. Frye of Maine was chosen president of the senate after the death of Vice-President Hobart. There is no vice-president. In the event of the president's death, the secretary of state, in the capacity of vice-president, would act as the chief executive.

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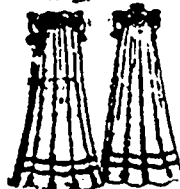


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For a Real Relish.

LEMON MERINGUE PIE.

Mix together 2 tablespoons corn-starch, 1 1/2 cups sugar and a pinch of salt. Add to this mixture a pint of boiling water and boil about three minutes or until clear, stirring constantly of course to prevent from sticking. Add the juice of 4 lemons (also rind if desired, though not necessary), mixing same in well. When slightly cooled, add the well-beaten yolks and whites of 3 eggs; the yolks first, then the whites. Line your pan with thin crust; pour in the mixture and bake 15 or 20 minutes in a hot oven. Remove and allow to cool somewhat; then add a sweetened meringue of the whites of 2 eggs and a little powdered sugar. Smooth the meringue over the pie with a knife blade, place in a quick oven and brown in a minute or two. If one does not care to use so many eggs, put only half of the three whites into the pie mixture, reserving the remaining half for the meringue. This may not be as rich as some lemon meringue pies, but it is decidedly more wholesome and quite as delicious.—[E. L. H. R.]

RHUBARB.

Stewed Rhubarb Sauce: Peel stalks of rhubarb and cut in inch lengths, put into a stewpan, add a little water and a pinch of soda; as soon as it boils, skim and sweeten to taste. Let cool before using.

Rhubarb Pie: Stew the necessary amount of rhubarb as for sauce, adding to it the yolk of 1 egg, 1/4 cup butter and 1 tablespoon flour. Bake with one crust, beat the white of the egg with 4 spoons white sugar, spread over the top and set in the oven to harden.

Rhubarb Shortcake: In small pie plates bake a shortcake of good biscuit dough, split open, spread with butter and fill with stewed rhubarb. Eat with sugar and cream.

Rhubarb Lemonade: An excellent substitute for lemonade is made by adding a little rhubarb juice (stewed) to a glass of cold water. Sweeten to taste. The addition of a few drops of lemon juice will flavor it.—[Lalla Mitchell.]

SPINACH AND LETTUCE.

Use only the young tender plants of the spinach or the tender leaves from the older stalks. Pick it over carefully and remove all roots, decayed leaves and stringy stalks. It should be washed in several waters and lifted from one pan to another in order to free it from sand, etc. Spinach is much better cooked in a double boiler, as it may then be cooked in its own juices. Not a drop of water need be added, but it should be stirred frequently at first. Cover it closely and cook until tender. About half an hour is usually required. When done, chop very fine, add a little salt and half a cup of sweet cream, allow it to boil up once, stirring constantly and serve very hot. Or it may be served with a dressing of lemon juice. If cooked in water it should be boiled rapidly until done, then drained in a colander and pressed dry before the dressing is added. It is very nice served with poached eggs on top, garnished with toast. Cut the toast in little slips and insert in the spinach at equal distances, or it may be garnished with sliced hard-boiled eggs.

Spinach Soup: Prepare 1 lb spinach as directed above and let it boil until thoroughly done. Then drain and press it through a fine sieve. Mix 1 oz butter and 1 oz flour in a saucepan, add the spinach puree, season to taste, and add 1 qt well-flavored stock. Let the soup come nearly to a boil, then remove from the fire and stir in the yolks of 2 eggs beaten up with a little lemon juice. Serve with small dice of fried or toasted bread.

Lettuce Salad: Wash the lettuce very carefully, put it into cold water and keep it on ice or in a cool place for an hour or two before serving. When required to use, dry the leaves with a clean, soft towel and tear into nice-sized pieces with a silver fork. Make a dressing with a cup of sweet cream and 2 teaspoons sugar, and after the sugar has dissolved add just enough lemon juice to slightly thicken the cream. Or if preferred, omit the cream

and make a dressing of lemon juice and a sugar alone.

Another very nice dressing for lettuce salad may be made by adding 1 tablespoon lemon juice to 1 cup strained stewed tomatoes seasoned to taste. A garnish of chopped or sliced hard-boiled eggs is always an improvement. Lettuce is also nice boiled, minced, seasoned to taste and served with little bits of butter over it. It is an excellent blood purifier and nerve tonic and should be freely eaten. Small leaves may be served whole to be eaten with salt. Many persons prefer it thus. A lettuce leaf should never be cut with a knife.

There is no more beautiful garnish for chicken, lobster or any salad desired than delicate lettuce leaves. Served individually, one small leaf to each salad plate, it may be made as beautiful to the eye as it tastes to the palate. Thin slices of tomato on lettuce, with a light mayonnaise dressing, makes a delightful salad.—[Mary Foster Snider.]

Party Cake—For a child's party, where three little guests were invited and three kinds of cake requested, I find the trio can be concocted all in one pan, taking the pattern from an old colonial recipe: Cream 2 cups butter (leaving it in warm kitchen to somewhat soften and make the labor of creaming less tiresome); gradually beat into it, a little at a time, 4 cups sugar, and one by one beat into it 6 eggs. Add 1/2 teaspoon (scant) soda and gradually beat in 8 cups thrice-sifted flour. Flavor one-third of the mixture with lemon juice and bake in one bar, to be served plain, frosted or split and filled with jelly. Into the second third stir a pint of the chopped meats of any nut, and bake in patty pans, for nut drop cakes. The last portion should be spiced; add 1 tablespoon strong coffee, 1 teaspoon grated lemon rind, 1 teaspoon caraway seed, 1 good-sized apple, peeled, cored and chopped as fine as possible, and a pint of raisins. A teaspoon molasses aids both color and flavor. Bake slowly in deep dish.—[White Ribbon.]

Transparent Pie—Three eggs lightly beaten, 2 tablespoons sugar, 1 teacup rich sweet cream, 3 tablespoons jelly (light colored jelly is most suitable), 1 tablespoon butter, flavor with lemon. Whip well the ingredients together and bake with no upper crust. Serve cold. [E. Switzer.]

Snowdrop Cake—Will send my recipe for snowdrop sponge cake that I have taken over \$30 worth of premiums on: The whites of 12 eggs, goblet and a half of sugar, goblet flour, 1 slack tablespoon cream tartar sifted in with flour. Stir half the whites of eggs and sugar, then the flour, then balance eggs. Put in mold, let rise, then bake.—[Z.]

Fresh Meat—I will send you my recipe for preserving meat and to keep away the bugs. Put powdered borax in a pepper box and sprinkle the borax thickly over the flesh side of the meat, hams, shoulders and sides, hang up in the meat house, and it will keep without even sacking.—[Z.]

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PROTECTION FROM COLD.

Aside from food in abundance, warmth is the one thing needed to promote safe, early breeding. An ordinary colony will generate sufficient heat to enable bees to rear sufficient brood; the trouble is so much heat is lost by radiation. From several years' experience, I have learned that even if bees are wintered in the cellar, it is best to remove them as soon as it is warm enough to fly in the spring, and then protect them on their summer stands.

Spring protection need not be an elaborate affair. Any old boards nailed together in the form of a box without top or bottom will hold the packing in place. The cheapest and most satisfactory packing boxes that I ever used were made of cull shingles, as shown in the illustration above. First make a simple, square frame of 2-in strips cut from inch lumber. This frame is 4 in larger each way than the hive.

To the inside of the frame are nailed the shingles in an upright position, the frame being about in the center of the inclosure. A few of the shingles at the front end are cut about 4 in short at the bottom; this leaves an opening for an entrance when the "ring" of shingles is set over a hive. The space between the hive and the shingles is filled with sawdust, planer shavings, or some similar material, but before the packing is put in, a little bridge or chute is placed over the projection bottom board of the hive. This prevents the packing material from closing the entrance of the hive and allows bees to fly.

To keep rain or snow from wetting the sawdust, narrow shingles are laid in a slanting position against the sides of the hive, their lower edges projecting beyond the upright shingles, to which they are slightly tacked to keep in place. To protect the top of the hive, the cover is removed, a piece of oilcloth spread over the top of the hive, then a section case, or "super," as it is called, is filled with sawdust and set upon the top of the hive. Some thick paper is tacked to the bottom of the super to keep the sawdust from falling out when the super is handled.

The cover of the hive is used as a cover for the super, and a stone keeps the wind from blowing it away. I leave this packing in place until June 1. If I wished to winter bees by protecting them out of doors, I should keep the packing in position with a similar arrangement; only I should use two such rims of shingles, slipping one partly over the other and putting on a roof of boards. I would use the upper one to give room for putting a larger quantity of packing over the colony. One of the hives in the central foreground is shown packed in this manner.—[W. Z. Hutchinson, Mich.]

EARLY SPRING CARE.

There are often warm days in the early spring when bees might be removed from the cellar, but the trouble is that winter is not always over with the advent of the first spring-like day. There may be several days, or even

two or three weeks, of quite warm weather, in which the willows, alders, elms and soft maples bloom, and it is really desirable that the bees enjoy all these advantages; but such fine weather, when it comes early, is quite likely to be followed by freezing weather of several days' duration, and even by a snow storm. The fine weather encourages the bees to fill their combs with brood that would eventually produce workers ready for the fields just at the opening of the first white clover blossoms, but the cold drives the bees into a compact cluster in the center of the hive, leaving half the brood, perhaps more, unprotected. This brood perishes; besides, the newly hatched, bees if any there are, are tender, like a newly-hatched chicken, and easily succumb to cold. The old bees have lost a good deal of their vitality and the cold snap is the "last straw" needed to send them to the bottom of the hive.

Moving the Bees—Bees that have been wintered in the cellar will now become uneasy. Have the summer stands ready and as soon as opportunity occurs get the bees out of the cellar. At the same time examine all hives and note which are low in stores so that they may be built up by feeding. Some prefer a syrup made with granulated sugar as follows: Take water 1 qt to sugar 3 to 4 pts and dissolve over a slow fire until the syrup becomes like honey in form, then put in a common Mason jar having first punctured some small holes in the metal cover. Place the jar top side down on a plate and place inside the hive over the brood chamber. Some prefer honey from any half finished boxes or frames left over from last fall placed in the top of the hives. This feeding is one of the main points in getting the hives good and strong ready for the fruit blossoms.—[J. H. Denyar, Northampton Co, Pa.]

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MGRIMS—W. J. S. has a horse which at times stiffens all over and falls down. This is a disease of the nervous system and is incurable.

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Around the Globe.

The Currency Bill as finally passed by congress was substantially as outlined in these columns. The national debt is to be refunded for 30 years by the issue of 2 per cent bonds to take the place of those now outstanding, which will mature in 1901 and 1908. The government will pay. It is estimated, some \$100,000,000 in premiums on the outstanding bonds. These 2 per cents will constitute a foundation for an increased national bank circulation, the banks being allowed to issue notes to 100 per cent of their bond holdings and paying a tax of 1/2 per cent a year on this circulation. How much this plan will expand the currency is still a question; the premium on the bonds will probably reduce the profits on bank circulation so as to prevent a very large increase; otherwise the increase might go as high as \$600,000,000. The bill provides for banks of \$25,000 capital in places of 3000 population or less. All forms of money must be kept on a parity with the gold dollar of 25.3 grains, which is the standard. A silver dollar will be as good as a gold dollar. A division of issue and redemption will help keep the gold reserve at the \$150,000,000 mark, taking care of issue and redemption, and keeping hands off the reserve when there are deficits. Three per cent bonds may be sold to replenish the reserve if it falls below \$100,000,000. The greenbacks are to be retired and replaced with silver certificates.

The National Conventions of the chief political parties will be held as follows: The democrats at Kansas City, July 4, republicans at Philadelphia, June 19, populists at Sioux Falls, S D, May 9, middle-of-the-road populists at Cincinnati, May 9, prohibitionists at Chicago, June 27. The anti-imperialists will probably meet at Indianapolis and endorse the Bryan ticket. Kansas City is the westernmost place ever chosen for the national convention of a great political party. In 1856 the democrats went as far west as Cincinnati. Since 1876 they have not once convened east of the Alleghenies, but until now they have not gone further toward sunset than St Louis, as the republicans have not gone further than St Louis and Minneapolis.

The Boer War—England went wild with enthusiasm after the successive strokes of the three generals which relieved Kimberley, Ladysmith and Mafeking. This phase of the English character surprised foreigners staying in England, having the appearance of the French or American character rather than of the British. The days in which the gloom of months lifted were found to be thrilling ones. There was nothing too good then for Generals Roberts, Kitchener and Buller. The 115 days' siege had left the troops in Ladysmith more reduced in numbers and vigor than those of Kimberley. The possession of these widely separated places was the first long step toward the invasion of the Transvaal, which the sanguine Englishmen had planned for last fall. Gen Cronje and his 4000 Boers, captured at Paardeburg, were removed to Cape Town, and Cronje and some of his men placed aboard ship. These English victories left the Boer army at an estimated strength of 40,000. The British have, or will have shortly, 250,000 men in South Africa, 25,000 having sailed recently from England. The large and gallant part which Canadian troops took in the capture of Cronje stirred much enthusiasm in England and in the Dominion.

Bell telephone is threatened at last with competition on a large scale. The Eric system, which covers Michigan, Wisconsin, Minnesota, the Dakotas, Arkansas and Texas, has been bought by New York and Philadelphia millionaires organized as the Telegraph, Telephone and Cable company of America. The Eric system uses the Bell instruments.

The project of a library post, whereby books from free libraries can be sent by mail to their regular subscribers at the second-class rate of one cent a pound, reached congress in the form of a bill, introduced by prominent librarians, educators and statesmen. Such a law would greatly broaden the field of free libraries and brighten the life of many small communities.

Our Veterinary Adviser.

INJURY—J. A. S. has a calf which passed blood with its urine. It died on the third day and when opened the lungs were bloodshot all through. From the description I would consider the animal had been injured. In such a case medicines would be of no service.

COLIC—Mr Subscriber has a young mare which has spells of colic when she is idle. Feed on good hay and oats, not too much, and give her regular exercise. When she takes the colic give 3 oz sweet spirits of niter and 2 oz tincture opium at a dose, in 1 pt cold water, and repeat in two hours if needed.

LAMENESS—A. H. S. has a mare which goes lamo or stiff when first taken out of stable out after being driven for a time she seems all right. This is a case of founder. Poultice the feet with hot bran mash put into bags and put on the feet. Change twice a day. Continue this for two weeks. Then mix cantharides 2 dr with hard 1 oz and rub around the coronets. Then give a month's rest.

INDIGESTION—M. W. A. has a colt which eats and drinks well but keeps thin in flesh. Boll 1/2 a teaspoonful of flaxseed into a pulp and while hot pour it on 1/2 a pail of bran and make a mash. Feed a mash of this kind once a day with one of the following powders 1 lb: Sulphate of iron 4 oz and potassium nitrate 4 oz; mix and divide into 24 doses.

LEUCORRHEA—P. Y. has a mare that has leucorrhoea. This disease is represented by a chronic form of inflammation of the lining membrane of the vagina and is usually very difficult to cure. Feed the mare on good oats and hay and give a teaspoonful sulphate of iron at a dose in a small bran mash once a day, and continue it for a month. Also clean out the part by injecting warm water, then mix 1/2 oz each of sulphate of zinc and acetate of lead in a quart of water and inject the whole at one time. Repeat this once every day for one week, then skip three or four days and begin again if necessary.

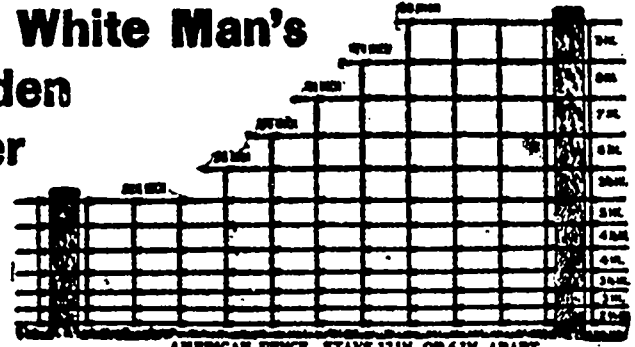
SOCIALISM—"As a wage slave," writes C. F. Nielsen, "I have very little time for reading, and thought of stopping your paper, but feel that F & H is a valuable paper for the working class, and therefore I like to renew. You could do a great deal more for humanity by telling your readers a little about socialism. It is coming rapidly all over the world."

Though socialism is but another name for co-operation, there are as many brands of socialists as there are of flour, almost. The co-operative principle is pushed along about as fast as the public is ready to receive it, and the limits set for its application mark the different grades of socialistic sentiment. In New Zealand, for example, the general government not only owns and operates railroads to the satisfaction of the people, but pays old-age pensions and aids the penniless unemployed to acquire homes in unsettled territory. The ownership of numerous factories in England by employees, who get handsome dividends, seems to be a step toward public ownership of industries. Many municipalities in the United States own water supplies, and some their gas and electric lighting plants. This of course is socialism. Everybody who believes in public schools is a socialist, to this extent. The disciples of Edward Bellamy go so far as to advocate the final control of all industry by the state, making wages the same for one class of service as for another.

DIRECT LEGISLATION—"Why don't you come out boldly for direct legislation, the initiative and referendum and imperative mandate?" writes Charles E. Lami. "It is the only way in which the people can get the right to govern themselves, described in the Declaration of Independence, the quickest and best way, much better than sending petitions to congress. It has the great advantage of being above party, non-partisan and non-sectarian. S D has it by amendment to her constitution and Mo has it by a small vote. I don't think it necessary to organize a new party, only get a determined majority of the voters to demand it, and the old parties will try to see which can give it to us first." The referendum is one of the articles of F & H's social and economic creed. I "came out boldly" for it long ago. Mass and S H have used the referendum off and on for more than a century. The initiative permits the people, when a certain number want to do so, to bring a desired question before the legislature, the referendum provides that a bill or resolve passed by a legislature shall be referred to the citizens of the state for ratification before it can become law. Will our friends in S D, Mass or elsewhere write and tell us of the recent working of the principle as noted by them?

ASK—"I think the adoption of a question and answer department would be a benefit to the paper and the people in general," writes Vernon Mancus. Well, bring on your questions, friends, and I will do my best to answer them.

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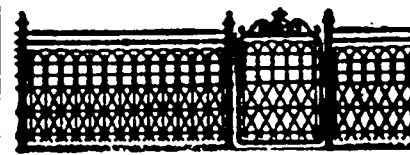
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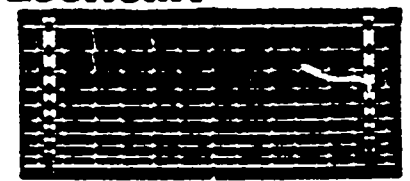


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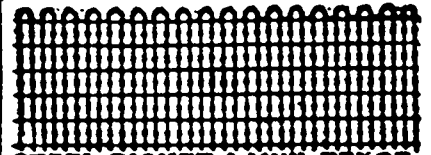
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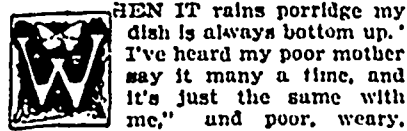
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# "When It Rains Porridge"

Written for Farm and Home by H. Annette Foote.



WHEN IT rains porridge my dish is always bottom up. I've heard my poor mother say it many a time, and it's just the same with me," and poor, weary, down-hearted Mrs. Gates sighed as she laid down the handbill she had been perusing with its accounts of wonderful bargains in dry goods.

"Then I wouldn't have my dish bottom up," stoutly averred Granny Gates from her rocking chair, her black eyes snapping with vigor not diminished by her white hair nor her years. "That wasn't the way my mother said the proverb. She always told us, 'When it rains porridge, hold up your dish.' The trouble is in not knowing when the sky looks like porridge."

"If ever a family needed porridge, this one does, but I don't see any way to get any unless it rains down," and Elsie Gates, the 17-years-old daughter of the house, gave the towel with which she had been wiping the supper dishes a vigorous snap before hanging it up to dry. The supper had been scanty and the children's appetites had been, as usual, keen. She sat down in the doorway. Johnnie, the youngest of the Gates family, precipitating himself upon her back with joyous shouts. She pulled him round in front of her and stood him up in the short grass.

"Mollie and Bennie," she called, "Johnnie is coming. Let's out for him." Johnnie toddled off to the other children, and Elsie leaned her chin upon her hands and gave herself over to discontented thoughts. It was precarious living at best. There was the house which belonged to granny, and there was granny's "interest money." And mother had a little money, too, from the Jessop side. And Grandfather Jessop's will had specified that "my daughter Elvira is to have in addition to the interest from the aforesaid lands, the milk of a cow, and what fuel may be necessary from my woodlots, or if said woodlots shall be cleared during her lifetime, she is to have its equivalent in other fuel; and I leave a charge upon my son James that his sister Elvira shall never come to want as long as any of my property shall remain for her necessary support."

Uncle James's milk wagon on its daily way to the creamery duly left as much milk as the family required, and it formed a large portion of the children's diet. And every fall the big open woodshed attached to the old-fashioned house was piled to the eaves. Uncle James did his duty according to the letter of his father's will, and his wife certainly did hers in the way of good advice and injunctions to economy.

"You ought to get along with one fire," she would say. "Of course it is different at our house, for Mabel is liable to have your company, now she is taking the music course at the boarding school. It costs awfully, but of course we must give her all the advantages we can." Elsie wondered where her advantages were coming from. "And, Elsie, I should think a girl as old as you are might get work somewhere. You might get chamber work up at the school or the summer hotel if you really tried." Elsie sighed heavily as she thought of all these things. If there was only something which she could do at home!

A group of girls of her own age, prettily dressed and chatting merrily, passed on the sidewalk. They were pupils in the boarding school which crowned the hill. Elsie knew some of them by sight and name. The one in the blue gown and with the long fair braid of hair was Marian Dorrance, and Elsie knew her home was in Maine. The one with such black eyes and hair and always a glint of red or yellow in her costume was Mildred Kent, and she lived in Missouri. Oh, to see what they had been able to travel to, to study, to learn music and French and draw, to dress prettily and have one's things new and whole, all at once.

Elsie not only wanted more things for

the family, she wanted some for herself. She longed for something more than a bare subsistence, the least possible amount of food and raiment, but she would be glad to be assured of even comfort for the present. Her mother's voice wailed on behind her:

"I used to hear my mother say there was a glove shop where she lived and they used to put out gloves to be attached and the shoe shops put out shoes to be bound, before the sewing machines came in and spoiled it all. But a girl can't do anything now unless she lives where there are mills or shops."

"Oh, yes," said Granny Gates, "we used to braid palm-leaf hats and straw braids for the bonnet shops, and weave palm-leaf for Shaker hoods. But there's no use walling over those times. They are as far gone as the days when my mother used to go out weaving and spinning. But the question ain't what used to be, but what is now. There is no more use crying over bygone porridge than there is over spilt milk. I believe there is something somebody wants done, and that they'll pay for. Perhaps it ain't just what we want to do, but if it's what we can do and what other folks want done, why, that's our chance for porridge, and that's our time to hold up our dish."

Elsie rose from the doorstep and walked down to the front gate. On one side of it was a large, thickly-matted bed of lilies of the valley, full of just blossoming spires. She stooped to gather a few to carry in to her grandmother, and as she rose, was aware that a group of the boarding school girls were coming back from their walk.

The foremost trio passed on, glancing at her casually, but Marian Dorrance and Mildred Kent paused. "I wish you would allow us to buy some of your lilies of the valley," said Mildred. Elsie flushed hotly. "We have never sold flowers," said she, a little haughtily.

"No," said Marian, "but we do so wish you would. I am sure you would if you knew how much we wanted them. 'We have walked by here three times this afternoon,'" said Mildred, "trying to screw our courage up to ask. 'We wanted to ask last year, but we were new girls then and we did not dare.'"

"And the other girls said you were an 'old family,'" said Marian, taking up the tale. "So we knew it would never do!" with such a merry twinkle in the blue eyes that Elsie could not help laughing in sympathy, and with the laugh came a sudden resolve. Her grandmother's adage came into her mind, and she determined to "hold up her dish" for whatever stray showers of porridge might fall in her direction. She began to gather the fragrant sprays with a generous hand.

"I do not know how much I ought to ask you for them," said she, a little doubtfully. "O, stop!" cried Mildred. "What you have already will make two generous 10-cent bunches, and we should want to come again, you know. There is no florist here, and we have to pay awful prices for everything we have from that man at the Falls who comes to take orders. Thank you so much for letting us have them at all!"

They passed on and joined the other girls, who had turned around to wait for them. After a moment's conference the others came back to where Elsie still stood by the flowers. "May we buy some, too?" asked the leader, a short, plump girl, all smiles and dimples. "And, oh, what are these pretty blue sprays? What lovely foliage they have!"

"That is Jacob's Ladder," said Elsie, giving the old-fashioned country name for the creeping polemonium. "There are not many of these yet; they are just coming into blossom." There were enough for two clusters, however, and the third girl spied and asked for some of the blue grape hyacinths, charmed with their tiny bells and delicate fragrance.

"My!" said Bennie, after the girls had gone. "Eighty cents, all in a little minute! I hope they will come again." "If we have anything to sell them," said Elsie, glancing reflectively over the possibilities of the old-fashioned beds. "There won't be very much of any one thing. But the lilies of the valley will last for some time. There are a great many buds."

"There won't be anything at all," cried Mollie. "If we don't look out for Johnnie," dragging that sizzling cherub out of the bed with both hands full of leaves and flowers.

Elsie shouldered him and carried him into the house, where Bennie was al-

ready telling the news. "Dear me," sighed her mother. "To think of selling the very flowers out of the garden, and I was a Jessop!"

"And I was an Ames!" said granny, with a proud little movement of her head. "And what it is honorable for an Ames to do is honorable for anybody on earth! This garden was an Ames garden before it was a Gates garden, and if it never has brought in anything it is high time it went to work for its living—its owners always worked for theirs! Elsie, are there going to be any double narcissus blows?"

"Come on!" shouted Mollie, "let's go and see!" and she and Bennie raced out, to come back breathless and disputing whether there were 49 or 51 buds. "About 50," said Elsie, "if none of them blast." Bennie laughed. "I am glad I made a mistake and planted a whole cropful of sweet peas instead of the others."

"You might have known by the looks," said his mother. "Well, I didn't, and I'm glad now. You'll see, those girls will be glad to buy 'em." "I think," said Elsie, "I will plant more sweet alyssum and mignonette seeds. Delicate, fragrant blossoms ought to sell." "There are lots of pansies," put in Mollie. "And there will be lots more," said Elsie. "The bed is shady and picking them will keep them blossoming, and those I planted in April will blossom later."

"And nasturtiums," suggested Mollie. "I used to see the girls carrying great handfuls of them last fall. And the valerian is sweet, and it has spread into a big bed. Only the cats won't keep out of it." "It is so late now the cats won't trouble it any more this season," said granny.

"There is one thing you haven't thought of," remarked Mrs. Gates. "Who will buy your flowers in July and August when the school is closed?"

Truly, Elsie had not thought of that, and her countenance fell, for the old garden was always a riot with beauty and fragrance during those two months. "Perhaps the summer boarders will," suggested Mollie. Elsie flushed. To sell flowers to girls of her own age who came for them was one thing, but carrying them up to Elm Crest to the summer hotel was another matter. "I'll ask Mr. Lane," said Bennie. "I'd just as soon as not and I can carry them up there, too. School won't keep them." "Thank you, Bennie," said Elsie. "I will ask him myself and you shall go with me, but I shall be very glad if you will carry them up there if we make a bargain."

The bargain was easily made. Mr. Lane was sure all the sweet peas would find ready buyers among his boarders. "And, by the way, Bennie," said he, "your best time for trade will be for the 9 o'clock breakfast, and I have no doubt there will be other things to do for the boarders. They frequently want a messenger."

Bennie's eyes sparkled, but all he said was, "Yes, sir!" Going down the hill with Elsie he laughed gleefully. "I didn't hold up my dish as granny says," said he, "for I didn't know the sky looked like porridge. But I guess it is a good plan to keep a fellow's dish right side up and then the porridge will hit it!"

As long as the season lasted all the flowers sold readily. In fact, there were not nearly enough to supply the demand, and Elsie was devising plans to raise more another summer, seeking information about the raising of violets in cold frames, and wondering if Roman hyacinths and freesias could be grown in sufficient numbers in the house to make it pay. Bennie found business so good among the summer boarders that he not only began to see where his next winter's suit was coming from, but to indulge hopes of a new overcoat. The summer earnings had not been large, but they had been steady and every penny was welcome.

But by September Elsie began to see an end to the good fortune for that season. The garden would soon be over and summer boarders were already slipping. But a new path was to open. Her first friends, Marian and Mildred, came down one golden September afternoon to buy nasturtiums. Then they stood hesitating, as if there were something more to say.

"Do you—that is—" began Marian. She stopped and began again, blushing prettily. "I am in a quandary. Miss Gates," said she, "and I wonder if you can help me. I am doing so much in music this year that I am constantly busy, and I wish very much to find

someone who will do my mending regularly. I find I can get plain sewing or dressmaking done here, if I need, but no one seems willing to do stocking darning, sew on buttons and strings, repair torn bands or replace skirt-binding."

"And mine, too," said happy-go-lucky Mildred. "I am not doing any extra studying—far from it. In fact, the French teacher remarked yesterday that he thought I was doing even less than usual. I was properly taught, I assure you, and I am always started whole, but I hate mending, and only boggle when I do it, so I fall to pieces long before I get home for mamma's seamstress to put me in order again."

Elsie's thoughts ran rapidly, and by the time Mildred finished her resolve was formed. "I see no reason why we cannot do your mending," said she. "My brother can come for it every week if you will tell me what day your clothes come from the laundry."

"I am so glad," said Mildred, "more for Marian, though, than for myself," with a mischievous glance at her companion. "You see it really worries her, while I suppose I should go on contentedly falling to pieces if no one came to the rescue." "Indeed, you would," laughed Marian, "for I never saw such a faculty for getting rid of buttons, ripping seams and converting buttonholes into yawning gaps."

Elsie laid the matter before the family concave. "Well, I can sew with anyone," said her mother, "and do the nicest of fine darning, and my patches are always on straight and run the right way of the cloth. There's a good deal in that, and stocking darning is one thing, and cloth darning is another, and fine darning is another, but that is mostly on gentlemen's clothes. Oh, I can sew or make buttonholes with the best of them!" "Just as I told you," said granny, "all you have to do is to keep your dish right side up."

The mending proved constant and profitable. If their busy needles kept the girls at the school tidy, why not perform the same service for others, gentlemen as well as ladies? More than one young man, living in a boarding house, was glad to pay for his mending. The work was not uninteresting. There is always a feeling of satisfaction in surveying a job of neatly mended garments, with buttons and strings all in place, torn band-ends cut away, pieced out and finished with new buttonholes, tiny breaks heedfully darned and worn socks made whole again. Mrs. Gates's pride in the results was unbounded, and when she had accomplished a particularly difficult bit she patted it and held it up in different lights as if it had been embroidery.

One other source of income was yet to open to Elsie. Going up to the school one morning, she found the housekeeper much perturbed. "I don't know what I am going to do, Elsie," exclaimed she. "This is to be a reception night the invitations are out, and the cook is sick. How I am ever going to get the cake baked is more than I can see. And a decent confectioner in town Bakery stuff won't do at all." "Can you trust me to make it at home and send the man down for it at 5 o'clock?" asked Elsie. "I know what our stove will do, but I don't know your range, and I shall be sure of success at home."

"Elsie, you are an angel!" exclaimed the perturbed matron. "Make sponge cake of course and unlimited chocolate cake, and any other light delicate kinds you can think of." Elsie laughed. "Granny says there are only three kinds of cake anyway, cup cake with both butter and milk, pound cake with butter but no milk, and sponge cake with neither. With one good rule for each variety, all the rest is a matter of brains and flavor and fruit. I will take your layer cake tin, if you please, and then I must hurry."

"Thomas is just going down for the errands. Here, Thomas, take Miss Gates home and stop on the way wherever she wishes. Now Elsie you can get your material's and take them right along with you."

By the time Elsie was home her plan was mapped out and she was ready for immediate action. As she had said, she knew just what her stove would do. With help from her grandmother in beating eggs, creaming butter and making icing, the work was accomplished, and it was a tempting array that Thomas carried up the hill at 5 o'clock.

"That is all very well for once," said [To Page 151.]



The Night School.

Think you, when boys and girls are gone,  
And locked the schoolroom door,  
That learning there no longer dwells,  
And study hours are o'er?  
You're wrong, for hark you, just at twelve  
The school bell rings full loud,  
And in the pupils rush with glee,  
A bright-eyed lively crowd.

A gray old rat is principal,  
And teaches where to find  
The things that ought to be most clear  
To every ratty mind.  
Her lessons all are practical,  
And thus she fain would teach:  
Eat anything but rough on rats  
That comes within your reach.

Young America.

**Decided Opinions**—I used to think I would like to be a teacher, like Edith says she is going to be, but lately I have changed my mind, as teachers have to study too much.—[Rosebud (Twelve), Iowa.]

It has always been a mystery to me why girls do not like kissing.—[Carl Dexter, Michigan.]

I have read Robinson Crusoe and The Swiss Family Robinson, but I think the latter is a little stretchy.—[Jack of All Trades.]

Well, Water Lily, I do not quite agree with you, but, as Phoebe thinks, I will mind my own business about it and think as I like.—[Pansy, Ontario.]

How many of our cousins have read the book, John Halifax? I am reading it now and am delighted with it. Good-by, cousins, I'll call again.—[Toadstool (Thirteen), Michigan.]

Just hear Marie W. talk about love. If you want to love someone, why, love your grandmother or others that are just as venerable.—[Up-to-Date Elsie.]

There are some of the Y A's who call for letters "that are not so silly," and then go on and write something just as silly.—[Canada Hawk.]

I would like to know what England is fighting for out to the Transvaal. [Frederick H. Saunders.]

I am fond of reading, and I think if girls would not read so many novels it would be better for them. They get so romantic.—[L., Pennsylvania.]

Not that I object to the practice of kissing, but why should we spend our time in such foolish work as writing about it?—[Saber Seventeen.]

**Among Indians**—I am a little girl away up here on the banks of the Mississippi. I wish my little Texas friends could see the river when it freezes. I never skated and am very anxious to try my luck. I have been among the Indians nearly six years. Shawnee, Sac and Foxes, and now the Sioux. I like Indians, for I know very little about white people, and mamma is so anxious for me to know some white children, as I was so small when I left Texas. I do not remember much about white children's ways or plays. Ours is an industrial school. We work half the



day and go to school half. I do not think I like white people, because they stare so when we go to town. I told some children not to look at me, and mamma said I did very wrong, because they only looked at me because they thought I was a white Indian.—[Mekata.]

**Girls**—I do not like Dickens's works, the characters are so unreal and say so little in the most words. I started to read Old Curiosity Shop, but got tired of it and quit. Longfellow is my favorite poet and Mark Twain my favorite author. I have just finished reading Titus; it relates to Bible history. We debated at school last Friday on "Resolved, that girls are more intelligent than boys." The judges decided in favor of the girls. My favorite study is history. Our school is composed of about 30 scholars. Our teacher's name is Mr



Longenbough. If Fred Swanson would come out to the grand state of Colorado I would guarantee he could get plenty of girls to kiss him, but I do not see how he would be any better off by it. Well, I must check myself in due time. [Kittie Dillon (Fourteen), Colorado.]

**Good Advice**—I raised a nice big turkey and sold it and bought 11 Christmas presents with the money and gave them away and received eight presents. I have an old hen and I am going to see how many chickens I can raise. Water Lily, ma knew a girl that got married to her school teacher when she was 16 years old. He would not finish his school. They all said he was sick, but ma said she guessed it was love-sick. Ma went to see them a few years after and they had nothing to eat only oatmeal, and the woman went and begged the liver of the butcher. Water Lily, how would you like to do all that? Our teacher last winter read a chapter every morning out of Black Beauty and none of us wanted to be late. Do any of you F & H readers know anyone by the name of Fred Lyndon? He left home about three years ago and his folks never heard from him but once since he left, and he said in that one

letter that he suffered for something to eat before he could get work. So, boys, don't any of you ever run away from home.—[Grace Miller, Kansas.]

**Earned It**—Fred Swanson, I sympathize with you, for I have been over the same road if not worse. I went with a girl once that said that there was no boy that could kiss her if she did not want him so. I got to hear what she said, and thought I would try my luck. When I tried to kiss her, my, how she did slap and scratch! But I got the kiss just the same. But I earned it, I tell you I did. Then I began to laugh and told her not to boast any more. And she got mad and said she was going to tell her pa, and sure enough she did, and the next time I met him, oh, my! I did not get a flogging, but I would rather had one than what I got. Which do you think was to blame?—[Billie, the Kid.]

**Proud**—I have a 22-caliber Marlin rifle of which I feel very proud. I also have a wheel. Wheeling is great sport. It gives one an excellent appetite. Eva Claiborne, I perhaps, am a little worse than you; anyway, I am just as bad. I'd rather read than eat, or read while I eat. Geography and mathematics are my best studies because I can remember so well. Rudyard Kipling, Bill Nye, Mark Twain, Longfellow and Horatio Alger, Jr. are my favorite authors. I think one should read A Hardy Norseman, by Edna Lyall.—[Johnny Boy.]

**Montreal**—On my trip to Lowell I went to Boston, Montreal and Maynard, Mass. In Montreal I saw houses with flat roofs and Indians and Chinese. Before we came to Montreal we saw rocks higher than houses, and we saw a house built on one of the rocks, and what they lived on I do not know. Maynard is a little country town. I went to Boston and saw Bunker Hill monument. And yet, every place I saw I didn't like as I do Minneapolis.—[Ruth Kelley (Ten) Minnesota.]

**Novels**—Water Lily, you have read a lot of silly novels. I'm going to be a writer, but mine won't hurt you. My favorite author is Ezekiel Butterworth and I like "Samantha" and the poet Holmes. Dickens is perfectly ridiculous. I take the F & H just for the letters. Eva, we are troubled with chronic laziness and I think most schools with silliness.—[Miss Minnesota.]

**Pets and Dolls**—If there is anything I like it is pets. I have a pet dog named Ponto, a cat named Snowdrop and a bird named Pearl. I am quite too young to have beaux, but my larger sister has and I cavendrop on them. I'll bet you don't know why I do it. It is when I have beaux I will know how to act. That is a pretty good idea. I think, don't you? [Wide-Awake (Twelve).]

I have three dolls. The biggest doll is Isabelle, the next is Lizzie, the other is not really my own. It was my mother's when she was a little girl, but I call her mine and her name is Addie.—[Kittie Rivers (Nine), New York.]

For pets I have a blue cat. It got one of its ears froze off last winter. I have a white and black spotted shepherd dog. I live one-half mile from school. I have been every day but two this winter. My teacher's name is Mr Davis E. Hughes. My mamma is making me a dress out of one of her old ones. My oldest brother is in charge of the telegraph office at Pinkstaff, Ill. I like to sew. I have pieced a quilt.—[Pearl H. Miller (Nine), Illinois.]

I dressed my doll up for a fair that we had this fall and got the prize. It was a scrap book.—[Anna W. Doran.]

I think it is all right for the little folks to talk about pets, and a great deal better than it is for the larger ones to talk about kissing so much.—[Chester Honnold (Twelve), Nebraska.]

What is invisible blue? A policeman when he is wanted.

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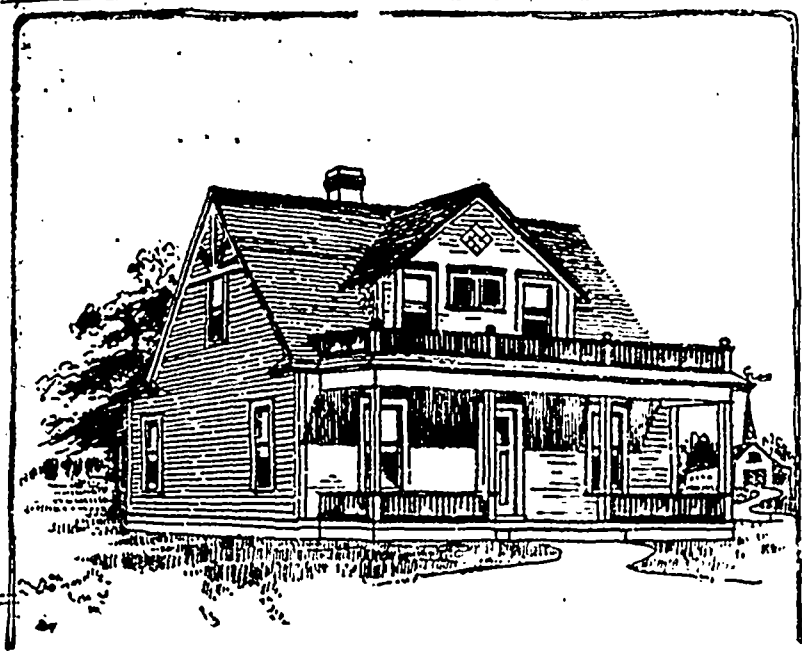
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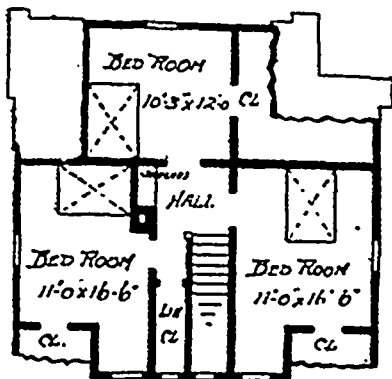
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In the Lap of Spring.

A FARM COTTAGE.

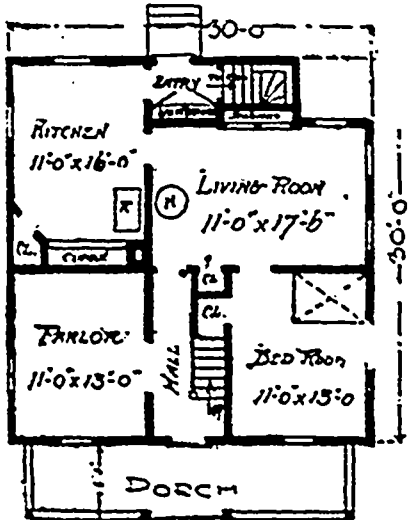
[From Keith's Home Builder, W. J. Keith, Minneapolis, Minn.]

For a farm this cottage will be found especially convenient, as the living room is of good size and the kitchen is



THE CHAMBERS.

convenient, affording ample accommodation in caring for the harvest hands. wardrobe in the rear entry is necessary for the men when they come from work to hang their coats and stow away their heavy boots. There will be a small cellar reached from this entry and cupboards for the dishes and kitchen tins, and closets for clothing are amply provided. In the living or dining room is a prettily designed side-



DOWNSTAIRS.

board which adds greatly to the attractiveness of this room. Finish, hemlock or pine.

Cost, \$575 in a lumber district; add 25 per cent for localities removed from lumber markets. Width, 30 ft.; depth, 34 ft 6 in.; small cellar; light first story, 8 ft 2 in.; second story, 8 ft; lowest light second story, 8 ft.

PREMIUM LIST PRIZES.

The cash prize contest in the annual premium list number of F & H, Oct 15, '99, proved to be a very fascinating one, and we give below the Editor's answer, and the award of prizes. No one got the same answer that the Editor did, but many of them were just as good. Some of you made the mistake of giving titles of small poems or plays that were not large enough to make a book of themselves, while others failed to get a complete list. On the whole, they were the best lists of answers ever received to a puzzle of this kind.

THE EDITOR'S LIST.

First I will mention my favorite novelist, who is Scott, I have three of his stories; they are Waverley, Kenilworth and Ivanhoe. I also have a poem by the same author, named Marmion. Dickens is also a favorite author of mine, but Pickwick is the only copy of his works that I own. My next favorite book is Middlemarch by Eliot. I also have Remora by the same author, but I do not like the book as well as the others. I always enjoy Penderinis by Thackeray every time I read it, and I also have Catherine by the same author. Then I have Marcella by Mrs Ward, which I also like very much. I am also very fond of Miss Wilkins's works, and I have two of these; they are Pembroke and Jerome. Next I have Alhambra by Irving, but I do not care so much for this as I do for two stories for girls by Mrs Carey, entitled Esther and Averell. Next on the shelf is Lucile, written by Meredith. Then come three plays by Shakespeare, and I name them in the order I like them best: Macbeth, Hamlet and Othello. I also have two of Longfellow's poems; they are Hiawatha and Evangeline. Next comes my copy of Faust by Goethe, in the original German, and I have one of Mrs Sheldon's works entitled Max. Of children's stories I have a whole shelf full, which I name in the order of their value to me. First come the works of Abbott, of which I have all of his Franconia series, 10 in number. Then come the Harper story books in 12 volumes. Next come 24 volumes of Alger's works. Then fill out the shelf I have Polly, by Meade. I also have on the next shelf Sunset by Black, Shirley by Bronte, Armadale and Basil by Collins, and Dorothy by Woolson.

THE PRIZE WINNERS.

\$10 gold piece to G. C. Dawitt, N. Y. \$5 gold piece to Naomi C. Woolton, Neb. \$2.50 gold piece to C. S. Dearborne, Cal. Watch to J. G. Hornet, Pa. Prizes worth \$1 to Nancy F. Wilson, N. H.; Sarah E. Newton, Mass.; Mrs Mary Bunten, N. H.; Lizzie W. Bunten, N. H.; J. H. Healey, Ont.; Mary E. Howe, Neb.; Mrs Sarah Gilles, Minn.; Daniel W. Bill, N. H.; Garvin Davidson, Ore.; James R. Beede, N. H. Prizes worth 50 cents to L. C. Burris, Fla.; Volney P. Johnson, Mass.; D. G. Chesley, N. H.; Gertrude Marks, O.; C. Spicer, Ia.; Mary E. Carroll, Cal.; Daniel W. Bill, N. H.; Lizzie M. Bowles, N. H.; W. H. Overacker, Fla.; Mrs Abbie F. Baker, Me.; Roscoe Young, Mo.; Miss E. E. Ricker, D. C.; Russell C. Field, Cal.; Mrs D. R. Varney, N. Y.; Geneva S. Hallard, Mass.; Mrs J. L. Dildino, N. Y.; Albert Pennell, Me.; Mrs T. N. McClelland, Ky.; Miss Emma E. Fridson, Tenn.; Alexander Heath, Ont.

OLD AGE.

Whether one hide in some secluded nook— Whether at Liverpool or Sandy Hook— 'Tis one. Old age will search him out—and he— He—he—when ready will know where to look. [Mark Twain.]

"WHEN IT RAINS PORRIDGE."

[From Page 149.]

Elsie, "but I shall not get the chance again." But she did. The cook at the school did not return, good help in that line was not easy to procure, and by the time a competent person in other lines was secured, Elsie was firmly established in her position as cake-baker. And, like the mending, the business grew. It was a relief to many a housewife with coming guests to have the cake baking off her mind and hands. Elsie made nothing in advance, though she was urged to do so, and even to open "ice cream parlors." She preferred to combine herself entirely to order work and take only what she was sure of accomplishing. She did not grow rich, and she worked hard, but she was always sure of a certain amount of ready money earned in her own home. Uncle James's wife sniffed disapproval of earning money in such odd ways, "during things no one else in town did." But as Mollie sententiously remarked, Uncle James's wife never did approve, so it did not greatly matter. Does it sound hopelessly prosaic and

commonplace? Selling what flowers could be raised in the old-fashioned garden, cake making in a hot kitchen, darning socks and setting patches; not very inspiring or artistic; just "the ceaseless round of daily toil." But it was the work which lay ready to her hand, the work which she could do well and take pride in doing, as much as if she had painted a picture or written a poem. "Yes," said the minister one afternoon when he was making a pastoral call on the Gates family, "I believe there are opportunities for everyone close at hand. If one can only see at the right moment that the opportunity is there." "That is just what I tell the children," said granny. "When it rains porridge, hold up your dish." The real thing is to know when the sky looks like porridge.

"It seems to me," remarked the prospective tenant, as he noted four inches of water in the basement, "that this cellar leaks."

"Leaks! Not a bit of it," spoke up the hustling agent. "Why, that water's been there for a month, and not a drop has escaped."

Advertisement for Gray & Co. Plating Works, featuring a \$5.00 a day offer for men and women, and a list of services including gold, silver, nickel, and metal plating.

Advertisement for a free silk dress, offering a beautiful silk dress to new subscribers.

Large advertisement for the Crack Shot "Take Down" single shot rifle, including an illustration of the rifle and details of the offer.

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We present herewith a condensed list of the many premiums which we give to those who get up clubs for Farm and Home. The premiums offered have been selected with more than ordinary care and with special reference to their suitability to those likely to win them. Particular attention is called to the fact that we give double the value offered heretofore, the premiums which we formerly gave for four subscribers going for two subscribers, and so on. These offers, however, are for new subscribers only and we hope thereby to greatly increase our circulation. We still give premiums for old subscribers, but double the number of new subscribers are required in each case. For example. To secure any premium offered for two new subscribers you must send four old subscribers, and so on, for any article advertised. A new subscriber is one who is not a reader of the paper at present, while an old subscriber is one whose name appears on our subscription list, and who receives the paper regularly. Every article advertised is well worth working for and all who get up clubs and secure one or more of these premiums will find themselves doubly repaid for the little time it will take.

The first column gives the number of each article, the second column the name, and the third column the retail price. Any premium advertised may be purchased outright, if desired, at the price set opposite each. We hope, however, that as many as can will get up clubs, and thus aid us in extending the influence and usefulness of Farm and Home still further, and secure one or more of these splendid premiums free of cost.

GIVEN FOR ONE NEW SUBSCRIBER.		GIVEN FOR TWO NEW SUBSCRIBERS.		GIVEN FOR THREE NEW SUBSCRIBERS AND 75 CENTS ADDITIONAL.		GIVEN FOR EIGHT NEW SUBSCRIBERS AND \$2.50 ADDITIONAL.	
Prem. No.	Retail Price	Prem. No.	Retail Price	Prem. No.	Retail Price	Prem. No.	Retail Price
1	Atlas of the World.	237	Emerald Ring.	239	Our Country in War.	145	Writing Desk and Bookcase.
2	Samantha at Saratoga.	238	Turquoise Ring.	240	Solid Gold Diamond Ring.	146	
3	Webster's Dictionary.	239	Three Stone Rings.	241	Solid Gold Opal Ring.	147	GIVEN FOR NINE NEW SUBSCRIBERS AND \$2.50 ADDITIONAL.
4	Unexpected Trouble.	240	Brilliant Ring.	242	Silver Plated Table Set.	148	141 Silver Plated Tea Service.
5	Profits in Poultry.	241	Platin Band Ring.	243	114 Shaving Outfit.	149	
6	Solid Silver Thumbie.	242	Cluster Ring.	244	615 King Air Rifle.	150	GIVEN FOR TEN NEW SUBSCRIBERS.
7	Clover Brooch.	243	Double Stone Ring.	245	Home Repairing Outfit.	151	552 Gent's Silverino Watch.
8	Gold Plated Bracelet.	244	Berry Spoon.	246	"Jim Dandy" Scales.	152	248 Carving Set.
9	Enameled Hat Pin.	245	Ladies' Fancy Scissors.	247	Electric Medical Battery.	153	224 French Achromatic Telescope.
10	Wishbone Pin.	246	Genuine Herschide Razor Strop.	248	GIVEN FOR FOUR NEW SUBSCRIBERS.	154	89 Autoharp.
11	Clover Scarf Pin.	247	Ivory Handled Penknife.	249	301 Olympia Watch.	155	203 Ideal Mandolin.
12	Lower's Knot Scarf Pin.	248	Gent's Pocket Knife.	250	Solid Gold Ring.	156	GIVEN FOR TEN NEW SUBSCRIBERS AND \$2.00 ADDITIONAL.
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14	Horseshoe Scarf Pin.	250	Empire Stamping Outfit.	252	Celluloid Photo Album.	158	GIVEN FOR TEN NEW SUBSCRIBERS AND \$2.50 ADDITIONAL.
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16	Fancy Scarf Pin.	252	Scientific Kite.	254	Little Hustler Motor (Parts).	160	194 Ladies' Gold Watch.
17	Silver Pen.	253	Metalaphone.	255	Phonoharp.	161	174 Turkish Couch.
18	Pearl Handled Penholder.	254	New Concert Harmonica.	256	Zobo Brass Cornet.	162	GIVEN FOR TWELVE NEW SUBSCRIBERS.
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21	Pair of Side Comb.	257	Ladies' Ornamented Pocketbook.	259	GIVEN FOR FIVE NEW SUBSCRIBERS.	165	GIVEN FOR FOURTEEN NEW SUBSCRIBERS.
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23	Caruncle Ring.	259	GIVEN FOR TWO NEW SUBSCRIBERS AND 50 CENTS ADDITIONAL.	261	Solid Gold Ring.	167	75 Ole Bull Violin and Outfit.
24	Brilliant Ring.	260	Olympia Watch.	262	Solid Gold Emerald Ring.	168	GIVEN FOR SIXTEEN NEW SUBSCRIBERS.
25	Flat Chased Ring.	261	Solid Gold Ring.	263	Six Tablespoons.	169	145 Writing Desk and Bookcase.
26	Platin Band Ring.	262	Safety Razor.	264	Little Hustler Motor.	170	GIVEN FOR EIGHTEEN NEW SUBSCRIBERS.
27	Chased Band Ring.	263	Celluloid Photo Album.	265	Success Magic Lantern.	171	141 Silver Plated Tea Service.
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30	Boys' Knife.	266	Phonoharp.	268	Carving Set.	174	194 Ladies' Gold Watch.
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36	Bull's Eye Lantern.	272	Silver Manicure Set.	274	Solid Gold Opal Ring.	180	
37	Clark's London Flute.	273	Solid Gold Ruby Ring.	275	Silver Plated Table Set.	181	
38	Crispin's Awl and Outfit.	274	Six Teaspoons.	276	114 Shaving Outfit.	182	
39	Family Soldering Set.	275	Silver Toothpick Holder.	277	King Air Rifle.	183	
40	Ladies' Pocketbook.	276	Salt and Pepper Set.	278	Home Repairing Outfit.	184	
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47	Chambers' Encyclopedia.	283	615 King Air Rifle.	285	Field and Marine Glass.	191	
48	Set of Dickens.	284		286	Ole Bull Violin and Outfit.	192	
49	Gleason's Horse Book.	285		287		193	
50	Club B and Hooks.	286		288		194	
51	Butterfly Chatelaine Pin.	287		289		195	
52	Gold Sash Buckle.	288		290		196	
53	Six Silver Plated Teaspoons.	289		291		197	
54	Ruby Ring.	290		292		198	

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“UNEXPECTED TROUBLE.” Actual Size, 19 x 25 inches.

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**The Theme.** In the foreground is an old hen, greatly excited because she cannot swim after her foster brood of ducklings. Gleelessly watching the predicament of the hen is a little child held up by a doting grandmother. The whole picture is full of life and appeals to every one at first sight.

## The Artist.

Following is a letter from Mr. Morgan, the artist, to whom one of the reproductions was submitted.

MONTROSE VILLA, ST. BONIFACE ROAD, VENTNOR, AUG. 16, '98.

“I recognize at once my work which I painted in 1893. It is a most admirable copy of my original, quite one of the most satisfactory reproductions I have ever had, giving the exact drawing and color and almost the touches of the brush. In some senses too faithful, as it brings to my memory the difficulties of getting the baby boy to pose, and the worry of the ducklings.”

“The incident of the old hen getting angrily excited because she cannot swim after her foster brood was suggested to me many years ago, when I was a child in Aylesbury, Buckinghamshire, justly celebrated for its ducks and butter. I used to see the hen-wife bring the young ducks as soon as hatched and toss them into the farm pond, and as the scene interested me then, I thought it worth recording. It is sometimes urged that hens have nothing to do with ducks, but that is erroneous. The adult duck is a bad mother, breaks the eggs and neglects her brood, while Dorking hens are generally careful mothers and sit early in the season.”

“My picture as far as I know has not been exhibited. The greater part of my life has been passed in the country and all of my pictures are of domestic scenes in the open air.” Yours faithfully,

FRED MORGAN.

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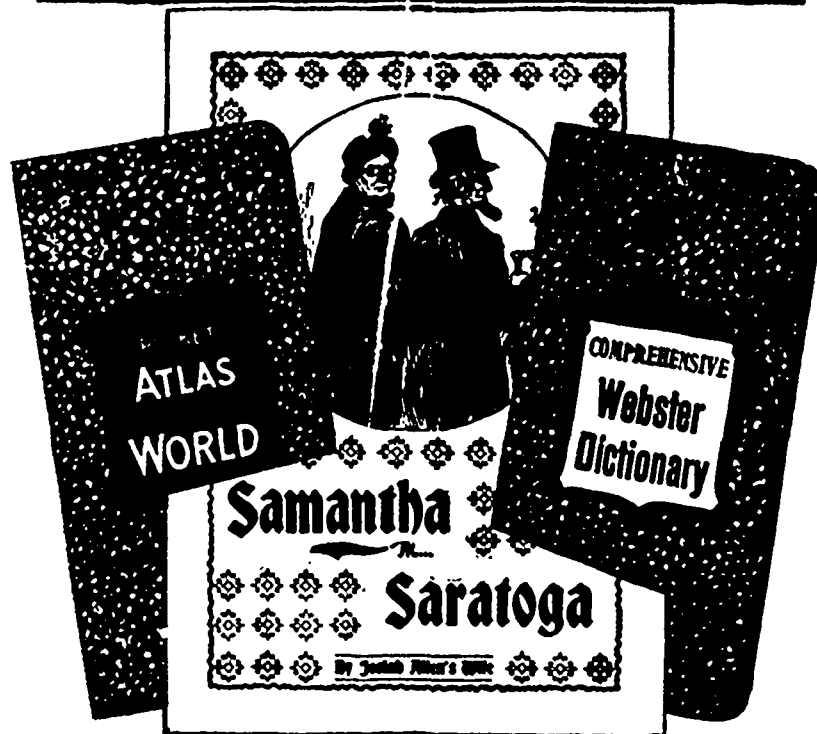
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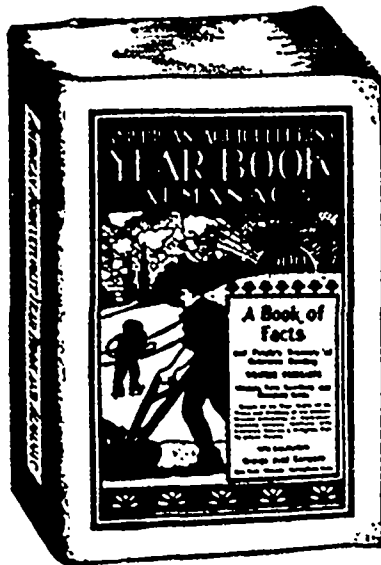
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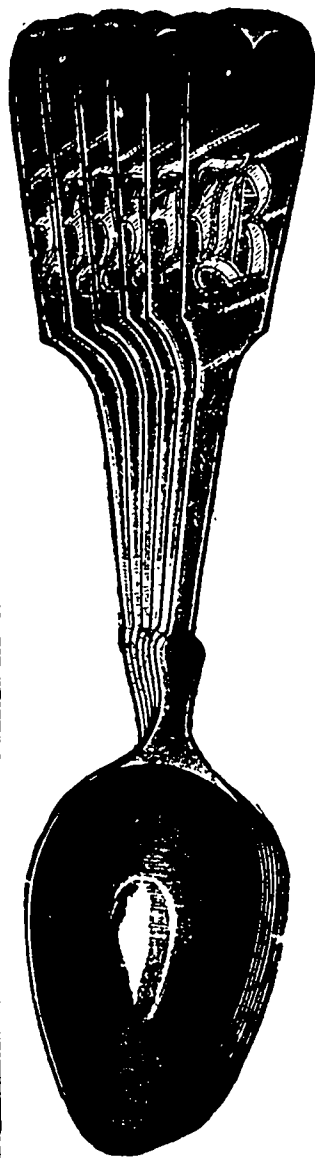
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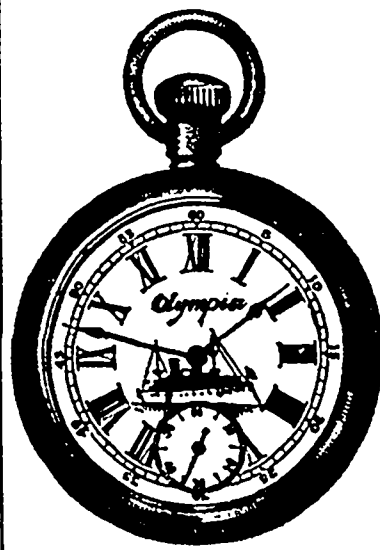
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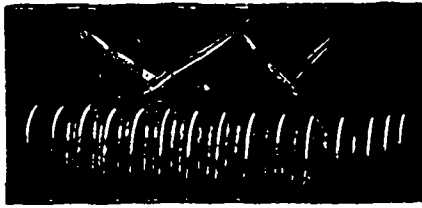


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Yours truly, J. E. GRAY & SON.

LAFAYETTE, IND., July 20, 1899.  
I simply wish to say that I am more than satisfied with the 12-foot mounted weeder I purchased of you last spring. My corn is cleaner and the ground worked better than it ever was before. I would not think of parting with it for \$100 if I could not secure another like it. I expect to send you some orders next spring as my neighbors like it also.

Yours truly, D. D. COLZ.

### All Around the Farm.

#### ERADICATING WIREWORMS.

What is the cause of a farmer being found at his dinner table? Hunger. The wireworms feed upon seeds, roots and foliage of plants, and the worm is trying a new diet when he attacks the tuber. There are five species of wireworms nearly alike and most people are not able to distinguish between them and millipedes. The true wireworm is long, slender and has a very hard body. It is from a light to a dark yellow in color and not very active when disturbed. The wheat wireworm is the most numerous and most destructive kind in N. Y. It is distinguished from the others by eye-like depressions on the sides of the last segment. Other varieties infest grass and corn land. Some mature in July and others in Sept and the fall months. They emerge in June as click beetles, with which many a boy has fooled away his time.

Wireworms cease feeding in the fall before Nov and descend into the soil for several inches, where they form cells and remain in a torpid condition all winter. The greatest damage is usually done in spring when the long fast has made them hungry. The click beetles eat slices of potatoes, wads of green clover, corn meal dough under boards in a corn field. Clover is the most attractive bait. They are most active at night and seek food by running over the surface of the ground. Poisoned food will kill many of these "parents of the wireworms" and this method is practiced in fields very badly infested or where the area is small.

There are hundreds of remedies recommended by farmers but from the experiments of Prof. Slingerland we conclude they are of no value as usually given. For example, seed soaked in Paris green and water, Fowler's solution, arsenic, corrosive sublimate and other poisons were relished without harm by these vigorous fellows. Seed rolled in tar or Paris green and flour was not protected. Salt, kainit, etc. prove efficacious only when used in such quantities as to kill vegetation or at an excessive cost. Salt was tried at the rate of 8 tons p a, and while 1000 lbs p a injured germination of wheat it did not drive down or away the wireworm. Lime, either slaked or unslaked, had no effect on them. It is the opinion of some they can be starved out by summer fallow, but in the experiment cages at Cornell many of them lived nearly a year in clean soil; in fact, more of them died in cages which had grass growing than in the clean soil. Such crops as buckwheat, mustard and rape did not prove distasteful or starve them out. Wireworms are not attracted to poisoned baits and insecticides like bisulphide of carbon, and others failed or were too expensive.

It is said that farmers who practice a short rotation are not troubled to any great extent with these pests. Soil ground which remains undisturbed becomes the breeding ground for many varieties of insects. Fall plowing, with

short rotation, destroys these favorable conditions and interrupts their plans. They live at least 3 yrs in the worm state. When they change into the adult stage, about Aug, they remain in the cell till spring. They are at this time tender, and if their sleeping room is broken, soon die. Good cultivation at this time, fall, will destroy more of them than all other methods combined. Only the pupae and adults are destroyed at this time and several years are required to eradicate them.—(C. E. Chapman, Tompkins Co, N. Y.)

#### THE BENEFIT OF SUBSOILING.

Subsoiling adds greatly to the productivity of heavy clay soils. If the subsoil is left undisturbed it forms an almost impenetrable strata or floor beneath the top soil and thus limits the downward growth of the roots. By subsoiling is meant the loosening of the lower layer of soil and not the throwing of it to the surface. In deepening our clay soil we must be very careful to avoid throwing too much of the newly broken clay to the top at one time, as this would probably lessen the productivity of the soil for a season or two. The best way then, to deepen clay soils is to break the upper layer with a turn plow to the usual depth, and follow in the open furrow with a bull-tongue. This bull-tongue is simply one straight, pointed tooth which tears up the hard soil at the bottom of the furrow left by the turn plow, but throws no soil out of the furrow. This requires an additional man and mule to break up the same area as would be gone over by one team, but the increased productivity will usually more than equalize the additional expense.

The deeper breaking of the soil gives greater range to roots of plants by allowing them to penetrate farther down, and in this greater range they will find more food. Loosening the lower layer of soil exposes it to the action of the air, water and frost, each of which aids in breaking up the hard and unavailable particles, and puts them in a condition to be used by the plant. Thus the hard and apparently worthless clay is changed into a valuable soil.

The drop of rain water, falling through the air, collects a gas which is our most costly fertilizing element. If this rain water passes through the soil, this gas is absorbed by the soil and thus we gain a large amount of a costly fertilizer. But if the rain water runs off on the surface, this gas is lost. If soil is broken deeply, a larger amount of rain water can be filtered by it, and we save more, but if the soil is loose to only a slight depth, then more of the rain water runs off on the surface, carrying the gas with it. It also washes away a good many particles of what soil is there.

In a dry season you can notice an advantage of the deeper broken soil over the shallow broken, because the roots, being able to penetrate deeper, are enabled to find a larger supply of moisture than those confined to a shallow soil. In a wet season, the deeply broken soil, being able to hold more water, less runs off over the surface to wash away

the top soil. As the water sinks into the lower portion of the loose soil, the upper portion dries quicker and cultivation can begin earlier.

Last year two fields of clay soil were planted with corn. One was subsoiled, the other not, but was fertilized. During the growing season there was a marked difference in the appearance of the crop, that on the subsoiled field being much darker in color and making a more luxuriant growth. It also held its green color longer during the hot, dry summer season, not firing up as quickly as the other, this giving evidence of the additional moisture which the roots found in the deeper soil. The subsoiled field was naturally more fertile than the other, but not enough to give the much larger yield which was obtained.—[A. H. Prince, Wake Co, N. C.]

#### THE VALUE OF ALFALFA.

Alfalfa is the most valuable rough feed grown in Kan. Combined with common grains it is worth three times as much as an equal amount of prairie hay, four times as much as sorghum hay, five times as much as corn fodder and 1 1/2 times as much as clover hay. Steer feeders report an average gain of 1 1/2 to 2 lbs p day p steer with corn and the ordinary roughness and 3 to 5 lbs p day when alfalfa is the roughness fed. At the Kan exper sta, one lot of fattening hogs were fed all the grain they would eat and another lot all the grain and all the alfalfa they would eat. The hogs having the alfalfa hay ate more grain and gained more pounds of pork for each bushel of grain consumed, showing a gain of 865 lbs of pork per ton of alfalfa hay. Hogs on alfalfa pasture showed a gain of 776 lbs p a of pasture. Alfalfa is particularly adapted to feeding with our chief drought-resisting grain, kafir corn, each having what the other lacks, and the two fed together making an admirable combination for all feeding purposes. In those sections of northwestern Kan where alfalfa is largely grown, the feeders are paying 2c p bu more for corn than is paid in neighboring communities where alfalfa is not grown. The feeder without alfalfa cannot compete against the feeder who has it, either in regard to gains or cost. Alfalfa is not generally raised in eastern Kan. It can be raised along every stream and in every draw in western Kan, and in Decatur Co I have seen good crops grown on high uplands 150 ft to water.—Prof Cottrell.

To Exterminate Moles mix calomel in a small piece of biscuit dough or biscuit pills. Open fresh runs and drop a few in. Cover the opening with fresh soil. This method is best, next to a mole trap.—[W. S. Culp, Chester Co, SC.]

About Peanuts—The early or Spanish peanut has a very thin shuck, is very oily and grows unusually compact. This variety has done splendidly on my farm in Miss and also in Mich and Wis. The large double-jointed peanut is not a sure cropper and always contains a large quantity of inferior nuts.—[J. H. Van Ness, Miss.]

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