LIBRARY

WESTERN EDITION

ESTABLISHED 1877
The Illustrated Farm and Family Journal

24 NUMBERS 35 CENTS

Vol. XXXII. No. 19 Springfield, Ohio, July 10, 1909 Terms { 1 Year, 24 Numbers, 35 Cents / 4 Years, 96 Numbers, $1.00 }

The Wheat Problem

By J. C. Mohler of the Kansas Department of Agriculture

High prices for wheat in the past year, and especially in the past few months, and the general discussion about this cereal have turned the attention of the American people toward this product in a way perhaps without a parallel. Not only are the growers interested, both as consumers and producers, in the rising markets, but bread-winners everywhere are keenly concerned as to the situation. Of course, wheat has sold for more money than now, but the uniformly high range in prices maintained for some years has awakened an interest in the subject that is far-reaching and wide-spread.

The importance of wheat flour and bread in the dietary is generally recognized. In a study and investigation of the cost of food in many families in different parts of the United States the Department of Commerce and Labor found, on an average, that about three hundred and twenty-five dollars was annually spent by the wage-earner for food. Less than one tenth of this amount was for flour and bread and other cereal products. On the basis of nutritive value, however, this one tenth of the expenditure provided approximately one half of the nutrients of the average ration. Hence it is quite apparent that wheat flour is one of the cheapest and most nutritious foods available, and consequently has been, and will continue to be, even though prices materially increase, a chief element in the regular daily ration of the American people.

Have We Reached the Point of Maximum Yield?

America is the greatest wheat-producing country in the world, and owing to the importance of her annual crops in trade and commerce, the recent report that "Farmer" Patten, of the Chicago wheat pit, declared that we had reached our maximum aggregate yield is eliciting considerable comment. On this assertion, in connection with our rapidly increasing population, is based his conclusions for the high prices of wheat, thus attempting to jump from under the popular prejudice among consumers and others against his stock-market manipulations.

While Patten needs no defense, he should not be too severely condemned. We are all of the same clay. In this age of wealth-getting few are so unselfish they would not take advantage of a similar opportunity, had they the requisite nerve, capability and cash and the shrewdness to see the opening. So long as our laws do not forbid grain-gambling, so long will such practices be continued.

It is of no avail to bewail conditions that make possible situations like the present one as to wheat, but the intimation that the limit of wheat-raising in the United States has been reached is wide of the mark, considering the possibilities both from the viewpoint of aggregate areas and maximum yields an acre. It may be true, as Mr. Patten points out, "that wheat-lands are being worked to death, and changes must come or we will suffer the result." American farmers are notorious for the rapidity with which they have depleted their lands. With our vast areas of virgin soil, when one locality began to show signs of impoverishment the restless pioneer would move on further west and repeat the operation even quicker than before. In this way much of our prairie soils, the natural wheat-producers, have been "skinned," and in the momentum of the mad rush for new land many have been carried beyond the United States into Canada, to become the subjects of a king, where the process of land "skinning" is being as vigorously pursued as at any time in the world's history. As wheat-farming in many parts of the chief wheat-growing regions is carried on, best yields an acre cannot be obtained, as more often every principle of good farming is ignored by the conscienceless "soil robber" in his haste to get rich quick.

New Systems of Agriculture Bring Increased Producing Powers

Beneficial changes in our agriculture, however, are taking place and being brought about all the while. Large numbers of scientists, students, explorers, teachers and others are applying their best energies toward establishing rational systems of agriculture in America, that we might not only maintain the fertility of our soil, but actually increase its producing powers, and there is great comfort in the statement of that eminent authority, Prof. C. G. Hopkins of the University of Illinois, "that land may be built up and made richer than it ever was by a good system of strictly grain-farming."

Wheat has been largely a pioneer crop. It is easily grown, produces large yields, and, comparatively, requires small capital. Hence it is the first agricultural industry in a new country adapted to wheat. The crop is usually continued until the decline in yield reaches a point where other branches of husbandry are more remunerative. Then wheat production is reduced, as shown by the records of many of the older states. There has been much said about wheat production not keeping pace with the increase in population. As a matter of fact, the output of wheat has gained materially over the increase in population in the past few years, but the consumption of wheat has also increased. While we are raising more per capita, we are eating more, and the present situation may be attributed in large measure to the appetites of the American people. So long as they have the price, they will pay it, for their stomachs must be satisfied. Americans have always been a well-fed people, and our prosperity has apparently encouraged us toward gluttony, notwithstanding increased prices. It is this increased use per head that has diminished the margin between production and consumption.

Larger Yields May Be Expected

It is freely predicted that in the near future the United States will not produce sufficient wheat for home consumption; but this need not be, for with increase in the price of wheat, a larger quantity, it may reasonably be expected, will be produced on older lands. With smaller areas of new land remaining, the demand is for better and more systematic farming—for fertilization, rotation of crops and better tillage—in short, a more liberal mixing of brains in the business. That the campaign along this line is already bearing fruit seems to be shown by the fact that some of the older states not generally considered as wheat-producers now have larger yields an acre than many of our Western wheat-growers. Larger yields are being obtained, too, in some of the so-called Western states. In Kansas, for instance, the leading wheat-producer of the United States, the average yield an acre in the decade ending with 1908 was fifteen per cent greater than for the ten years preceding. Kansas can materially increase her wheat acreage, the Dakotas can do likewise, and the wheat acreage of the nation may be greatly extended.

Unprofitable Land Will Be Reclaimed

Even so recently as thirty years ago Ohio, Michigan, Indiana, Illinois and Iowa were among the foremost wheat-producers. Because these states preferred to reduce their wheat acreages does not argue that they will not grow increased areas of wheat in the years to come. With high prices the farmers of the more Eastern states may rehabilitate their old wheat-lands; by improved methods of farming, depleted lands of the so-called West may be again profitably devoted to wheat, while irrigation and dry farming are reclaiming considerable areas heretofore uncultivated, to say nothing of the extensive territory that is suitable for the production of this staple crop in the Canadian provinces.

Another feature as it exists in the middle states that is interesting is found in the circumstance of a shortage in farm help. Take the Sunflower State as a typical example. Only a little over a third of Kansas' area, practically all arable, is under cultivation, and many farmers could easily double their wheat-sowings if they could obtain the necessary help to put it in. When a larger proportion of our increasing population will go to the farms, or stay there, then the acreages in crops may be appreciably enlarged, and the indications are that this call of the farm is being heeded.

The Prospect for Future Production is Encouraging

A survey of the situation reveals an outlook for the future that must be encouraging to the grower of wheat. There being no longer any appreciable areas of virgin soil available, it is unlikely that there will ever again be a long time of low prices for wheat such as was witnessed a few years back. In Kansas, a most important wheat state which reaches the market early with her output, millers and grain-men have already contracted for large quantities of wheat to be delivered in July at one dollar a bushel—a most extraordinarily high price for new wheat. This not only portends prosperity for the Kansas growers, but suggests what may be in store for wheat-raisers generally.

Aside from the possible increased sowings, with proper systems of farming the United States may greatly increase her present average of yields an acre, and with the best brains in the country working to that end the promise is bright for such a consummation. This will not only mean more wheat, but more of the other products of the farm, to nourish and sustain the largely increased population that is inevitable.

Farm Buildings and Equipments

Hints for the General Farmer on Utilizing Natural Resources

A Convenient Barn

As the season for building is on us again, and the prospective builder is on the lookout for plans or hints pertaining to barn-building, I submit the plans of a very convenient building for the general farmer.

The foundation and frame will be found to be a most excellent one. The interior is arranged to suit my individual taste and convenience, but is capable of many changes. Some who do not yet realize the value of the silo or the feeding qualities of the root crops will want to leave off the silos and the root-cellar. Some may want the heads of the cows and horses turned from the feed-alley, etc.

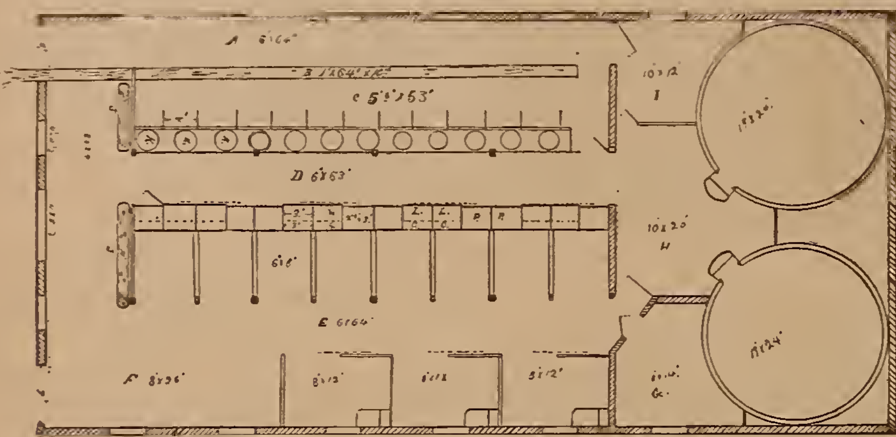


Fig. 1—Basement Plan

First we want a good foundation upon which to build. We have this of concrete. Fine sand and clean gravel of any size wanted within half a mile of the building site makes a concrete wall for basement and foundation a cheap one. The silos and the entire basement floor are also of concrete.

The framing timbers are cypress and yellow pine. The floor of the upper story is double—first a two-inch layer of common or No. 2 yellow pine dressed on one side, then on this is laid a floor of No. 1 seven-eighths-inch yellow pine.

The stalls, feed-boxes, hay-chutes and all partitions are of yellow pine. The dimensions of the timbers of stalls, feed alleys, boxes and rooms are marked in the illustrations.

The entrance to the basement is on the south end, the comb of the building running north and south. The basement floor in front is on a level with the ground, while at the base of the silos, or twenty-two feet from the north end of the building, it is six feet below.

The feed-room, root-cellar and calf-room were not dug out until after the silos were built up even with the top of the foundation at the north end.

The excavations for the silos were made twenty-one feet across, with perfectly smooth walls, which answered for one side of the form. After the walls of the silos were put in and hardened, the earth was taken out around them to lines forming the north side of the rooms shown in Fig. 1. The walls of the silos form the sides of the rooms.

The basement walls are sixteen inches thick at the bottom and ten inches at the top; the inside of the walls is perpendicular and the six-inch slant is on the outside.

The basement ceiling is eight feet from the floor. The floor has a fall of one half inch to the foot from the silos to the doors in front.

The doors, indicated by dotted lines, are hung on tubular rollers.

In Fig. 1, Basement Plan, A is the cow-alley to stalls and calf-pen; B, gutter to drain cow-stalls, one foot wide, six inches deep at shallow end and fourteen inches at its mouth where it empties into the manure-shed; C, cow-stalls; D, feed-alley, six by fifty-three feet. In the center of the alley overhead is a track for a carrier for feed-box, running from the feed-room. H, to the watering-troughs, J J. E is the alley between the box and open stalls, with a track for carrier overhead, on which to haul out manure.

F, eight by twenty-six feet, is an open harness-room. G is the root-cellar, ten by fourteen feet; H, feed-mixing room, ten by twenty feet; I, calf-room, ten by twelve feet; J J, watering-troughs; K K K, tub feed-boxes for cows; L L, hay-chutes; O O, small troughs in front of hay-chutes; P P, feed-boxes with sliding door, answering for two boxes, the position of the door being shown by dotted lines.

The windows in the basement are four by four feet and are hung on hinges. All windows are protected on the inside by one-fourth-inch-mesh screen wire.

In the Second-Floor Plan, A is the corn-crib, eight by fourteen feet; B, a place for ensilage and stover cutter; C, room for cut stover; D, oats-bin; E, bran-bin; F's, hay-chutes leading to stalls below; G G, hay-chutes to feed-alley; H H, straw-chutes to put down straw for bedding; I I, position of joists for second floor; J, feed-chute from bins to feed-mixing room below; K, chute from stover-room to feed-mixing room; L L, place for driveway sliding doors to run back in; M, windows, three by six feet, set three feet from the floor and reaching to within seven feet of the eaves; N, entrance to driveway; O O, feed-chute from silo to feed-mixing room in basement.

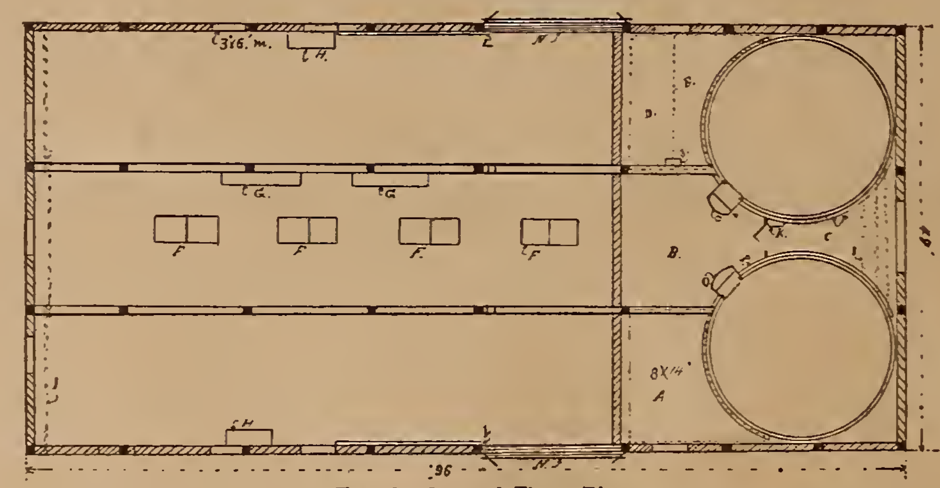


Fig. 2—Second-Floor Plan

These chutes have doors every four feet opening into them from the silo. These doors are hinged at the bottom, and when laying down form a bottom between the door of the silo and the chute, the openings in each corresponding as to size and location.

P P is a projection of the silo wall corresponding in height to foundation walls. These projections are eight inches and are made at the time the silo is constructed, by setting the forms out eight inches at this place. These make a good support for joists.

The illustration of the Framed Bent shows the construction of the center bents. The dotted lines show the bents for each end, and represent the nail ties for same.

All ties and braces are mortised in. Posts are fastened to sills by one-inch locust pins. The laps in plaits and ties are pinned together. The rafters are in two sections, taking sixteen-foot rafters for each. A track for hay-carrier is in the center at the comb.

A dormer-window, four by six feet, is arranged for each silo in the roof, corresponding with the center of the silos. The tops of the silos come up even with the bottoms of the plaits which run over them, and are framed as to the posts.

The silo walls form a part of the walls of the corn-crib, bran-bin and stover-bin.

The windows on the second floor are two-sash, the top sash arranged to let down for ventilation.

A manure-shed forty-eight by twenty feet is on the south end of the building, into which empties the gutter running from the cow-stalls. J. W. Griffin.

A little farmer never looks so big to the world as when he brings to market the best the farm produces, nor does the world ever look so good to the little farmer as when it buys all he offers. W. J. B.

Utilizing Water-Power and Electricity on the Dairy-Farm

Mr. J. T. McDonald, of Delaware County, New York, who owns and manages one of the best dairy-farms to be found in this section of the state, has so far succeeded in solving the problem of how best to take advantage of the power to be secured from the streams abounding in this hilly region as to show the possibility that is open to other farmers similarly situated.

The farm, containing about two hundred acres, was first settled by the father of the present owner, and came into his possession about the year 1875, since which time he has greatly improved and added largely to its productive capacity, until now he keeps upon it a dairy of about ninety cows.

A moderate-sized stream of water running through the farm is so utilized by holding the water and storing it in reservoirs that there is at all times a sufficient amount of water-power for doing the work desired in the mill upon the place a few rods above the house.

This mill is equipped for sawing lumber and for grinding feed, besides a complete outfit of box-making machinery made largely upon plans of Mr. McDonald's own invention, where are made up from timber grown upon the farm all the boxes used in the shipment of butter, eggs and other products of the farm. Connected with it also is a shop well fitted up with tools of all kinds necessary for the various kinds of work done here, with planing-machine, cider mill and press, etc., so that it is seldom necessary to leave the farm for any of those little jobs of work such as are ordinarily taken away from home by the majority of our farmers.

Adjoining the large and convenient dairy-barn is a completely-equipped creamery fitted up with all the modern conveniences for butter-making. A twenty-five-horse-power boiler with ten-horse-power engine furnishes the motive power for the work in the creamery. This boiler is also used for sap evaporation in the season of maple-sugar making, to steam feed in the winter for the dairy herd, and also for the scalding and cleaning of the dairy apparatus. It is utilized for all this class of dairy work with a great saving of labor, and at the same time insuring, if properly used, a condition of absolute cleanliness.

Attached to the creamery, too, is an ample cold-storage room, in which ice extends over a part of the churn-room. The storage of a large quantity of ice here has of course a tendency to modify the temperature in the churn-room, and it is found to give very nearly ideal conditions for best results in butter-making.

Mr. McDonald has a private family trade for his whole dairy product, and the butter is put up in small prints and sent direct to families in different cities, with express charges prepaid, which method of delivery has proven very practicable and satisfactory.

The water-supply for all the farm buildings, including the large and fine residence and outbuildings, three well-built new cottages recently erected for the accommodation of the families of the laborers employed upon the farm, is brought to the house in a four-inch cast-iron pipe from a reservoir on the hillside holding one thousand barrels or more. A number of living springs are conducted into this reservoir, which is situated at an elevation giving a one-hundred-pound pressure to the water at the house and barns.

And last, but not least, in this system of farm conveniences, and one that is seldom found on the dairy-farms of America, is the complete equipment for electric lights.

Asked if he thought the average farmer who has water for the motive power would find it practicable and profitable to light his home and the farm buildings with electricity and approximately what the cost of such a plant would be, he answered, "It has certainly proven very practicable for me, and after using it now for several years I can say I have never made any other investment with which I was so well pleased. I put in a fifty-light dynamo at a cost of three hundred dollars for the dynamo, and the whole system, including the wiring of all the buildings, was completed for about one hundred dollars additional."

All the stables are lighted with it, and he finds it here a convenience of which, as he expressed it, "no one can appreciate the value until he has given it a trial."

A voltage indicator in the kitchen is used to regulate the power of the current, and all the care required is to watch the indicator and change the voltage to correspond with the number of lights that may have been either turned on or off so as to give the necessary voltage for desired results. With two wires drawn tightly on a sweep and so arranged with a gate that the gate, which is very sensitive to the slightest change, may be easily managed, it is readily controlled without leaving the kitchen.

By this arrangement the trouble of running the whole lighting system of the place is reduced to a minimum, and Mr. McDonald believes that any farmer who has a stream of water running through his farm from which, by damming up and storing the water, he can secure the necessary power to light his home and the farm buildings by electricity, will find that it will be found a most economical method of furnishing the light required throughout the year, to say nothing of the greater safety of this light as compared with the commonly used kerosene-lanterns about the barns and stables. Of course, not every farmer may have the same natural advantages that are found at this place, but there are certainly hundreds of farms, particularly in the hilly regions of this and adjoining states, where some of these same advantages do exist. E. J. Brownell.

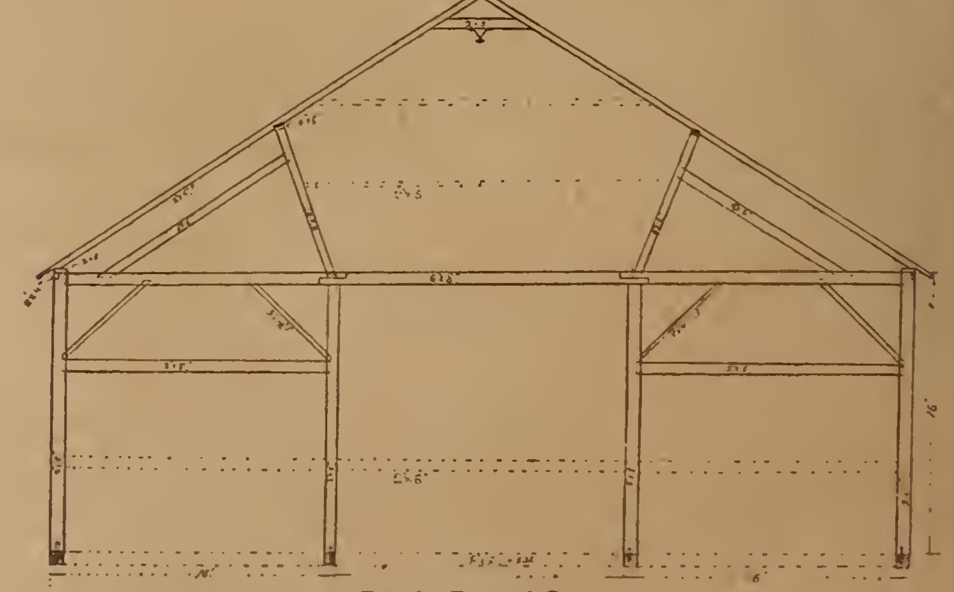


Fig. 3—Framed Bent

The Farmers' Fight

The Farmers' Coöperative Elevator—Part II.—By G. C. Streeter

THE farmers' elevators secure to the sections that they serve other marked advantages. In the first place, they give honest weights. One of the petty larcenies of the trust has been short-weighting the farmers. It was a common practice of the line elevators to beat the farmers in the weight of their grain. Every farmer who has ever sold grain to the old-line elevators can testify that if he had the price of all the grain taken from him by short weights he could take a vacation in a new rubber-tired buggy. This form of petty larceny was so common that in many sections the farmers had established public scales, that they might get honest weights on the grain they sold.

The establishment of the farmers' coöperative elevators meant honest scales. Every load of grain that the farmers delivered to the coöperative elevators was honestly weighed, and they received pay for every bushel of grain that they delivered. This addition to the farmers' cash receipts may not have been large in any particular case, but the aggregate of it in the great grain-growing states meant thousands of dollars in added profits to the farmers.

Dockage and Grading

Another source of added profit was a more just system of dockage and grading. The manager of the coöperative elevator will give the highest grade that he thinks he can obtain at the terminal markets, and will dock the grain just as little as he dares. He is of course greatly hampered by the inferior terminal inspection and dockage of the grain that he ships, and is consequently obliged to dock higher and grade lower than he would if there was fair inspection at the terminal elevators. But nevertheless he will give the best grade and the lowest dockage that the present system permits. That is something that the managers of the old-line elevators seldom did.

Reasons for Growth

It is easy to see from the above why the farmers' elevator movement was bound to grow. It is easy to understand why the farmers have rallied to the support and been enthusiastic for the extension of this coöperative system. It means dollars in their pockets. Look at it from the standpoint of actual figures. If a farmer in a quarter-section has forty acres of wheat, and raises twenty-five bushels to the acre, he has one thousand bushels of grain to market. An added price of three cents a bushel means an additional thirty dollars annually on his wheat crop. Not a large amount to any one man, but for the entire state of Kansas or for the wheat-raising section of the West it means hundreds of thousands of dollars more to go into the pockets of the farmers.

Land Value

But let us look at it from the standpoint of land value. If the farmer whose crop is sold at a shipping-point served by the coöperative elevator received thirty dollars more cash for the wheat grown on forty acres of his land, it means that he received seventy-five cents more an acre for his crop than the farmer who raises wheat on a farm located where he has to sell his grain to the trust. Seventy-five cents is six per cent on twelve dollars and fifty cents; therefore an acre of land situated in the vicinity of a farmers' elevator will produce six per cent on twelve dollars and fifty cents additional value. In other words, if this condition is to continue, the land is actually worth twelve dollars and fifty cents an acre more. If that applies to part of the farm, it likewise applies to the entire farm. Consequently we must consider that the coöperative elevator movement has increased the farm values of the section where they operate by several dollars an acre.

This is not only good theory, but it is actually established in practice. I have known people who in buying farms have paid higher prices for land because it was so located that they could market their grain at a coöperative elevator.

The Fight With the Trust

As soon as the first farmers' elevators were in successful operation, the grain trust was quick to realize the danger of the situation. They saw their control of the grain trade threatened. They knew that with honest competition they could no longer manipulate prices, grades and weights at their pleasure. They foresaw a régime of enforced honesty, and the consequent loss of some of the profits of the old system. Then the fight began. We must realize that the grain trust, like every other trust, understands every phase of commercial welfare. They know every trick of the game. They will fight to the finish. They fight with the confidence and advantage of a perfect organization, immense capital, trained intelligence, powerful allies and extensive knowledge. At the first sign of danger every force of the grain trust was enlisted to fight the farmers' coöperative elevator movement.

I have already spoken in detail of their trade competition, whereby paying fictitious prices they tried to make it impossible for the farmers' coöperative elevators to do business. But this was only the beginning of the struggle. As soon as the elevator movement was started they called to their assistance their chief allies, the railroads.

Railroad Assistance

It became almost impossible for a coöperative elevator to secure a site on the right of way belonging to the railroads. When the farmers' organization applied to the railroad management for permission to build an elevator on their right of way they were met with the policy of delay. Their communications were filed away unanswered. Letter after letter received no reply. Finally, when their persistence obliged the railroad officials to answer their request, they were met with the policy of procrastination and more delay. Weeks and months passed in an effort to get action from the railroad company, and finally they were met with a polite but firm refusal. Sometimes it was on one ground and sometimes on another. Sometimes the railroad objected to their selection of a particular site; sometimes they objected to the type of elevator proposed, but more often they simply refused to allow them to build on their right of way on the plea that there were already elevators enough to take care of the business at that point. The railroads were protecting the monopoly of their allies, the grain trust.

These conditions became so unbearable that in Kansas and other states the legislature passed laws giving the independent elevator companies the right to condemn a site on the railroad's right of way. The railroads fought these laws in every possible way, and succeeded for months and years in delaying the establishment of a legal system of securing elevator sites on the railroad's right of way.

Switches Refused

Frequently the coöperative organization, tired of the unending delay, bought sites contiguous to the railroads, and then asked the road to put in a siding. Now, it is the common practice for railroads everywhere, and particularly in the Middle West, to build sidings into the establishments near their lines that have any quantity of freight to ship, but when the farmers' elevators asked for sidings and switches they found it almost impossible to obtain them. The history of the farmers' elevators in the Middle West is a history of continual fighting to obtain what other business concerns get for the asking.

The Car Supply

But the difficulty of obtaining sites and switches was only part of the obstacles that the railroads offered.

As soon as the elevators began business and had grain to ship, they found it most difficult to obtain cars. The office of the Inter-State Commerce Commission is full of complaints from farmers' elevators charging discrimination on the part of the railroads in supplying cars. Subsequent investigation by the commission has proven gross discrimination against the independent elevators in the matter of supplying cars. In one case, after a car had stood on the tracks for days waiting for an old-line elevator to use it, it was loaded with grain by an independent farmer. The railroad refused to move the car. It stood on the track for days, and finally the railroad people dumped the grain out of the car onto the ground, and left it to spoil.

Enlisting the Board of Trade

But the difficulties thrown in the way of the coöperative elevators through the alliance between the trusts and the railroads were only one phase of the struggle. The trust had other powerful allies. One of the greatest of these was the board of trade.

As soon as the farmers began to ship grain to the terminal markets they found it impossible to find commission men or grain-dealers to handle their grain. There were in all the great terminal centers, like Chicago, Kansas City, St. Louis, Minneapolis and Duluth, hundreds of commission men whose business it was to sell consigned grain on commission. These commission men were continually sending out circulars soliciting consignments of grain to be sold on commission, so it seemed to the farmers that it was only necessary to ship their car-loads of grain to the terminal markets for these commission men to sell. Let us see what happened.

We find that the grain companies and the commission men were forced by the grain trust to refuse to handle the shipments of the farmers' coöperative elevators. The trust and their allies informed the commission men that *if they handled the grain of the farmers' elevators they would be boycotted*, and no grain that could be influenced by the trust or its allies would be sold through a firm that handled the farmers' elevators grain.

Inasmuch as at that time there were comparatively few farmers' elevators, and consequently a small amount of grain to ship, independent commission men were unwilling to handle this grain and sacrifice the rest of their business. What was the result? *They were obliged to notify* and *did notify the independent shippers* that they could not and would not handle their grain. The records of the Inter-State Commerce Commission is full of cases where the grain of the farmers' coöperative elevators stood for days on the tracks in terminal markets because every commission man refused to sell that grain. In some cases it spoiled before it could be taken out of the cars. In other cases the demurrage on the cars almost ate up the value of the shipment. When the farmers tried to meet this condition and establish their own selling agencies at Minneapolis, the chamber of commerce refused membership to their representatives.

The Fighting Farmer

But the farmers of the West have one good fighting quality. It is stick-to-itiveness. They had started fighting, and they did not intend to stop. They realized that it was a fight for their independent economic existence. If they were beaten they would be absolutely at the mercy of the trust. They carried the fight into the courts and into the state legislature; they carried it to the halls of Congress and to the Inter-State Commerce Commission. They enlisted public officials in every department of public life. While the battle is only half over, it is now possible to predict the end.

Successful Coöperation

There are to-day more than sixteen hundred farmers' coöperative elevators in successful operation.

More than three hundred thousand grain-growers in the Middle West own stock in these coöperative elevators. They are three hundred thousand enthusiastic advocates of coöperation.

They already handle more than one sixth of the grain marketed in the United States, and return to the grain-growers annually millions of dollars of added profit.

Eight new coöperative elevators are started every week, and the movement is only begun.

Not only is the number increasing, but they are enlarging the sphere of their work. They not only sell the farmers' grain at a better price, but they are beginning to sell him staple supplies at reduced prices. The coöperative elevators sell to their members coal, lumber, fertilizers, twine, tile, flour, farm machinery, lime, cement, brick, feed, and in some cases groceries and shoes.

The coöperative elevator does two things. It secures for the farmer higher prices for his crop, and enables him to buy his own supplies for less money. Is it any wonder that the farmers are enthusiastic in their support of coöperation?

But the movement is just nicely started. Within the next twenty years the farmers will have a coöperative elevator at every important grain-shipping point in the country and will build and operate terminal elevators in terminal markets. They will sell directly to the millers honestly-graded unadulterated grain and secure for themselves a fair profit.

The fight between the elevator trust and the farmers' coöperative elevators will end in victory for the farmers.

This is the age of coöperation, and the foremost example of coöperative achievement is the Farmers' Coöperative Elevator Movement.

A Farmers' Coöperative Elevator in Pierson, Iowa

Farmer Philosophy

A man may rise at three o'clock every morning, and yet be behind the times.

Wisdom is something which does not come to a man until he goes after it.

A farm with modern improvements is the result of much money coming in and some money going out.

To some men there is nothing too good to be sold, and nothing too cheap to be bought for their wives.

The merchant whose advertisement appears most in the paper gets the biggest trade, and the farmer who appears oftenest in his field gets the biggest crop.

A lazy man is a man who considers none of the world's goods too good for him, but considers himself too good for the tasks necessary to produce them.

We are coming to the day when we will live without medicine—when the old doctrine of divine healing and the new philosophy of health, used together, will keep us well.

Farm land within six miles of Seattle, Washington, is said to be worth one thousand dollars an acre. This is where the fruit comes from, and where the farmer eats green corn, from the second crop, in November.

Agriculture is now being taught in schools. The making of good roads should be included. By educating the young people of to-day on the importance of good roads would result in good roads and nothing but good roads for the next generation. WM. J. BURTSCHER.

In the Field

Practical Discussions on Timely Questions

The Proper Time to Cut Hay

Much has been said about the season for cutting meadow-grass, some very good farmers contending that timothy should be fully matured—that is, it should be allowed to stand till the heads are full and the seeds thoroughly ripened, then cut and mowed or stacked. They claim there is more nutriment, more real, substantial feed, in hay thus harvested than if it were cut earlier in the season.

Other farmers, equally as good as those first mentioned, assert that meadow-grass should be mowed immediately after the bloom falls. They argue that more of the natural, grass-flavor succulence is retained after curing, and that stock not only relish it more, but that it is really better for them, as it is more easily digested, and consequently less liable to cause or encourage disease in the digestive organs.

Now, with due respect for both of these theories, each of which has its strong points, I can only submit my own personal experience along this line.

I find that timothy which has been allowed to stand till thoroughly ripe seems to contain just a trifle more of the qualities which give strength to stock than that cut before it ripened. Yet there is no real gain in this, since only a little over half of the ripe hay is eaten. Every feeder has noticed that nothing but the heads and a few choice blades are ever touched. The larger part of the stems is too dry and tasteless. Stock will have none of it. I think, though, that the full heads of timothy make it unnecessary to feed quite so much grain, and this is the only really strong point I consider in its favor.

Another drawback is that this kind of hay appears to mold very easily in mow or stack, thus making it very undesirable to handle and tending to promote diseases, especially the heaves.

On the other hand, I find that hay cut just after the bloom falls remains bright and sweet in stack or mow under anything like favorable circumstances, without a trace of mold beneath the surface hay; nor is there even any dust to speak of. In fact, it stays almost as bright as it was at cutting-time.

It also seems to retain most of its tenderness and grassy succulence, both cattle and horses eating it with great relish, licking it up so clean that I never found it necessary to take any refuse from their mangers all last winter. So we must naturally conclude that it is easier of digestion, and consequently healthier, than the hay cut later in the season.

Even should it take just a little more to feed (which I hardly think it does), what does the small difference amount to if it keeps the digestive organs in better working order?

All things considered, my verdict is strongly in favor of the early-cut hay. I mow down just after the bloom falls, and stack or mow as soon as sufficiently cured. One caution should be dropped here, however. The curing process should be closely watched and not carried too far, as overcuring injures this tender grass more than it does that cut later. If allowed to lie in the sun too long it loses much of its juiciness, leaving the stems dry, brittle and almost without taste. In case there is any great amount of hay down at one time, it is advisable to rake into windrows as quickly as possible after curing, as it will not blister so readily in this shape as it will spread out over so much ground, in the swath, till stacked.

After all, many farmers are convinced one way or the other only by their own experience, but it's high time to get right, and stay right, on this question of hay-cutting.

M. A. Coverdell.

Conservation of Water in the Soil

The great thing during seasons of scant or average rainfall is the conservation of the water after it has been stored in the soil. The one great source of loss is evaporation. Few have any conception of how much water may be lost in this way. The amount, of course, will vary with the situation, exposure, temperature, etc. It is not known what the exact loss from soils would be, but it is believed that so long as the soil is bare and looks moist on the surface, evaporation is robbing it of its moisture, but as soon as the soil looks dry or is hidden by a crop, the rate of evaporation falls off very rapidly.

These latter conditions are best brought about by cultivating and seeding as soon as the land is dry enough. If there are two plots of soil side by side, and one is cultivated and the other is not, the evaporation from the cultivated one is much greater for a day or so than from the other, but this evaporation takes place chiefly from the loosened portion, and hence in a very short time, provided no rain falls, this layer becomes dry and acts as a blanket to protect the soil below, diminishing the evaporation.

Hence, it is a matter of vital importance that the soil should be cultivated at the earliest possible moment. A delay of one week in this operation after the soil is fit will rob it of from one to two inches of water, an amount sufficient to tide the crop over a drought. Deep cultivation is not advisable, for all of the loosened layer dries out in dry weather, and since the deep blanket is little, if any, more effective than the thinner one, the extra loss from the thicker blanket is not atoned for by greater saving of water in the lower layers, and is a net loss to the plant.

With cereals the conservation of moisture by cultivation may be continued till the grain is nicely up. If a rain has come, packing down the soil and destroying the loose blanket, and thus setting up rapid evaporation again, it is good practice to run over the crop with a light harrow and restore the blanket. The saving in moisture will more than atone for any injury the harrow may do the young plants. With hoed crops, theoretically they should be cultivated after every heavy rain.

In humid sections, where the rainfall is usually sufficient to saturate the soil, after harvest conservation of moisture is not essential, but in semi-arid regions the tillage right after harvest is essential for the purpose of conserving moisture.

W. R. Gilbert.

Small-Grain Pointers

Pay more attention to your small grain. You can make it a cleaner and better feed or a more profitable product for market.

See that it is properly shocked at harvest-time—six to ten sheaves in a circular shock, every sheaf set up so it will not lop over or fall to the ground.

Leave the shocks open for a day or two if the weather will permit. Thorough curing prevents heating and molding. Then "cap" with square canvas prepared for the purpose, a light weight being attached to each corner to hold them on.

Never mind about the cost. These canvas "caps" will last for years and years, and if you don't have them, the birds and insects will get much of your grain, wind and rain will thresh a lot of it off, alternate heating and cooling, wetting and drying, will also add their damaging effect, all of which leaves you less grain and of a poorer quality than if properly cared for.

M. A. C.

At Harvest-Time

Are you ready for the harvest
When the golden sheaves are ripe,
And the sickle-bar is singing
And the sun is shining bright?

Are you ready for the gathering
Of the fruit upon the trees,
And the clover-blooms are waving
For the little honey-bees?

Are the cows out in the pasture
Grazing on the waving green,
And the swine down in the pasture
Basking in the little stream?

Are the meadows sweetly waving
With a growth of ripening hay,
And the sheep and lambs a-bleating
At the breaking of the day?

Is the corn-field growing gently
As the plowman plods along,
And the mocking-bird a-singing
With its sweet and gentle song?

Are the work-hands always busy
As the time is passing 'way,
And the meadows sweetly beaming
With a breeze of new-mown hay?

Is the housewife having trouble
Getting canned the fruit so ripe?
Are you giving her assistance
That you think is surely right?

Give the wife some one to help her
Can the things you love so well;
She will have your meals all ready,
And ah! so good, no one can tell.

R. B. Rushing.

Conquering Our Weed Enemies

A large share of the farmer's attention during the summer is taken up in combating his old enemies, the weeds. Not only do they offend the eye, but aside from things esthetic, they are a positive menace to successful agriculture. Possessed of strong roots and a vigorous constitution, as most of them are, they are enabled to gather nourishment from the soil more readily than many of our farm crops.

Weeds that are indigenous to a country are not usually troublesome. When, however, they are introduced elsewhere, the strife begins. Probably not one in twenty of our worst weeds in America are native plants. It naturally follows that they must be furnished with some means of transportation. There are two ways in which this is accomplished: First, by natural agencies, as wind, water, birds, etc.; and, secondly, by human or artificial means, as feed-stuffs, seed grain, manure, implements, etc.

One of the most prolific sources of weed dissemination is the buying and sowing of impure grass-seed. By specially noting the prolificacy of a few well-known weed-seeds, this fact will be more forcibly realized. Take a common thistle head, and it may contain three hundred seeds, each producing a plant with fifty thousand seeds. Shepherd's-purse, false flax, wormseed-mustard, curled dock, each average from twenty thousand to forty thousand seeds on a plant. For several years some of the experiment stations have examined numerous samples of commercial clover and grass seeds, which were found to contain a large percentage of the foregoing varieties, together with others equally undesirable. In one case a sample of red clover contained over thirty-six thousand weed-seeds to the pound, alsike forty-nine thousand and timothy seventy-nine thousand. This is alarming, yet the weed problem is not unsolvable. In this direction much can be done by preventing their propagation. This means a careful screening and the sowing of only such seed as has been obtained from localities with a minimum of these pests.

In attempting the eradication of weeds it is well to consider them as annuals, biennials and perennials, as in most instances the treatment is simple and upon general principles.

Annuals are those plants that complete their growth and ripen seed in one season, as wild mustard, purslane and ragweed; also those known as winter annuals, of which cockle and pigeon-weed are examples, produce a certain growth before winter, and complete their development the following spring. Clean culture is the chief essential in successfully dealing with this class; it prevents them from seeding, and they soon die out entirely. Furthermore, the germination of many seeds are hastened, thus affording an opportunity for early destruction, and so effectually check future ravages. Unfortunately, however, some seeds are incased in an oily covering that enables them to resist decay. For example, wild mustard and wild oats have been known to possess vitality after having lain in the ground for twenty years. When brought to the surface they spring into life. Then is the time to get after them, as they may be easily exterminated by cultivation as fast as they appear.

Biennials require two years to complete their growth. Usually they have a long tap-root, in which, during the first year, the plant stores up a supply of nourishment in the form of starch, which is utilized the second year in producing seeds, as burdock, blueweed and the wild carrot. Like annuals, they are only productive from the seed, and therefore should not be allowed to mature. To get rid of them they must be cut off two or three inches below the crown with a sharp spade or spud, otherwise they will stool out and prove more troublesome than before.

Perennials continue to grow and produce seed indefinitely. There are two classes—those that produce themselves from the seed only, such as ox-eye daisy, dandelion and yarrow, and creeping perennials, which reproduce not only from the seed, but also by means of creeping rootstocks, that run along beneath the surface and are supplied with numerous buds, from each of which springs up a new plant. Representatives are Canada thistle, bindweed and couch-grass.

These "creepers" are by far the most troublesome of all weeds and require very thorough treatment to keep them under control. As these weeds are surface feeders, shallow cultivation is imperative. Then, too, it is essential that the land be worked only during dry weather. Any attempt to do this when the ground is wet will cause fresh sprouts to spring up wherever the roots are bruised, and only serves to render the situation more complex. Generally the land is most economically cleaned by planting a hoed crop and carrying on a persistent and thorough system of intertillage. In some cases, however, when the infestation of weeds is exceptionally bad, such areas may be summer-fallowed; even at the loss of a crop, this will sometimes prove the most profitable remedy. Quite frequently troublesome perennials appear at first in small patches. As no flowering plant can live without leaves, any means of preventing their growth will literally starve the roots to death. Pasturing with sheep is an easy and effectual method of eradication, and considered on their ability as scavengers alone, a small flock will be found a good investment. I have also seen some very bad patches of perennials smothered out by covering thickly with straw or stable manure. This, however, would not be practicable on a large scale.

A valuable means of keeping under control, if not completely exterminating, any form of noxious growth is the following of a rational system of rotating crops. It will have been observed that the different farm crops appear to have a sort of affinity for certain kinds of weeds. For instance, spring grains are congenial to mustard, wild oats and foxtail, fall wheat and rye to cockle, pigeon-weed and chess, while meadows and pastures encourage the growth of curled dock, ox-eye daisy and plantain.

These facts suggest a rearrangement of crops, such as sowing spring grains on lands infested with weeds common to fall grains, and vice versa. In the former case the cultivation required in connection with the seeding operations will destroy any weeds that may have started to grow the previous fall; in the latter instance the crops will be harvested, and incidentally any foul growth kept from maturing. On pastures and meadows where the growth of grass is fairly dense, annuals are pretty likely to be smothered out. The trouble will be from biennials and perennials. If a short rotation of, say, three or four years is practised, which includes a hoed crop following sod, these may be held in check so as to give very little trouble.

J. Hugh McKenney.

New Saws and Fresh Filings for Farmers

The man who is always busy is too busy.

The farmer must solve his own problems—and he will.

A mossback farmer may develop into a scientific agriculturist.

Often the garden that is as large as it was the year before is too small.

It almost seems a paradox that the hen should do her laying while she sits.

The farmer is great because his city neighbor is great enough to know it.

The brighter the farmer, the richer his soil; and the richer his soil, the larger his crop.

Nothing pleases some men more than to help their neighbors to a way to make more money.

A hen goes about her business quietly—scratching a little, cackling a little and laying a little.

The city, after all, is very small—as narrow as her streets, when compared with the country, which is as wide as her fields.

A farmer in the truest sense of the word is a man who devotes himself to the farm, the whole farm and nothing but the farm.

The fact that the egg she laid the day before is gone from the nest does not dishearten the hen. She lays another and cackles just as cheerfully as ever.

Wm. J. Burtscher.

Around the Farm

Items of Interest and Value to the Progressive Farmer

Mixing Fertilizers on the Farm

There are but three really important and essential fertilizers which can be profitably used in connection with barn-yard manure. These are phosphoric acid, potash and nitrogen. Why not buy the amount needed for each special crop and mix them at home? By taking this course and using acid phosphate, sulphate of potash, nitrate of soda, cotton-seed meal or sulphate of ammonia the purchaser can save several dollars a ton on the amount required to buy these needed materials when bought from the manufacturers.

When nitrate of soda is to be used, the lumps can be pulverized or the nitrate can be spread on the floor and lightly sprinkled with water the night before the mixing is to be done. This will cause the lumps to fall into small pieces if the nitrate is well raked.

Begin the mixing by spreading the acid phosphate or basic slag on the floor, and on this place the sulphate of potash, and on this a layer of nitrate of soda, and mix the materials until the color is uniform.

"In mixing fertilizers," says Doctor Geekens, a leading German chemist, "The following ones cannot be mixed without injury: Superphosphate and lime, or lime with barn-yard manure, guano, and sulphate of ammonia, or other ammoniates, such as nitrate or soda or tankage. Lime drives off the ammonia, and thereby lowers the quality of the fertilizer. Bone-dust and superphosphate may be mixed without injury."

As a guide to the amount of the most valuable fertilizing elements in each ton the following table is given: Basic slag contains about three hundred and forty pounds of phosphoric acid, and superphosphate, about three hundred and forty pounds. Nitrate of soda contains about three hundred and twenty pounds of nitrogen, and sulphate of potash, about one thousand pounds of potash. Dissolved bone contains about three hundred and twenty pounds of phosphoric acid and about sixty pounds of nitrogen.

In purchasing fertilizers, the object should be to secure as many pounds of nitrogen, potash and phosphoric acid as possible for each dollar expended, instead of a greater amount of bulky, not to say useless, materials. W. M. K.

From a Farmer's Window

What a difference there is in the way different men do their farm work! I was thinking this morning that we would soon be in the midst of haying again, and as one thing always follows another, I fell to thinking what a time we had a few years ago to get our work done.

The weather had been real good for a number of days, and really it did seem as if we might keep right on having bright, sunshiny skies. There is where one man showed his wise foresight, while another missed it badly. One man, whose farm lies before my window, had always been in the habit of keeping his work well in hand every day, no matter how promising the weather might be. He had learned that nothing is more uncertain than the weather. Every night he had his grass all under cover or well cocked up in the field.

Another man, a little farther away, thought it safe to be a little more ambitious. He was willing to take bigger risks, so he went on and mowed for a number of days, intending to get a lot of teams and haul the hay in at one grand swoop. It was a fine idea and one that would have worked out all right if Jupiter Pluvius had smiled all the way through. Which is just what he did not do.

One day it began to rain. The first man saw the signs in the sky. He had a barometer, too, and noticed that the mercury was getting pretty low. About eleven o'clock he hustled out and got on the last load. A few drops of rain fell before he had the last forkful on, but he drove into the barn before it was wet enough to hurt the hay at all.

But the other man? It was too bad, but there his whole farm meadow was in the swath, with some raked in the windrow after he, too, began to get scared. And there it lay and lay and lay, for it rained for most of the time for the next two weeks. Hundreds of tons of hay spoiled in the field that year. It was a serious loss. Many farmers did not get any of the hay which had been out; it rotted in the field.

These two men are representative of a great many others that were doing haying that year. Everywhere some were caught, while others who were more conservative saved their crop. This will be the way of it as long as the world stands, probably.

You may see the same thing in all kinds of farm operations. One man, for example, will buy a farm and go in debt for it when he has not the executive ability ever to get out of the tight place into which he has put himself. I have now in mind a man who bought a farm on contract, paying nothing down. That is where two men made a grand mistake. The man who sold, whether he knew it or not, placed a temptation in the way of the one who bought. It is a good rule never to sell a farm without at least one half the money down. Then the seller has something to show for his property, while the other man has a greater incentive to keep on and work out of debt.

But this man did not stay on that place long, and the owner lost the use of the place and some of the payments that had fallen due. It was the same old story of the hay-harvesting. It is a good plan to keep close up with all such things and never shut the weather-eye.

Another man quite within the sweep of the farmer's window bought a little farm, paying part down for it. He began slowly, setting out some berries and trees and buying a horse. For a few years he and his wife had a rather hard time. Then the berries began to bear, the cows did well and the trees came into fruitage. To-day he has a nice little home, all paid for, and is making some money every year.

The fact is, while it is all right to be optimistic and take good long views of life's road, still it is the part of wisdom to take every step carefully and with due consideration of results. Not that it is ever well to look on the dark side of life; that takes all the joy out of living—but we must not forget that there is always lurking around the corner a danger of failure for the man who is not careful and who does not think well what one single wrong move may bring.

As farmers we ought every one of us to be hopeful in spirit all the time. Of all men, we are most favored. If we do not enjoy life, it is because we have not the disposition to look on the bright side. When we get gloomy and downhearted, the best way is to look out for our eating, drinking and methods of working. Something is wrong somewhere, not outside ourselves, but right at home. We

The Cavity in the Trunk of This Tree Has Been Filled With Cement

need to slacken up in work, perhaps, and let Nature set us on our pins again. Then the blue devils will take their flight and all will be well again.

At the same time there is a wise foresight that every farmer needs to exercise. How is it at your house? Take your wife into your counsel and let her help you steer your bark safely through all the shoals and rapids of life. You will be glad you did. E. L. Vincent.

The Tree Doctor

A new business of importance to farmers, and one which promises to grow to great extent during the next few years, has been created. It is the business of scientifically treating trees, both fruit and shade, preserving their lives and rendering them of greater value.

The chief feature of this work is the filling of hollow trunks with concrete, finishing them in such a way that the bark will heal over and ultimately cover the filling.

One of these tree doctors will treat a decayed tree just as a dentist will doctor a defective tooth. First, all of the decayed matter is thoroughly scraped out, after which the cleaned surface is coated with copper sulphate, to kill all the germs that may remain in the wood after the scraping. Then comes a coating of tar, intended as a preservative, and then the wood is closely studded with wire nails for reinforcing purposes. If the cavity is very large, additional reinforcing is effected by lengths of wire. Then the cavity is filled with concrete composed of three parts of sand and one part of Portland cement. To obtain a smoother finish a mixture of two to one of the concrete is used.

The surface of the concrete is then given a coat of tar, and then painted,

A Convenience for the Rural Mail-Carrier

after which Nature does the rest. In filling the tree cavity, pains must be taken to bring the filling to a certain point and stop there. The cement must not extend beyond the cambium layer, the portion of the trunk of a tree capable of growth. The filling being so left, the wood begins to spread over the cement, and ultimately carries the bark over it, entirely covering the concrete surface. Trees have been so treated that it is impossible to tell that a large amount of concrete lies hidden beneath the bark.

One Illinois farmer had his entire pear orchard treated in this way; all of the hollow trees were plugged up, and the bark is now growing over the doctored places.

Most of the men who do the work are graduates of agricultural colleges and thoroughly understand the nature of a tree and put their knowledge to good use. They not only fill the decayed parts, but they clean off the bug-breeding nests and strip the bark of all deleterious matter. Another branch of the work is spraying. Standard mixtures like the Bordeaux are made use of.

J. L. Graff.

A Rural-Free-Delivery Novelty

It is a common sight, when riding along a rural-free-delivery route, to find at some point where a branch road joins the carrier's route a cluster of from three to six mail-boxes perched on stakes and strung along in a straggling group. In these the mail-carrier deposits the mail for several families living off his direct route.

Such a collection is always more or less unsightly and not very convenient for the carrier, who has to stop and start for every individual box.

Some enterprising farmers and vineyardists of Yates County, New York, have hit upon a very clever arrangement for obviating both these difficulties. The accompanying illustration shows how it has been done.

A heavy post was set firmly in the ground, and on this was mounted, so as to revolve freely, an old wheel from a hack wagon. On the rim of this the mail-boxes were mounted. The wheel shown carries seven.

The carrier now makes but one stop, and by revolving the wheel is able to deliver the mail of seven families. The advantage both in convenience and appearance over the old colony of boxes is evident. Any handy farmer can duplicate this arrangement.

Carl Churchill.

The Simplicity of Spraying

To many growers a spray formula is involved in deep mystery. It is regarded as a sort of magic charm that some deep student has evolved and that, to be effective, must be blindly followed to the last detail, throwing reason and common sense to the winds. The average farmer allows himself to be bewildered in a maze of innumerable formulæ, and he knows not which to use, and so uses none. In reality the matter is quite simple and a few essential principles underlie the whole practice of spraying. Indeed, the wonder is that so few materials are able to effectively combat so many pests.

All economic enemies of plants are either vegetable or animal. The former are chiefly fungi, the latter mainly insects. Of the insects we have two classes—those that bite or chew, as the potato-bug, cutworm and codling-moth, and those that suck, as mealy bugs, plant-lice and the scale insects. Now, with these three groups—fungi, biting insects and sucking insects—well in mind, we are ready to look for remedies. There are many substances that are fatal to the pests, but nearly all are fatal to the plant as well. So the problem is to find the one that will kill the enemy without harm to the crop.

Years ago it was discovered that fungous diseases cannot thrive in the presence of copper sulphate, or blue-stone. But this material is made with sulphuric acid, or oil of vitriol, which is, of course, highly destructive to plant tissue. Hence an alkali must be used to neutralize the acid, and lime is selected as most suitable. The next question is that of strength, bearing in mind economy and effectiveness. Hardiness of leaf and the resistance of the fungus determine the amount of copper sulphate, usually three to six pounds to fifty gallons of water, the amount ordinarily taken in spray mixing. It has been found that about the same amount of lime as blue-stone must be used to neutralize the acid. The mixer can readily determine the amount himself by simple tests. One of the best is with ferrocyanide of potash, which turns red as long as the solution is acid, but remains unchanged when it is right. So the formula for Bordeaux mixture, as it is called, is 3 : 3 : 50 to 6 : 6 : 50.

Biting insects are controlled with stomach poisons, usually some form of arsenic. Paris green is the old standard, but it must be very carefully used, to avoid damage to foliage. Arsenate of lead is coming into wider use. With both these the question of formula is merely a matter of economic and effective distribution, though lime is often used with the former, to prevent harm to the leaf. They may both be mixed with lime, ashes, or the like, and dusted on the plants; or they may be used in water or Bordeaux mixture, and sprayed.

The sucking insects insist on burying their mouths in the leaves, and so are not reached by stomach poisons. They breathe through pores distributed over the body, and are combated with substances that will fill these openings. Oils in their ordinary condition do not spread freely enough to accomplish the result, to say nothing of the enormous quantity that would be required, hence they must be diluted. The only way oil and water can be mixed is by treatment with a strong alkali, as potash, which is used much as in soap-making. Thus for this class of insects we use kerosene emulsion and the miscible or soluble oils. Many of the latter are bought ready for dilution, or they may be prepared at home. It has been found that a boiled solution of lime and sulphur is effective against scale insects. How it kills is not understood. This same mixture, when boiled by the slaking of the lime it contains, is recommended as a fungicide.

Now, under these few heads are included almost all the farmer's insect enemies that are combated by spraying. First determine to which class your foe belongs—whether fungus, biting insect or sucking insect—then consult bulletins and spray calendars, which, by the way, are very concise and reliable, or write to your experiment station about the formula. The Ohio Experiment Station at Wooster, Ohio, and the Cornell Experiment Station at Ithaca, New York, have particularly fine publications of this sort.

As to the work of spraying, do it thoroughly. Each insect does not have to have a whole drop to himself, but every insect must have a little. Paul Work.

The Baler for speed. Bales 12 to 18 tons a day. Has 40 inch feed hole. Adapted to bank barn work. Stands up to its work—no digging holes for wheels. Self-feed Attachment increases capacity, lessens labor, makes better bales and does not increase draft. Send for catalogue. Sandwich Mfg. Co., 179 Main St., Sandwich, Ills.

Nitrate of Soda

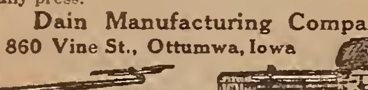
In Original Bags

NITRATE AGENCIES COMPANY

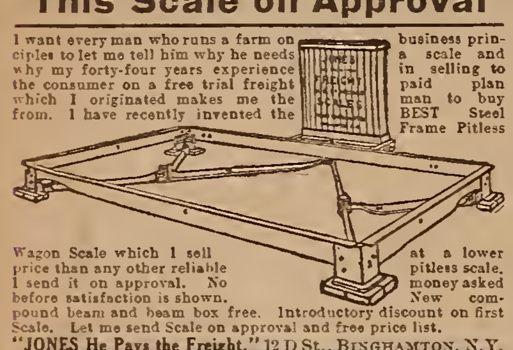
64 Stone Street, New York
Keyser Building, Baltimore, Md.
36 Bay Street, East, Savannah, Ga.
305 Baronne Street, New Orleans, La.
140 Dearborn Street, Chicago, Ill.
1103 Temple Bldg., Toronto, Canada
San Jose, Cal.
321 Stimson Block, Los Angeles, Cal.
603-4 Oriental Block, Seattle, Wash.

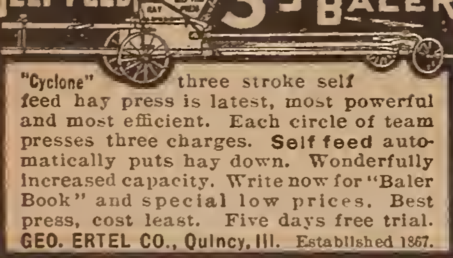
a continuous travel, full circle, all steel press with numerous exclusive advantages saving money, time, labor. No step-over pitman—no tricky toggle-joints—no pile-driving rebound. No waste power. Rocker Tucker—an exclusive feature—turns out Smooth Bales that pack well, sell better than ragged bales. We also make best belt-power press on market. Write for catalog and letters from users. Wait until you get word from us before you buy any press.

Dain Manufacturing Company
860 Vine St., Ottumwa, Iowa

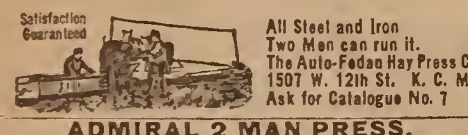


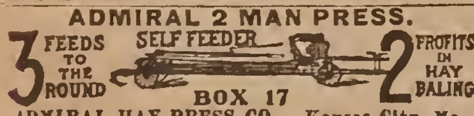
This Scale on Approval





3-STROKE SELF-FEED HAY PRESS.





Horticultural Notes

July Garden Notes

It is a good plan never to have any idle ground in the garden. As soon as one crop is harvested, spade up the ground and plant something else in the place of it. Keep the ground at work. You know the old saying, "Satan always finds some work for idle hands to do." It is about the same with the ground in the garden as with the hands. If it is not growing something useful it will be growing something harmful. Better seed it yourself than be content with what will come spontaneously.

The sweet corn comes in this month. As you gather the ears for table use, cut out or pull up—preferably pull up—the stalks from which the ears are taken, and give them to the horses. They will enjoy them greatly, together with the husks from the ears. Then when the corn from the early roasting-ear patch is all used up, the ground is ready to be stirred and planted to something else. Try it with Early Ohio potatoes or some other early variety. Take the seed from the early patch planted in the spring. They will come on late in the fall, and the fresh new tubers will be a great delight for table use.

For some reason rutabagas have a reputation for not doing very well in Iowa, but last year I planted some after the middle of July, on some ground from which the early-potato crop had been taken. They did not grow to a very large size, owing to the very dry weather in August and September, but they did very nicely, considering the chance they had, and reached a size of about two inches in diameter. I put several bushels of them in the cellar for winter use, and they were a source of pleasure all the winter through, and the entire family expressed regret when the last of them was reported.

It is a good time now to start the strawberry-patch. Planted now, the plants will get a good growth before winter, and will bear nicely next season. It is well to plant a small patch every year. In that way you can have a small patch of vigorous bearing young plants each year, and can also test some of the newer varieties. You can never tell just what a new variety will do for you until you have tested it. So much depends upon local conditions that a variety that is very desirable in one part of the country is practically worthless in another part. The best way is to keep testing the new kinds on a small scale, and when you find one that does well for you, you will feel yourself amply repaid.

M. G. Rambo.

The Transplanter and Its Use

The transplanter is a comparatively recent invention, and has been in use only a few years in the Northern and Central states. As yet there is no automatic transplanter that does successful work. By an automatic transplanter is meant one that handles the plants and does not require the attention of a man or boy to manipulate the plants by hand.

The only successful transplanter that we have seen requires three men to operate it—one to drive and two men to handle the plants. The machine drills in the fertilizer, waters the plant and leaves it in the soil in a much better condition to withstand the harmful effect of transplanting than is possible by the hand method. A roller in front crushes the lumps, and this roller is followed by a V-shaped shoe, which makes a furrow, into which the plants are inserted by hand. A plant is held in this furrow until the click of the watering device, which spurts a small stream of water around the roots of the plant. The plant is then guided by a hand past two scrapers on either side, which fill the furrow with mellow soil, and beyond two pressing-rollers, that pack the ground in the form of a ridge slanting down from the plants.

The water is thrown with some force, which tends to spread the fine roots and set them among the soil particles. The bottom of the furrow is firm, which prevents the soaking away of the moisture, while immediate evaporation is prevented by the ridge packed by the pressing-rollers. The ridge leaves the soil in excellent condition for the first cultivation, and one can work close to the plants with a two-horse cultivator without injury to the plants. They are all in direct line, following each other, even though the row itself may be curved.

It requires some practice on the part of the setters—the men who handle the plants—to become efficient, and some cannot learn it at all. The plants should be held on an apron. This apron may be an ordinary sack with two strings tied to the corners. The plants are held loosely on the lap, with the roots pointed toward the feet. One should try to handle only one plant at a time. While one hand is taking care of the plant that is being set, the other should be freeing another plant from those in the apron. The setters drop the plants alternately, and it requires two persons who are particular and quick. It is important that the plant be placed in the furrow at just the right time, because if it is released a little too soon or not quite quick enough, the beneficial and needed effect of the water is lost.

A dog on the wheel trips the watering device at regular distances. The distance between plants can be from sixteen to thirty-two inches, depending on the particular crop to be transplanted. The amount of water used can also be regulated, but two to four barrels an acre is generally the amount used.

The transplanter has been used for potatoes, and we have used it for corn a few times. While our principal use of the machine is for cabbage, some years growing as many as twenty acres of this crop, we have used it to transplant tomatoes.

One dollar an acre is the customary charge for the use of the machine, and when all help is furnished, the charge is three dollars an acre. One dollar of this is allowed to the driver and team and fifty cents goes to each of the setters.

The amount of work possible is rather uncertain, depending upon the condition of the ground, plants and water arrangement and the length of the rows. Under favorable conditions from two to four acres can be planted in a day. When one is doing work for another party, the water is supposed to be brought to the field and all plants pulled, so that there will be no delay.

The plants for the transplanting should be uniform in size, because they are more easily handled. They should all be separated when pulled, and not be pulled by the handful. The keeping out of weeds is another precaution to be observed. If a weed is among the plants it is almost sure to be planted, because the setters are too busy to sift and sort out the weeds and inferior plants. The size of the plants should be about two or three inches long, and all be nearly of the same length, so the shoe can be set at the right depth.

Although the planter gives the soil good preparation and leaves the plantlet in the finest of soil, the field should be thoroughly fitted and mellowed for best results. It is preferable to transplant afternoons and evenings when it is possible, but it is not at all necessary. At the best the plants will wilt, and perhaps, if it is very hot weather, go down for two or three days. It is a good plan the third day to go over and reset by hand those that were missed or have died.

Many try to do the transplanting immediately preceding a rain, but I do not advise such a plan. It is true that the plants may stand up better at first, but I would prefer to plant them in the sun, even though they wilted and received no rain for a week. The rain makes the surface hard, which is very detrimental to the tender young plants. It is all right to follow a rain by a transplanter, but it will not do satisfactory work if the soil is too moist. It gums up and pulls out the plants.

Lynford J. Haynes.

Theory Versus Practice in Planting

There are certain fundamental rules in horticulture which are the outcome of practice and observation, and which one would as soon think of ignoring as he would of doubting the multiplication table or the first principles of good living. There are also certain people who appear to make it their business to try to prove these rules to be useless and misleading and to ridicule the practice of those who are guided by them.

Fortunately the majority of practical people prefer the teaching which is based on long practice to that which is merely theoretical; but there are also those who are always ready to adopt the "new idea" and to listen to the faddist. Every practical cultivator knows that pruning, when properly performed, will produce certain desired results; yet owing to the mischief which follows from improper pruning, there are people who declare all pruning to be either a waste of labor or positively harmful. It would be just as logical to argue that because some people injure their health by overeating or eating the wrong kind of food, it would be better if we gave up eating altogether.

The latest fad is that against the observance of care and conformity to established practice during the operation of transplanting trees and shrubs. The evils of deep planting, mutilation of roots and cramping of roots; of neglecting to work the fine soil in among the roots; of planting when the soil is very wet, are, we are assured, imaginary, "the slavish and unthinking repetition of something in the manner which is supposed to be orthodox." If a man holds a gun in a certain way, and fetches down his bird because of it, it may be slavish and unthinking repetition if he keeps to that way and does not try the result of reversing his gun, which would be an experiment certainly, and we should indeed "draw careful conclusions from the results." We do not require experiments in horticulture which have for their object the upsetting of practices of proved utility. We have heard men condemn many horticultural operations because in their limited experience they appeared to be unnecessary.

In planting trees or shrubs of any kind the operator will be wise if he secures plants with plenty of healthy fibrous roots, takes care that they are not badly broken or bruised, digs holes larger than the roots would require when spread out, carefully lays out and distributes the roots so that they extend horizontally over as large an area as possible, avoids planting too deep, places the soil about the roots so that the fine particles get well in among them, then treads lightly before filling up the hole and treading firmly, to bind and not clog or puddle, and finally takes precaution against the plant being shaken loose by the wind. These are practices which are good for all plants, although we are quite aware that some of them would be wasted on such common things as willows, poplars and others of like character.

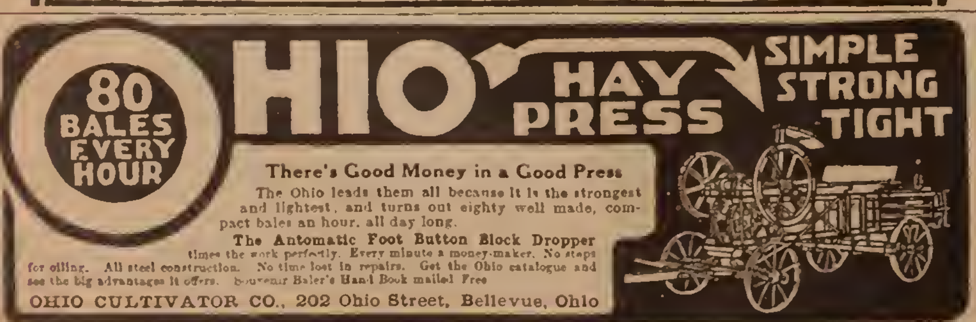
We do not decide that all animals will thrive under rough treatment because a few can survive it. The gardener who plants trees generally as he would set a gate-post would most certainly be courting failure and consequent dismissal. The mutilation of roots is at least as injurious to the plant as that of the stem and branches. Every gardener knows the effect of crushing, bruising and cramping the latter; every plant physiologist warns him against such treatment; both of them know that it would be in all cases unscientific, even although in some cases it might not prove material.

The recuperative powers of some plants are such that they are able to get over a considerable amount of bad treatment. There are thousands of children who do not succumb to bad and insufficient food, dirt and other wretched conditions; some even grow up to be strong men and women in spite of them, yet who would dare to argue that these conditions are better for children than the conditions prescribed by doctors and thoughtful parents. It has been said that men who know nothing about gardening can grow plants better than those who do. This is heretical enough, in all conscience, but it is not more so than to attempt to prove that care in the performance of planting operations is a proof of stupidity and ignorance of the requirements of plants.

W. R. Gilbert.

LIGHTNING HAY PRESSES

For 25 years the Reliable Balers.
Simple, Free from Breakage, Greatest Capacity and Best Work—Strong and Durable.
Consider these Facts for a Profitable Investment.
With our various styles can meet your requirements. Horse & Belt Power. Self Feed Attachments. Write for our Catalog.
KANSAS CITY HAY PRESS CO., 124 Mill St., Kansas City, Mo.



Fruit-Growing

By Samuel B. Green

Plum-Trees Dying

H. S., Grogan, Ohio—I do not understand from your letter why it is that so many of your plum and peach trees have died. I do not think that applying salt or wood-ashes about them would do anything to prevent their dying after they get to the point where they are extremely weak. It is more than likely that they are affected by some borer or disease. The wireworms about the roots might have done them serious injury, but I can hardly think that there were enough of them to destroy the trees, and the cause of the injury must be looked for elsewhere. I wish you would send me samples of the injured wood and of the insect that you think has affected it.

Propagating California Privet

A. W. P., Coulterville, Illinois—California privet is propagated from autumn-made cuttings. These are made up from the one-year-old wood about the first of November. I generally prefer to make these about eight inches long. These cuttings may be wintered over in a cellar, in bundles of about one hundred cuttings each, or, better yet, outside, buried in sand.

If made up at this season it will probably be necessary to take off the leaves, and if treated as recommended, in all probability they will be calloused on the bottom end by the time winter sets in.

In the spring of the year a piece of warm, moist soil should be selected, and the cuttings put four inches apart in rows, leaving but one bud above the surface of the ground. Treated in this way they are almost sure to grow. They may also be grown from seed or by layering. Be sure to pack the soil firm about the cuttings when they are planted. To do this, get the land in good condition for planting, line out with a line or garden marker, stick the cuttings in slanting, and then tread by the side of them.

Gum on Cherry-Trees

J. G. T., Homeworth, Ohio—You state that there were "chunks" of gum on the trunks of your cherry-trees and that some of these trees have died. Cherry-trees commonly produce gum from all bark injuries, and a very common cause of this gum-producing matter is borers that work in the trees. These are often very destructive, and continue to work in the trunks of the trees for many years, often completely girdling them and preventing the return flow of sap from the leaves to the roots.

The eggs of this borer are laid by a wasp-like moth in the early summer. Soon after hatching, the borers eat into the bark, and some become buried in the young wood and bark, where they remain until the next season. From the wounds caused by these borers, the gum often exudes in large quantities. It is generally mixed with the frass thrown out by the boring insect.

The best remedy is to look over all the trees twice each year—once in the spring and again in August—and if any indications of borers are found, such as would be shown, for instance, by a hole from which the borings or gum were exuded, or by discolorations in the surface bark, investigation should be made by cutting away the bark until the borer is found or you are satisfied that it is not present. It is very common to have cherry and peach trees killed by these borers.

Early Richmond and Dyehouse Cherries, Etc.

J. M. G., Upper Alden, Illinois—The Dyehouse cherry is very similar to the Early Richmond, not so large, but rather better in quality, and of about the same degree of hardiness. While I do not like to have varieties substituted in my orders, yet the substitution of Dyehouse for Early Richmond was not a bad one. It is a good cherry and will probably prove as satisfactory as the Early Richmond.

California privet should receive a little pruning early in the spring on the old wood, to get it into shape if needed. This is best done before growth starts. After growth has started, and the plants begin to make their long upward growth, pruning should begin and be continued throughout the growing season at intervals of two or three weeks, in order to get best results. Of course, if you are forming a new hedge, not such close pruning is needed as when the hedge is old and light growth is needed.

There might be several reasons why an apple-tree that blooms would not produce fruit. In your particular case, however, where it stands only thirty feet from varieties that do bear, I am inclined to think you have a kind that is very uncertain, and that the only satisfactory remedy will be to regraft it with other kinds.

As a rule cherry-trees do not need much pruning. They take on a good, regular form without any attention of this kind. If, however, they produce awkward branches or branches that are too near to the ground, they may be pruned the same as other trees without injury. This pruning should be done early in the spring, before growth starts, if severe, but if only slight, June is the best time, and the larger wounds should be covered with white lead, grafting-wax or some similar protective covering.

Safety Ladder

The illustration shows a ladder that I use in my orchard. It is more easily handled and doesn't knock the fruit off as does the old-style ladder. It is much safer, and when the snout is put in the fork of a limb it doesn't slip and you can reach sideways without fear of your ladder turning.

For sides get the light white pine clear of flaws, one and one fourth inches by three inches, of any length desired. For steps use seven-eighths-by-three-inch stuff, and for step-rests one-by-two-inch stuff.

For the snout use a two-foot piece, and with bolts and wedges secure it solidly to the side pieces.

Cut the first step two feet long and the others by measure. I put a small rod under the first step and as many more as are needed to make the ladder solid.

I have ladders of different lengths to use in different trees. HARVEY HILL.

Thinning Fruit

From experience I wish to say that I believe it pays to thin fruit, in many cases at least.

Young trees which overbear often kill or fatally injure themselves. In order to care for them properly, the fruit should be thinned out considerably if it sets heavily. Pull off the small and imperfect fruits. This is especially true of peach and plum. For those who grow fruits for exhibition purposes this is absolutely necessary, also for those putting out fancy fruits for fancy trade.

Some punch off the faulty fruits with a pole, others shake or jar the trees, but the surest way, where it is possible, is to hand-pick.

Last year we thinned the fruits on some young budded peach-trees. It saved the trees, I am sure, and the quality of the fruit that matured was very fine.

OMER R. ABRAHAM.

Evergreens for Planting in Michigan

E. E. D.—For planting on your farm at Lewiston, Michigan, where formerly Norway and white pine trees grew, but where now you have a second growth of maple, poplar, birch, oak, etc., I would suggest that you plant Norway and white pine and Norway and white spruce. These trees branch close to the ground if given plenty of room, and are all of them thrifty, vigorous growers that do well in this section. It is too late to plant them this year, unless possibly you could secure plants from a nursery where they were kept in a cold cellar and had not started.

Bud-Moth

C. R. S., Belgrade, Minnesota—The insect cases which you inclosed are the genuine bud-moth. This insect works in the buds of our fruit-trees and is sometimes quite troublesome. The best remedy is spraying with Paris green and water, the same as for other leaf-eating insects. It should begin as soon as the worms appear, and close watch should be kept for their first appearance.

ORIGIN

Of a Famous Human Food

The story of great discoveries or inventions is always of interest.

An active brain worker who found himself hampered by lack of bodily strength and vigor and could not carry out the plans and enterprises he knew how to conduct, was led to study various foods and their effects upon the human system. In other words before he could carry out his plans he had to find a food that would carry him along and renew his physical and mental strength.

He knew that a food which was a brain and nerve builder (rather than a mere fat maker), was universally needed. He knew that meat with the average man does not accomplish the desired results. He knew that the soft gray substance in brain and nerve centres is made from Albumen and Phosphate of Potash obtained from food. Then he started to solve the problem.

Careful and extensive experiments evolved Grape-Nuts, the now famous food. It contains the brain and nerve building food elements in condition for easy digestion.

The result of eating Grape-Nuts daily is easily seen in a marked sturdiness and activity of the brain and nervous system, making it a pleasure for one to carry on the daily duties without fatigue or exhaustion.

Grape-Nuts food is in no sense a stimulant but is simply food which renews and replaces the daily waste of brain and nerves.

Its flavour is charming and being fully and thoroughly cooked at the factory it is served instantly with cream.

The signature of the brain worker spoken of, C. W. Post, is to be seen on each genuine package of Grape-Nuts.

Look in pkgs. for the famous little book, "The Road to Wellville." "There's a Reason."

SECOND EDITION

THE Embroidery Book FOR 1909

By Evelyn Parsons

THE first edition of our Embroidery Book was received so enthusiastically by our readers who want the best and newest things in needlework that we have been forced to order a second printing—now ready. It is the same as the first, a forty-page book of the newest ideas in embroidered gowns, tub-dresses, shirt-waists, hats, neckwear, lingerie, baby-clothes, household linen, curtains, sofa-cushions, and so on, with fine pictures of everything. This edition is limited, so it would be well to order at once.

Sent Post-paid on Receipt of Ten Cents

Address

EMBROIDERY BOOK

Woman's Home Companion

Madison Square

New York City

ATLAS PORTLAND CEMENT

Makes The Best Concrete

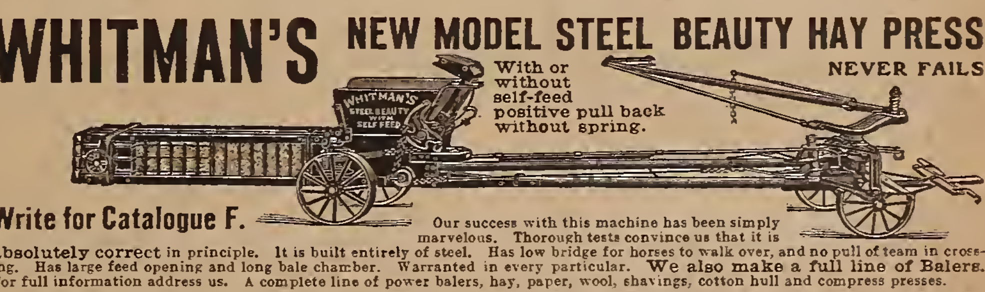
The cement bought by the U.S. Government for the Panama Canal

SEND FOR OUR FREE BOOK "Concrete Construction about the Home and on the Farm." Contains over 100 drawings and illustrations.

THE ATLAS PORTLAND CEMENT CO., Dept. 122 30 Broad Street, N.Y.

Daily output over 40,000 barrels, the largest in the world.

WHITMAN'S NEW MODEL STEEL BEAUTY HAY PRESS NEVER FAILS



Write for Catalogue F. Our success with this machine has been simply marvelous. Thorough tests convince us that it is absolutely correct in principle. It is built entirely of steel. Has low bridge for horses to walk over, and no pull of team in crossing. Has large feed opening and long bale chamber. Warranted in every particular. We also make a full line of Balers. For full information address us. A complete line of power balers, hay, paper, wool, shavings, cotton hull and compress presses.

THE WHITMAN AGRICULTURAL COMPANY, 6924 South Broadway, ST. LOUIS, MISSOURI

The Oil That Stays On a Loose Bearing

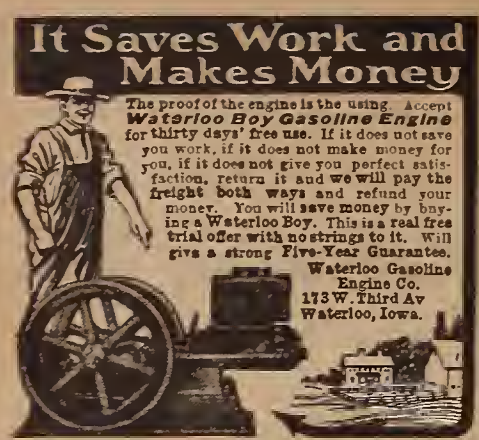
is Ruddy Harvester Oil. It has a way of staying *on* and wearing *long* which makes it invaluable for farm machinery—especially when boxes and bearings are considerably worn.

Ruddy Harvester Oil

is a heavy oil, yet a free feeder. There is no acid in it—it won't gum and it won't rust. Winter or Summer, the best oil for heavy or much worn farm machinery is Ruddy Harvester Oil.

Comes in quart, gallon, 5-gallon cans, half barrels and barrels. Ask for it.

STANDARD OIL COMPANY (Incorporated)


It Saves Work and Makes Money

The proof of the engine is the using. Accept *Waterloo Boy Gasoline Engine* for thirty days' free use. If it does not save you work, if it does not make money for you, if it does not give you perfect satisfaction, return it and we will pay the freight both ways and refund your money. You will save money by buying a Waterloo Boy. This is a real free trial offer with no strings to it. Will give a strong Five-Year Guarantee.

Waterloo Gasoline Engine Co.
173 W. Third Av
Waterloo, Iowa.

Genasco Ready Roofing

Saves money and trouble. Made of lasting Trinidad Lake Asphalt.

Fully guaranteed. Look for the trade-mark. Write for samples and the Good Roof Guide Book.

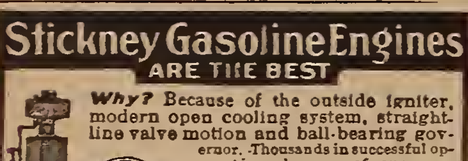
THE BARBER ASPHALT PAVING COMPANY

Largest producers of asphalt and largest manufacturers of ready roofing in the world.

PHILADELPHIA

New York San Francisco Chicago

Stickney Gasoline Engines ARE THE BEST


Why? Because of the outside igniter, modern open cooling system, straight-line valve motion and ball-bearing governor. Thousands in successful operation because of our years of experience in building the best. Seven sizes: 1½ to 16 H.P.

Send for our Free Catalog and our Catechism telling fifty-seven reasons why *Stickney Engines are the Best.* Agents everywhere sell them.

Charles A. Stickney Company
MAIN OFFICE & FACTORY ST. PAUL, MINN.

Lowest Factory Price—Freight Prepaid

Write immediately for free samples and booklet telling about the most remarkable offer ever made on old reliable high quality BREESE BROS. RUBBER ROOFING

Guaranteed, waterproof, fire resisting and durable. Delay may cost you money. Write now.

The Breese Bros. Company
Roofing Dept. 24, Cincinnati, O.

THE LARGEST AND BEST LINE OF WELL DRILLING MACHINERY in America. We have been making it for over 20 years. Do not buy until you see our new Illustrated Catalogue No. 15. Send for it now. It is FREE.

Austin Manufacturing Co., Chicago

WELL DRILLING Machines

Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Mounted on wheels or on sills. With engines or horse powers. Strong, simple and durable. Any mechanic can operate them easily. Send for catalog.

WILLIAMS BROS., Ithaca, N. Y.

CIDER PRESSES

and all machinery for making fruit juices, etc. Most reliable and economical. Catalogue free.

The BOOMER & BOSCHERT PRESS CO.
90 Water Street,
Syracuse, N. Y.

Saw Mills

If you need anything in saw mills or wood working machinery, send for our catalog. Our line is complete. Goods highest quality and prices reasonable. American Saw Mill Mach. Co., 130 Hope St., Hackettstown, N. J. New York Office, 1576 Engineering Building.

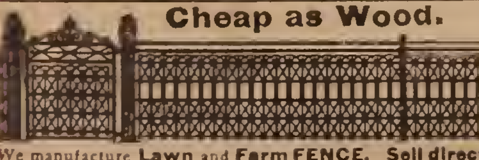
It is to your advantage to mention Farm and Fireside in writing to advertisers. Farm and Fireside folks get the very best attention.

WARD FARM FENCE

40 carbon spring steel, extra heavily galvanized. 30 days' free trial. Farm and Poultry Fence, and Ornamental Wire and Wrought Iron Fence Catalogues. Write for Special Offer.

The Ward Fence Co.,
Box 532 Decatur, Ind.

Cheap as Wood.


We manufacture Lawn and Farm FENCE. Sell direct shipping to users only, at manufacturers' prices. No agents. Our catalog is Free. Write for it to-day. UP-TO-DATE MFG. CO., 971 10th St., Terre Haute, Ind.

About Practical Poultry-Raising

Shall We Hatch Late Chicks?

There is wide difference in practice and opinion among those who keep fowls as to the proper period for hatching the chicks for best results. Of course, breed makes much difference, as the very large breeds take a long period to reach maturity, but leaving out of the question the Asiatics, of which comparatively few are raised in this country, we still find people who think April is already late, and others who make a practice of waiting till the latter part of May, or even June or July, to get out the greater number of their chicks.

The large and rapidly increasing number of fanciers have been chiefly responsible, probably, for the increasing desire on the part of the many to get chicks as early as possible. The incubator has made it possible to raise early chicks in larger numbers than could have been done before the advent of the machines, and the universal desire for winter eggs has been another strong factor.

I have watched these things very closely for years. I once believed that only the early chicks were certain to do well and be profitable; but further experience has convinced me that the matter is almost wholly one of handling, and is in the breeder's own hands.

In case the late chicks can be made to thrive as well as earlier ones, there is a great deal to be said in favor of hatching right on through the season, or at least until one has a satisfactory number out. Indeed, from one point of view, it is decidedly better for the majority of farmers not to hatch till June, or even August.

Late Chicks Cost Less Than Early Ones

The handler of fowls who cannot get winter eggs is not justified in hatching early chicks, for they will cost him twice as much as late-hatched ones before they begin to bring in anything. And admitting that late chicks can be made to thrive satisfactorily, there are only two reasons that I can see for feeding chickens from March until February, as so many do before getting any returns, when those hatched in July and August will begin to lay at about the same period. The fact that a trifle is lost in size need not count, since outside eggs can be used for hatching, so that the size of the birds need not continue to grow less. There will always be plenty of neighbors who will not believe in late chicks, and eggs can be had from them if it is thought necessary.

There are, however, two points against late chicks. One is that they have to put on their mature coat during cold weather, and are therefore more subject to colds if not properly shielded from wind; the other is that when laying has been very heavy and the season very hot, the parent stock will not give as good eggs in midsummer as they will very early in the season. It is a question which each must decide, whether or not these objections are so great as to overbalance the real advantage of quicker growth less cost to raise, etc.

It is Merely a Matter of Management

The matters of lice, too much heat, trampling, lack of water, etc., can all be overcome by careful handling, and there are no chicks that thrive like the midsummer chicks if circumstances are made to favor them. The greatest handicap summer chicks have to meet is trampling by older ones. One little-suspected evil is too strong sunshine on chicks just from the nest. Since I learned to keep the summer chicks confined to their coops for the first few days, with careful shade after that, I do not have those inexplicable losses that used to be so common. Of course, lice can deprive us of all the summer chicks if we let them, but we don't need to let them. The need for water all the time and shade at will cannot be too forcibly impressed on the boys and girls who are interested in the chickens.

I have seen a brood thrive perfectly for a month and go all to pieces through overfeeding for one or two meals, combined with lack of water at the same time, and no after pains could overcome the blunder. Overfeeding may not be fatal if water is always at hand. A dry water-dish may mean a dead chick, perhaps a dead brood.

On our place we have much pleasure each year in bringing up several families of what, for want of a better name, are known as "box babies." No other chicks thrive like these, none show so few losses, none are so tame ever after, so that, except for the greater care which they require, no brooders need be had for chicks which come after the weather is reasonably warm—warm enough to supply all the heat needed during the day.

A good-sized soap-box is the only brooder needed for twenty chicks, with a screen for the top. A warm but loosely woven piece of flannel is the only hover needed, and at five or six weeks of age the inmates of this primitive "brooder" will insist on no longer receiving the treatment of babies. They then go to coops at night like others.

C. A. Umoselle.

Some Incubator Experience

A lady subscriber in Pennsylvania writes me that she has been having all sorts of bad luck with her poultry this spring. She has hatched over five hundred chicks in her incubators, and has thirty-one left. She says she has used up twenty dollars' worth of eggs, six dollars' worth of oil and a hundred dollars' worth of patience, and lost about ninety hours of sleep for a handful of chickens. She gives the names of the makers of the machines, and asks what she ought to say to them. My advice to her would be to say nothing, but pocket the loss and go back to the hen.

Another lady in the same state writes me that she has lost sixteen dollars' worth of eggs which her incubator failed to hatch. She says the maker guaranteed the machine to do good work, which it has not, and she wants to know if she will have to pay the note she gave when she took the machine "on trial." Of course she will. That's what notes are for—that is, to enable the seller to get his money.

This lady, and all other ladies and gentlemen, should get it well fixed in their minds that incubators will not run themselves, nor will very often do remarkable work for beginners. When one buys an incubator, he or she should calculate that two good years' experience will be required to make good operators of them, and the loss of eggs and chickens must be charged to education. It is likely that at the end of two years the machine will be ready to be placed on the retired list, but there are others—plenty of them.

Extra Care is Required

We have raised many thousands of chickens, both incubator and hen hatched, and long ago discovered that the former require much more care to get them started than hen-hatched chicks do. My experience with them showed plainly that they are vitally weaker than hen-hatched chicks, despite the assertion to the contrary of interested parties. But a fair proportion of them can be raised if given the necessary care. Right there is the stumbling-block. Most people are unwilling or unable to give them the extra care required, because it takes time and some expense, besides the trouble.

A party who had invested in six incubators, relying upon the "plain instructions" furnished by the manufacturer with his machines and in his catalogues for success, once sent for me to come and tell him why he was having such bad luck with his chicks, having just buried the last of something over seven hundred. He had an outfit of machines and brooders that had cost him over two hundred dollars, and the cost of running this outfit amounted to about sixty dollars a month, and as he could ill afford to lose his investment, he was wildly anxious to learn if there was any way out of his predicament.

Practical Pointers

He had over twelve hundred eggs in the machines just beginning to hatch when I arrived. The following two days we took out nearly six hundred fairly strong chicks. I examined his brooders and threw them out. He had a room sixteen feet square, and in this we placed a heating-stove, then covered the floor with an inch of cut straw and clover chaff. We then put in a lot of boxes about a foot square and without any top, covered the bottoms with clover chaff, heated the room up to eighty-five degrees, and then brought in the chicks, putting twenty to twenty-five chicks in each box, and covered them with small pieces of an old blanket. Here they were left fifty hours. Then we let them out of the boxes, one side of which could be let down, and fed them a very small quantity of dry chick-feed. That was all they got that day. They were returned to the boxes and covered.

The room was kept full eighty degrees warm all the time. Early the following morning we let the chicks out and fed them a fair supply of the chick-feed, returned them to their boxes, and in the evening fed them again and gave them a little water. The following day they were fed twice and allowed to run about the floor an hour each feeding-time and given more water. After that they were fed three times a day, had water-founts full, and were permitted to run most of the day. The room was still kept up to eighty degrees, and the water given always had the chill taken off.

After two weeks the temperature was gradually lowered to sixty degrees. Then the windows were opened a little and they were gradually hardened to outdoor conditions. At seven weeks they were placed in a thirty-by-forty-foot tight-fenced chick-yard with coops that could be closed tight for sleeping quarters and shelter. Of the entire lot only twenty-two died.

The man informed me that he would play that game once more to make him even, then sell his machinery for what he could get for it and go back to the hen. And he did.

Of course there were a whole lot of little details connected with the raising of these chicks that I have not mentioned, but which took up a great deal of time. He had an alarm-clock to call him every three hours to fire up in the chick-room and to go down cellar and regulate the incubator regulators. He changed the bedding in the brood-boxes once in four days, and cleaned the floor and rebedded it once a week. When the second hatch came off he divided the room with boards a foot wide set on edge, and kept the little chaps by themselves, except that he placed a dozen of the older ones with them to show them how to pick up food.

The first thing the buyer of an incubator must learn is how to run it, and that is no easy task for the average person. Some people claim they can do it with ease, and that they have hatched quite a lot of chicks, but for some reason none of them appear to have acquired any wealth to speak of.

Fred Grundy.

Sprouting Grain for Poultry

"Does it pay to sprout grain for feed for laying hens? It might prove interesting to many of your readers if you would give your opinion. I know it would to me." N. B.

This seemingly new method of feeding some kinds of grain is not quite as recent in its discovery as we might at first think. I am not as old as some folks, and yet there are some gray hairs in my head. I remember seeing my mother pour hot water on the oats she was to feed her chicks when I was a little fellow. Then she would let them stand till cool enough to feed without burning the throats of her biddies.

There in the kettle the oats would swell till they were much larger than they were at first; and while they would not of course really sprout in the short space of time given them, they were to all intents and purposes sprouted oats. I recall, too, how greedily the hens ate these oats, especially in cool or wintry weather. And they did first-rate on them. This plan of feeding scalded oats is still followed by some poultrymen.

If you scatter a small quantity of salt over the top of the oats when dry, say a teaspoonful to five or six quarts, and then pour on scalding hot water till the grain will take up no more, stir the whole well, and let it stand covered up for half or three quarters of an hour before feeding, you will see that your hens will eat the ration with great avidity and do splendidly on it.

Perhaps sprouted barley is the best grain to feed this way. The method is to place the quantity you wish to feed in a kettle, cover it with hot water, and let the kettle stand for a whole day. Then pour off the water which has not been absorbed by the grain, and add warm water, keeping the kettle in a warm place, and stirring now and then, so that all the kernels may sprout. Keep the kettle covered for two or three days, or until the grain is well sprouted, then feed. A number of messes may be going at once to give a continuous supply.

I am not wise enough to tell what the secret of this plan is, but I believe it is simply to give the birds a liberal supply of fresh green food. This is one way of doing it. If you have plenty of green food of other kinds, it does not seem to me one would care to resort to this method. As a rule hens do not care as much for barley as they do for most any other kind of grain, but when prepared this way they eat it readily and the results are highly favorable.

E. L. Vincent.

Live Stock and Dairy

A Successful Hog Man

In this age of progress, even the farmer is turning specialist. Any new industry whereby a man may make dollars is heralded with enthusiasm.

I recently visited the home of Mr. Sam A. Ellis, of Warren County, Ohio, a farmer who is turning his undivided attention to the hog.

Mr. Ellis lives on a farm of one hundred and twenty-two acres, and I think I can see the average man who is unacquainted with the facts in this case sit in open-eyed wonderment, with perhaps a faint suspicion of incredulity in his mind, when he reads this story of the success of this prominent hog man—how he has built up an enormous business from almost nothing, with annual sales of many thousands of dollars.

In my conversation with Mr. Ellis, I asked, "How did you come to make the hog your special study?"

He then told me of his father being a successful raiser, and it was then he acquired his early knowledge, thereby laying a solid foundation for his future operations.

In 1883 Mr. Ellis sold his first pigs—there being twenty-six head, averaging two hundred and forty-two pounds, bringing six and three fourths cents a pound. From this on his business gradually grew, until in 1906 he shipped eight hundred and seventeen hogs to Pittsburg at one time, netting him eleven thousand nine hundred and ninety dollars.

Mr. Ellis is a very methodical man. He has books showing every pig raised and bought, and every bushel of corn, all oil-meal, mill-feed, etc., used since his beginning in 1883. From the first year you can see how his business has increased, until the season 1908-09 found him with thirteen hundred and twenty head.

How does he do it on so small a territory? Every one asks this question as if in fear of asking for a secret to be divulged, when there's no secret in connection with this man's success. System, thoroughness, doing things yourself, are some of the requisites.

Every trough, every hog-house, he makes himself. He is ever vigilant for the three great enemies of the hog—filth, lice and worms.

To avoid the filth, all his pens, shelter-houses, etc., are portable. All sheds for brood-sows are on runners, easily moved by hitching a horse to them; as they are floorless, therefore when moved, house-cleaning is quickly done.

The largest shed on the farm is portable, cheaply constructed, yet warm, and will shelter five hundred stock or four hundred fat hogs. All shelter-sheds are near the center of the feeding-field. All are substantial, but cheap. Mr. Ellis is no advocate of cement floors or anything for show. All practical business and for the dollar.

For lice he buys crude petroleum. With a common two-gallon sprinkler, by penning a few at a time, the whole lot are quickly sprayed. This he does at frequent intervals and is never troubled with lice. He uses two barrels or more of petroleum a year.

He gives salt, and plenty of it, for worms. He thinks the average farmer or hog-raiser does not know this well enough.

From three or four adjoining towns he hauls four-horse loads of coal-ashes. Every morning he sends a sled-load with from five to six bushels of ashes to be distributed about in heaps. On each heap one half bushel of salt is put. By night it is gone. He uses on an average two barrels of salt a week.

After a pig has reached the one-hundred-pound notch he is fed no more mill-feed, but is put on his feeding-out ration of corn. Mr. Ellis knows by experience that in summer it requires six bushels of corn and in winter ten bushels to put one hundred pounds of flesh on a hog. Is not this worth knowing?

He strongly advocates the use of oil-meal. He never uses stock food of any kind. His manner of feeding has proved a success. He urges hog-raisers to keep all things clean.

His method of watering is systematic and perfect in its way. He has a never-failing spring which in connection with a small branch feeds a good-sized pond. The pond is fenced in tightly, but chutes are made, where the hog may drink to his fill, but having board floors, he cannot wallow. The spring is also inclosed tightly, and empties into the pond through a sunken boarded trough, which is partitioned closely, making it possible to the hog to drink, but impossible to foul the water. The branch is fenced in on each side.

Every precaution is taken to keep the water pure and prevent wallowing. If the hogs make holes, which the rain would convert into puddles, dirt is immediately hauled and the holes filled.

He rotates his crops, making new feeding-grounds.

This man is a great benefit to the surrounding community, creating a home market for all corn raised. In 1906-07 he bought 16,920 bushels of corn, besides oil-meal and mill-feed. In 1908-09 he bought much more. He has one large crib with an eight-thousand-bushel capacity, besides smaller ones. He unloads his corn with a two-horse power elevator, unloading fifty bushels in from six to eight minutes.

Mr. Ellis is not a believer in the pure-bred hog. In his line of work it proved very unprofitable. A good growthy, common male hog has been most successful with him. This, after spending money for pure-breds of different breeds, with his unlimited and successful experience, should be a word to be heeded by the beginner.

This season of 1908-09 has been his biggest year. On March 4, 1909, he shipped two hundred and thirty-seven, March 16th, two hundred and fifty-one, and March 18th, two hundred and fifty-two. At this time he has over six hundred, and is still buying.

In walking over this prosperous farm I could not but observe that Mr. Ellis was a great believer in tiling. In calling his attention to this fact, I found him to be a strong advocate for tile. He thinks the average farmer tiles too little and uses too much commercial fertilizer. It should be vice versa. But that's another story.

In glancing over Mr. Ellis' books, I gathered the fact that from 8,323 hogs sold, Mr. Ellis netted $103,494.37.

There is no good reason why any one else with ordinary intelligence and business ability should not make a success of the business if they follow in the footsteps of this man, who has blazed the trail that leads to success.

Cora A. Thompson.

A Portion of a Field Containing Five Hundred Hogs Ready for Market on the Farm of S. A. Ellis, Warren County, Ohio. A Part of the Large Shelter-Shed is Also Shown

CREAM SEPARATOR DISCS

Unscrupulous competitors, struggling desperately to retain any separator business, are making such reckless statements as to separator "DISCS" that a few words more on our part may not be amiss.

DE LAVAL "DISCS" are as necessary to the bowl of the cream separator as teeth to the human mouth.

A man can chew without teeth and you can separate without "DISCS," but in both cases at a great disadvantage.

So far as imitating "DISC" separators are concerned, they compare with the IMPROVED DE LAVAL about as artificial teeth do with a perfect set of natural ones.

The DE LAVAL COMPANY owned the first "HOLLOW" bowl and the first "DISC" bowl and have originated all the improvements upon both. Hence they are free to use the best and any combination of the best features, while would-be competitors are forced to get along with ten to thirty year old types of construction upon which DE LAVAL patents have expired.

DE LAVAL "DISCS" fully double the capacity of any separator bowl of the same size at the same speed.

DE LAVAL "DISCS" fully double the separating efficiency of any separator bowl of the same size at the same speed, and enable a perfect separation that is not possible otherwise.

The saving in size of bowl and in necessary speed makes possible much easier running, and more than doubles the life of the separator when built equally well.

But other separators are not built as well as the DE LAVAL, so that the average life of a DE LAVAL separator is five times that of the average would-be competing separator.

DE LAVAL "DISCS" make possible the skimming of cool milk, which cannot be done with most other separators at all, and if at all only with greatly increased butter-fat losses in the skimmilk.

DE LAVAL "DISCS" make possible the running of heavy cream, 40% to 50% butter-fat, with its tremendous advantage in creamery patronage, which is either impossible with other separators or can only be done with greatly increased butter-fat losses in the skimmilk.

DE LAVAL "DISCS" enable the construction of a bowl in the LATEST IMPROVED DE LAVAL SEPARATORS that is quickly and easily cleaned and absolutely sanitary, a combination of most important advantages not to be found in any other separator made.

DE LAVAL separators cost no more than would-be competing separators of relative actual capacity, save their cost every year, and last from two to ten times as long.

98% of the experienced users of FACTORY cream separators now use DE LAVAL machines. The great majority of FARM separator users are already doing so, and within five years we sincerely believe the use of DE LAVAL separators will be UNIVERSAL.

A DE LAVAL catalogue explaining all of the above points is to be had for the asking, as well as an IMPROVED DE LAVAL machine for practical demonstration of them to every intending separator buyer.

THE DE LAVAL SEPARATOR CO.

42 E. Madison Street, Chicago
1213 & 1215 Filbert Street, Philadelphia
Drumm & Sacramento Streets, San Francisco

General Offices: 165 Broadway, New York

173-177 William Street, Montreal
14 & 16 Princess Street, Winnipeg
107 First Street, Portland, Oreg.

AN OLD TIMER

Has Had Experiences

A woman who has used Postum since it came upon the market knows from experience the wisdom of using Postum in place of coffee if one values health and a clear brain. She says:

"At the time Postum was first put on the market I was suffering from nervous dyspepsia, and my physician had repeatedly told me not to use tea or coffee. Finally I decided to take his advice and try Postum. I got a package and had it carefully prepared, finding it delicious to the taste. So I continued its use and very soon its beneficial effects convinced me of its value, for I got well of my nervousness and dyspepsia.

"My husband had been drinking coffee all his life until it had affected his nerves terribly, and I persuaded him to shift to Postum. It was easy to get him to make the change for the Postum is so delicious. It certainly worked wonders for him.

"We soon learned that Postum does not exhilarate or depress and does not stimulate, but steadily and honestly strengthens the nerves and the stomach.

"To make a long story short, our entire family continued to use Postum with satisfying results as shown in our fine condition of health and we have noticed a rather unexpected improvement in brain and nerve power."

Increased brain and nerve power always follows the use of Postum in place of coffee, sometimes in a very marked manner. "There's a Reason."

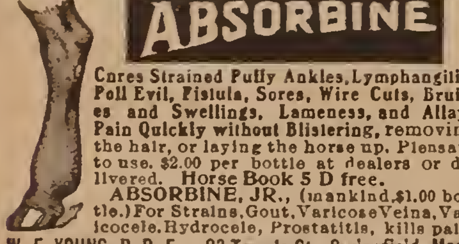
Look in pkgs. for the famous little book, "The Road to Wellville."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

60,000 ACRES LAND

Between 50,000 and 60,000 acres of land, 30 miles South of Savannah, Ga., especially desirable for colonization or reforestation proposition. Land cut over 20 years ago, at which time, trees under 12 inches were left and considerable timber is now standing, with thousands of small ones of later and recent growth. Railroad runs directly through the property and extends within 7 miles of the ocean. Good soil, good climate conditions. For sale as a whole, or in tracts of 10,000 acres. Price, terms and other features upon application.

Industrial Dept., Seaboard Air Line Ry.
Portsmouth, Va.



ABSORBINE

Cures Strained Puffy Ankles, Lymphangitis, Poll Evil, Fistula, Sores, Wire Cuts, Bruises and Swellings, Lameness, and Allays Pain Quickly without Blistering, removing the hair, or laying the horse up. Pleasant to use. $2.00 per bottle at dealers or delivered. Horse Book 5 D free.
ABSORBINE, JR., (mankind, $1.00 bottle.) For Strains, Gout, Varicose Veins, Varicocele, Hydrocele, Prostatitis, kills pain.
W. F. YOUNG, P. D. F., 23 Temple St., Springfield, Mass.

DAISY FLY KILLER placed anywhere, attracts and kills all flies. Neat, clean, ornamental, convenient, cheap. Lasts all season. Made of metal, cannot spill or tip over, will not soil or injure anything. Guaranteed effective. Of all dealers or sent prepaid for 20 cents.
HAROLD SOMERS
150 DeKalb Ave.
Brooklyn, N. Y.

Michigan Lands

SEND for my free 32-page illustrated booklet and map of the Dempsey Lands in Mason and Lake Counties, Michigan; unexcelled for general farming and sheep and cattle raising. Best land at lowest prices in Michigan. Easy terms.

J. E. MERRITT, - Manistee, Mich.

DEATH TO HEAVES
Newton's Heave, Cough & Distemper Cure
Guaranteed or Money Back. $1.00 per can, at dealers, or Express Paid. 18 Yrs' Sale.
THE NEWTON REMEDY CO. Toledo, Ohio.

PATENTS Watson E. Coleman, Washington, D.C. Books free. Highest references. Best results.

Live Stock and Dairy

Hot-Weather Dairy Queries

Have you considered these: Blistering heat, torturing, blood-sucking flies, foul drinking-water?

Are you prepared for this, the most trying season of all the year, or are you bumping along in the old rut?

Where's that sprayer? Or do you expect the cow to scrap those pesky, swarming flies all day long, and still give you a nice pail of milk at night? She can't do it.

Have you provided Bossie with a nice, cool shade to protect her from this roasting heat? If you haven't, try standing out in the sun all day yourself—you'll fix up some sort of shade for the cows the next day.

Do you force your cows to drink water just wherever they are lucky enough to find it these hot days? Don't you know that warm, filthy slough-water isn't fit for an animal to taste? And how do you suppose the cows relish the water that stands in a hot tank day after day?

Don't you think it about time to call a halt in these careless, unsanitary proceedings? Wouldn't it swell your profits in dairying at a time when there is usually a great decrease in the flow of milk? Then don't you believe the health and comfort you would add to your dairy herd would repay you many fold for furnishing the cows plenty of pure, fresh water during the hot summer season?

M. Albertus Coverdell.

Breeds and Breeding

It was always my delight to care for and pet live animals, and as a boy I used to spread my fostering efforts over a wide range of pet stock. A white mouse, a ferret, a sparrow, a pigeon, a chicken, a rabbit, even a harmless little snake, when seen in the possession of another boy, would not fail to arouse in me feelings of covetousness and the desire for ownership. Anything that had life and needed care would do. And this is so with a good many other boys, and grown people, too, for this love of helpless living creatures follows most people through life.

It first led me to raise pigeons, then rabbits, then chickens, then pigs, then cows. At first I was satisfied with the common scrub animal. Then, naturally, came the desire for something better. The mongrel fowl had to give way to the pure breed, Brahma, Langshan, Hamburg, Rhode Island Red; the ordinary scrub cow to the Jersey. This desire for something better is so general and so natural that I sometimes wonder that the country is still full of scrub hens and scrub hogs and scrub cattle. If the people who keep them knew how much pleasure and satisfaction and profit is in well-selected pure breeds of any of these animals they would not be slow in making the change.

Take, for instance, the case of chickens. The mongrel may produce eggs, and give you fairly good meat stock, but if you desire to sell the eggs, the buyer finds them of all shapes, all colors, all sizes, and if he is after eggs for hatching, he finds yours is scrub stock and nothing more. You will receive the lowest market price, and you cannot expect more. If you have cockerels or pullets to sell, again the buyer finds an uneven lot, good, if well fattened and dressed, for common prices in a common market. The discriminating buyer will hardly look at them, and may not care to take them at any price.

How different when you have an improved pure breed! A flock of fowls of uniform type—shape, size, color—is a pleasure to behold, a pleasure to own and care for, and a source of satisfaction and profit.

Take the case of cows. I like to see good cows, and keep two or three just for the fun of making pets of them, besides getting my family supply of nice clean milk, cream and butter. At first I kept the ordinary scrub cows. Proper feeding and proper care generally made even this stock fairly satisfactory, but I longed for something better. I began to grade up by using Jersey males and raising all heifer calves. Soon I had very acceptable Jersey grades, and we got richer milk and more profits. Then I got the pure-bred Jersey, and I have more fun and more satisfaction out of them than out of the grades, and surely I get better returns. And when I sell a cow, the older ones being disposed of as the heifers come on, the very looks of her will sell her at a price far above that of a scrub. So we are always better off with pure breeds than with scrubs, in pleasure as well as financial returns.

The tendency with many persons is to rush in whenever anything strikes their fancy. This is especially the case with people who like poultry, or who get touched by the so-called "hen fever." They see a fine flock of pure-bred Rhode Island Reds, and at once they bargain for a sitting of eggs. A day or two later they see somewhere a flock of Minorcas, and a sitting of eggs is secured there. And perhaps still later they come across a flock of Hamburgs or some other fine breed, and again a sitting of eggs is purchased. This is all right so far as the poultry-keepers are concerned who wish to sell eggs for hatching, but it is poor policy for the purchaser of these divers lots of eggs. The result is a mixture of all sorts of breeds, and never satisfactory. It leads to cross-breeding and to the production of mongrels, which are neither handsome, attractive nor practically useful.

There are cases where cross-breeding is practised and permissible—namely, for special purposes and managed by skilled poultrymen. Such cases are rare, however, and the average poultry-keeper should keep out of it. The professional breeder of fancy or pure-bred poultry may keep his flocks separate and in confinement, and therefore may have as many breeds as he wishes. The average farmer who gives his flock free range should confine himself strictly to one breed, and concentrate his efforts upon that and upon maintaining it on a high standard of excellence. Whenever he keeps more than one, his troubles multiply and his profits grow less.

There is no one best breed for you, either in poultry, or in swine, or in cattle or horses. Select the breed that seems to suit your fancy and your conditions, and then get acquainted with it and all its peculiarities. Learn how to handle it right. Breed up. Keep it up. This will keep up your interest and your profits.

I cannot see much advantage in the practice of crossing breeds of cattle. As a family cow I believe the Jersey is hard to beat. During the past winter I had a three-year-old Jersey heifer come in for the first time, and shortly after that a two-year-old Holstein-Jersey heifer, also. Both had heifer calves, the Jersey a very small one, which was vealed. The Holstein-Jersey cross, which had been served by a pure-bred Jersey again, gave an unusually large and strong calf, and I am raising this for experiment. The Holstein-Jersey gives the real Jersey milk in quality, but the Jersey is gaining on her in quantity. The final outcome is problematical. In a general way it may be said that crossing breeds of cattle is a lottery. The cross may give Jersey quality and Holstein quantity, or it may give Jersey quantity and Holstein quality. I hardly feel safe in repeating the experiment. The pure-bred animal always has its value, and keeping the stock pure is the safe and profitable course. T. Greiner.

The True Function of the Farm Flock

The opinion that sheep should be kept as scavengers and that they thrive best on the farm that is too poor to support other kinds of live stock is twin brother to the opinion that white beans thrive best on a poor thin soil.

While it is a fact that sheep will clean up weeds and briers and manage to live on pastures that are too poor to support horses and cattle, yet this is an incidental excellence which the true flock-master does not advertise. He commends sheep because they respond profitably to good care and close attention, involving the use of his home-grown feeds, that are grown especially for their use.

Sheep that are kept as scavengers soon assume the appearance that their purpose would signify. Their fleeces are full of burs and ragged and they show the effect of mismanagement and neglect.

The intelligent flock-masters are fast coming to recognize the fact that the man who makes the most of his opportunities in handling a farm flock must become a breeder and feeder of high-class mutton sheep. There is an increasing demand for prime mutton, more especially prime lamb, that the range and big feed-lot cannot supply. Not only is this much so, but the farmer who lives closer to the city markets has a decided advantage over the ranchmen and feeders who are compelled to market their products in large numbers as soon as they have reached the proper development to suit the trade.

The farmer who is breeding a flock of improved mutton sheep and feeding them in an intelligent and painstaking manner may plan his feeding operations so that he may have the advantage of a good near-by city market every week in the year. It is neither necessary nor essential that a man have expensive barns and equipment to provide for the farm flock, although the man who has such barns and equipment often finds it very profitable to specialize upon the production of hot-house lambs.

Among the essentials of the successful care and management of a farm flock of mutton sheep are that we treat them in a manner adapted to their nature. Select good breeding-ewes and use only the best type of mutton rams and finish the product in a manner that will meet the demands of the most critical buyers, who are willing to pay an increased price for an article that will meet the demands of a discriminating trade.

The man who is making a specialty of selling his product to a fancy trade can usually find a ready local market for his culls and such as fail to conform to the demands of his fancy city trade. No matter how well bred his flock may be or how careful and painstaking he may be in caring for and feeding them, there is certain to be some lambs that fail to reach the development and size demanded by the buyers of fancy mutton, but which may be profitably disposed of to the local trade.

When we observe the quality and study the conditions which surround the average farm flock we do not wonder that farmers fail to make a success of the sheep business. Sheep must have good care and be properly fed and protected from inclement weather; they will not thrive if abused and compelled to sleep in damp and poorly-ventilated quarters. Given proper care, a flock of improved mutton sheep will return larger and more certain profits from our home-grown foods than any other kind of farm live stock.

On the average farm the sheep are the most neglected animals on the farm, and it is really astonishing to note the waste of opportunities in conditioning and marketing lambs. Ram lambs are a drug to the market, yet thousands of farmers continue to flood the markets with them. It is these inexcusable methods of growing and marketing products that discourage thousands of farmers from investing in a few choice ewes and laying the foundation for a farm flock.

Any intelligent farmer who is a student of the present economic conditions cannot fail to see that the future of the mutton growing and fattening business affords an attractive outlook to the farmer who is in a position to handle a flock of from one hundred to two hundred well-bred ewes. W. Milton Kelly.

Exercise of Farm Animals

Exercise tends to longevity. It also tends to a long period of usefulness. The animal that is well fed and which is kept from exercise will deteriorate from fatty degeneration of the heart and other muscles.

It is well known, however, that overfed and underexercised animals become useless as breeders. An animal may be allowed to become quite fat if at the same time it is kept exercising, and it will still retain its breeding powers. Horses require more exercise than do other farm animals, this being due doubtless to the peculiar condition under which the horse was developed in a wild state. Speed was its chief means of safety, and its legs were built up by centuries of exercise. The horse, therefore, has great lung capacity to enable it to burn up great quantities of carbon in its muscular exertions. I am led to believe that the horse suffers more from lack of exercise than any other farm animal. Cattle require much exercise, but not so much as the horse. Cattle are built for less exercise and are made to stand and fight to better advantage than the horse. The animals of the beef breeds are heavy, but powerful, and their muscles apparently do not work with the same rapidity as do those of the horse. Walking about a pasture all day is enough exercise for them.

When the horse is let out of the stable and turned into a pasture, he frequently starts off at a run and makes several circuits of the pasture before his desire to exercise violently is satisfied, but this is not seen in the case of cattle and other farm animals. That shows some of the difference there is in the exercise of cattle and horses.

To say the least, they should all have an abundance of exercise during the summer as well as in winter.

R. B. Rushing.

Live Stock and Dairy

Bran and Oats Make a Good Feed

There are several right ways of feeding cows and as many wrong ways. Good bran I consider an excellent feed for cows, as well as for all other kinds of live stock, yet there are dairymen who claim that bran is the poorest feed they ever gave to a cow.

There is a great difference in bran. Too many feed their cows, as well as other stock, at random—that is, without regard to the quality of food and without regard to the requirements of the animal—hence many of us feed too much. I never had any trouble from feeding too much bran.

Oats are one of my best and most useful feeds. I like to feed them unthreshed, or in the bundle or sheaf. Some think it a wasteful method to feed oats in this way, but if they are harvested while yet a little green, and are properly taken care of, the cows will eat them with relish. The first thing the cows get hold of is the heads, and after eating these they will finish up the rest, so there will be no more waste than with any other food. I have seen them fed to horses in this shape, too, with excellent results, and I always aim to have some oats in the bundle for the hens in winter. They are a fine egg-producer, and when given in this way they answer the purpose of scratching material, keeping the hens busy getting the oats; then the straw answers for bedding for the hens to work over.

V. M. Couch.

Care of Horses in Hot Weather

I am confident that far too many drivers of farm teams do not take into consideration the suffering which hot weather brings upon horses. A great many fatalities are brought about from heat exhaustion and sunstroke, although in many instances some other cause is assigned for the death.

As a general thing it will be noticed that the horse which most quickly becomes a victim of heat exhaustion is one that has not been given the proper care and attention. He is one that is in a bloodless, debilitated condition as a result of poor nutrition and the surroundings incident to a badly-ventilated and filthy stable, or else he is one that through overfeeding and a lack of proper regular work is in a state of obesity, with flabby muscles, impaired circulation and excretory organs which are not sufficiently active. If a horse is to withstand the effects of hot weather he must be kept in a stable always clean and well ventilated.

The water he drinks must be pure and cool, and he should be allowed to drink at frequent intervals. His feed should be nutritious and of a cooling nature, and his skin should be kept healthy and the pores open by being groomed. Giving him a nice bran mash twice a week will assist in keeping the system cool.

In extremely hot weather I allow my work teams two hours instead of one for dinner, and do not feed them until they have somewhat cooled off. I also take the harness off while dinner is being served; it pays to do this.

When the horses are working hard in hot weather I feed very lightly of hay at noon, and do not feed green grass that has been cut and allowed to sweat in the heaps.

Each horse has its respective collar, which is properly fitted.

Collars that fit too tightly are an aggravating cause of heat exhaustion. A sunshade for the poll or crown of the head will add to the horse's comfort immensely if it is arranged so that the air will circulate beneath it. A sponge fastened on the poll is positively injurious unless it is kept wet and cool, which is practically impossible. It is the continuous work while exposed to the direct rays of the hot sun that leads to heat exhaustion and sunstroke, therefore short rests should be allowed at frequent intervals in a shady place if possible, and a few swallows of cool water should be given as often as possible.

The above suggestions, if followed closely, will lessen the danger of heat exhaustion, but in extremely hot weather, when the work on the farm is pressing, a case may occur, and the driver should know what to do under such circumstances.

When a horse begins to lag, droops his head, pants hard or ceases to perspire, he should be stopped at once, for if he is kept going he will surely go down, perhaps drop dead.

As soon as the horse shows himself to be suffering from heat exhaustion, unhitch him and remove the harness. Spray him along the back with ice-cold water and apply it freely to the poll with a hose or a sponge. Let him stand out of doors in a shady place, and with such treatment a recovery will usually come quickly.

I believe too many of us give little heed to the increased tax on the powers of our horses brought on by hot weather, and it frequently happens that we pay the penalty in the loss of a good horse.

Wm. H. Underwood.

The Day They Broke Peggy In

"What ye goin' to do with the ropes, Uncle Sam?"

Uncle Sam gathered his ropes up in a loop and started for the stable, Laddie close at his heels.

"Why, Peggy's got to be broke to milk, Laddie! Found a new calf last night, and now we've got to learn her to milk. Maybe you'd better not come down yet a while. After we get her broke maybe you can come. Now she'll probably kick like sin. Usually heifers do the first few times they're milked."

"Like to see how you do it, Uncle Sam!" the boy pleaded. "We might want to know how, you know. I'm sure our folks would like to know if they's any better way'n they've got!"

"Well, I don't care; only keep back out of the way, so you won't get hurt! That's all I care!"

With something of fear in his heart, Laddie ventured into the stable and stood afar off while Uncle Sam went at it to fix Peggy for the first milking. First the rope was placed about the heifer's body, in front of the hips, and drawn as tight as a strong man could do it. At the first touch of the rope, Peggy looked around over her shoulder with fear in her eyes to see what was being done to her. The wild, appealing expression in her usually soft eyes touched Laddie's heart from the very first. This was a strange performance, it seemed to him, and he wondered what was to come next.

Uncle Sam took a milking-stool and an old pail and sat down by the side of Peggy. When his hands closed about her teats, away she sprang as far as she could get.

"So, here!" yelled Uncle Sam in a tone that made the dim echoes of the barn ring.

"Must be Peggy's real deaf!" Laddie thought. "If she wasn't, he wouldn't need to holler like that."

"What's the matter with ye, anyhow?" was the demand, as Uncle Sam hitched his stool a little nearer and braced himself for the second attack. Then began a battle royal between the stout-handed man and the timid little heifer. Peggy did her best to get away from the man who was pulling and hauling at her teats. Once Uncle Sam got up and drew the rope a bit tighter about the body of the heifer. The milk flew everywhere except in the pail, all over Uncle Sam's trousers and mainly on the floor. Peggy was growing more and more excited. It was evident that she considered herself being abused to the very utmost. And it seemed to Laddie, perched on the door-sill watching proceedings, that she was exactly right. And when at last Uncle Sam lost the last spark of his temper, and getting up, gave the frightened heifer a number of terrible blows on the back, the little fellow ran with all his might and left them to fight it out alone.

When Uncle Sam had finished his job, and was going to the house to "change his clothes," Laddie ventured out from behind the woodshed, and said, with his head bending down toward the ground:

"That ain't the way my pa milks heifers. Just wish you could see him do it once!"

"Ain't it? How does he do it, Laddie?" Uncle Sam was conscious that he had been engaged in a most unfair and unmanly piece of business. He felt that he had made a bad mess of it, lost his temper and misused a fine little heifer. The process must be gone through with a number of times, too, before Peggy would give it up and get used to the ordeal of being milked. It was all new and strange to her. No one ever had given her a single hint of what was to come before she went over the line from calfhood to the kingdom of the cow. But was there a better way? If Laddie knew of any better plan, why should he be ashamed to listen?

And Laddie went on to explain how his father taught the young cows to stand for the milking. It was now the man's turn to listen, and to his credit be it said, he did it like a man of good judgment. Uncle Sam was not at heart a bad man. He simply had been doing by the heifer as he had been brought up to do, following in an unthinking way what had been the plan of his father and his grandfather in breaking the heifer to milk.

"My pa milks his heifers a good while before they give any milk," Laddie began. "He talks to 'em all the time, kind of soft and low, and rubs their backs and sides and gets 'em used to having him 'round 'em. They get so they like it real well, and sometimes they stop eating to have him fuss with 'em. And then when the time comes, pa just sits down just as he does to any cow, and holds the pail careful with one hand and milks with the other. First you know he's done and he's got the milk! He don't use any rope nor any such thing. They wouldn't know what to think of it if he did. I think pa's way is a pretty good one, don't you?"

Uncle Sam did, good enough, so that he did the same way with all the heifers he had to break after that. It saved many awful times, and Uncle Sam surely thought better of himself than he did before his little visit with Laddie.

E. L. Vincent.

Cement Feeding-Floors

If corn stays anywhere near its present price it is expensive to feed, and very little should be wasted.

The cement feeding-floor is a convenience and a necessity. In very soft weather hogs will often root up their lot, but a cement-floored pen will put a stop to it all.

These floors can be made under shelter or out in the open, at the option or convenience of the feeder.

A long house with a feeding-floor in one end and a bedding department in the other is preferable.

O. R. Abraham.

The GOLDEN ROD
CREAM SEPARATOR

Here is a fact that means dollars and cents to you:—

Every sale we make is made on the guarantee that the Goldenrod will prove to be a better separator.

And all these sales stick, as we have said—none of the separators comes back.

In other words, we meet and defeat competition.

We prove that the Goldenrod gets all the cream—which means more cream than any other separator gets.

We prove that it works easier and better—because of its frictionless chain drive. If we didn't prove these things, the broadness of our claims—the sweeping character of our guarantee—would prove our undoing.

If we didn't make good on all our claims, our business would be going backward—instead of which our sales are increasing by leaps and bounds.

Give us a fair, square chance to prove that you ought to own the Goldenrod in preference to any other separator, and we'll prove it.

Write first for the booklet, in which thousands of enthusiastic owners tell what the Goldenrod has done for them, and we will tell you about our special free trial proposition—an arrangement whereby you can prove our claims on your own dairy floor.

Competent Agents Wanted. Our Omaha warehouses promptly supply Western trade.

MERIT SEPARATOR COMPANY
Oxford, Pa. Dept. B Omaha, Nebr.

$29.75 For this Low Down AMERICAN SEPARATOR

IT PAYS WITH EVEN ONE COW

Get better value. Save money. Deal with the actual manufacturers. Our catalog tells all about the Low Down American Separator, our liberal proposition, low prices, generous terms of purchase, long time of trial and efficient guarantee. Western orders filled from Western points. Address,

AMERICAN SEPARATOR CO.
BOX 1058, BAINBRIDGE, N. Y.

WAGON SENSE

Don't break your back and kill your horses with a high wheel wagon. For comfort's sake get an

Electric Handy Wagon.

It will save you time and money. A set of Electric Steel Wheels will make your old wagon new at small cost. Write for catalogue. It is free.

ELECTRIC WHEEL CO., Box 96, Quincy, Ill

PATENTS SECURED OR FEE RETURNED.
Free report as to patentability. Illustrated Guide Book, and List of Inventions Wanted, sent free.
EVANS WILKENS & CO., WASHINGTON, D. C.

PATENTS that PROTECT
Our 3 books for inventors mailed on receipt of 6 cts. stamps.
R. S. & A. B. LACEY, Washington, D. C., Dept. 49, Est. 1869

Our population increases a million each year. Our land area doesn't increase an acre. That's why it pays to buy good farm lands now in the

"Santa Fe Southwest"

Everybody knows that the United States is growing fast.

Few persons realize that our population increases **a million a year!**

That's the average annual rate of growth since the last census. Part of this is excess of births over deaths. The remainder comes from foreign immigration.

These "million-a-year" new mouths all must be fed with food from our farms. These "million-a-year" new bodies all must be clothed with other farm products.

Factories are necessary, but they only take what the land produces and make it into food and clothes.

Always the **demand is greater,** year by year, for what the earth can grow. The supply of land remains about the same. To be sure the cultivable area is added to a little, but it does not keep pace with the added population.

Just a simple sum in arithmetic: Amount of land a fixed quantity; population rapidly growing; result—**land goes up in price.**

In most European countries values are so high that landless farmers are compelled to seek the cheaper lands of this country. If only one-quarter of the foreign immigration finds its way to the agricultural lands of the United States, it takes a big acreage off the market every year. What's left is worth more.

The Eastern farmer seeks the Middle West. The Middle West farmer pushes on to the Far West. **No longer is there a frontier.** And salaried city men, country-bred, are buying small farms, too.

The day of so-called "cheap" lands is almost gone. There are still a few score thousand homesteads left in the semi-arid region, which ultimately can be made productive by irrigation.

Dry farming is adding other areas to the crop-producing territory.

But these, though welcomed, are only a drop in the bucket.

Land is the **basis of all values,** so why not get in now on the "ground floor?" Temporary periods of stationary prices may come. For a long hold—ten, fifteen, twenty years—your Southwest farm, if bought right, will surely double or **quadruple in value,** to say nothing of crops raised meanwhile.

The Santa Fe has no land to sell. Its business is to haul passengers and freight. It wishes, however, to help build up the communities along its lines.

Write me to-day, for our Southwest land folders, describing Kansas, Oklahoma, Texas, Colorado, New Mexico, Arizona and California—the best part of the best country on earth. They tell the truth. Say which section you are most interested in. Give your full name and address. I will also send you our immigration journal, *The Earth,* six months free.

C. L. Seagraves, Gen. Colonization Agt.,
A. T. & S. F. Ry. System,
1171-P Railway Exchange, Chicago.

SUBSCRIPTION PRICE

One Year (24 numbers) . . . . 35 cents
Four Years (96 numbers) $1.00
Canadian Subscriptions . { 1 Year, 60 cents / 4 Years, $2.00

Entered at the Post-Office at Springfield, Ohio, as Second-Class Mail Matter.

Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."

The date on the address label shows the time to which each subscriber has paid.

Subscribers receive this paper twice a month, which is twice as often as most other National farm journals are issued.

Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope.

When renewing your subscription, please say it is a renewal, and if possible send the label from a recent copy. If all our subscribers will do this a great deal of trouble will be avoided.

PUBLISHED BY
THE CROWELL PUBLISHING COMPANY
SPRINGFIELD, OHIO
Branch Offices: 11 East 24th Street, New York City. Tribune Building, Chicago, Ill.
Copyright, 1909, by The Crowell Publishing Company

ABOUT ADVERTISING

Farm and Fireside does not print advertisements generally known as "readers" in its editorial or news columns.

Mention Farm and Fireside when you write to our advertisers, and we guarantee you fair and square treatment.

Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

Farm and Fireside is published on the 10th and 25th of each month. Copy for advertisements should be received twenty-five days in advance of publication date. $2.00 per agate line for both editions; $1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2¼ inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

Letters regarding advertising should be sent to the New York address.

The Wheat Situation

Undeniably the success of the Patten wheat deal was primarily due to the fact that he understood and took advantage of natural conditions. His operations were based not so much on the world's supply of wheat from the crop of 1908 as upon unfavorable prospects for the crop of 1909, and in this his forecast was correct.

Conditions last October indicated to any one of observant mind with some knowledge of wheat-growing that the crop of winter wheat for 1909 in the United States could not possibly be a full crop. The severe fall drought that prevailed generally over the winter-wheat region east of the Rocky Mountains handicapped the crop at the very time of sowing, and made it impossible for the crop ever to be a big one. The acreage sown was reduced, and owing to the lack of soil moisture and timely fall rains, the wheat-plants started feebly and went into winter in very poor condition. In the spring hundreds of thousands of acres of winter wheat were taken for oats and corn.

Then came a new set of conditions. Abundant spring rains forced the small plants into an astonishingly rank growth, and superficial observers began to claim that there would be a big crop of winter wheat after all. But the weather conditions producing the rank growth and sudden ripening between early spring and harvest-time are just the conditions exceptionally favorable for such diseases of wheat as rust and scab, which greatly reduce the yield of good grain. The growers who have good wheat this year are in command of the situation. They should be able to realize its value when they sell it. Last year fully two thirds of the crop passed out of their hands before there was an adjustment of prices to the real situation.

Now is their opportunity. Let them not be persuaded at threshing-time that the Patten May deal was nothing but an artificial corner. Let them resist the usual "bear" influences for a while, and the farm price of the 1909 crop will be nearer the real market value than it was last year.

Although Patten's operations were primarily based on a knowledge of the actual condition of winter wheat last fall at seeding-time, his success was due in no small measure to the fact that with the assistance of powerful associates he could take care of the speculative markets on the Chicago Board of Trade. Time and again, whenever the bears attempted to break prices by dumping hundreds of thousands of speculative wheat on the market, Patten had sufficient financial backing to buy it all.

"Dry Farming" in the Humid Regions

To mention the application of the principles of "dry farming" in the humid regions in a season when the rains were so heavy and frequent for several weeks in May and June that corn cultivation could not go on for two days in succession would almost seem a positive offense. But let us consider the subject a little. In hot weather following rains the ground quickly bakes, or a surface crust is formed, particularly on clay soils. Now here is just where the application of the Campbell system of soil culture comes in with remarkably favorable results. In corn culture, for example, cultivation should follow every heavy rain as soon as the ground is in proper condition, to break the crust and to form a soil mulch. For if the crust is not broken and the mulch of loose earth formed, the soil moisture is quickly evaporated; and if a rainless period of only ten days follows, the corn begins to suffer for water. Then we complain of drought, and say the corn needs rain. What it really needs is the conservation of soil moisture by proper and timely cultivation.

This point becomes more forcible when we consider that the average rainfall in the humid regions during the corn-growing season does not furnish sufficient available water, after allowing for surface drainage and evaporation, for the crop to make a full yield. The corn crop depends largely on water conserved in the soil from the early rains of the season.

The soil elements of plant-food are taken up in a dilute solution of water by the roots. The water rises through the stems to the leaves, where it is exhaled, leaving the minerals to be elaborated into food for the plant. For every pound of dry matter in plants, from three hundred to over five hundred pounds of water must be lifted from the soil and exhaled through the leaves. With this in mind we begin to realize the enormous amount of water used by plants. The amount required by different plants varies considerably, but take corn for example. It is estimated that the amount of water required by a single acre of corn of average production is fully three hundred and fifty tons. The reason of first importance, therefore, of cultivation is to check the evaporation of water from the soil in dry weather and save it for the use of the growing plants.

There is no fixed best number of times for the cultivation of corn. Under very favorable conditions of soil and moisture three cultivations have made a maximum yield. Under other conditions five cultivations were not enough. Don't "lay by" the corn with a crust on the soil. Break it, and break it again if necessary, even if the work must be done with a one-horse fine-toothed cultivator running only two inches deep.

Land intended for wheat or other fall-sown crops should be plowed as soon as possible after harvest. Then the seed-bed should be prepared, and the earth mulch be maintained by the harrow until seeding-time. The comparatively few fields that were prepared for wheat last year on this plan gave magnificent returns, in spite of the fall drought—the greatest for a quarter century past in the winter-wheat belt.

Fields planted on late plowing after the soil moisture had nearly all evaporated were either total or partial failures. The experience in wheat during the past season furnishes a striking object lesson on proper soil culture.

In brief, the application of the principles of "dry farming" is just as important in the humid as in the semi-arid regions.

The Dividend Tax

In a special message to Congress, President Taft recommends:

First, that both houses by a two-thirds vote shall propose an amendment to the Constitution conferring the power upon the national government to levy an income tax, which he believes is favored by a great majority of the people.

Second, that the tariff bill be amended to impose upon all corporations and joint stock companies for profit an excise tax measured by two per cent on the net income of such corporations.

In urging this measure President Taft says:

> "Another merit of this tax is the federal supervision which must be exercised in order to make the law effective over the annual accounts and business transactions of all corporations. While the faculty of assuming a corporate form has been of the utmost utility in the business world, it is true that substantially all of the abuses and all of the evils which have aroused the public to the necessity of reform were made possible by the use of this very same faculty. If now by a perfectly legitimate and effective system of taxation we are incidentally able to possess the government and the stockholders and the public of the knowledge of the real business transactions and the gains and profits of every corporation in the country, we have made a long step toward that supervisory control of corporations which may prevent a further abuse of that power."

If the federal supervision is over all the business transactions and annual accounts of corporations involved in this excise measure, it might eventually accomplish much good by bringing about a greatly needed reform of the corporation laws of all the states of the Union. The President's remarks indicate his lively appreciation of the great evils existing under present abuses of corporate power, but why stop at supervisory control by the federal government? Why not go at once to the heart of the matter—the absolute necessity of reform in state corporation laws under which the evils thrive? Until they are radically changed, a federal tax on net earnings of corporations will be successfully evaded. As a rule the little corporations will pay and the big ones evade such an excise tax as is proposed.

Back Talk to Lewis

Letters From Readers

Editor of Farm and Fireside:—

I am a great admirer of Brother Lewis, and he certainly hits the nail on the head giving the senators the right name—grafters. No doubt there are some good ones, but you know it only took one hundred and twenty-three thousand dollars of the Standard Oil Company's money to buy a senator and get back into Texas again after being ousted. You can tell a senator or representative by his earmarks—always opposing such bills as guaranty of bank deposits, parcels post or free lumber, something the majority of common people want and need very bad. The grafters are paid to defeat all such bills. They are elected by the people and bought up by the trusts to do their bidding.

Texas. W. F. Harbke.

Editor of Farm and Fireside:—

All deep-thinking men, regardless of political parties, must admit that corrupt legislation is a detriment to good government. Why men object to reading the plain, unvarnished truth so ably presented in these columns by Mr. Lewis is more than I can comprehend. A great many papers present false reading because of party prejudice and a lack of integrity to expose corruption in and out of Congress. We farmers need to know the truth at all times, and when Mr. Lewis ceases to enlighten the readers of this paper in regard to their own welfare, I expect to cancel my subscription. I defy any man to declare this the best government in existence. Were this the case, there would be fewer bank failures, panics, strikes, trusts, etc. The farmer should possess knowledge and wisdom as well as know the art of farming.

Missouri. L. E. Varner.

Editor of Farm and Fireside:—

Being a "Missourian," I would like to be shown what benefit Mr. Lewis' article in May 10th issue is to the public? If a farmer would use one fourth the space and say as little, you would be fully justified in putting it in the waste-basket. His article can only cause your readers to have a poor opinion of newspapers, and especially reporters. Give us something practical and to the point. Why not divide the political page, one half given to each side to discuss public questions? Then we would get the strongest argument for or against. Mr. Lewis touches on tariff. We are told that we have a tariff on wheat to protect us in our home market, and yet the wheat-buyers here are buying our wheat for one dollar and thirty cents a bushel, while they are paying one dollar and fifty cents for wheat shipped in from other states where land is cheaper than ours. They combine to fix the price here. What is the remedy?

Missouri. B. F. Wampler.

Editor of Farm and Fireside:—

Don't you think you ought to take pity on Mr. Corntassel and cut the political page out?

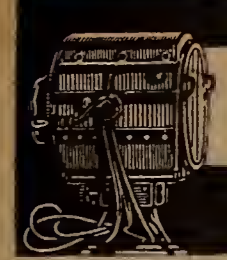
What a calamity it would be if Lewis should divert the minds of these pumpkin-growers from the problem of production to that of securing laws and a system of distribution whereby the pumpkins, etc., which they produce might be sold at prices that would give them something like a fair compensation for their labor.

The old party "wind-jammers" come very near the truth when they tickle the ears of these "clodhoppers" just before election with the time-worn adage "the farmer feeds the world." We have been feeding the "under-world" at our back door with "hand-outs."

If the farmers would unite with the working-men in the party of their class and study the problem of distribution with the diligence they are giving to that of production, the million or two "hoboes" which they are feeding at their back doors might be buying at good prices the pumpkins which they saved from the ravages of the bugs in the spring, only to see them rot for want of a market in the fall.

But then how would the grafters and parasites live? No, the thought is not to be tolerated for a moment, and you must put a gag on Lewis.

Oregon. Fred F. Hughes.



In the Public Eye

What I Saw and Heard and Thought in Washington

By Alfred Henry Lewis

If you don't agree with Mr. Lewis, "talk back" to him, confining your reply to two hundred words. We shall hope to publish some of these replies from time to time.—THE EDITOR.

Mr. Lodge was in a perturbed mood. He stood waiting for a Senate elevator, and his mood of perturbation was evinced by ringing the elevator-bell three times. When a Senate elevator-bell rings three times, that is the signal for the elevator to ignore all intervening floors, whether to let off or take on a passenger, and rush with one great sycophantish bound to what august senatorial being has so triple-pushed the button. This is the Senate rule. It is meant to establish in the minds of common men the Senate greatness.

Mr. Lodge has for long sought to "lead" in the Senate. But Mr. Lodge, with the instinct, lacks all genius for leadership. Mr. Lodge doesn't know that the first rule of leadership is to be sure you are followed.

It is a pity that Mr. Lodge was not with me in Kansas City upon an afternoon when that truism touching leadership had obvious demonstration. He would have learned that leadership depends simply upon knowing which way the herd is going, and sticking to the head of the herd.

On the Kansas City afternoon adverted to, a brass band came tooting its glittering drum-rumbling way down Main Street. At the fore strutted the "leader"—a portentous creature, all bearskins and gold braid. He had a six-foot brass baton, which he tossed, twirled and did stunts with. All told, he was a personage at once impressive and important, and the public, gaping from the deferential curb, viewed him with respect.

Of a sudden the band proper wheeled and went up Fourth Street, leaving that baton-tossing, resplendent, bearskinned "leader" one half way on Main to Third. In a moment every trace of "leadership" had vanished. That sunburst in bearskins and gold braid was no longer followed. In truth, he was reduced to the miserable shift of chasing the tooting herd to recover his lost leadership. Also, where before he was respected, he became the common scoff and jeer.

Had Mr. Lodge been with me upon that educational afternoon he would have learned what might have served him on many a Senate occasion.

The great Senate trouble with Mr. Lodge is he's too ambitious. He tries to do too much. In some of his manifestations he is not unlike a hen-turkey I once knew. This anxious fowl appeared to believe herself the only hen-turkey on earth, and that with her rested the responsibility of perpetuating her race. Thus thinking, she insisted on "setting" upon full twice as many eggs as Nature in drawing her ground-plan ever meant she should cover. The result was that, first one, then another, every egg was addled.

During the Crum debate Mr. Lodge was in a high vein and lectured the South concerning the negro most vehemently. On that topic of "negro" Mr. Lodge should put on the soft pedal. Who has not heard of Pot and Kettle, and what is due, or rather not due, from one to the other of these excellent utensils? Many an original New England dollar found its source in slaves and slavery. Even the sacred "Mayflower," when the passenger traffic in Pilgrims ran low, lapsed into the slave-trade and rolled up ducats by bearing screeching, unhappy, black cargoes to these shores.

Also there is another risk—to be sure, a slim one—that Mr. Lodge invites. Mr. Bristow or Mr. Curtis can tell him of a pesky personage, once a member of the Topeka Legislature, who for his criticisms and faultfindings and assumptions of superiority won renown in his day. He, like Mr. Lodge, was proud of his name, which was Winthrop or Bradford or something else that came ashore at Plymouth Rock.

One awful day, after our Kansas Mr. Lodge had hectored his colleagues to a standstill and shown them their moral, mental and political blackness as in a looking-glass, the ill-used ones engaged themselves upon revenge. They introduced a bill to change the hectoring gentleman's name from that honored one of "Winthrop" or "Bradford" or whatever it was to "Dummeldinger." The lower house adopted the measure; the upper stood ready. The hectoring, lecturing one saved himself only by the most abject apologies for what ill words he had spoken. This closed his public career.

Suppose Congress, flea-bitten into madness by the moral jabs of Mr. Lodge, should pass a law changing his name of "Henry Cabot Lodge," so fragrant of the mighty days that were, to "Dummeldinger!" It would be horrible as a merest stab at sentiment! Politically, socially, and in Mr. Lodge's trade of literature, it would be worse, since it would spell the complete obliteration of Mr. Lodge.

Just as nine tenths of an iceberg is submerged in the ocean, so is nine tenths of Mr. Lodge concealed in his name. Change that name to "Dummeldinger," and all you'll have left of Mr. Lodge is that little, chilly, overbearing, visible peak of Puritan ice and snow, which, without the other to support it, would melt into speedy nothingness and disappear.

Mr. Lodge should think on these things. Even though he is not to be restrained in his South-baiting by that parable of the Kettle and the Pot, he should so far remember his own peril as to pause this side of where Congress, made mad, gives him retributive rebaptism as "Dummeldinger."

Speaking generally, Mr. Lodge is not potential in the Senate. This is due in part to a certain manner of infallibility, while alive to the fallibility of others. Therefore is it that his fellow-senators resent Mr. Lodge, oppose him, go to war with him.

* * *

The appropriations for last year were $1,044,000,000. That was an advance of more than $36,000,000 on the year before. This year the public expense will go higher still. Mr. Hale, when in the last Congress he insisted upon $136,000,000 for the navy, said that this year would witness a $180,000,000 naval appropriation, while the bill for 1910 to follow would carry $200,000,000.

This, say the wise men, doesn't look like lowering expenses, and they point out that were the proportion of increase threatened by Mr. Hale for the navy to obtain throughout all the departments of government, 1910 would close upon a deficit which would be anywhere between half a billion and a billion dollars. Also, these sapient ones laugh at those who say the cost of government is to be cut down, and ask, "Who ever saw public expenses lowered save as the outcome of a political revolution?"

* * *

As showing somewhat the length and breadth of what one might call the bill and resolution industry, some genius the other day counted up and announced that during last Congress over thirty-six thousand bills and resolutions were offered in the House and in the neighborhood of nine thousand in the Senate.

The congressional day begins at noon, and might last five hours—but doesn't. Give each bill and resolution twenty minutes for consideration and a vote, and figure up the chance of your particular bill being heard of.

Many bills are introduced by congressmen for apparently no reason other than just to see their names in print. Certainly there be bills which the authors however addled of a baseless optimism, could have had no hopes of passing. Take the bill offered by Mr. Cox, of Indiana, to abolish the mileage charges of statesmen. Our publicists are paid ten cents a mile, going and coming, between the capital and their humble homes. Also, in a more elastic and less watchful public hour, there have been publicists who did not scruple to figure mileage upon routes so roundabout that they included Cape Horn. These congressional Magellans, however, no longer exist. The country is improving. That "graft" would not now be tolerated. Still, taking the shortest cut for it, mileage is no bad congressional thing, and what bill proposes to cut it off would be about as popular with congressmen as a measure which added ten years to their age.

It is beyond belief, therefore, that our Hoosier Cato could have looked, when he introduced it, to see that anti-mileage bill succeed. Which by natural swoops brings one to the query, Why, then, did he introduce it? To that there is no answer. Also, in the instances of ninety-nine in every hundred of those forty-five thousand bills and resolutions, were a similar question propounded, it would go equally without reward.

* * *

The Senate has created a new committee on public expenditures. The announced purpose of the committee is to limit extravagance, keep down waste. It has fifteen members, with Mr. Hale at its head. I might believe in the sincerity of this committee if it were not for its personnel. Beginning with Mr. Hale, and going through the list, it's precisely as though, having in view the protection of the poultry interests, and to induce economy in the appropriation of hens and eggs, one had named a committee of fourteen weasels ruled over and directed by an old experienced fox.

* * *

Mr. King has written me about his fear of war with Japan. In that connection there is one thing to remember, which I think Mr. King and many other people overlook. There are two ends to every lane, though the lane lead to war. Whenever we have a war with Japan; Japan will have a war with us.

Neither should it be forgotten by folk disposed to chop logic, and tell what we do to such as France and Germany as showing what we ought to do to Japan, that the situations are not similar. The difference in the one case is the difference of nation; in the other it's the difference of race. If we cannot accept the Japanese upon what terms we take the French and the Germans, the fault lies with Providence, not with us. The mustang of the Panhandle would receive the little horse of the Shetlands upon terms vastly different from what he would grant the zebra. And yet it is Nature that arranges the diplomacies of animals. Some day we may be above Nature, but until then we'd better follow her smoke.

Japan our neighbor?

Truly! And what said the wise Franklin? "Love your neighbor as yourself, but don't take down your fence." Were you to summon the great lightning-finder from his Arch Street Philadelphia grave, and face him with this tangle of Japan, that is precisely what he'd say to-day.

* * *

Mr. Terry was recently named for a place in the New York subtreasury, but not confirmed. The bankers objected to Mr. Terry, and that banking objection was strong enough to halt both Senate and White House.

The objecting bankers admitted that Mr. Terry was honest. And since the duties of the position do not go beyond making change and counting money, any right-minded grocer's clerk should have been able to discharge them. As nearly as I could discover, the bankers objected to Mr. Terry only upon grounds of bank fashion. "Mr. Terry doesn't stand high enough in financial circles," was the way they phrased it.

For myself, I grow a bit weary of some of our bankers. They appear to claim for themselves in America that place which in the public economy of the Hindus is held by the sacred gray apes. Dollar-sapped, too many of them, of anything that resembles the sort of patriotism that fought at Bunker Hill, they must still have their unchecked sacred way in whatever of government enlists either their minds or their paws.

As in that subtreasury case of Mr. Terry, so in scores of others that happen in the course of every year, these haloed simians of money come swinging down from out the top of the national banian, paw under foot, to say to the Senate, "You must not!" or to the White House, "You must!"

It gets to be a trifle tiresome. Doing nothing for the government, while the government does everything for them, they never hesitate to take public charge of government whenever such charge-taking matches their vanity or their pocket. And just as the Hindu stands back before those fetterless, gray sacred apes, so are our public officials expected to stand back before our fetterless, gray sacred bankers.

It would be publicly better, and much more American, to give those bankers a battle every time they claim anything broader than a bricklayer's chance. Why publicly specialize in favor of bankers? This is no more a banker's government than it is a carpenter's government or a farmer's government.

Until the Sixteenth

By Beulah Hughes

Illustrated by Harriet A. Newcomb

Benny wasn't selfish. He was too sympathetic to have that fault. He had a wholesome love for people who understood him; for those he couldn't understand, a questioning awe; and on account of the unfortunates to whom he was just a child, his face often wore a certain little smile which baffled them.

The smile appeared often the first bright days of the voyage. A short time after the gang-plank was lifted he had found a little shelf on deck, where he at once settled himself as upon his own inheritance. There in the corner of the white railing his sturdy little figure outlined itself against the blue of the water and caught the eyes of the passengers on promenade as the relief of a cameo.

Late in the afternoon of the second day, while Benny was reveling in a particularly rough bit of sea, he came to the realization that an understanding spirit was near. Without looking up, one of his little fists loosened itself from the small iron bar of the rail, and he deliberately secured a handful of the blowing folds of her red skirt. All this without turning his head; then, with his eyes still on the tumbling white-capped waves, he spoke.

"Is the water f-foapy?"

"No, dear. That is—"

"I—I don't mean the f-fwome. The—the 'ittle spots."

"Oh! That is the foam all broken—"

Benny could feel the interest.

"Like 'ittle c'umbs my aunty b'ushes off the table?"

"Yes, dear."

There! He knew she would understand.

"My name's Benny."

Part of the shadow left the girl's eyes, and yielding to a sudden impulse, she answered this trusting overture with a caress. She was about to tell him her name, but as her hand touched his head he leaned confidingly against her, and looking up, once more wistfully abandoned himself to her loving sympathy.

"Did you ever go twavelin' wif a nuncle all by your ownse'f?" It was out at last!

"No, dear."

Benny disregarded the admission of her lack of experience.

"When you asks some peoples for fings does your heart get long and fin an' twavel towards your froat?"

When the girl smiled Benny knew she was not laughing at him.

"But I doesn't ask nuncle for many fings. I—I can dwess mineself, all 'cept partin' mine hair an' lacin' mine shoes. But—do you fink dat is vewy much twouble?"

The last sentence came a little wistfully, because Benny was remembering what he had overheard one night when he was supposed to be asleep in his little crib. Quite plainly through the open door he had heard his aunty say,

"Donald, you won't like the trouble, but you must have patience. Remember, Benny hasn't gone about much, and the excitement may make him restless."

Catching the expression in his eyes, a sudden dislike for this uncle, intense as it was unexpected, filled the heart of the girl. Taking his earnest little face between her hands, she exclaimed:

"Oh, you're such a little man to be so far away from your mama."

"My mama isn't far away. She's in the stars. One time when I stayed wif aunty while my mama an' papa went 'way, 'way off on a v'cation, a grea' big earfquake comed an' taked my mama away, an' nen papa goed 'long to take care of her, jest like he always did. I comed 'long wif mine uncle 'cause he was comin' anyway—but I isn't goin' to be any twouble. Does you know mine uncle? He's the tall man wif a speckled tie."

Instantly the girl knew she would always hate spotted ties.

That night, after being tucked safely in the lower berth—assigned to him by his uncle because it was the shortest distance from the floor—Benny endeavored to follow instructions and go to sleep. But long after his uncle was wrapped in slumber the little chap's brain was actively engaged in a disconnected review of the day. Then, quite without warning, the most awful things happened. The ship began to creak and groan, and something, which Benny knew must be goblins, began to rock the little fellow's bed with long, sweeping swings from one side to the other.

The storm, which Benny had not been told was coming, had arrived in all its strength. Uncle Donald slept through it all, quite unconscious of the lonely, terrified little fellow in the lower berth.

Benny was a brave, proud little chap, but he arrived at last at the place where he felt being eaten by the goblins was worse than having his heart get long and thin—yes, even if it should get long and thin enough to come in its travels right out of his mouth. He raised the covers enough to get one eye out, took a hurried survey of the mysterious dark, and then with swift caution—leaving the blankets in a tangled heap—he scrambled out of bed. With not so much as a backward glance to see what the goblins did with the empty berth, he scurried across the hall and tapped on the opposite door. In a moment it opened, and the little white-robed figure was caught in an embrace both comforting and full of promise.

With his arms about her neck the boy did not have to think of the condition of his heart. No danger of its getting long and thin when he asked her for a story.

And so, because the girl's thoughts had kept pace with the restless turmoil of the storm-blown waves outside, she satisfied his demand and brought to her own tired heart the relief which comes from voicing one's troubles. The little fellow, not knowing he was hearing the cause of the shadow in her eyes, pillowed his head upon her breast and listened with the gladness of childhood.

"Once, one time, dear little boy, there lived a little fairy whose mama and papa had been called to a far-off kingdom. She was lonely all by herself, seeing the other little fairies with so many playmates; but by and by a dear, friendly fairy came and took her to a castle called Content, where she wove dreams out of moonbeams for other fairies, and every time one claimed a dream for his own she received a treasure to add to her store. By and by a great big king fairy called on the little fairy and asked her if he could have all of her dreams to send out in a great big book for his own people. He said he would give her big treasure, and by and by, after this great big king fairy found she could make a certain kind of cobweb dream which would make the other fairies see beautiful places in kingdoms they had never visited, he planned to send her 'way across the ocean to get some new cobwebs."

"Was the ocean jest like dis?"

"Yes, dear. And so the little fairy planned everything and put away all her treasures, and she was very happy, because if she could go there for this great big king fairy, when she came back she would live in a beautiful castle called Success. But just a little while before the time came for her to go, a big bad fairy came."

"A wobber?"

"Yes."

"To get the nice little fairy's treasure?"

"No, not that, dear. Something worse. This bad robber fairy went to work and got all the bad fairies to help him and made the king fairy think he could find so much better than she the places where these cobwebs grew. So the little fairy couldn't go for the king, after all. He sent the bad fairy in her place."

"What was the wobber fairy's name?"

The girl sighed. "The king didn't say."

"Nen did she cwy 'cause she couldn't go 'way off on the ocean?"

"She did go, dear—but not for the king. So you see that was different and not half so fine, because she wasn't sure of finding her way into the castle called Success."

Here the story ended. Then a tired, sleepily-indignant voice whispered, "'F I had a gun I'd—I'd shoot that old bad fairy—shoot—shoot him dead! Nen—nen—I'd kiss the 'ittle fairy—an' go—'way—off—off to the wainbow wif her. Nen—nen—" And the baby fell asleep.

Morning came. Uncle Donald awoke with the subconscious feeling that the night had been rough. He looked over the edge of the berth, half expecting to see Benny on the floor, but much to his consternation, nothing met his eyes but the tumbled covers. He dressed hurriedly, thinking of the places where Benny would most likely be found, and remembered dissuading the boy of the avowed intention of saying good-night to the girl with the shadow in her eyes. He did not blame Benny for his desire to be near her!

He was struggling with the "speckled tie" when the door opened. He turned suddenly and met a little face in which triumph was curiously mingled with an expression of uncertainty as to its owner's reception.

"Well, sir, give an account of yourself." This from Uncle Donald.

Without entering into any details of the storm and the manner of his departure, bit by bit in his own childish way the little fellow told the wonderful fairy story which had taken firm hold of his little brain and had made him boil with helpless indignation at the bad old fairy.

"Did you find out her name, Benny?"

Reluctantly the boy gave it up.

"Yes. It's Louise Rem-ing-ton."

Uncle Donald turned abruptly, and in the glass his young nephew saw him tug at the "speckled tie." After gazing a long moment at the broad, unresponsive back, he indignantly exclaimed:

"Don't you wike it?"

Instead of answering, Uncle Donald seemed suddenly possessed of a most astonishing desire to have Benny ready for breakfast.

It was the morning of the last day out. Benny and Louise had spent much time together. Often Uncle Donald had been with them, and then Benny just sat still and listened to a great many things he didn't understand—things about writing and books and some kind of wonderful "traveling logs" and men who wrote them. This last puzzled Benny a great deal. He didn't know how men could write logs that traveled.

One thing Benny did know—that however Uncle Donald disliked the name of Louise Remington, he had a distinct regard for the lady to whom it belonged.

But Benny was troubled over the very curious way Uncle Donald took a certain letter from his pocket. This letter seemed to bother his uncle. The little chap was quite sure of this, because it made deep wrinkles come over his eyes, and one night, when Uncle Donald had read it just before retiring, Benny had heard him say right out loud, "Until the sixteenth." Then he had sighed.

This last morning was gray and lowering. The wind blew and the waves were black and had an ugly, threatening, lonesome sound when they came against the ship.

Benny, snugly protected by the folds of a plaid steamer-rug, reclined in his dear lady's lap. His eyes grew heavy and he was half asleep when Uncle Donald joined them.

At first they did not speak. The pensive shadow deepened in the girl's eyes; the face of the man wore a look of growing determination almost stern. Lulled to sleep by the splash of the waves, the boy wandered off into dreamland, unconscious that the other two were facing a crisis.

Turning abruptly in his chair, the man looked straight into the troubled blue eyes of the girl, and demanded:

"Do you know who took the place on the magazine away from you?"

The girl started, and counter-questioned:

"How did you know?"

"When Benny told me your name and the fairy story. Miss Remington, I took that position from you. Two months ago the greatest desire of my life was to obtain the chance of writing the travelogues for 'Seeley's Magazine.' To-day I should prefer to do anything else in the world. I have seen myself in your eyes, thanks to this baby nephew of mine. It is easy to get to the center of things out here. So the little fairy will bring the cobwebs to the king, after all."

"Impossible."

"But it is possible! Before coming on board, the mail which came to my club was handed to me. Dangerfield has been after me some time to do this work for his paper. Read this."

Ignoring the heading, the girl's eyes found these words: "Decline to accept your refusal as final. We hold the offer open until the sixteenth. Have decided to raise the salary."

"Two months ago," continued the man, "I should have tossed that aside as trash. To-day it seems more worth while than anything else in the world save one—your respect and the chance to win your love."

Benny sat up with an insistent demand, "Why couldn't the 'ittle fairy kill the bad old wobber fairy?"

The girl answered the child, all the while gazing across the little golden head deep into the brown eyes of the man as she said:

"Because, after all, dear, the little fairy could go for the king. The robber fairy was only making believe to be bad so that he could weave a rainbow dream for the little fairy to keep—all her own! And he wasn't bad. Oh, no, dear, he was very, very good."

"'Do you know who took the place on the magazine away from you?'"

Just Jokes

Seeing is Believing

ISAAC (who has just recovered from typhoid)—"Doctor, you have charged me for four veeks' calls; I vill pay for only three veeks!"

DOCTOR—"But I called on you every day for four weeks, Mr. Isaac!"

ISAAC—"Vell, dere vas one veek I vas delirious and I didn't see you come in!"—Life.

On Sunday

FOND MOTHER—"Oh, Reginald, Reginald, I thought I told you not to play with your soldiers on Sunday?"

REGINALD—"But I call them the Salvation Army on Sunday."—Bohemian.

Working Up to It

AUNT ANNE, an old family darky, was sitting with knees crossed in the kitchen, when the young daughter of the house entered, and impressed with the hugeness of the old woman's feet, asked what size shoes she wore.

"Well, honey," replied Aunt Anne, "I kin wear eights; I ginerally wear nines; but dese yer I's got on am twelves, an' de good Lawd knows dey hu'ts me!"—Everybody's.

Recently Incapacitated

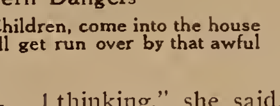
THERE were some deficiencies in the early education of Mrs. Donahoe, but she never mentioned their existence.

"Will you sign your name here?" asked the young lawyer whom she had asked to draw up a deed transferring a parcel of land to her daughter.

"You sign it yourself, an' I'll make me marrk," said the old woman quickly. "Since me eyes gave out I'm not able to write a wurrd."

"How do you spell it?" he asked, pen poised above the proper place.

"Spell it whativer way you plaze," said Mrs. Donahoe recklessly. "Since I lost me teeth there's not a wurrd in the wurrld thot I can spell."—Youth's Companion.



Modern Dangers

Mother Bird—"Children, come into the house this minute! You'll get run over by that awful flying-machine!"

The Little Boy's Complaint

A LITTLE boy in Trenton, who has but recently mastered his catechism, confessed his disappointment therein in the following terms:

"Say, dad, I obey the fifth commandment and honor my father and mother, yet my days are not a bit longer in the land, for I'm put to bed every night at seven o'clock just the same."—Lippincott's Magazine.

Progressive

SAM—"Mother, did God make you?"

MOTHER—"Yes, dear."

SAM—"And father, too?"

MOTHER—"Yes."

SAM—"And sister, too?"

MOTHER—"Certainly."

SAM—"And me, too?"

MOTHER—"Certainly, foolish."

SAM—"He's improving right along, isn't he?"—Harper's Weekly.

Fooled Him

KATIE, who had been taught that the devil tempts little girls to disobey, was left alone in a room for a time one day with the admonition not to touch a particularly delicious plate of fruit that stood on the table.

For a while she bravely withstood the temptation. Finally, however, her resolution wavered, and she took a big red apple from the plate. She walked away with it, but before putting it to her lips her courage returned, and she quickly replaced the apple on the plate, saying as she did so, "Aha! Mr. Devil, I fooled you, didn't I?"—The Housekeeper.

A True Lover

SHE (at the piano)—"I presume you are a lover of music, aren't you?"

HE—"Yes, I am; but pray don't stop playing on my account."—Judge.

The Mathematical Problem

LITTLE Marion was busy at her "home work." After a great many perplexed frowns and much nibbling at her pencil she looked up, and said:

"The only answer I can get to this example is 'five and three fourths horses.' Do you s'pose that is right, mama?"

"Well, I don't know," answered her mother cautiously. "It sounds rather queer."

A long pause; then the small arithmetician's face lit up with a smile.

"Oh, I know," she cried; "I'll reduce the three fourths horses to colts!"

A Terrible Moment

WILLIE (coming into the house breathlessly)—"Papa, hurry up! There's a man with a wagon outside to see you about putting in the coal."

SLIMSON—"Tell him I'm busy just now, Willie. I'll go out and see him in a few minutes."

WILLIE—"But you mustn't keep him waiting, papa. You don't know who he is. He is the father of the pitcher of our base-ball team."—Chesterton Todd.

Dobbin's Journey

THE family horse, who rejoiced in the eminently proper equine name of Dobbin, had earned a rest by long service, and was accordingly sent away to the country to spend his declining years in the broad pastures of a farmer friend of his owner. The distance being somewhat excessive for his rheumatic legs, he was shipped to his new home by rail.

Little Edna, the family four-year-old, viewed the passing of Dobbin with unfeigned sorrow. She sat for a long time gazing disconsolately out of the window. At last, after a deep sigh, she turned with a more cheerful expression, and said:

"Did Old Dobbin go on the choo-choo cars, mama?"

"Yes, dear," answered her mother.

A broad grin spread over the little girl's face. "I was just thinking," she said, "how funny he must feel sitting up on the plush cushions."—M. E. C.

A Dilemma

THE B—— children have been carefully taught the seriousness of prayer and its certain fulfilment if you pray with all your heart.

The other night Bobby besought earnestly that God would make the next day bright and beautiful with blue sky and sunshine; indeed, he prayed so long that Gordon, waiting for his turn, was exasperated almost to the point of interruption.

At last Bobby finished, and Gordon flopped down on his knees in the greatest haste.

"Oh Lord," he babbled as fast as his tongue could go, "please make it rain like fury to-morrow! Amen." Then he jumped up, and said in the most engaging manner to his mother:

"Now which do you s'pose God will do?"—Alice Van Leer Carrick.

Joint Ownership

One of the Twins—"Boohoo! we've dot a pain in Tommy's tummy!"

Farm and Fireside's

Great Atlas Offer

It Contains 106 Pages, 70 Colored Maps, Flags of All Nations, Biographies of Our Presidents.

AT last FARM AND FIRESIDE has been able to obtain a splendid, comprehensive, up-to-date Atlas of the World, which our readers can now obtain in connection with their subscription. This is the most complete little Atlas we know of. It is bound in full cloth; it has 106 pages, with 70 colored maps—it is right up to date. We are able for a very short time to offer you this magnificent volume with your subscription at a price that will absolutely astound you, for it is less than the Atlas alone would regularly cost.

What's Inside

Special maps show the important ship routes, the distances between ports, also the latitude and longitude of every place in the world. The flags of all nations are shown in their real colors, and a gorgeous display they make.

In addition to all the maps showing the location of countries, towns, rivers and mountains, this valuable Atlas and handbook contains a brief accurate biography and the portrait of every president of the United States, including William Howard Taft, who was inaugurated on March 4th. There is a list of all the most important cities of the world, with the population of each, including every city in the United States with a population of 10,000 or more. The book contains a full-page map of the Panama Canal, with a profile map showing just how the canal will be built, together with full description of the canal.

How to Get It

For a one-year subscription to FARM AND FIRESIDE and the Atlas (postage prepaid), send us only 50 cents—less than the value of the Atlas alone. For a two-year subscription and the Atlas, send 65 cents. This subscription may be either new or renewal.

NOW We will send you the Handy Atlas, Without Cost, with postage prepaid by FARM AND FIRESIDE if you send us two subscriptions to FARM AND FIRESIDE. The subscriptions may be either new or renewal. One of the subscriptions may be your own.

Act at once while the chance lasts.

FARM AND FIRESIDE, Springfield, Ohio

FOR THE ASKING

You Can Get These Ten Beautiful Post-Cards

These ten exquisite post-cards—"Flower Friends"—are printed in many colors, and will delight every FARM AND FIRESIDE reader. We want you to have a set, and we have made extraordinary efforts in order to obtain them for you.

Each card contains a favorite flower, printed in colors on a solid gold background, which gives a very rich and stylish effect. The flowers have been made by a special photographic process, by which the flowers have actually been photographed in their exact colors. This is the most costly way to reproduce in color, but we wanted to have them the most perfect post-cards ever made. In addition to the beautiful flower picture—so real that you can almost smell its fragrance and pick it off of its gold background—each card also contains a charming piece of poetry appropriate to the flower pictured beside it. These are the most unique and beautiful you ever saw.

Our Special Offer

And now we have a surprise for you! These cards would sell for 25 cents to 50 cents in a store. We will send them to you without cost, with the compliments of FARM AND FIRESIDE, if you will send us three 2-cent stamps to cover the cost of postage, packing and handling. What is more, we have another Surprise for you—a very delightful one, about which we will tell you when we send the cards. Send three 2-cent stamps to-day to

FARM AND FIRESIDE, Springfield, Ohio

You can use the coupon opposite.

Mail This Coupon To-day

FARM AND FIRESIDE,
Springfield, Ohio

Gentlemen:—
Please send me at once the 10 "Flower Friends" post-cards. I inclose three 2-cent stamps to pay for postage, packing and handling. Also please tell me all about the Surprise.

Name..............................

Address..............................

....

A DELICIOUS DRINK
Baker's Cocoa

made by a scientific blending of the best tropical fruit. It is a perfect food, highly nourishing and easily digested.

Registered, U. S. Pat. Off.

52 HIGHEST AWARDS

Walter Baker & Co. Ltd.
Established 1780 Dorchester, Mass.

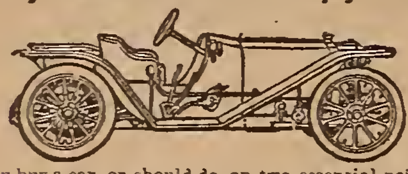
Do you eat enough of this

The great benefit in health and strength that always is enjoyed by regular eaters of good oatmeal is known the world over. Every year there are more and more eaters of Quaker Oats, which is recognized in this country and in Europe as the one perfect oatmeal.

All the experiments of the government food experts and the athletic trainers of Yale University prove that cereal eaters are the strongest and healthiest, and Quaker Oats stands at the head of the list of cereal foods. It is not only the best food, but it's the cheapest food on earth. Eat it daily for breakfast.

The large size family package of Quaker Oats, with a handsome piece of china, sells at 30c; without the china, 25c. The regular size package costs 10c.

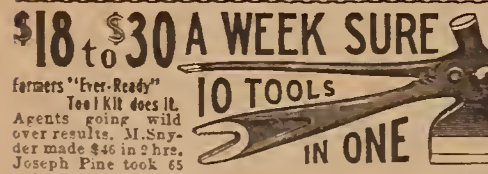
Buy a Motor Car and Enjoy Life



You buy a car, or should do, on two essential points—the car itself and the firm which sells it. We are the largest dealers in new and used autos in the world. It pays to deal only with a responsible firm. We can sell you a good used car from $150 up. Get our big Cut Rate Bargain List. References: Dun's, Bradstreet's or Metropolitan Bank, New York; National Newark Banking Co., Newark, N. J.; Foreman Bros.' Banking Co., Chicago, Ill. Write to-day.

TIMES SQUARE AUTOMOBILE CO.,
New York: 1597 B'way & 215-17 W. 48th St. Chicago: 1332-34 Michigan Ave.

Agents Wanted



$18 to $30 A WEEK SURE Farmers "Ever-Ready" Tool Kit does it. 10 TOOLS IN ONE. Agents going wild over results. M. Snyder made $46 in 2 hrs. Joseph Pine took 65 orders in two days. M. D. Finch sold 42 in 9 hrs. Had no experience. You can do it. To show it means a sale. FREE SAMPLE to workers. Foote Mfg. Co., Dept. 801 Dayton, O.

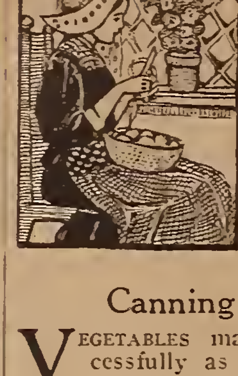
$4.00 A DAY SURE Selling this wonderful Noodle Cutter. Sells at sight. Mrs. M. Pickerel sold 516 in small town. Cleared $61.50. You can do as well. We show you how. Write for Free Outfit. ANCHOR MFG. CO., Dept. G, DAYTON, OHIO

AGENTS WANTED Men or Women to sell Consumers. Big Profits. Groceries, Coffees, Teas, Extracts, Perfumes, Soaps, etc. With or without premiums. Write for catalogue A. Bushway Flavoring Extract Co., 951 N. Water St., Decatur, Ill.

AGENTS SELL THIS combination stove-lid lifter, screw-driver, wrench, hot pan lifter, tack hammer and puller, and 100 other uses. 12 TOOLS IN ONE. John Lowrey sold 24 first afternoon, made $5.50. Write Today. Outfit Free. THOMAS MFG. CO., 205 Barney Blk., Dayton, O.

AGENTS PORTRAITS 85c, FRAMES 15c, sheet pictures 1c, stereoscopes 25c, views 1c. 30 days credit. Samples & Catalog Free. Consolidated Portrait Co., 290—81 W. Adams Street, Chicago

WANTED AGENTS TO SELL THE FARMER'S ACCOUNT BOOK. Quick seller, big inducements. Twenty thousand already sold. Endorsed by all. Address L. L. SYPHERS, Fort Wayne, Ind.



The Housewife's Club

Here is a chance for each of you to help one another. Possibly you have discovered some new and practical idea in keeping house, some labor-saving method, some delectable recipe, some new way of making home attractive, in general something to make the housework easier and life more enjoyable. Why not give the rest of our readers the benefit of your experience? We will pay twenty-five cents for any contribution available. This department will appear monthly. Contributions must be written in ink, on one side of the paper, and must contain not more than two hundred and fifty words. We would suggest that contributors retain copies of their manuscripts, as no contributions will be returned.
Address THE HOUSEWIFE'S CLUB, care of Farm and Fireside, Springfield, Ohio.

Canning Vegetables

VEGETABLES may be canned as successfully as fruits, and afford almost as good a variety.

CANNED PEAS—Fill the jars to within an inch of the top with fresh shelled peas, then pour in all the cold water the jars will hold. Let stand an hour or more, and if any have settled, fill up, and seal air-tight. Place in the wash-boiler on boards, and fill nearly to the tops with cold water. Boil three hours.

STRING-BEANS—Put the beans on, and cook in the usual way until tender. Then salt, and pack in jars, pouring over them enough of the liquor in which they were boiled to fill the jar; add one tablespoonful of good vinegar, and seal air-tight.

Greens, spinach, mustard or dandelion are canned in the same manner as string-beans.

CANNED SWEET-POTATOES—Prepare a rich syrup in a kettle. In another kettle boil your sweet-potatoes. When done, slice, fill jars, and pour the boiling syrup in; seal, and put in a dark place. These are delicious. K. H., Illinois.

Excellent Floor-Paint

TWO ounces of carpenter's glue and one quart of rain-water. Let stand on the back of the stove until thoroughly dissolved. When cool, mix with yellow ocher until it will spread nicely, then paint the floor. When dry, go over it with crude oil. I have tried this paint twice, and find it more durable and much cheaper than ready-mixed paints.
MRS. C. F. R., Minnesota.

To Keep Eggs Fresh

MIX one quart of lime with one pint of salt, and stir into two and one half gallons of water. Put in a crock or keg. Put the eggs in and set in a cool place. They will keep a year. You can add eggs or take out at any time.
MRS. J. D., Pennsylvania.

Bread Omelet

SOAK three tablespoonfuls of stale bread-crumbs in one cupful of milk until soft. Beat six eggs, the whites and yolks separately, until very light. Stir into the soaked crumbs, and season with pepper and salt. Butter a deep pudding-dish, pour the mixture into this, and bake in a quick oven until light and brown. Serve at once. MRS. B. B., New York.

Attractive Window-Basket

LET me tell the readers of FARM AND FIRESIDE how to make a cheap and attractive window ornament. Take a good-sized carrot, cut a piece off the root end, and scoop out a small hole. Hang it up by a ribbon in the window, with the root end upward. Keep the hole in the root end filled with water, and watch the feathery green leaves grow out of the lower end and curl up around the carrot. They make really beautiful little window-baskets. MRS. L. R., Michigan.

Questions Asked

We shall be very glad to have our readers answer any of the questions asked, also to hear from any one desiring information on household matters. There is no payment made for contributions to this column.

I would appreciate it if some one would send me the recipe for making chili sauce. E. H. L., New York.

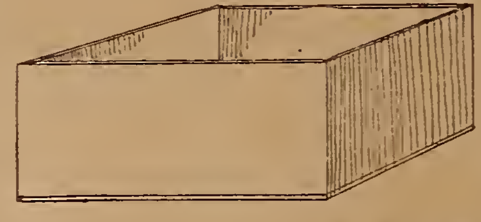
Wanted—A recipe for making marble-cake. I've tried some of the ordinary recipes, but they have never turned out successfully—the chocolate and the vanilla run together. E. W. U., Boston.

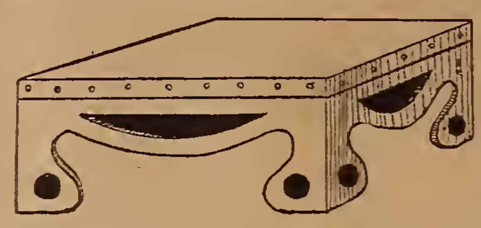
The Cooking Time-Table

HERE is a cooking time-table taken from an old housekeeper's cook-book. It may be of assistance to some of the new housekeepers who read "The Housewife's Club."

For Boiling Vegetables

Beets—Four hours.
Cabbage—One hour.
Carrots—One hour.
Cauliflower—Thirty minutes.
Celery—Twenty to thirty minutes.
Corn—Five to eight minutes.
Lima beans—Thirty minutes.
Onions—Forty-five minutes.
Potatoes—Twenty to thirty minutes.
String-beans—Twenty to thirty minutes.
Tomatoes—Fifteen to twenty minutes.
White turnips—One hour.
Yellow turnips—One and one half hours. A. S. T., New York.





Flower-Stand Made From a Box

HANDSOME stands for jardinières or large plants in pots may be fashioned from empty soap, starch or other small packing boxes. If the shape is unsatisfactory—most of these boxes are oblong instead of square—then knock off one end, saw off a few inches across the box, and then nail the end in position again. Mark off the pattern on the box with a lead-pencil, and then cut out with a fret-saw or other small saw. Stain and varnish, and the stand is ready for use. An ornamental molding along the edges makes a handsome finish. These stools also make very good foot-rests.
C. W., New Jersey.

Poison-Ivy Cure

PERHAPS some one will be glad to know my cure for poison-ivy. I am very susceptible to the poison, and all I do is to rub on a little garden mold, and the sting immediately vanishes. Occasionally two applications are needed, but generally one is sufficient. The mold seems to neutralize the poison instantly. Of course I do not know whether or not this would be efficacious in every instance, but it seems to me that it is well worth trying—and then, too, it costs nothing. G. G. W., New Jersey.

Potatoes Baked on a Gas-Stove

DO ANY of our readers know that potatoes may be baked on a gas-stove? I made the discovery last summer. Place an asbestos mat over the gas-burner, wash the potatoes, and put them on the mat, covering them with an iron skillet. Let them bake fifteen minutes, then turn, and in about half an hour they will be nicely baked. W. E. N., Pennsylvania.

Device for Frying Bacon

MY HUSBAND declares he never before tasted good bacon until I made a frame to fry it dry. I put nail-holes into an ordinary tin pie-pan the size of my

skillet, and soldered on a handle, to lift the bacon out and pour off the grease very often, leaving it crisp and delicious and more wholesome.
MRS. S., South Dakota.

Another Use for Flour-Sacks

HERE is a new way of using flour-sacks. I generally have a great many, as I use a forty-nine-pound sack every week. I wash them thoroughly and bleach them, and when I have a few on hand I pick out those of even weave and make the smaller children's nightgowns, using just three—one for the yoke and plain sleeves and two for the lower part. I finish the neck and sleeves with edging.

Others I use for waist-linings, dish-towels, and I make sash-curtains for the kitchen windows.

When I'm short of muslin I make drawers and petticoats for my small daughters. It often happens that the sacks are woven as fine as muslin. These I save for petticoats. Taking the length of the sack, I use enough to make the skirt the proper fullness, cut a deep flounce, sew it on the usual way, and finish the bottom with lace or embroidery. If it is too long, I run in a tuck or two. It is amazing how durable these "sack" petticoats are.
MRS. A. C. B., Illinois.

Good Home-Made Soap

BY SAVING the grease from cooking meats from time to time, there will soon be enough to make a good quantity of soap that is beautifully pure and white.

The following recipe is excellent: One-pound can of potash; five and one half pounds of grease (strained); one half cupful of ammonia; one-half-pound package of borax. Dissolve the potash in three pints of cold water. This causes the water to boil. When cold, stir in the melted grease, then the ammonia, and lastly the borax, stirring constantly. Pour into pasteboard boxes to cool, and when cold, cut in squares.

A good scouring-soap can also be made by adding lastly a small quantity of fine white sea sand and stirring thoroughly. Finely-ground oatmeal added to the original mixture will make an excellent toilet soap. S. J. R., Delaware.

A Clever Idea

IF YOU are without a cellar, and live where it is difficult to obtain ice, try the following plan:

Take an ordinary-sized dry-goods box (a box three feet long, two and one half feet deep and one and one half feet wide is a good size), and bury it so that the top of the box is just even with the ground. Then cover the bottom inside of the box with sand to the depth of five or six inches. By pouring a bucketful of water over the sand every morning, the "underground" refrigerator will be rendered much colder. The box is then ready for your milk, butter and other edibles which you wish to keep cold and fresh. A tight lid may be fastened on the box by means of hinges.

I have tried an ice-box of this kind, and find it most useful.
MRS. R. M., Indiana.

Help for Busy Mothers

WHEN working about the kitchen I am never worried about baby falling or getting into trouble, because I have thought of the following scheme: I bought a heavy dry-goods box deep enough for the baby, and this is where he plays when I am busy with the housework. The box keeps him from crawling or walking into the fire, and I am never worried when I know he is there. I give him plenty of toys, and he will play for a long time. If the weather is cold, I put a sheepskin with the wool side up in the bottom of the box, to keep him warm, but a quilt or carpet will answer the purpose just as well. Such a box will save many a step and be a great help to the busy mother. Be sure to have the box heavy enough, so that it will not upset when the baby moves around.
MRS. B. T. P., South Carolina.

Coffee-Cake

ONE cupful of brown sugar, one cupful of butter, two eggs, one half cupful of molasses, one cupful of cold coffee, one teaspoonful of soda, two teaspoonfuls of cinnamon, one teaspoonful of cloves, five cupfuls of sifted flour and one cupful of raisins. Mix the ingredients in the order given. Sift enough flour over the raisins to coat them well. Bake one hour. MRS. L. B., Indiana.

Standard Calicoes

Our grandmothers wore **Simpson-Eddystone Silver Grey** cotton prints. Our mothers are wearing them today. Ask them about quality—how they wear and hold their color. Let them show you the neat stylish patterns.

Quality was paramount in grandmother's time. The same today in Simpson-Eddystone Prints.

Standard for over 65 years.

Ask your dealer for Simpson-Eddystone Prints. If he hasn't them write us his name. We'll help him supply you. Don't accept substitutes and imitations.

The Eddystone Mfg. Co., Philadelphia
Established by Wm. Simpson, Sr.

Fashions for Summer Days

No. 1285
Shirt-Waist With Applied Yoke

Pattern cut for 34, 36, 38 and 40 inch bust measures. Quantity of material required for 36 inch bust, four yards of twenty-four-inch material, or three yards of thirty-six-inch material, with one fourth of a yard of contrasting material for trimming

PONGEE in the natural color is one of the most fashionable materials for shirt-waists this summer. Try it for shirt-waist No. 1285. Since pongee is more fashionable than ever, very many imitations of this cool, silky material have been manufactured which are of mercerized cotton. They are much cheaper and yet they have a decided pongee look.

Dress accessories of linen are quite the smart thing this summer. Coarse, heavy white linen is being used as a trimming for both silk and cloth gowns. It is introduced in the décolletage, the revers, the collar and the cuffs. It looks most attractive when embroidered in color to harmonize with the shading of the gown.

Linen hats to match the gown are much the fashion. Some very smart ones are of white rough-finish linen in a basket shape, and are trimmed with clusters of large red and yellow cherries and their green leaves.

The linen pocketbook and bag are both considered extremely smart. The bags are very attractive, showing a braided design in linen soutache.

Bags, by the way, are very much the fashion this summer. Many of the girls have linen handkerchief-bags to match their different linen dresses. A new bag to use as a substitute for a pocketbook is a Panama straw with gilt mountings.

Madison Square Patterns

HAVE you seen the Summer Style Book of Madison Square Patterns? If you have not, take a look at it. It's just out, and it tells you many new things of interest about fashions in general and summer fashions in particular. In writing for it, inclose four cents in stamps and send your order to the Pattern Department. The patterns here illustrated are ten cents each. Address the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City.

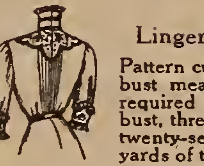
How to Get Patterns Without Cost

We will send you two of FARM AND FIRESIDE'S Madison Square Patterns, without cost, if you will send us two subscriptions to FARM AND FIRESIDE. One of the subscriptions may be your own. Either subscription may be for one year at thirty-five cents or for two years at fifty cents. You may choose any two patterns shown on this page or in any other issue of FARM AND FIRESIDE. Send your order to the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City.

No. 1340—Empire Kimono

Pattern cut for 32, 36 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, ten and one half yards of twenty-two-inch material, or six yards of thirty-six-inch material, with one and one half yards of contrasting material for trimming-bands

No. 1286
Lingerie Waist With Plastron



Pattern cut for 32, 34, 36 and 38 inch bust measures. Quantity of material required for medium size, or 36 inch bust, three and three fourths yards of twenty-seven-inch material, or three yards of thirty-six-inch material

PERHAPS she may not feel so herself, nevertheless the woman who can make her own clothes is a very fortunate person these summer days.

The new, thin wash fabrics were never more tempting and they are selling at prices quite within the means of every woman, no matter how economical she is forced to be.

The fancy swisses make delightful summery dresses and there is no end to their novel designs, and some even show a shaded colored design in their pattern. The newest of the silk and cotton crêpes show a silk plisse stripe, which is very effective. And then there are the very smart-looking cotton voiles in stripes, which display wonderful color combinations.

The inexpensive flowered dimities, some with the background plain and some showing a cross-bar, make up so attractively in kimonos and dressing-sacques, forming the coolest of negligées for warm-weather wear. A pink rose-bud scattered dimity is a very pretty material to choose for the Empire kimono illustrated on this page, with the bands also of dimity, but showing a larger rose pattern. Bordered cotton voile is another good material to use.

Cotton crêpe is another desirable material for this kimono, with lace insertion for the trimming. These crêpes come in specially lovely colors.

No. 633—Corset-Cover Closed at the Back
Pattern cut for 32, 34, 36 and 38 inch bust measures

No. 634—Gored Petticoat With Adjustable Flounce
Pattern cut for 22, 24, 26 and 28 inch waist measures

No. 1326—Misses' Four-Gored Skirt With Inverted Plaits
Pattern cut for 12, 14 and 16 year sizes

No. 1045—Shirt-Waist in Broad-Shouldered Effect
Pattern cut for 32, 34, 36 and 38 inch bust measures

No. 1046—Plaited Skirt With Tucked Panels
Pattern cut for 22, 24, 26 and 28 inch waist measures

Copyright, 1909, by The Crowell Publishing Company

Boys!

PLAY BASE-BALL AT OUR EXPENSE!

Base-Ball Supplies Given Our Farm and Fireside Boys!

EVERY red-blooded American boy should play base-ball. It's the national game and the sport of the nation. Every city and town in the country has a base-ball club. Every college in the land supports a ball team, and millions of dollars are spent every year on the great American game.

A clean, healthy, manly game is base-ball. That's why we want the FARM AND FIRESIDE boys to play the game and to play it right. To do this our boys must have the proper equipment.

Look at the Supplies We Are Giving Away!

Men's Professional Base-Ball, the kind that the professional players use. A lively, durable, well-made base-ball that will stand hard wallops and rough handling.

The Catcher's Mitt and Fielder's Glove are of the best quality and workmanship, and are well padded. They are made of good, strong leather, and are durable in every respect.

The Mask is made of strong, heavy wire, and is up-to-date in design.

Any one of these desirable base-ball articles we will send you, post-paid, for only four yearly subscriptions to Farm and Fireside at 35 cents each. Two-year subscriptions at 50 cents will only count as one toward a premium.

Our Suit Offer

Send us nine yearly subscriptions to FARM AND FIRESIDE and in return we will send you one of our SPECIAL BASE-BALL OUTFITS consisting of a five-piece suit—one gray flannel base-ball shirt, one pair of gray flannel base-ball pants, one gray flannel cap, one pair heavy colored stockings and one colored web belt to match, together with **either** the Catcher's Mitt or Fielder's Glove above described.

Get nine boy friends to send us nine subscriptions each and in return we will send each boy one of these outfits, and in **addition** we will furnish the team—**Without Cost**—one Catcher's Mask, one Base-ball Bat, one Professional Base-ball and one Chest-Protector. Remember, these last four articles are sent in addition to the regular outfits, **ABSOLUTELY WITHOUT COST.**

Now, boys, is the time to get started, while the season is young and the base-ball spirit is strong. Send us your subscriptions at once for the outfits and get in line for the Four Special Club Gifts!

Send your subscriptions to

FARM AND FIRESIDE
SPRINGFIELD, OHIO

"PRISCO" LANTERNS DON'T SNEEZE

There is as much difference in lanterns as there is in live-stock.

You haven't got a thoroughbred unless you've got a Prisco.

OUR FREE BOOK tells why they don't sneeze and gives lantern facts and Prisco proofs that will interest you.

THE PRITCHARD - STRONG CO. 6 Circle Street • Rochester, N. Y.

Elkhart Buggies have been sold to the consumer For Thirty-Six Years

May We Send You Our Large Catalogue?

Elkhart Carriage & Harness Mfg. Co. Elkhart, Indiana

This is a Real Automobile on High Wheels

We ask experts to read our catalog and take our cars apart to discover how we could improve them. And we ask you to send us your name and read our catalog to understand why we have spent so much time and money to make the Schacht the highest standard high-wheel automobile in the world. You should not risk buying any car of this type before investigating the differences in money-worth values. Write us for the book.

THE INVINCIBLE SCHACHT

Schacht Mfg. Co., 2730 Spring Grove Ave., Cincinnati, O.

Rider Agents Wanted in each town to ride and exhibit sample 1909 model. *Write for Special Offer.*

Finest Guaranteed 1909 Models $10 to $27 with Coaster-Brakes and Puncture-Proof tires.

1907 & 1908 Models all of best makes $7 to $12

500 Second-Hand Wheels *All makes and models, good as new*.......... $3 to $8

Great Factory Clearing Sale. We Ship On Approval *without a cent deposit, pay the freight* and allow TEN DAYS' FREE TRIAL.

Tires, coaster-brakes, parts, repairs and sundries, half usual prices. Do not buy till you get our catalogs and offer. *Write now.*

MEAD CYCLE CO., Dept. R83 Chicago

ELEGANT Thin Model 20 YEAR WATCH

Hunting case beautifully engraved, gold finished throughout, stem wind and stem set, fitted with 7 ruby jeweled American lever movement. Guaranteed 20 years; with long gold plated chain for Ladies or vest chain for Gents.

$3.75

LADIES or GENTS size

IF YOU SEE IT YOU WILL BUY IT. Let us send it without expense to you C.O.D. express charges paid by us, for examination at your nearest express office and if you think it a bargain and equal in appearance to any $15.00 gold filled watch pay the express agent $3.75 and it is yours. Mention if you want Gents or Ladies size. H. C. FARBER, C30, 225 Dearborn St., CHICAGO

GOLD WEDDING RING GIVEN

Send for 10 packages of our beautiful silk and gold embossed post cards to distribute at 10c each. Return us the $1 when collected and we will send you by return mail this very fine 14K gold filled heavy band ring, not the cheap kind. Address R. F. MOSER, 331 Household Bldg., Topeka, Kan.

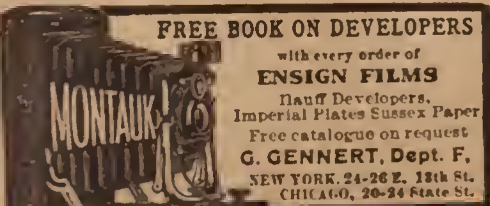
GENUINE BARGAINS IN HIGH-GRADE UPRIGHT Pianos. Slightly used instruments: 12 Steinways from $350 up; 6 Webers from $250 up; 9 Krakaners from $250 up; 7 Knabes from $250 up; 3 Chickerings from $250 up; also ordinary second-hand Uprights $75 up; also 10 very fine Parlor Grand pianos at about half. Write for full particulars. Cash or easy monthly payments. Lyon & Healy, 62 Adams St., Chicago. We ship everywhere on approval.

PARKER'S HAIR BALSAM

Cleanses and beautifies the hair. Promotes a luxuriant growth. Never Fails to Restore Gray Hair to its Youthful Color. Cures scalp diseases & hair falling. 50c. and $1.00 at Druggists.

LOVELY POST CARDS GIVEN

Three choicest artistic Souvenir Post Cards, beautiful colors, absolutely without cost, if you send stamp for postage. W. H. GATES, 82 W. 8th St., Topeka, Kansas.



FREE BOOK ON DEVELOPERS with every order of ENSIGN FILMS

Nauff Developers, Imperial Plates Sussex Paper

Free catalogue on request

G. GENNERT, Dept. F, NEW YORK, 24-26 E. 13th St. CHICAGO, 20-24 State St.

Our Young Folks' Department

The Capture of Bingo

By Alice Viola Burrell

It was four o'clock one Monday afternoon in early July, and the six members of the Rising Star Society sat comfortably around in easy chairs in the attic of Marjory Jackson's home. It was almost time for the business part of the meeting to be over, and then the girls were looking forward to a frolic.

"Attention!" cried President Marjory sternly, as she brought her gavel down with a little resounding bang on the desk before her. Marjory's brown eyes flashed and her curls bobbed emphatically. "Here we six girls have been banded together in the Rising Star Society for over three months, and not one of us has ever done a single, solitary thing in the world but have a good time. And didn't every one of us promise to do something to help along some poor boy or girl? Nice Stars we are without a twinkle among us!

"Now, here is a plan that I have thought of," continued Marjory. "I don't know how it will strike you girls, but just tell me if you don't like it. Suppose we take all the money we have in the treasury, and instead of having that picnic down at Willow Point next Saturday, let's take eleven children to the circus. We have four dollars and twenty-five cents in the treasury, and if we buy twenty-five-cent seats, then seventeen can go. There are six of us, so we can take eleven poor children."

"Brava, Marjory Jackson!" said little Ethel Moore, as she put her arm affectionately around Marjory's shoulder. "Honestly, girls, I think Marjory's scheme is just great, don't you?"

"I should say we do, and we'll carry it out, too," cried Lou. "I suppose, since I'm secretary of this worthy order, I'll be expected to gather in our flock of eleven small circus-seers and present them for inspection at half-past twelve on Saturday."

Saturday morning came clear and warm, and by half-past twelve the six members of the Rising Star Society were assembled on the veranda of Marjory's home awaiting the arrival of The Eleven, as the girls laughingly called them.

"Here come the Mills twins! Gracious me! And here comes Jimmy Jenkins with a fresh collar and a bright red necktie—the one you gave him for Christmas, Amy. Isn't he a dandy?" sang out Florence from her post on the broad railing of the veranda. "And oh, goodness! here come two, four, six, *eight* more. Hold me up, Grace, this grandeur is too much for me. Why didn't you girls ask a good round dozen while you were about it?"

"Never mind, Flo. They're all here at last. Now remember, girls, we're each to look after two children, except Annette, who is to have charge of Jimmy Jenkins (and he is big enough to look after himself, anyway) and the peanuts," said Marjory. "Come on, everybody. Good-by, mother, we're off," she called to the sweet-faced little lady who stood on the veranda to wave good-by.

Down the long dusty road they trudged, the six laughing girls and The Eleven, who looked shy and giggled behind the backs of the larger girls, but who bore their unaccustomed condition of starched glory very bravely indeed.

As they drew nearer the circus grounds they noticed people running excitedly in every direction, shouting to one another, and they hurried on to find out what was the cause of the commotion.

Nailed on a tree near the big tent was a poster, which read: "$100.00 REWARD FOR THE CAPTURE AND RETURN OF BINGO, THE GREATEST TRAINED MONKEY IN THE WORLD."

"Wouldn't it be great to find that monkey, girls? Come on or we'll be late." Marjory bought the tickets and led the way into the great tent.

They walked around the grounds, looking at the lions in the big gilded cages, and the "thinnest" man and "fattest" lady, the sword-swallower and snake-charmer and all the "Side Shows." It was not until they were about to find seats on the long rows of wooden benches that Amy exclaimed:

"Good gracious! One of The Eleven is missing! It's Jimmy Jenkins! Annette, where is Jimmy?"

"Why, I—I don't know, Amy. He was here a minute ago. Come on, we'll look for him!" And poor Annette, in a panic of fear, rushed off, followed by her five friends and the ten bewildered children.

"Lost! First a monkey, and then a small boy. Where do you suppose that young rascal can be? I wonder—" and Lou broke off abruptly and ran to the entrance of the grounds. Could it be? Yes! It was Jimmy, who was coming down the road in that cloud of dust, leading a frightened monkey by means of a red necktie halter! And crowding around the boy was a mass of people asking how he had found the animal.

"Girls! Girls! Come quick! Jimmy has found the monkey, and here they are!" shouted Lou to her friends.

Sure enough, there was Jimmy, his clothes torn and wet and bedraggled. And there was the shivering, frightened monkey, with Jimmy's red necktie around his neck, and they were being brought in to the circus ring by the big man with the black mustache. The big man put Jimmy up on a high platform and asked him to tell the crowd how it happened.

So Jimmy told them that as soon as they had all gone into the circus grounds he began to think about the monkey and the one hundred dollars reward, and out he slipped through the gate to hunt around. He went directly to the woods. There were a good many people already searching the woods, but Jimmy kept away from them and followed the little brook that led to the Deep Pool. When he reached it he heard an unearthly cry in a tree above him, and crack! went the limb on which the monkey had sought refuge! Down went the monkey into the pool! In rising to the surface he became entangled in the branches of the fallen limb, but Jimmy quickly seized one end of the limb, crouched down close to the edge of the pool and helped the monkey ashore. Then he ripped off his red necktie and fastened it around Bingo's neck and led him back to the circus.

Jimmy was made the hero of the day. The best seats in the circus were given The Eleven and the six girls, and after it was all over, Jimmy proudly carried home ten ten-dollar gold pieces to his poor, hard-working mother.

Cousin Sally's Letter

Dear Boys and Girls:—

I have had so many letters from you, saying, "Cousin Sally, won't you please tell us some games to play, now that the days and evenings are so warm?" that I thought you might like to have me give you a suggestion or two.

When I went to school (and that wasn't so very many years ago) we girls used to play a game called "Blind Man's Singing-School," of which perhaps you may not have heard.

First of all, the singing-teacher is chosen, and then blindfolded, and the class, composed of the rest of the company, sits in a line facing her. The lesson starts with a request from the teacher for the class to sing the scales. The head girl, or the one at the foot, sings Ah! and the next one Ah! a little higher or lower, and so on until every one has had a turn. Each scholar may sing in any key or note she wishes. All the while the teacher listens attentively, to see if she can tell from which one of the girls the sound comes. When she thinks she has recognized a voice, she commands the class to be silent, and then criticizing the manner in which the note was sung (just to carry out the idea of "teacher"), she calls out the name of the player. If she is correct, then the girl whose name she has guessed is blindfolded and made teacher, while the former teacher joins the class and becomes one of the singers. When playing this game you must always exchange seats before the lesson with the new teacher commences, for in this way the voice may not be recognized from the direction in which it comes. Sometimes when I was teacher I would ask the class to sing a song—some old nursery rhyme that everybody knew. The girl at the top would sing the first word, the next girl the second, and so on around the circle until the song was finished. This is heaps of fun, because the singers are always sure to get off the key. Try this game the next time you don't know what to do to pass away some idle moments, and I am sure you will agree with me it is jolly good fun.

From the many letters I receive from my cousins, it seems to me that nearly every one is going to have a good time during vacation this year. Some are going to the mountains; some to the sea-shore; others will stay home and help mother, and many are going to work to make a little extra money to help pay for their course in college next fall.

Perhaps it is time that I was saying something about my vacation. When you read this letter Cousin Sally will be away up in the mountains—off for a short rest, where it is cool, sweet and beautiful. And the long walks I shall take every day, and the rides! I shall carry a note-book and pencil with me, for should anything come up that I think would interest you, I will jot it down and tell you about it when I get back. I will think about you all every day when I'm out camping and having a good time.

I wish you all a happy vacation. Keep out in the sunshine all you can, and breathe in plenty of good, pure air. It is better than medicine.

Ever faithfully,
Cousin Sally.

Monthly Prize Contest

For the six best pencil or pen-and-ink copies of the above illustration, or for a heading for our department suitable for October, Cousin Sally will give prizes as follows: A book, a box of paints, a penknife, a post-card album, a post-card puzzle, a game.

The contest is open to every boy under seventeen years of age. Do not roll your drawings, but send them flat. All work must be in by July 20th. Address Cousin Sally, care of Farm and Fireside, 11 East 24th Street, New York City.

Sunday Reading

A Smile Worth While!

SMILE! Always smile!
That's the new gospel of successful living.

Are you an apostle of the creed? If not, are you willing to come forward and declare your affiliation.

If not, why?

It does not cost you anything to join, and the dues are paid forever, in advance. The only fees that will ever be demanded of you will be smiles and —more smiles.

Some people have been so gloomy and blue and grouchy so much of their lives that they may not be able to work up a perfectly winning smile at the first attempt, but if you will get your system soaked full of smiles clear through and through, why, you won't have any trouble in getting them to the surface when they are needed.

However, the main thing is to smile! And keep right on smiling.

In a certain great city, world-famed for its gaiety, where one would expect to find the people past-masters in the pleasing art of smiling, there has recently been established a school for smiling. To place a smile on a business basis is one of the latest of commercial enterprises. It should succeed. It deserves support.

The principal of the institution, the school of smiles, who is said to possess a most charming method of smiling, sets forth in the prospectus that the art of smiling is an invaluable commercial asset, valuable in business and equally essential in social associations, particularly in our home life to promote good-will and happiness.

It is observed that a professional smile is employed in every business and profession—the butcher, the baker, the grocer, the doctor, and even the undertaker. And it pays in dollars and cents.

Just go over the list of people you know in business, the ones who sell things, and you will find that the most successful ones are those who know the value of a smile with their customers. You make one purchase in his store, and then you go back there to make the next, because "he was so pleasant and so accommodating;" and he smiled just the same, whether your purchase was large or small, or whether or not you bought the articles you looked at. It was a pleasure to deal with such a man, and he gets your trade, and the trade of other people, too.

You can get more for a smile than you can for a frown any day in any business. The wise employer realizes this, and his employees are always willing to do an extra turn in an emergency, and always to do the best there is in them, for the man who directs them with a smile. And this applies everywhere, in any business—in the office, in the factory, in the shop, on the farm. A smile is worth one hundred cents on the dollar to you.

The smile in politics! Every politician knows the full value of a smile, and he works it overtime and to the limit. It is his mascot, his open sesame among all classes. The politician minus the smile would soon fail in politics. And that reminds me that the people have just placed in the White House a smiling President, for Mr. Taft is known as the Man of Smiles. His smile is familiar to many nations the whole world around; it has been one of the compelling key-notes in his success as diplomat and statesman. He knows when and where and how to smile. A broad experience has taught him the art of smiling.

Some people never smile; they only grin.

There is an old saying that a face that cannot smile is never good, and Henry Ward Beecher once said that a face that cannot smile is like a bud that cannot blossom, but which dries up on the stalk. Again he said, "Laughter is day, and sobriety is night; a smile is the twilight that hovers gently between both, more bewitching than either."

There is wonderful efficacy in a smile. Sometimes a smile is mightier than words to accomplish a thing desired. Smiles, aside from aiding you to secure favor in material things, will brighten the atmosphere in which you live, make your life happier and your friendships sweeter.

A smile is the golden sunshine that lights the trail that leads to success.

Get on the trail, and then smile.

And keep on smiling to the end.

R. M. W.

Steadfastness

THE business of a river is to flow. Its banks may be beautiful or unpleasing; its current strong or sluggish; its skies blue or clouded; its waters may mirror flowers in spring and ferns in summer; may float the dead leaves of fall or be hemmed in and pressed by the ice in winter—it must flow on. A noisy brook in its youth, a noble river at last, so deep that men say, "There go the ships," majestically entering the ocean; but from its birth to its bourn its business is to flow. Here eddies may seem to be turning it back, there the current may be checked by a resisting arm of land, but the central stream moves steadily onward, as though led by the hand of Destiny.

Is not this steadfastness to mark, to make, the character of your lives? Is it not God's will that we should press steadily on to our goal in obedience to Him, in channels of His choosing, whether in sunshine or shadow, in the cheer of spring or in the chill of winter, neither detained by pleasure nor deterred by pain?

The hosannas of the children rang about Jesus and gladdened His heart, the palm branches were strewn in His path and gave Him joy, but He would not build a tabernacle of the branches, good as it was to be there. The agony of Gethsemane confronted Jesus, but it could not turn His steadfast face.

His life moved unfalteringly onward, neither beguiled by pleasures nor daunted by perils. He felt both, but would not let them determine anything for Him. They must be incidental; to please His Father was fundamental. "It is enough for the disciple that he be as his Master, and the servant as his Lord."

Remember, then, amid the joys of life the glad but steadfast face of our Master, and amid the sorrows of life the sad but steadfast face of our Lord. How strong, how peaceful, how deeply joyous our lives may be if they are sacramental, lived in memory of Jesus, the central stream of their deep determination, like His—doing the will of our Father. —Maltbie Davenport Babcock.

Suspicion—a Great Fault

OF ALL the ugly and deplorable human faults, perhaps the worst is that of suspecting everybody one meets of wrong or unfriendly intentions. It often happens that a deep and sincere friendship is wrecked just because of one suspecting the other of an unfriendly feeling that never existed. Don't cultivate the habit of being suspicious. It is one that is very easy to acquire, but not so easy to overcome. It breeds trouble and misery, weakens the character and casts an unhappy shadow over one's life. Try to see the good in people. Don't always be on the lookout for their faults and shortcomings. Remember that you yourself are not perfect, and perhaps those you condemn might be justified in thinking the same unkind thoughts about your character and disposition.

If you feel suspicious of Mr. J., at least do not let it show in your manner or actions toward him. To believe and trust a person whom you know is trying to harm you will often convert him and make him feel ashamed of his unfriendly intentions.—M. E.

My Garden Must Be Beautiful

MY GARDEN must be beautiful;
For when the shadows play
In length'ning shapes along the wall,
And comes the cool of day,
Perchance my Lord might come to see
The place where roses bloom for me.

And if He asked to come within
This house of mine to rest,
How fair and sweet the rooms should be
For such a wondrous Guest!
'Twere better far to keep them so,
Lest He might come before I know.

And if He stayed for friendly speech
As fell the light of day,
How should I know to talk with Him,
Or holy things to say,
Unless my soul acquainted be
With some of heaven's mystery?
—Anna Temple in the Sunday-School Times.

The Habit of Grumbling

STOP grumbling! If the habit is a new one which you have only recently acquired, well and good; it will not be so difficult to break. But if it is one of long standing, the cultivation of strong will-power will be necessary.

There are some people who are never happy unless they are grumbling. Either the weather doesn't suit them (it is too hot or too cold), or else they have an unlimited number of imaginary ailments. Nothing is ever just right; they are never happy; they won't allow themselves to be happy; they are always longing and wishing for something they can't have.

The daily cry of millions is, "Oh, if I just had a little more money, how happy I would be!" But if they had, perhaps they wouldn't be so happy, after all.

If a picnic is planned, the grumbler is always sure to predict rain. How much better would it be to look forward to the day's outing with joy and anticipations of a good time? Don't be forever grumbling about something; it doesn't pay, life is too short, and then, too, no one loves a grumbler. Of course we all know that it isn't pleasant to have it rain on the day planned for a picnic, but, after all, we cannot govern the weather, so why not adapt ourselves to circumstances and accept the inevitable? As James Whitcomb Riley writes in one of his poems:

"Whatever the weather may be," says he,
"Whatever the weather may be,
It's the song ye sing, an' the smiles ye wear,
That's a-makin' the sun shine everywhere."

If you are not popular with Mrs. B., there must be some reason for it. Do you find fault with everything? Are you always grumbling, forever nagging? Perhaps this is why no one seeks your society.

People want companions, friends who have something pleasant to talk about, good news to tell. People of this nature seem to exude a bright radiance and carry a sunny atmosphere with them wherever they go.

Keep your troubles and worries to yourself. Remember that your friends have their share of trouble as well as you, even though they don't grumble about them, and they are not particularly anxious to have yours thrust upon them.

Happiness cannot be purchased, but it can be acquired. Its foundation is contentment, and if we could only make up our minds to be satisfied with the life that God has seen fit to give us, then we are well along the road of happiness. Of course we all have dreams of the future, but if God does not deem it wise for us to realize our "dreams," then it is our duty to make the best of things and be grateful and content with our lot.—F. M. E.

Charms Children

Delights Old Folks

Post Toasties

The crisp, delicious, golden-brown food, made of Indian Corn.

A tempting, teasing taste distinctly different—all its own.

"The Taste Lingers"

Sold by Grocers

Popular pkg., 10c.

Large Family size, 15c.

Postum Cereal Co., Ltd.
Battle Creek, Mich.

The New No. 3 Brownie

Pictures 3¼ x 4¼ inches.
Price $4.00.

Uses Daylight Loading Kodak Films. Is made in the Kodak factory by Kodak workmen. A simple, practical, reliable camera, with which you can make good pictures from the very start.

Ask your dealer or write us for booklet "The Kodak on the Farm."

EASTMAN KODAK CO., 382 STATE STREET, ROCHESTER, N. Y.

Farm Notes

Hints on Hay-Making

The first requisite to successful grass culture is that the soil be naturally adapted for the purpose. Dry plains, cold, wet and undrained lands cannot profitably be used for the successful production of grass. Some, by intense cultivation and special fertilization, succeed in getting large crops of hay under unfavorable conditions, but this is not to be recommended.

Lands to successfully produce grass should be moist, but if too wet should be relieved of their surplus moisture by drainage, as too much water induces the growth of water and natural grasses, which are undesirable if first-class hay is wanted. In seeding a field to grass, the first thing is to have the land well and thoroughly plowed, as good plowing lies at the foundation of all successful cultivation and production. If the land can be used for one or more seasons before seeding to grass, in the cultivation of some hoed crops, it will be found to be an advantage in cleaning the land and making a good seed-bed and in getting rid of the old sod. If it is not convenient to use the land in this way before seeding down, after plowing, it should be finely pulverized by frequent harrowing, until a fine seed-bed is made. It is as important to have a fine seed-bed for grass as any other crop, a fact that many do not seem to be aware of.

All rocks, stumps and every form of obstruction which would interfere with the use of modern labor-saving machinery should be carefully removed, and the surface made smooth and clean. When it is intended to seed in September, and the land can be plowed in spring and be harrowed once a week during the summer, the soil will be made fine and effectually cleaned from weeds and other noxious growth. Even vetch or couch-grass will succumb and disappear under this treatment.

If yard manures are to be used to fertilize, they should be evenly applied with a manure-spreader and well mixed with the soil by frequent harrowings. Where chemicals or concentrated manures are used, they should be applied near the surface, with only a light covering of soil, after the seed-bed has been prepared.

When the land is in good condition, grass-seed may be sown at almost any time if not too dry, and in time make a good stand. Early in the spring, just before freezing up in winter, or in August and September are favorite times for grass-seed to be sown alone. Good results are obtained by sowing at the two first-mentioned times, but the first crop is liable to be weedy; the aftercrops will be clean. Sown in August and September, the weed-seeds and annual plants will germinate and be killed at the close of the season and the first crop will be clean. Sown at this time, the grass gets a good stand before winter, and will go safely through the cold winter.

As to the amount of seed to be used, at least twelve quarts of timothy and seven pounds of cleaned redtop should be used to the acre; this, if evenly applied with a machine, will cover the land in good shape and make a good stand. Great care should be used in the selection of the seed. Only good and clean seed should ever be sown.

Timothy and redtop are recommended to be sown together, as they mature at about the same time and make a quality of hay which is in demand in the market.

All docks and other foreign plants found in a grass-field should be carefully removed, as they disfigure the field and injure the quality of the hay.

When the timothy is in bloom is considered the proper time for cutting; if left until the seed begins to mature, the roots are weakened and the grass liable to disappear. Early-cut hay makes much the best appearance in the market and is considered more valuable for feeding purposes.

When grass is cut late in the afternoon it will not be injured by the dew, and will be ready to work early the following morning. The best implement we have found to facilitate hay-making is the side-delivery rake, which gathers the grass into small windrows, which are thrown up very light and loose, allowing free action of the sun and air. The spaces between the windrows are raked clean, which allows the ground to become warm and dry. When the whole field has been over, the windrows are turned with the rake, as fast as the horse can walk, on the clean, warm space between. By repeating the process two or three times in a good day the hay will be made uniform and of a good green color, and in the latter respect much better than when made by the old methods; by noon the hay will be fit to go into the barn.

I have found the rake much more satisfactory than the tedder, as the latter is apt to leave green bunches, does not take the grass clean from the ground and does not do uniformly good work. The rake leaves hay in the best condition to be taken up by the hay-loader, which is a great labor-saving machine and should be more generally used than it is. I have used one for the last five years, and would not think of dispensing with its use.

I have had the wheels of the horse-rake lined with sheet-metal on the inside, which prevents the hay from falling between the spokes of the wheels and scattering out at the ends or leaving trails; by having the rake-wheels fixed in this way, one can ride over and clean up a field very quickly and not have to go back and repeat the work.

C. A. Umoselle.

Applying Commercial Fertilizers

The method of application of commercial fertilizer is as important as the quality and quantity. First, in order to get the full results from the commercial plant-food, land must be thoroughly pulverized; the finer the particles of soil, the better the coöperation between the natural and artificial nourishment.

The finely prepared seed-bed acquires a greater volume of moisture, and heat and moisture are the principal factors in rendering plant-food available.

The more uniform the distribution of fertilizer in the ground, the better the results. Hence, the broadcast is much superior to the hill method for corn. When broadcasted or drilled with the wheat-drill the commercial article comes in contact more evenly and meets directly a greater amount of soil texture, uniting more thoroughly the soil particles and the sulphuric acid contained in the fertilizer. This will allow the acid to operate upon a great deal of non-available matter, converting it into available plant-food, which it is unable to do when dropped in the hill. Also it is to be remembered that the corn root-feeders creep thickly through the entire row, gathering nourishment from every particle of the ground.

In case of extreme drought we run no risk in mixing the fertilizer completely with the soil, as the tender feeders cannot come in direct contact with enough of the retained sulphuric acid to sustain injurious results. We must remember that sulphuric acid is not a plant-food, but only an agent of force to render the phosphorus of the basis available, or, in other words, to dissolve the basis, whatever it may be, into soluble matter, so it can be used by the plant. In using the slow-acting fertilizer as a great many do, it should be applied broadcast and thoroughly mixed with the soil three weeks or more (if circumstances will admit) before planting, in order to give a better chance for complete action on the part of the soil in conjunction with the fertilizer.

The kind of fertilizer best to use depends altogether on the land on which it is to be used. For ground very much run down by excessive farming or naturally thin, a complete fertilizer is best. Yet all the complete fertilizers on the market are not practically complete, some of them having only one to two per cent ammonia and potash, which is too small to amount to much where those elements are needed; and again, in such goods the amount of available phosphoric acid is usually cut down to about eight or ten per cent. It is better to buy a fertilizer containing a high per cent of phosphoric acid alone. Fourteen to sixteen per cent straight phosphate is better than ten per cent phosphoric acid with only a trace of nitrogen and potash.

Complete fertilizers should run about ten to fourteen per cent phosphoric acid, five to seven per cent potash (muriate) and four to eight per cent ammonia (sulphate). Following clover or any legume, the straight high-grade acid phosphate is sufficient and much cheaper. It is a good idea to use a liberal supply of wood-ashes to overcome a possible deficiency of potash, and the clover will furnish the needed supply of nitrogen.

We pay too much for the trouble of mixing these low grades of so-called complete fertilizers. We should look carefully to the source from which the ammonia and potash are derived, as there is a vast difference between the commercial and the agricultural value of these two elements.

E. W. McNeer.

Five Roofings Tested

Gentlemen: Oakford, Pa., February 15, 1908.

The Amatite Roofing you advised me to try has proved to be the best roofing I have on any of my chicken houses, having tested it for two years with four other roofings. Consequently, when I was compelled to buy a new roof on my wagon house, used Amatite.

If you see fit to use this letter as a testimonial, you will be doing the chicken fanciers a great benefit.

If anyone wishes to see how the roofing lasts I will be pleased to have them visit my farm. Yours truly,

Hill Crest Farm, William F. Fotterall.

This is the kind of letters which we get daily regarding Amatite.

When it was first put on the market a great many people were attracted by it, but did not wish to spend all their money in a new type of roofing, so they used some Amatite with the old-fashioned "smooth surfaced" roofings right alongside so as to get a good comparison of their durability. Now they are finding that Amatite *without any painting* lasts longer than other roofings that need *continual painting*, and they are writing in letters like the above.

Amatite has a surface of *real mineral matter* which will not rub off or wear off, as the coal tar pitch which holds it in place is a powerful adhesive.

The price of Amatite is very low. The smooth surfaced roofings sold at the price of Amatite are usually a one-ply or half-ply grade which is very flimsy and light in weight, and do not compare with Amatite, which is *five-ply*. Amatite has a double layer of Coal Tar Pitch, a double layer of wool felt, and a *real mineral surface*.

Free Sample and Booklet

Send for a Sample of Amatite and see what the mineral no-paint surface looks like. You'll then understand why it is so much better than "painted roofing."

BARRETT MANUFACTURING COMPANY

New York, Chicago, Philadelphia, Boston, Cincinnati, Minneapolis, Cleveland, St. Louis, Pittsburg, New Orleans, Kansas City, London, Eng.

THE FLATHEAD, in the most picturesque part of the Rockies, has 450,000 acres of the very finest of agricultural and grazing lands. A government reclamation project will also make a large part of it very attractive. THE COEUR D'ALENE, just east of the city of Spokane, Washington, on Coeur d'Alene Lake, has about 200,000 acres, including timber lands. THE SPOKANE, north of the city of Spokane, has about 50,000 acres. The Flathead lands are appraised at $1.25 to $7.00 an acre—the others not yet appraised. REGISTRATION for all these lands extends from July 15 to August 5, 1909. Drawing will take place August 9, 1909. Entries will not be made before April 1, 1910.

For the Flathead land, registration is at Missoula, Montana. For Coeur d'Alene land at Coeur d'Alene City, Idaho. For Spokane land at Spokane, Washington.

For detailed information regarding lands etc., write to C. W. MOTT, Gen. Emig. Agent, Room 64, N. P. Building, ST. PAUL, MINN.

For rates of fare and full information about train service write to A. M. CLELAND, Gen. Pass'r. Agent, Room 64, N. P. Building, ST. PAUL, MINN.

It is to your advantage to mention Farm and Fireside in writing to advertisers. Farm and Fireside folks get the very best attention.

Western Edition

ESTABLISHED 1877
The Illustrated Farm and Family Journal

24 NUMBERS 35 CENTS

LIBRARY RECEIVED JUL 23 1909 U. S. Department of Agriculture.

Vol. XXXII. No. 20 Springfield, Ohio, July 25, 1909 Terms { 1 Year, 24 Numbers, 35 Cents / 4 Years, 96 Numbers, $1.00

Alfalfa—Its Possibilities as a Farm Crop

By Prof. H. C. Price, Dean of Ohio College of Agriculture

Although alfalfa is one of the oldest cultivated crops of which we have record, having been grown by the Greeks and Romans over two thousand years ago, it is one of the most recent crops introduced into cultivation east of the Mississippi River.

It was introduced into America by the Spaniards, who brought it to Mexico, and from there it was taken to South America. About fifty years ago it was introduced from Chili into California, from whence it has slowly worked its way eastward. Within the last five years alfalfa-growing has sprung into popularity in the Eastern states, and it promises to revolutionize farming in many sections, and probably more has been written on alfalfa in the agricultural press in the last few years than on any other subject.

The Alfalfa-Plant

Alfalfa is a perennial legume of the same order of plants as the ordinary clovers. In its early stages of growth it so closely resembles the ordinary sweet clover (Melilotus alba) that it is very difficult to distinguish one from the other. It grows from two to three feet in height and bears a small purple flower in loose racemes.

It has a very highly-developed root system, and it is a common impression that alfalfa roots always keep going down in the earth until they strike water. Where the subsoil is open and porous the roots do penetrate the soil for many feet.

Alfalfa is grown for pasture, for feeding green (soiling) or for hay—principally for the latter purpose. Where it will grow well, no other crop will yield as much feed to the acre, except corn, and at the same time it improves the soil, since it has the property of taking the free nitrogen from the air and appropriating it for its own growth by means of nitrifying bacteria, which grow in the tubercles on its roots. Being such a deep-rooted plant, it also draws its supply of plant-food from a deeper source than is reached by other plants grown in the same soil.

Timothy yields one crop of hay a year of about two tons to the acre if the crop is good. Ordinary red clover will yield two crops—one in June of two to two and one half tons to the acre, and the second crop in September, which is ordinarily cut for seed and not saved for hay; but when it is cut for hay it will yield about one ton to the acre.

Alfalfa will yield three to four crops a season, the first crop being cut about the first of June, and subsequent crops come five to six weeks apart. The first crop is usually about two tons to the acre and later crops are one to one and one fourth tons to the acre, so that a good yield of alfalfa will give from four to six tons of hay to the acre every year.

Alfalfa hay is much richer in protein than either timothy or red clover, as shown by the following analyses:

Number of Pounds of Digestible Protein in 1000 Pounds

Alfalfa hay	110 pounds
Red-clover hay	68 pounds
Timothy hay	28 pounds

When we consider that protein is the food element sought in our highly-concentrated foods, like cotton-seed meal and linseed-meal, we see that it is much more valuable for feeding purposes than other farm crops.

At the same time that the large yields of rich hay are being grown, the land is gaining in fertility by the addition of nitrogen, which is being "trapped" from the air. The element that is bought in commercial fertilizers at fifteen cents a pound is being stored up in the land while the farmer grows rich from the abundant yields of alfalfa hay.

Seeding to Alfalfa

The greatest drawback to the general introduction of alfalfa is the difficulty of getting a good stand when first seeded. The ordinary method of seeding red clover with wheat or oats is not successful with alfalfa.

Two methods of seeding are employed: (1) Seeding with a nurse crop in the spring, and (2) summer seeding without a nurse crop.

When the first method is employed, the seeding is done in the spring as soon as the ground will do to work. Spring barley or oats is used as the nurse crop and is sown more sparingly than when sown for a grain crop; not over one or one and one half bushels of seed to the acre need to be used.

The alfalfa-seed should be sown at the rate of fifteen to twenty pounds to the acre, and may be sown broadcast and harrowed in; or, if the barley or oats is sown with a drill, the alfalfa-seed can be sown at the same time, allowing it to fall in front of the hoes or disks.

The barley or oats should be cut for hay before the grain has matured, so that the young alfalfa-plants will not be injured. In favorable seasons the barley may be allowed to mature, and can be cut for the grain, but the oats should be invariably cut for hay.

Summer seeding has succeeded where spring seeding has failed, and is more likely to give satisfactory results. Land that is to be seeded during the summer should be broken in the spring and thoroughly cultivated, and as often as the weeds start to grow in it or after hard, dashing rains the ground should be harrowed. In this way the young weeds are killed and the moisture is stored up in the soil. The alfalfa should be sown during July if the weather is favorable, and at the same rate as when sown with a nurse crop. One of the objections to the summer-seeding method is the fact that farmers do not get any use of their land the season that the alfalfa is sown.

A method that is being used very successfully in some places is to sow alfalfa after early potatoes. In this way a profitable crop is grown on the land the year that the alfalfa is sown, and the ground is given excellent preparation before the crop is sown.

In a field on the farm of the Ohio Agricultural College this method was used last year, and in seeding a field of eighteen acres three methods of seeding were used as follows:

(1) Six acres seeded April 17th, with oats as a nurse crop. The outlay for all expenses on the field during the season was $16.37 an acre; the receipts an acre were $14.08, leaving a cost of $2.29.

(2) Six acres were seeded July 17th, without a nurse crop. The cost of preparing and seeding the land was $10.48 an acre, and there were no receipts from it, so that the cost an acre was $10.48.

(3) Six acres were seeded after early potatoes, and the alfalfa was sown August 6th. The cost of growing, harvesting and marketing the potatoes and seeding the alfalfa was $63 an acre; the receipts were $84.83 an acre, leaving a profit of $21.83 an acre over and above the cost of seeding.

Most excellent stands of alfalfa were secured by all three methods, and there seems to be little or no difference in the results that may be obtained by the different methods.

Essentials to Success in Alfalfa-Growing

First of all, the land must be thoroughly well drained. Alfalfa will not stand "wet feet," and on land that is not well drained it is useless to try to grow alfalfa until it is tiled. Alfalfa will grow on land that is subject to overflow, and is not seriously damaged if covered by water for twenty-four to thirty-six hours; but if the land is heavy and inclined to be wet and springy, the alfalfa will soon disappear.

In the second place, the land must not be lacking in lime. The alfalfa-plant is a lover of lime and of limestone soil and is very sensitive to the lack of lime.

On land that does not readily grow red clover it is useless to sow alfalfa without liming; and even if it does grow clover well, it may be necessary to lime.

The land must be in good physical condition and not lacking in humus. The young alfalfa-plant is a very delicate one and must have the most favorable conditions for getting established.

Not as much is said now about inoculation of the soil as there was a few years ago. The bacteria that grow on the roots of the alfalfa are a specific kind that differ from the kind that grow on other clovers, excepting the sweet clover. If these are not present, the tubercles will not be produced on the roots of the plant, and the alfalfa will not thrive. If the alfalfa has not been grown in the immediate vicinity in which the alfalfa is being sown, it will be necessary to artificially inoculate the land with bacteria or wait for the land to become inoculated more gradually from the bacteria that are carried on the seed.

If the land is to be artificially inoculated, it is best done by taking soil from an old alfalfa-field in which the tubercles have been produced, and sowing on the field that is being seeded, at the rate of two to four hundred pounds to the acre.

A Good Crop
The First Cutting of Alfalfa at the Ohio State University, June, 1909

Harvesting and Storing

One of the problems of alfalfa-growing in the eastern United States is the harvesting and storing of it.

The first crop is ready to cut from the first to the tenth of June, and almost

[concluded on page 2]

Asked and Answered

Questions of Interest to the Practical Farmer

Winter Oats

I often get inquiries concerning the winter-oats crop as to hardiness, cultivation and yield compared with the spring varieties.

The prevailing opinion seems to be that winter oats cannot be grown except in the most southern states, where the winters are very mild. This is a mistake; however, it cannot be expected that a winter variety of oats can be grown in the most northern states of the Union. Professor Hunt says of winter oats that the territory of profitable production is gradually extending northward.

Winter oats have been grown here in Nicholas County, West Virginia, for about twenty-five years. If sown on a southern or western exposure reasonably early in the fall, the oats are nearly sure to stand the winter all right, but when sown on a soil laying facing the north, the chances are that many of the oats will freeze out. If the oats are sown late in the fall, the crop is uncertain, as the freeze is likely to break the sprout off at the grain.

Last fall I sowed my winter oats October 1st. The soil was so dry that they did not come up until nearly the first of November. Some of the oats heaved out during the winter, but enough stood the winter to make a fairly good stand. Some other fields near here which were sown earlier made an excellent stand.

The winter oats hardly ever, if ever, fail to fill well. The spring varieties have been almost a complete failure here for a number of years. Some farmers sow winter oats in February here, with fairly good results. They do much better than the spring varieties, but not so well as the fall sowing.

One strong point with the winter oats is that they tiller so well that if only a scattering plant survives the winter they will thicken up and make a good stand. I have counted nearly fifty well-developed heads of oats grown from a single grain.

Last year my winter oats were sown on a hillside facing the west, at an elevation of from thirteen hundred and fifty to fourteen hundred and fifty feet above sea-level, and a good grade of superphosphate was drilled in with the seed, at the rate of one hundred pounds to the acre on a part of the field. The superphosphate seemed to hasten the maturity and helped the oats to fill better than where no fertilizer was used. Very few of the oats were frozen out. Spring oats were almost a complete failure, while my winter oats grew to my shoulders, and the heads were well filled. On most of the field they were very thick on the ground.

If the oats are put in with a grain-drill, the furrows made with the drill help to protect the oats from freezing out. It is best to run the drill at right angles with the prevailing winds, so that when the snow drifts some will lodge in the furrows and protect the oats, while if the drill is run parallel with the wind, the snow is likely to blow out of the furrows.

One and one half bushels of oats to the acre is about the right quantity of seed to sow, and from one hundred and fifty to two hundred pounds of a good grade of commercial fertilizer to the acre will usually pay. A superphosphate or a superphosphate with potash is preferable to nitrogenous fertilizers, as the oats can be depended upon to gather enough nitrogen from the soil, unless the soil is very deficient in nitrogen.

The crop can be used to prevent the waste of fertility from leaching away during the winter season, and is thus a good cover crop. A. J. Legg.

Some Advice for the Hired Man

A hired man in Michigan has a complaint to make. It seems he has been reading the report of the Country Life Commission, and that part referring to the long days on the farm proved very interesting to him. He thinks he is laboring too many hours a day. He says he is called at four o'clock in the morning, and is on the go until noon. After dinner he hoes garden and does other chores until half-past one, when he goes to the field and labors until sundown. He says sundown is quitting-time. He has supper at nine, then retires. On Sunday morning he does up the surplus chores, such as mowing a lot of grass for the horses, enough to feed them about three days, changing the stock from one yard to another, ringing pigs that have begun to root, etc., etc. He thinks this sort of life is rather too strenuous and has about decided to shake the soil of the farm from his clothing and try city and eight hours a day. He wants to know if I think that would be a good idea.

I have been through the mill he is now in, and my bones and muscles ached like a rheumatic joint. I felt that I was being imposed upon; but there was no way of getting out of it so I stuck to it without a whimper until I got a chance to do better. Probably he would best do the same. I have frequently gone on record as being opposed to the "mule style of farming," as this man aptly terms it, because I do not think such unending grinding is necessary. It is worse than slavery. If one cannot get on in the world without laboring hard three fourths of each twenty-four hours he is plainly a poor manager.

The work to be done on a farm depends very much on the weather. If the weather is fair, or very nearly so, most of the busy season, the work can be kept up without any difficulty and without working more than ten hours a day. But if we have a long rainy spell, so that the work is delayed, and weeds get a big start, then we have to roll up our sleeves as soon as we can get at it, and stick to it from early until late to win out. Every hired man knows this, and I have found very few who ever kicked about long hours and lively work until the fields were all cleared up and the crops given a good chance.

We had a long spell of wet weather the past spring, and farmers were not able to get into the fields for nearly three weeks, and one can well imagine what condition they were in when cultivation became possible. Those who are farming only so much land as they can manage well soon had their fields cleaned up and in fine shape, and they will have good crops. Those who are working more land than they can well handle never did get their fields into good condition, though they worked early and late. The natural consequence will be a poor crop.

Possibly this hired man is working for one of these men. If such is the case it will pay him to hire to a good farmer who can handle his farm well under almost any circumstances, at five dollars less a month.

I have worked for farmers many years, and learned that fifteen dollars a month for a year meant vastly more money in my pocket than twenty dollars for six months and odd jobs the rest of the year. I would advise every hired man to try to obtain a job by the year. One gets acquainted with the folks, with the horses and other stock, and with the land of the farm, and that means a whole lot.

I would advise every farmer who possibly can, to hire his help by the year. Get a young man from a neighboring family or one not far away, and keep him the entire year, even if he does not earn much for you two or three months of the year. You have him ready at all times to do any of the thousand and one jobs that have to be done. Then the place can be kept up in better shape if one has a man about all the time, and it gives one time to think and plan his work to the best advantage. It pays.

Fred Grundy.

Occasional Notes

The cardinal policy of all progressive countries is to assist and encourage as much as possible their home agricultural industry.

Mr. E. M. Ammons, of Littleton, and John Bell, of Montrose, who are two good workers in the interest of reading, thinking farmers, have been selected by the governor of Colorado as members of the state board of agriculture.

President Taft in his inaugural address said, "In the United States Department of Agriculture the use of scientific experiments on a large scale, and the special information derived from them for the improvement of general agriculture, must go on."

Chicago's new wool-house is two hundred and fifty by one hundred feet, and is five stories in height. Western wool-growers can now have their wool assorted and classified so that buyers can buy from sample in the office. Growers will no longer be compelled to sell their wool as soon as clipped. K.

A Farm Convenience

Thousands of the Farm and Fireside readers who have read the articles on farm and water-power will be interested in the good fortune that came to a South Dakota farmer, Edward Stauffenberg.

Stauffenberg sunk a well on his farm, and struck a fine artesian flow, and it was not long before the farmer planned to make it serve a dual purpose. The water would not only quench the thirst of his household and his stock, but it would serve to generate sufficient electricity to run all of the machinery of a half-section farm and to illuminate all of his buildings.

The entire plant is now in operation—it shells his corn, cuts wood, drives his feed-chopping machines and makes his farm buildings as light as day.

At the last electrical show held in Chicago there was shown a great variety of new and modern machinery designed for this very purpose. All that is necessary for hundreds of other farmers to do is to find the water, and the electricians and the farmers' ready cash will do the rest. A good many farmers are now using a gas-engine set and charging battery for generating electricity for illumination and for power to run all kinds of farm machinery.

In the case of Mr. Stauffenberg, however, Nature has supplied the generating power, and all he had to do was to harness it, and this he has cleverly done.

J. L. Graff.

From Another Viewpoint

I have a letter from a man who once told me that my views respecting the guaranteeing of bank deposits and parcels post were exceedingly foolish. That was during the last presidential election. He then declared that a parcels post would cause a deficit in the postal department of fifty millions or more, and I ought to have more sense than to advocate such a measure. The guaranty of bank deposits, he said, was simply putting a premium on robbery. Thousands of banks would start up, gather in a lot of deposits, then go broke, and honest bankers would have to pay their depositors out of the guaranty fund, and lots of other stuff along that line. Now he has changed. He has become a rabid guaranty man, and is also an advocate of a parcels post.

The matters and things that changed him were such as have come to thousands, but had not previously come to him. A nice bank started up in his town. It was apparently loaded with cash, and the proprietors were as fine business men as one could find in a week. This bank solicited business especially among the farmers and got lots of it. One of the bankers bought the finest house in the town, which, in the minds of the patrons of the bank, was positive evidence that he had an ocean of money. One of the bank's methods of soliciting deposits was a new wrinkle in that locality, and it caught hundreds. It sent to families where there were children, cunning little savings-banks, with fine advice about saving during childhood, and having deposits in banks, etc., etc. Suddenly it closed its doors.

The depositors were informed that they would be paid in full, but the bank had decided to go out of business, and this was the shortest and most direct way of doing it. After the excitement was calmed down, the depositors gradually learned that they would probably get about fifty cents on the dollar. After months of waiting they got very nearly that amount.

Our friend's family was caught for several hundred dollars. His children were priding themselves on their funds in bank, and they were sadly disappointed. In his letter he says:

"My best, hardest-working and closest-saving boy has lost over a hundred dollars, and now he declares he never will try to save another penny. He says he will spend it as he gets it, and have the good of it. I shall try to reason him out of his determination, but I hardly know what argument to use. If the funds had been guaranteed, as you advocate, and I foolishly opposed, we would not have lost a penny. But as it is we have lost both money and confidence in banks."

Well, they will all come to it sooner or later. The banks bitterly oppose the guaranty plan because it will impose a small tax on them, and they have thousands of backers among the class that are most injured by the failure of a bank. They vote as their boss dictates, and he dictates as the corporate interests instruct him. When each man becomes his own political boss we shall have several good measures enacted into laws. This man has become an advocate of a parcels post because two express companies charged him more than twice the value of an article for carrying it less than two hundred miles. He never had such an experience before, and this opened his eyes. F. G.

Alfalfa—Its Possibilities as a Farm Crop

[continued from page 1]

invariably there is a large amount of rainfall at that time, and it is exceedingly difficult to harvest the first crop without more or less injury from rain.

The succeeding crops are harvested at a time when rains are not so abundant, and there is less difficulty in getting it cured.

One solution of the difficulty of harvesting and curing the first crop is to cut it and put it through the ensilage-cutter before it is wilted, and put it into the silo, taking pains to tramp it down as solidly as possible. It keeps perfectly and makes excellent silage, but lacks the palatability of corn silage. It is too concentrated a silage to be fed by itself, and gives the best results when mixed with corn silage. It is doubtful whether it would pay to cut alfalfa and put it into a silo if the weather would permit drying it for hay, but in case of wet weather preventing the curing of hay, the silo offers a means of successfully saving it.

The time to cut alfalfa depends upon its growth and the weather, ordinarily just when the bloom is beginning to appear; but in case the plants have made a very rank growth and fallen down, and the leaves begin to drop at the base of the plant, it should be cut at once. In fact, at any time the rust begins to show on the alfalfa, which is indicated by the leaves turning yellow, it should be cut, or otherwise it may kill the plant. Any time after the buds on the stem of the alfalfa-plant begin to break, it is safe to cut it; but if cut before the buds break, the plant is likely to die.

In harvesting alfalfa, it should be tedded soon after it has become thoroughly wilted, and before it is dry enough for leaves to break off it should be raked up and put into small shocks and allowed to remain for a day or two until it is thoroughly cured.

Alfalfa for Pasture

Alfalfa has not been used to any great extent in the Eastern states for pasture. For cattle it is known as a dangerous pasture, on account of its tendency to produce bloat, and cannot be safely used unless the animals are kept on it continually.

For sheep and swine it furnishes the best of pasture. There is, however, one drawback to the use of alfalfa for grazing purposes, on account of its liability to be tramped out by the stock pasturing on it. It may be that after alfalfa comes to be more commonly grown that it will be found valuable for pasturing purposes, but as yet it is grown principally for hay.

Alfalfa and Crop Rotation

Alfalfa can scarcely be assigned a place in any of the ordinary crop rotations which are being followed on Eastern farms, because when a field becomes set in alfalfa it continues to improve for two or three years, and should be left to stand for four or five. However, on account of its value as a soil-renovator, it should not be ignored in crop-rotation schemes, and should be brought into the rotation every four or five years. Taken in the ordinary four-year rotation—corn, wheat, clover, timothy, which is commonly followed in many sections—alfalfa could be brought into the rotation every fourth or fifth year by having five fields, and throwing the field, when once seeded, out of the rotation for four or five years.

Alfalfa and Corn

Alfalfa as a farm crop is an ideal complement to corn. It is an ideal crop to precede corn, and better yields cannot be gotten any place than from corn grown on alfalfa sod. As a feed it makes an ideal ration when fed in connection with corn. There is a greater possibility of profit in these two crops when grown together than in any other crops that can be grown by the American farmer.

The May-Wheat Corner

By G. C. Streeter

THE month of April last saw the culmination of one of the most successful grain corners the country has ever seen. During that month the price of May option reached one dollar and twenty-eight cents. Cash wheat at the mills sold for upward of one dollar and fifty cents. Mills were forced to close down. The price of flour reached abnormally high figures. Bakeries were bankrupt and thousands of people went hungry.

Let us examine in detail the conditions, the processes and the results of this cornering of the wheat. Let us see who profits and who pays the profit. Let us see what are the conditions that enable men to corner the wheat supply of the country and arbitrarily advance the price of wheat, and consequently the price of flour and bread.

For several months previous James A. Patten had been buying May wheat. That is, he had been buying what is known as the May option, which is an agreement with those from whom he buys, to deliver him contract wheat during the month of May. He and his associates had purchased for May delivery several million bushels of wheat, and by constantly higher bidding had forced the price of wheat up until it reached the figure stated above. But, inasmuch as the price of cash wheat—that is, the wheat that the millers and exporters buy for immediate delivery—fluctuates with the price of the wheat options traded in on the board of trade, the price of cash wheat greatly advanced.

The price that the millers were forced to pay was, as I have stated above, upward of one dollar and fifty cents. As it takes about four and three fourths bushels of wheat to make a barrel of flour, you will readily understand that when you add to the cost of the wheat, the cost of transportation, the cost of milling and the cost of the barrel, and take from it the value of the bran, middlings and other by-products, it made the price of flour abnormally high and necessitated an advance in the price of bread, or the making of a smaller loaf for the old price.

How Does It Affect the Farmer?

Now let us examine this question of one-dollar-and-fifty-cent wheat from the farmers' standpoint, for it is the welfare of the farmers in which we are principally interested.

If the farmers of this country had wheat to sell at one dollar and fifty cents a bushel, or anything like that price, the great increase in the price of wheat would be benefiting the agricultural communities of this country. But, as a matter of fact, ninety-nine grain-growers out of every hundred had not one bushel of wheat to sell. Secretary Wilson said, "The large majority of wheat has left the hands of the farmers. A fictitious price has been created. The farmers are not beneficiaries of such conditions." You know that is absolutely true. Seventy-five per cent of the marketable wheat is sold before January 1st every year. The average wheat-grower sells his wheat as soon as it is threshed or as soon thereafter as is possible. This is particularly true in the great grain-field of the West and Northwest.

The vast majority of farmers sold their wheat in the fall for sixty to eighty cents a bushel. But you are on the ground and can judge for yourselves. Do you know of many farmers that had wheat to sell? Had you any except seed and perhaps feed grain?

The Cost of Seed

Right here let us consider another point. The cornering of wheat and forcing the price up to one dollar and fifty cents a bushel made the seed grain of the farmers cost several million dollars more than it would have cost had there been no corner. Every bushel of wheat the farmer sowed was worth one dollar and fifty cents, and in figuring the cost of his crop he must figure his seed at the market price when sown. There is, in this particular, a direct loss to the farmers of probably twelve million dollars on their seed grains.

Who Gets the Profit?

But if the farmers don't get the profit on one-dollar-and-fifty-cent wheat, who does? Why, the men who own the wheat, of course. And who are the men who own the wheat? The owners and operators of the great terminal elevators in the country, the big millers, and the little coterie, who, under the able leadership of Mr. Patten, were interested in boosting the price of the product that they controlled. Practically all of the visible supply of grain in the country was stored in the millers' warehouses, in the terminal elevators or in the line elevators.

Who Pays the Profit?

If it is true that Mr. Patten and his associates made millions of dollars in this wheat corner, from whom did these millions come? From the millers of the country? Not at all. It is the custom of millers to regulate the selling price of flour by the market price of wheat, and if wheat advanced, the miller advances the price of his flour correspondingly.

The only way the increase in the price of grain will affect the millers is to give them an added profit on whatever grain they may have in store that they bought at lower prices.

Then who does pay the profit? Only one class of people—the people who eat the bread.

The Farmers' Flour

Did you ever stop to consider who it is that consumes the bulk of the bread eaten in this country? If not, it is well to do so. First, the farmers themselves; second, the industrial workers of the country. Please consider for a minute these facts. There are about thirty-five million people in the United States living on farms. The average annual consumption of flour is equal to the product of five bushels of wheat for each individual. In other words, the farmers of this country consume the flour from nearly fifteen million bushels of wheat every month. If a farmer sells his wheat for eighty cents a bushel, and buys flour made from eighty-cent wheat, he loses nothing by the transaction; but if the farmer sells his wheat for eighty cents, and buys flour the price of which is based on wheat at more than eighty cents, he loses that difference in the price.

As a matter of fact, two thirds of the wheat crop of the country is sold by the farmers before January 1st, and every sack of flour that the farmers of this country have purchased since January 1st has been purchased at a price based on wheat costing more than his sold for. The difference between the price the farmer received for his wheat and the price of the wheat used in the production of that flour is the measure of the profit that the farmer is paying to the handlers of the grain.

For instance, if cash grain in Minneapolis was worth eighty-five cents a bushel when you sold your grain, and was worth one dollar and twenty-five cents a bushel in the same market when you purchased flour in February or March, then you were paying the difference between eighty-five cents and one dollar and twenty-five cents, or forty cents a bushel. As it takes four and three fourths bushels of wheat to make a barrel of flour, your contribution on that particular barrel of flour would be one dollar and ninety cents. If you can figure out for your own satisfaction the number of farmers who have been buying barrels of flour during the time of the inflated prices, you can get some idea of the millions of dollars that the farmers of this country have paid.

The Remedy

With each recurring attempt to corner the grain supply of the country there is a wave of public protest and indignation against both the men engaged in cornering the grain, and the system that makes a grain corner possible. At present many of the ablest minds in the country are considering ways and means of preventing a corner in wheat or other commodity that is one of the prime necessities of life.

The public assumes a very different attitude toward gambling in grain from what it takes toward any other form of gambling in futures. It is generally recognized that corners in grain, which naturally increase the price of a food supply, result in greater and more wide-spread evil than ordinary gambling in railroad and mining stocks. The people who buy and sell stocks, or who deal in futures, who go long or short, of the stock markets are the only ones who are affected by the results. If some clique of speculators corners a stock, and unduly advances the price, no one suffers except those who have been gambling in that stock. The physical condition of the railroad represented by the cornered stocks remains the same. The road continues to serve its patrons in the same way at the same price, regardless of the market quotations on its stock and bonds.

With grain and food-stuffs the situation is entirely different whenever a clique of speculators corners the wheat market, and raises the price beyond reasonable limits; the millers are obliged to advance the price of flour, and the bakers are obliged to advance the price of bread. Every one who buys bread or any other product of flour is obliged to add his quota to the profit of the speculators who have managed the corner. A corner in stocks affects only those who have been unwise enough to get caught, but a corner in grain affects everybody. The innocent suffer as well as the guilty and the burden seems to fall the heaviest on those who are least able to bear it. This is the reason why a corner in grain excites such wide-spread indignation and calls forth so many drastic proposals to make grain corners impossible.

James A. Patten
The Man Who Managed the May-Wheat Deal at a Profit of Five Million Dollars

Legislative Remedies

The first thing that seems to suggest itself to the indignant public is legislative control of the grain trade. Since Mr. Patten started his grain corner there have been dozens of bills introduced aiming to control speculation in grain. Most of these bills propose absolutely to prevent all dealing in grain futures, or options. The great trouble with this plan is that it wipes out a legitimate business along with the colossal gamble. Nine tenths of the grain transactions on the board of trade in Chicago, Minneapolis, Kansas City and other grain markets are gambling transactions, pure and simple. They are simply bets on the future prices of the commodity. They have no legitimate place in modern business, and any law that could wipe out this class of transactions would not only be justified, but it would be overwhelmingly supported by the majority of the people. In fact, it would receive the support of every one except those who directly profit by the grain gamble.

Unfortunately a part of the dealing in grain futures is a legitimate and necessary part of the grain and milling business, and any law that wipes out this class of transactions works a hardship both to the miller and to the general public. A man in any business has a legitimate right to contract for future supplies of raw material. When a miller buys grain for delivery months ahead of time, intending to convert that grain into flour, he is making just as legitimate a contract as a farmer who buys a machine for future delivery or who contracts in advance for his winter supply of coal. All manufacturers are accustomed to make contracts for the raw material which they expect to use months ahead of their actual requirements, and there is no reason or justice in the passing of a law discriminating against a single class of manufacturers. The miller has the same right to place orders to anticipate his requirements that any other class of manufacturers has, and he should be protected in the exercise of these rights.

The great difficulty in remedial legislation is the impossibility of passing laws that will wipe out the gambling transactions and still protect the miller in his right to make contracts for future requirements.

The Miller's Profits

The nature of the milling business is such that flour must, in most cases, be sold before it is manufactured. The margin of profit in flour-making is so small that the slightest fluctuations in the price of wheat may entirely wipe out the miller's profit. But wheat is subject to wider and more rapid fluctuations than any other raw material used in such large quantities. This is because it is the basis of such wide-spread speculation on the boards of trade. Because of these rapid price fluctuations and the small margin of profit in manufacturing flour the miller, to be safe in selling flour, must be sure of his future supplies of grain at certain prices; therefore, he makes contracts for wheat for future delivery, and sells flour at prices based on the contract price of the wheat. The successful conduct of the milling business and the sale of flour at the present small margin of profit necessitate a system that permits the miller to protect himself by contracting for future supplies.

The trouble with most of the proposed legislation is that it absolutely ignores this essential condition of the milling business. The passage and enforcement of much of the proposed legislation would cripple the miller and necessitate a greater margin of profit on flour. In other words, it would increase the profit that the consumer must pay for his flour, because, when a manufacturer is obliged to take risks, he passes those risks along to the ultimate consumer in the form of an increased price.

Legislative Control

The legislative control of grain speculation is not a new proposition. Ever since Joseph conducted his first corner on grain down in Egypt, and used the catacombs for a grain elevator, the public have discussed the price of wheat, and have been proposing legislative control of the grain trade. Second-century measures of this kind were a common subject of discussion in the streets of

Athens. When the Mediterranean pirates cut off Rome's supply of wheat, and the price of breadstuffs was unreasonably advanced, the Roman forum rang with denunciation of the grain trust, and the people who owned what little corn there was in Rome were about as unpopular with the Roman populace as Jim Patten is in America and England to-day. Most European countries have, in the last century, struggled with this same question of grain corners.

The German Law

In Germany, at least, they have gone a long way toward solving the problem. There is a German law that practically prevents speculation in grain. Those who are interested in the law as enacted in Germany can find it in the Consular Reports No. 194, published in November, 1896. This report can be obtained without cost from the Bureau of Manufacturers, Department of Commerce and Labor, Washington, D. C. This law has absolutely wiped out speculation in the chambers of commerce and on the produce exchange, and the consensus of opinion is that it has had a beneficial effect upon the interests of the farmers. On the other hand, it has practically wiped out of existence the occupation of those people who lived by grain gambling. The grain brokers, their clerks and office force have had to seek other occupations. The opponents of the measure claim that it has driven large interests from the great market cities of Germany to Antwerp, London and Amsterdam. I presume the enactment of a similar law in this country would compel many people who now live by the profits of the grain gamble to seek other occupations. The operation of the German law, however, does not seem to have affected adversely in any way the interests of the miller or of the legitimate dealers in grain for future delivery. It has only eliminated the gambling element of the grain trade.

The Argentine Law

In the Argentine confederacy a law similar to the German law is in force. It is impossible to buy or sell options on grain. It is likewise impossible to settle differences without an actual delivery of the commodity. If you buy ten thousand bushels of wheat in the Argentine republic for delivery in December, the law compels you to take that wheat and pay for it. The workings of this law have made the grain business in the Argentine republic a legitimate business and not a gamble. Bets on the future course of grain prices are illegal and impossible. But people who want grain for future delivery can make contracts to protect their future requirements. No legitimate business has been in any way adversely affected, but many evils have been eradicated.

Proper Legislation

The enactment of any legislation that would accomplish the same results in this country that have been accomplished in Germany and in the Argentine republic undoubtedly would be advantageous to the milling interest, to the consuming public and to the producing farmers. There is no good reason why legislation along these lines should not be enacted and enforced. It would undoubtedly make the Chicago Board of Trade look like a busted toy balloon and compel a crowd of grain gamblers to seek some reputable occupation, but I cannot see that it would affect adversely any legitimate business interest whatsoever.

The effect of this last great grain corner will undoubtedly be the enactment of stringent laws for the control of the grain trade. It is to be hoped that these laws will be carefully considered, so as to accomplish the object desired—that is, the elimination of grain corners and of speculation in the prime necessity of life, and at the same time protect the legitimate interest of those whose business necessitates contracts for future supplies of raw material.

Economic Control

There is another force operating for the prevention of grain corners; it is an increasing control by the farmers of the grain supply of the country. At present grain corners and the manipulation of prices, either up or down, are made possible by the Grain Trust's control of the bulk of the visible supply of grain in the country, through their control of public, private and line elevators. The Trust members themselves control the bulk of the grain in the country elevators; by rushing this grain into the public elevators, they can enormously increase the visible supply, and thereby break the price; by holding the grain in private and line elevators, they can minimize the supply of contract grain, and thereby raise the price.

Under the old system the farmers were accustomed to sell their grain crops as soon as they were made. The supply passed at once into the control of the speculators. This has been necessitated by the farmer's need of money and his lack of storage facilities for grain. At present there are nearly two thousand Coöperative Elevator Companies in the country that have great storage capacity at the disposal of their members. It has become possible for a member of a Coöperative Elevator Company to store his own grain in his own elevator, and if he needs money he is able to borrow such funds as his necessities require, without sacrificing his grain as soon as the crop is ready to market. The farmers are now working on the theory that if they will extend the marketing of their grain crops over the entire year they will receive much better prices than if the crop is dumped on the market in the few weeks succeeding harvest. This theory is fundamentally sound, because any one who has studied the trend of grain prices during the past twenty years realizes that grain has been abnormally low during the dumping season when the average farmer was selling his crop, and abnormally high during the months when very few farmers had grain to sell. Both the Farmers' Coöperative Elevators and the American Society of Equity are trying to educate the farmers so that they will market the twelve months' supply of grain during the entire twelve months, and not during the two months in the fall. They are trying to so arrange financial accommodations that their members will not be obliged to sacrifice their grain because of the financial necessities. This control of immense amounts of grain which can be quickly delivered at the terminal markets is going to make the creation of a grain corner much more difficult and much less profitable, because any fictitious advance in grain prices would mean that the farmer will at once send to market this reserve supply of grain, profit by the fictitious prices, and break the corner.

Public Opinion

Perhaps the most effective remedy for corners in food products or other necessities of life is in an enlightened public sentiment. The sooner the general public come to recognize the iniquity of corners in food-stuffs, and the attendant hardship and privation to those who are least able to bear it, the sooner they come to condemn the actions of men who will cause this privation and suffering for selfish ends, so much sooner will grain corners become unpopular. Mr. Patten and his associates have in reality been conspiring against the welfare of the general public, because a grain corner is nothing more nor less than an attempt to extort fictitious prices from the public for something that they must have in order to live. When public morals are sufficiently enlightened so that there is a universal wave of public protest against such action, just so soon will grain corners cease to be popular. When the general public begins to consider not the question of how much money a man has, but how he got it, just so soon will people of the type of our grain cornerers cease their pernicious activity. So soon as an act of this kind is judged on its merits, and receives the condemnation that it deserves, so soon will the public be safe from the consequences of many of these acts. What we need is an enlightened public interest and an aroused public conscience that will understand and condemn every private act done against the public good.

Thistles

It is often, when one goes out of his own district, that he becomes aware of a number of matters of agricultural interest which he does not meet at home. When he makes practical acquaintance with the difficulties of his less favored neighbors, if he is a man of thought he begins to appreciate the fact that agriculture is a very big subject. In some of its aspects it is not very often far from land reclamation as where the growth of rushes proclaims a want of drainage.

In other matters, what would be good farming in one district would be quite unsuitable in another. The stay-at-home farmer is not always disposed to make allowances for difference of circumstances, and is apt to condemn the practices of other districts on insufficient evidence.

With this short preamble I must say that there are certain matters in which the most confirmed stay-at-home is fully qualified to criticize. One is the almost utter neglect of the thistles, which year by year gain possession of pasture-lands. This fault is not confined to any one district nor to any one class of farmer. The whole matter is in many instances regarded with indifference.

Now, the great disadvantage of thistles in a pasture is that every thistle reduces the area available for grazing rather more than the ground it actually occupies. The farmer who is not asleep must notice that a clump of a dozen or twenty thistles is so much ground actually wasted. The sheep are not going to risk their eyes; the cattle are too careful of their muzzles to graze close up to the aggressive intruders. As a result the farmer finds that his farm is going downhill; it will not feed as many head of cattle as it did some years ago; the land is worn out; the climate is going to the dogs, etc. We often hear all sorts of philosophical explanations of why grazing is so bad, yet the very reason, which is on the surface and obvious to all, is cheerfully ignored.

There are several kinds of thistles, some of them almost entirely confined to tillage land, but the one to which I am referring here is the creeping perennial thistle. There has been much dispute as to whether this plant propagates at all by seeds. This question has been satisfactorily answered in the affirmative. This may be prevented by mowing the thistles in July, which is early enough to prevent the ripening of the first seed crop and still late enough to prevent a second crop of seed ripening.

Although seeding may be prevented by this July mowing, it will do nothing toward the killing of the thistles already in the field. It will rather tend to spread them, for when the top is cut, the underground stem will send out a number of branches, to reappear as fresh plants some distance away. This is the result of allowing the plant to make its season's growth and store up strength in its underground stem. If the foliage could be kept down persistently during the season by spudding or mowing at least three or four times, the stem would become delicate and would send up much weaker shoots the following season. If the farmer is deceived by the weakness of these shoots, and does not repeat the mowing the second season as persistently as the first, the plant will accumulate vigor again and will be as strong as ever the third year, with the addition that the number of growths will be increased immensely.

The only road to success in the extermination of the creeping thistle is to repeat the first year's treatment each year as long as the thistles appear. Each year, as the stock weakens, the work will be less, but it must not be discontinued so long as any remain. In this way, and in this way only, will the farmer get an acre of grazing-land out of an acre of grass. W. R. Gilbert.

Aids to Fall Pasture

Most of us turn enough stock on our pastures in the spring to keep the grass eaten down pretty well. Then when the weather grows hot and dry during late summer and the early fall, the grass dries up, and we find ourselves lacking sufficient pasturage.

Since we persist in following this course, it will be a great advantage if we can make some provision for overcoming this pasture shortage. And right now is the very time to plan for it.

The meadow-lot may be utilized for pasture a few weeks after harvesting, but it, too, will soon go the way of the pasture-lot. Besides, it isn't a good policy to pasture the meadow down too short, especially at this season.

So we must turn to the cultivated land for assistance in this hour of need. Turnips may be sown almost any place in the field—among the corn, in the potato-patch, in the now-deserted onion, radish and lettuce beds—and be ready to feed, tops and all, in a short time. Some might prefer to sow rape in these odd spots, rather than turnips. Either will form a convenient and profitable ration with which to supplement the shortage in grass.

There are other plans which may be suggested by the above, but the most satisfactory method, and one that dispenses with the hand-feeding, is to break up the oats-stubble or wheat-field as soon as harvesting is over, and sow to cane, rape or millet. Either of these crops will come on quickly, and a luxuriant growth, as rich in succulence as the early spring grass, will be available to turn the stock onto. Another admirable feature of this treatment is the effectiveness with which weeds are kept down and smothered out by the rank growth.

Any of these plans virtually gives us two crops from the same piece of land in a single season, besides leaving the soil in prime condition for being stirred real late in the fall or early the next spring. In short, these supplementary pasture crops are money-makers as well as money-savers. They furnish a much-needed feed at a time when stock, made desperate by hunger, are sometimes driven to break into the corn-field and gorge themselves, thus greatly damaging the crop, and exposing valuable animals to the danger of foundering. And none of us care thus to encourage our stock in being breachy.

These emergency pastures also aid us in maintaining our regular pasture-lands by keeping the stock off of the grass for a while and giving it time to recruit up, take a firmer root and produce a proper growth, instead of its being pulled up by the roots, gnawed and trampled into the ground by tooth and hoof.

Another big advantage gained by providing for an abundance of fall pasture is that of keeping the stock in excellent condition, fit for starting through the winter. This means a saving of high-priced feed during the severe weather and a respectable-looking herd of animals when next spring opens up. In fact, if one cannot supply sufficient fall pasturage, it is advisable either to sell off part of the stock or hire pastures, rather than ruin the pasture-lands by overpasturing, and then start through the severest season of the year with a lot of half-cared-for stock.

M. A. Coverdell.

Producing Good Queens

I saw in the Farm and Fireside of May 10th an article by F. A. Stroschein on mating queen bees in nuclei hives, in which he says, "After apiarists have the desired number of colonies, swarming generally is suppressed as much as possible, but it is a good idea to get the star colonies to swarm, so that the queen cells can be saved and the queen introduced into poor colonies."

I find it is not necessary to have the star colonies swarm in order to get the queen cells. We can do better than that by killing the queen in a poor colony, then the third day in the afternoon catch the good queen and cage her and leave her in her own hive until after sundown, then take her out and open the hive of the queenless colony, give them a puff of smoke, turn her loose and shut the hive, and do not open it for three days, and they will receive her.

After the good queen is taken out her bees will build all the queen cells we want. Then in nine or ten days, or any time after they are capped and before they hatch, I cut out as many queen cells as I want to use, leaving one for that colony, and graft them into one-pound boxes of honey, one in each box, and put them in toy hives just large enough for one box of honey and bee space all around it. Brush in a handful of bees from any colony, and shut them in, and put them in a tree or any place away from the other bees, as recommended by the author of the article referred to. Open them after three days, and the bees will stay with the queen cell until it is hatched, and will work the same as in a large hive. The queen will fly, mate and return, but will not lay in the small hive, but is ready to be put in a large one any time; then, to introduce her, I lift out the box of honey with the queen and all the bees on it, set it on the top of the frame of the queenless colony after sundown, and leave it undisturbed for three days. The queen will go down on the frame and the bees will remain on the box until they smell like the other bees, and they will live happy ever after. J. W. Nichols.

Agricultural News-Notes

Mr. Julian L. Brode, a cotton-seed specialist, has been authorized by the United States Department of Commerce and Labor to go to Europe and make a report on the best method of increasing the foreign demand for cotton-seed and its by-products.

The best work that is being done by the Department of Agriculture is thought by many practical farmers to be that of demonstrating that a few acres managed as they should be are made to yield a larger revenue than many when farmed in the old muscular way.

Oklahoma is to have a forty-acre demonstration farm in each county in the state, to be under the immediate supervision of the state board of agriculture and the county farmer's institutes. The annual appropriation on the part of the state is forty thousand dollars.

In the middle Atlantic states the large grain farms are being subdivided into smaller ones for the growing of vegetables, small fruits and the production of eggs and other quick-selling products. By better methods of culture the profit an acre has been greatly increased.

In Germany, Holland, Belgium and Sweden the national wealth has been practically doubled within the last twenty-five years by practical agricultural instruction, demonstration work and the adoption of coöperative methods of buying supplies and selling farm products in the world's best markets.

The importance of the potato crop amply justifies the United States Department of Agriculture in continuing the experiments that are now being made at Hockanum, Hartford County, Connecticut, for developing disease-resistant varieties of the Irish potato. Several types grown last season proved to be apparently blight-resisting.

Around the Farm

Items of Interest and Value to the Progressive Farmer

When Threshers Come

"OH, PA, the threshers are coming! Down to Mr. Barker's now! S'pose they'll be here to-night?"

"I wouldn't wonder. But we won't care about that, Laddie. They must stay somewhere, you know. We'll keep our eyes open, and be ready for them. We will be glad to get the job done, won't we?"

"Bet we will! Can I help get down the bundles?"

"Maybe, some."

Seventeen extra kicks of Laddie's heels, a streak of sunshine vanishing through the crack in the door, and a boy perched a moment later on the fence-post commanding a view of the road as far away as the neighbor's who is to entertain the coming threshers. It is always a great day when the machine pulls into the yard. There is an excitement about it that stirs the household, from old to young. Mother, thinking first of her own part of the work, begins to plan for bread and beans and the many little extras that must be provided for the extra care, for the chances were greatly in favor of our having the threshers to care for overnight.

"They know where it's a good place to stay all night, don't they? Ma always has something good to eat!"

"Hush, Laddie!" mother cautions, modestly disclaiming that she is a better cook than any of the rest of the neighbor women, though all have our opinion on that point, and could back Laddie up in the very strongest statement he might be inclined to make touching the ability of mother in this direction.

"Don't say that, Laddie! We're all good cooks in this neighborhood, you know."

"But you're the beater, ma!"

And then a kiss and a hug seal the loyalty of the little chap, and away we all go to watch proceedings.

The time was when threshing was a thing greatly to be dreaded, and with many that day has not altogether passed away. Still, we have learned to anticipate the day so well that the rough edge has largely gone. We rather enjoy the crisis in the quiet life of the farm. It brings a change, and then it is a great satisfaction to know how the grain is going to "turn out." Then we shall know what we have to rely on for the coming year. It looks so good to see the great bins of grain in the granary! I do not wonder that the young folks like to poke their hands away down into the oats. They are so cool and nice.

But how have we made ready when at last the rig pulls into the yard? First, the grain-sacks have been hunted up and the holes, if any, mended nicely. Mother usually attends to this so well along from time to time that there is little to do now. The box of nails and the hammers have been brought out. Boards for the chute down which the bundles will come flying have been laid near the big barn door. The pitchforks have been brought together. The telephone brings up from the village a lot of lemons; beats all what a thirsty set threshers always are. But when the sweat runs down your face and out at every pore of one's body there is need of plenty of water to keep up steam. And then we clear up the barn floors and look to see if the sheds are all in order for the straw. But we take it easy and do not chafe. There is the trouble with us so many times. We let ourselves get excited, and that wears the machinery of life far more than the work we do.

In the house mother keeps right on her way, doing the little things that will take the real burden off when the men come.

"No, I don't mind it," she tells the neighbor woman who comes in to talk it over. "I rather enjoy their coming. You just put in a few more potatoes and such things, and that is about all there is of it. It's so nice to get it done!"

It is worth while to look at it in this philosophical way. But we did not always do it. The time was when we were all about sick after the work was over. One thing more we have learned, and that is that if we have plenty of help, things go better. When there is a scarcity in this line, everybody must work so hard that the strain is really too great. Have you ever worked at the tail end of a machine with the straw just rolling out by the ton, the dust choking you till you could not see clearly, and getting into your throat and nose until you felt as if you had swallowed a feather bed, feathers and all? And then to have to keep the floor cleared up or be buried alive—it is lively business and no mistake. But get help enough, so that all can work within the bounds of their strength, and the work goes better. A wet sponge tied over the nose helps to keep the dust out, too, and if you keep your mouth shut—a hard thing to do sometimes—so much the better.

Well, so the ordeal comes and goes. Blessed be those last words, "and goes!" How fine it is to think that for all the hard places in this life there surely comes an end! The storm passes. The trial is only for a little while. "Joy cometh in the morning." The machine has been here. The swiftly flying cylinder has driven the golden kernels of grain out of the chaff; the great stream has gone pouring down into the measures to be carried away to the granary bins. The straw is packed closely away for the days to come. The hands are paid off, and down the road yonder goes the machine to help some other farmer do his threshing. We sit down, a bit tired, but very happy.

"Nice lot of grain, ain't there, pa?"

"Fine, Laddie!"

Work has its compensation. The shadows gather about the old farm home. We sit down to think it over and to rest for the days to come. E. L. VINCENT.

Saving the Young Tree

THE planting of the young tree is not the only work that is to be done in its behalf. If the life of the tree is to be preserved, it must be watched over with jealous care.

All insects and worms that would prey upon its life must be destroyed as far as possible. It is really a useless expenditure of money to purchase trees, stick them into the ground, and go off and leave them. If they are fruit-trees, nine times out of ten they will never come to maturity. The insects and worms will destroy them before they are half grown, and besides, there are other opposing elements that would destroy them if insects and worms did no damage. The ravages of beasts, rabbits and the droughty weather must be guarded against.

The other day I saw an orchard that represented the expenditure of hundreds of dollars and much labor that the rabbits had literally ruined. They had peeled tree after tree. A little precaution could have saved them. I passed another orchard where the farmer's stock were roaming at will, breaking down the smaller trees and browsing the limbs of the larger ones. A fence would have prevented this.

In the summer-time the young trees suffer most from the droughts. The tree grows lively in the early spring, when rains are frequent, then when the heated summer months come and the rains cease the trees lack moisture and become stunted or perish. In unirrigated countries the best way to preserve the life of the tree in dry times is by a mulch. It may be of straw or old refuse hay. Even weeds that have been mown about the place make a very good mulch. Pile the mulch thick about the tree as soon as the weather turns off dry. The moisture will be maintained and the tree will not perish. W. D. NEALE.

Value of the Silo

MY EXPERIENCE with the silo teaches me that no farmer, large or small, can well afford to be without one. Even those that have but a few head of stock will find it to their advantage to build a small silo. While it cannot be looked upon as the only essential element in successful farming, yet there are a number of distinct advantages to be gained from its use.

I find that by its use the entire corn crop can be taken from the field at a time when it contains the highest digestible food value, and stored away in such condition that all of these valuable food contents will be consumed by the stock. Analysis shows that corn contains the most digestible matter just at its maturity, before it becomes dry and hard. Therefore, much of this matter is wasted in allowing it to dry out, which is the result of handling it in the usual way.

When the crop is cut and shocked in the field it must stand all kinds of weather, in which case there is a distinct loss, as a portion of it becomes unfit for feeding purposes. Then, again, when hauling the shocked corn from the field there is always a waste of fodder in loading and unloading. This may not seem to amount to much at the time, but in the course of several years it will amount to almost that of an entire crop. By the use of a silo these losses are avoided.

I regard the silo as an economical necessity on any farm, for it is a source from which an abundant supply of cheap, succulent food comes for the winter months and seasons of drought. I feel that I could not run my farm successfully without one. WM. H. UNDERWOOD.

When to Harvest Forage Crops

THIS question is one which deserves more careful consideration than is usually given it. Some farmers recommend very early cutting of crops used as forage crops, while others allow their hay and other forage crops to stand until they are past the best stages.

The advocates of very early cutting consider the relative per cent of protein and sacrifice bulk and amount of carbohydrates. If we consult a feeding-table and go by the analyses given by chemists we find that the relative amount of protein is highest in clovers, grasses and other forage crops before the crop reaches full bloom. The bulk increases until the seed is formed, and the protein per cent in the crop is reduced as the crop matures, rather from the increase of bulk than from a loss of protein.

The protein per cent is reduced by the addition of carbohydrates rather than from a loss of protein in the plant, and as the carbohydrates are valuable as a food, it is questionable whether it is best to make a sacrifice of carbonaceous matter in order to get a feed rich in protein. As the plant matures it is not so digestible as it is in its earlier stages, so this is worthy of consideration.

If a forage crop is harvested at about the time it reaches full bloom, the material which goes to make the seed is still in the stem and leaves and is saved in the forage; but if seed is formed, especially in plants which grow small seeds, much of the value is wasted by shattering, and the very small seeds are not broken by the animal when chewing, and of course not much of the seed is digested.

It is a general principle in plant life that vitality is weakened by maturing seed, and that if seed is matured before cutting, the stubble does not sprout up so vigorously as when cut before seed is formed. In the timothy-plant a bulb is formed on the root and a sprout starts at the base of this bulb, which makes a new plant after the crop is harvested. If the crop is harvested before these bulbs are sufficiently matured, the plant may be killed or badly damaged. Clovers start off more vigorously when harvested early. A. J. LEGG.

Rye for Fall, Winter and Spring Pasture

I AM led to believe that the real value of rye as a fall, winter and spring pasture is too little known. If it were better known it surely would be grown for such a purpose to a far greater extent than it now is. Its strong points for a pasture include the following: It may be sown very early in the fall, even at the last plowing of the corn, and good pasture may be obtained in early fall, winter and spring from the one sowing; a stand of grass may be obtained while it is being pastured, and it can be followed by another crop in the early spring, thus keeping the ground covered during the winter, so it will not wash, and providing a great amount of humus for the soil.

However, if rye is to furnish good pasture in the early fall, it must be sown early, even the latter part of July in the North, and must then be pastured rather closely, for if allowed to grow too rank, the head is liable to form, which will destroy its power to grow in the spring. While the weather is still warm, keeping it pastured down rather closely helps to prevent it from rusting. It can in this way be made to produce a very large amount of pasture in the fall, but when so treated the grazing in the spring will not be so large as that obtained from rye sown later in the fall and not pastured so heavily. However, I prefer to have this good grazing in the early fall and winter rather than in the spring, therefore I always try to have my rye sown early in the fall.

Rye will furnish pasture earlier in the spring than any other pasture that I have ever used, but as the land is usually wet, I do not care to pasture it very heavily, but prefer to have the rye turned under, to add humus to the soil.

The length of the grazing period in the spring depends somewhat on the closeness of the grazing, but usually it does not continue good more than five or six weeks; but by that time other grazing is usually abundant.

I have found that when timothy and redtop are sown with rye they will root in the autumn and will not only be ready to furnish pasture along with the rye, but will continue to grow when the rye is gone.

Another very good way is to wait about sowing the grass-seeds until the early spring, and then sow such grasses and clovers as flourish in your locality, and cover them with the harrow, and usually the harrowing will help the rye. By following this method where it succeeds, the farmer is enabled to get pasture quickly, which is often a great advantage.

In sowing rye in the fall for pasture it can usually be done successfully after some other crop has been grown for the season on the same land; in this way it will come after any of the other cereals, and then in the spring there is still time to follow with other crops, provided it is pastured. Cow-peas, field roots, rape, millets, and such like, will easily follow it.

One of the highest uses of rye pasture probably is for grazing ewes with lambs in the early spring, or in grazing weaned lambs in the early fall. It is, under some conditions, a great aid in furnishing pasture for swine, but it must be pastured with caution by milch cows, as it is likely to give an unpleasant odor to the milk. I have found that it is not the best of pasture for beef cattle, as the grazing is too limited.

Rye may be used in the early spring as a soiling crop, but later it becomes woody, and in such condition is not relished by the stock. R. B. RUSHING.

Kill the Weeds in the Corn-Field

THERE is no work on the farm that pays better than killing the weeds in the corn-fields after the corn is too tall to cultivate. It pays big to go through the fields with bright, sharp hoes and chop out the weeds that have been left by the cultivator and prevent them from seeding.

In the spring I passed a field of corn belonging to a German. The continued rains had prevented farmers from cultivating for over two weeks, yet this field was almost entirely clear of weeds, and when the rains ceased it was put in perfect order very quickly. I learned that this man made it a practice to destroy every weed that came up among the corn along in August, not permitting one to go to seed. He will have a fine crop this year. The adjoining field, belonging to another man, was a mat of weeds, mostly smartweed, and it could not possibly be cleaned out after the rains were over. It had to be replowed and replanted, and as the season was well along it is doubtful if enough corn matures, even with a favorable season, to make half a crop. This man, like thousands of others, makes no attempt to destroy weeds left by the cultivator, and the seed they mature more than doubles his labors the following season. In this matter clean culture is very much like the stitch in time, and has about the same effect. FRED GRUNDY.

Lime, Mild and Caustic

ALFRED VIVIAN'S article in the FARM AND FIRESIDE of April 10th, entitled "Lime Not a Food," states the case well, but there is one point I would emphasize, and that is the difference between ground limestone and burnt lime. Burnt lime is a caustic lime, while ground limestone is a mild lime.

Upon light soils deficient in humus, ground limestone is preferable, whereas upon heavy soils rich in humus, burnt lime is better. Caustic lime upon a soil deficient in humus is too severe. C. N. BUCK.

A thousand-acre farm near Macon, Mississippi, is to be fenced and seeded down to alfalfa by the Noxubee Farming Company, which has been recently incorporated. This farm is in what is known as the "black prairie belt." *

POTASH

You can no more get wheat without straw than you can get cream without milk. If you get too much milk for too little cream, don't starve the cow to reduce the milk, but feed her for *richer* milk.

If your wheat this year shows too much straw and not enough grain, feed your soil this Fall for wheat that will grow *more* grain next year.

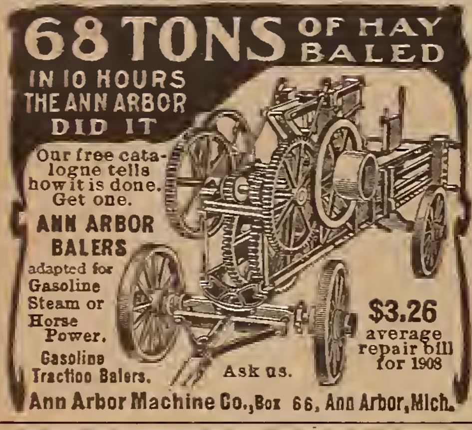
Complete your commercial fertilizer with **Potash**. It builds up a strong, sturdy, well rooted, springy wheat stalk, fills out the grain, and carries it through wind and rain to make a profitable harvest for you.

Potash Pays

Add enough **Potash** to your fertilizer to bring it up to a 2-8-6 formula. Two pounds of Muriate of **Potash** to each 100 pounds of fertilizer increases the **Potash** total one per cent.

Send for new Farmers' Note Book—about soil, crops, manures and fertilizers—a practical book compiled by experts. Mailed on request, FREE.

GERMAN KALI WORKS, 93 Nassau Street, New York
CHICAGO—Monadnock Block
ATLANTA, GA.—1224 Candler Bldg.



United States Rubber Company

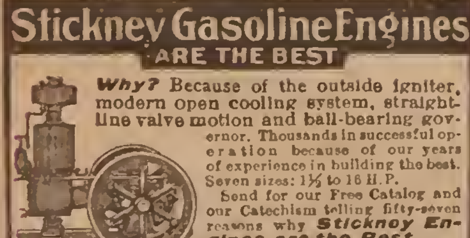
42 Broadway, New York, July 1, 1909.

The Board of Directors of the United States Rubber Company has this day declared from its net profits a quarterly dividend of Two Per Cent on the First Preferred Stock (including all outstanding old "Preferred" Stock), and a quarterly dividend of One and One-Half Per Cent on the Second Preferred Stock of this Company, to Stockholders of record at 3 P. M. on Thursday, July 15th, 1909, payable, without closing of the Transfer Books, July 31st, 1909.

JOHN J. WATSON, JR., Treasurer.

Saw Mills

If you need anything in saw mills or wood working machinery, send for our catalog. Our line is complete. Goods highest quality and prices reasonable. American Saw Mill Mach. Co., 130 Hope St., Hackettstown, N. J. New York Office, 1576 Terminal Building.



Gardening

By T. Greiner

Lice on Cabbages

A Nevada lady reader complains of being troubled by plant-lice on cabbage, also by having cabbage and other plants cut down by cutworms and grubs.

It is not an unusual thing to find cabbages and cauliflowers as well as turnips almost covered with plant-lice. Yet, as already stated, we have quite a number of remedies for them, the simplest being hot soap-suds. Tobacco preparations are quite effective in driving the pest away, and may be used both dry (as dust) or wet (in tea form).

Spraying with the commercial lime-sulphur solution, not too strong, perhaps one to twenty, will also be liable to clear the cabbages and similar plants of lice. But don't let the lice have their way. Fight them, or they may so weaken and ruin the plants as to make them positively worthless for use or sale.

As to grubs and cutworms, they hardly ever bother us much this late in the season. The damage is done by them mostly in spring in fields newly set with plants. Cabbage, tomato, pepper and similar plants are often cut down, making it necessary to replant.

By going into the patch early in the morning we can usually find the worms in the ground not far from where a plant has been cut down, and they can be hunted up and destroyed. By plowing in late fall—in fact, just before winter sets in—we can get rid of a good many grubs and cutworms, and thus protect the next season's crops. If cutworms, however, appear very numerous, they may be poisoned by means of bran mash or pieces of green sod that are seasoned with Paris green or arsenate of lead. The same poisons may safely be applied to cabbages just beginning to head, for the green worm.

Sowing Seeds in Dry Soil

Garden soil hardly ever gets so dry, even in a long drought, but that with proper sowing we can expect good seed to grow. Freshly-stirred ground, so as to bring moist soil near the surface, is the key to success.

A garden patch that was plowed in spring, and perhaps has had an early crop of lettuce, or radishes, or peas, etc., growing on it, and consequently has been kept in good tillage, usually contains plenty of moisture further down, even if an inch or two of the surface should be dust-dry. If we just go ahead and sow seed—may this be radishes, or lettuce, or late beets, or turnips, or any other—into this dust-dry top layer, it may remain there without sprouting for weeks, and finally never come up. But when we plow the patch over anew (this being the most effective way), or even stir it with a deep-running cultivator, we can secure a nice moist seed-bed, in which seeds deposited at once will promptly sprout in the hottest and driest weather.

It is the soils that have as yet been unattended this season, being neither plowed nor tilled otherwise, which in a dry time become hard and dried out to such an extent that even the plow will fail to bring moisture to the top. Sowing seeds in such land is a bad proposition. By applying plenty of water to the drill where the seed is to be sown, and then sowing as soon as the soil is just in the right condition afterward, we may get the seeds to grow, and if rains come within a reasonable length of time afterward, we may get a crop.

Sometimes in early July, when I find it difficult to set cabbage-plants and make them live, the soil being very dry, I resort to the method of dropping a few cabbage-seeds in the hill, firming the soil over the seeds well by squarely stepping on it, and I find that I can almost depend on thus raising good cabbages.

Turnips After Strawberries

What to do with the old strawberry-patch? Usually it is left to grow up in weeds, and by another season it has become stocked with weed-seeds. The strap-leaf or flat turnip varieties grow quickly, and a good crop of them can be grown on the old strawberry-patch even if seed is sown as late as early August. The latter part of July is better, however.

If the old plants and weeds can be cut down, and after having become dry, burned up with the mulching material before plowing, all the more satisfactory. Otherwise take pains to plow the rubbish under well, and prepare a fine seed-bed. The strap-leaf sorts of turnips could be sown broadcast. I prefer to drill the seed in rows, say eighteen inches apart, and cultivate with the hand wheel-hoe.

Often such turnips are readily salable. If not, we want them just the same. They come handy for pigs, sheep, cattle, and even poultry. I can use quite a number of bushels for my fowls during the winter. They are more easily grown even than beets, and the seed is cheap.

I usually sow a row or two of winter radishes at the same time, and on the strawberry-patch if I use it for growing turnips.

Setting Plants in Dry Weather

It is easy to give theoretical advice about setting plants during a long dry spell in midseason; but it is quite a problem in practice to set such plants successfully under weather and soil conditions as we have them at the present time.

No matter how difficult the task, however, we must manage somehow to plant our late cabbage, cauliflower and celery plants at this time in such a way that they will live and take hold of the soil again, or we will miss these vegetables in the fall and winter. If no rains come, and the soil remains dust-dry, we will have to try, anyway, and possibly plant and replant until we have a full stand.

I have plenty of good cabbage-plants at this time; and even in this dry spell, being grown in rich soil that is well supplied with humus, they have made good roots. But if we undertake to pull them up, even after loosening them by digging the garden-trowel under them and prying them up, the soil crumbles mostly off the roots, and many of the little roots break off and remain in the ground. So I water the plants in the nursery row, where I intend to take them up for setting out, until the soil around the roots is well soaked. It does not require a great deal of water for a piece of row giving a few hundred or a thousand plants, and the plants come out nicely, with roots unbroken, and some of the wet soil adhering well to them. Celery-plants are handled in the same way.

If there is any moisture in the soil where we wish to set the plants, the latter will usually soon take hold of the ground in their new location; but if the soil is very dry, I again apply a little water to the spot where a plant is to stand. So for cabbage-plants, about a cupful of water is put to each hill, while for celery-plants the water is applied right in a continuous row. If this is done an hour or more before the plants are set, the ground will be in just about the right condition for receiving the plants. Pack the soil well about the roots, and the plants are likely to live and do well.

Early Potatoes

In normal years I have some Early Ohios ready to dig, or at least big enough to eat with early green peas, by the fourth of July. Not so this year. We shall be glad enough to have them by August 1st.

Excessive rains hindered us from planting as early as in normal seasons, and now a rainless spell has set in, and the ground is so dry that the late plantings seem to be at a complete standstill. Many "hills" are slow in coming up, or do not come at all, and bugs and beetles, especially the flea-beetle, make life a burden to the plants that do grow.

I am afraid that potatoes in this vicinity will be a poor crop unless we have rain soon and in abundance. Yet we keep on spraying and fighting and cultivating. We do our part, and then try to be satisfied with what we can get.

Sweet Peas in July

Sweet peas should be well mulched in July. If they are not they will dry up and die. I have seen it stated that sweet alyssum or some other low-growing border-plant makes the best mulch, but I have not found it so. The alyssum itself is a strong rooter and requires a good share of moisture. The sweet peas need all the available moisture and plant-food for themselves. The best mulch I have found is taken from the manure-pile back of the horse-barn. The roots of the plants should be well covered with this mulch. The manure in the mulch will feed the roots and strengthen the growth of the plants, keeping them in bloom until the frost comes, and the thick covering of straw will hold the moisture in the ground.

M. G. RAMBO.

Keenest Delights

of Appetite and Anticipation

are realized in the first taste of delicious

Post Toasties

and Cream.

The golden-brown bits are substantial enough to take up the cream; crisp enough to make crushing them in the mouth an exquisite pleasure; and the flavour—that belongs *only* to Post Toasties—

"The Taste Lingers"

This dainty, tempting food is made of pearly white corn, cooked, rolled and toasted into "Toasties."

Popular pkg. 10c; Large Family size 15c.

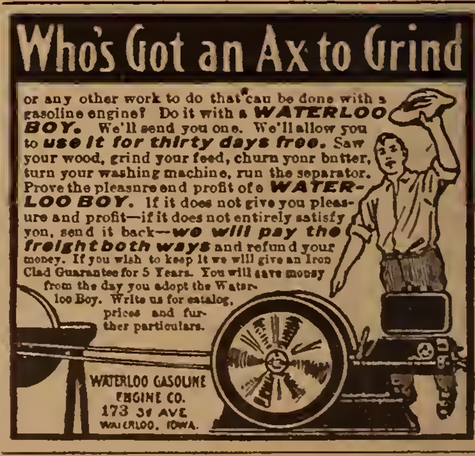
Made by
POSTUM CEREAL CO., LTD.
Battle Creek, Mich.

We Sell You Auto Experience!

This is an age of specialists. We are the largest dealers in new and used autos in the world, and because we are such we have just the experience you have not. We can sell you a car we know to be good from $150 up. Get our big Cut Rate Bargain List. Take advantage of our experience. Buy from a responsible firm. References: Dun's, Bradstreet's or Metropolitan Bank, New York; National Newark Banking Co., Newark, N. J.; Foreman Bros.' Banking Co., Chicago, Ill. Write to-day.
TIMES SQUARE AUTOMOBILE CO.
NEW YORK: 1597 B'way & 215-17 W. 48th St. CHICAGO: 1332-34 Michigan Ave.

Michigan Lands

SEND for my free 32-page illustrated booklet and map of the Dempsey Lands in Mason and Lake Counties, Michigan; unexcelled for general farming and sheep and cattle raising. Best land at lowest prices in Michigan. Easy terms.
J. E. MERRITT, - Manistee, Mich.



THE LARGEST AND BEST LINE OF
WELL DRILLING MACHINERY

in America. We have been making it for over 20 years. Do not buy until you see our new Illustrated Catalogue No. 15. Send for it now. It is FREE.
Austin Manufacturing Co., Chicago

PATENTS Watson E. Coleman, Washington, D. C. Books free. Highest references. Best results.

PATENTS that PROTECT
Our 3 books for inventors mailed on receipt of 6 cts. stamps. R. S. & A. B. LACEY, Washington, D. C., Dept. 49, Est. 1869

Fruit-Growing---By Samuel B. Green

Root-Killing of Apple and Cherry Trees

C. F. McD., Winchester, Ohio—I do not know what the trouble can be in the case of your cherry and apple trees. This injury may be due to some injury to the roots of the trees have received in winter, but I am more disposed to think that it is caused by some fungus in the ground, which has destroyed the roots of your trees. In some sections the roots of the oaks are killed by a fungus. One of the most common of the injurious fungi is known as Agaricus melleus. This is also troublesome in Europe to the Douglas fir and other plants.

While I am disposed to think this is the cause, I do not know of any satisfactory remedy. I believe that eventually we shall overcome its injuries by the use of roots which are resistant to the work of this fungus. I would suggest that you take this matter up with the officers of your state experiment station at Wooster, Ohio.

Grape-Worm

W. J. B., New Britain, Connecticut—The specimen of the grape foliage that you sent has been injured by what is known as a leaf-roller. These are especially troublesome, on account of their being so effectually concealed between the leaves, which they draw together. They cannot be reached with certainty by any of the common insecticides.

I think the best thing for you to do is go over the grape-vines and crush the leaf-rollers in their nest in the land. In this way I think you can destroy them all in a short time, and it is the most practical way of destroying them. I should not expect that spraying with Bordeaux mixture would do any good in this case, but spraying with arsenate of lead at the rate of three pounds to fifty gallons of water I think would be effective and satisfactory, although it would not take the place of the hand work.

Killing Dandelions

H. B., Deephaven, Minnesota—The dandelion proposition is one of the hardest I have to face on our large lawns. We have experimented with sulphate of iron for spraying them, and think that in a location where the dandelions were confined to a reasonable-sized tract of land, so that no seed would come from near by, we might be able to keep them in subjection by spraying them for several seasons, but with us here it seems almost out of the question.

We used sulphate of iron for this purpose last year at the rate of two pounds to one gallon of water, and sprayed our lawns where the dandelions were numerous. While this would sometimes slightly injure the grass, yet the dandelions were greatly weakened and many of them killed out. This material should be applied with a good spray-pump, and it is more important to use plenty of the spraying material than it is to use a strong solution.

The reason why your work of cutting out the dandelions was not successful was that in digging them you did not go deep enough. If a dandelion is cut off within two or three inches of the top of the ground, the root will sprout and produce a new top with several centers. The only satisfactory way of digging dandelions is to get them out with from four to six inches of the root, and this requires considerable labor.

In the Eastern states, where the dandelion is fully as much of a pest as in Minnesota, it is customary to spade or plow up the lawns every few years, turning the plants under deep in early autumn, and then in spring getting the land into good condition and seeding down early. The earlier this plowing can be done in the autumn, the more certain it is to be successful.

Planting the Nebraska Sand Hills

A number of students of the forestry course in the University of Minnesota have been assisting in the planting of the sandy lands in northwestern Nebraska. It should be more generally known that there is in this region an enormous tract of sandy land, known as the "Sand Hills," which has a very scant vegetation, and is practically worthless for anything but grazing purposes, and of little value for this. The United States government is carrying on trial plantings on parts of this area. The most important part of this work is now being done near Halsey, Nebraska, where various experiments have been carried on.

One of the chief troubles they have had in their plantings has been that wherever they have broken the surface of the ground a blow-out was liable to be started, which might become very large in a short time. The sand is very fine, and the particles being round, moves easily in the wind. Many experiments have been made to find the best way of putting in the trees without too much disturbance of the scant vegetation which now holds the surface soil in place.

The following notes from David E. Finkbiner, a student of the Minnesota School of Agriculture, who has been working there during the spring planting, will undoubtedly be read with interest by tree-planters generally.

"The planting was finished up here on Saturday (May 28th), and the trees in the hills are looking good. We have had sufficient rain and favorable weather conditions all around to insure a good stand of trees. They are grading their trees here much closer this spring than they ever have before. The best trees are put in by the square-hole method, while the poorer ones are trenched in. The trencher is a wedge-shaped machine, operated by three horses, which makes a trench fourteen inches deep and three inches wide at the top. The culls are laid in the trench about a foot apart and the ground tamped around them.

"Bull pine is the only kind of tree that Mr. Mast seems to want to plant, and is the only tree outside of the red cedar and the Scotch pine that should be planted here."

Insects on Strawberries—Raspberries Failing

J. H. S., Skidmore, Missouri—I do not quite understand what insect it is that affects your strawberries, and wish you could have sent a specimen, so that I could have seen it and the injury it has done to your plants. In a case like this, where the insects are eating the foliage of any of your plants, spraying with arsenical compounds is to be recommended. I think, however, the safest spray for a case of this kind is arsenate of lead at the rate of three pounds to fifty gallons of water. This sticks well to the foliage and is much more effective than Paris green or London purple.

I do not understand the trouble with your raspberries that causes them to die at the tips of the cane, and finally dry up about the time that the fruit should begin to ripen. All of our new varieties of raspberries seldom last in their pristine vigor for more than a few years, and then they begin to fail. One of the most common evidences of failure is a weakening of the old canes, at which time the leaves curl up and the berries become somewhat discolored and bitter. In your particular case I am inclined to think that you had better start with some new variety or else with fresh, vigorous stock of the same variety, and don't plant on land on which your failing plantations now stand.

Buffalo Plum, or Buffalo Pea

A. B., Vona, Colorado—A plant common on the Western plains, and known by the name of buffalo plum, or buffalo berry, has fleshy fruit that is oval in form and inclosing pea-shaped seeds. It is, in effect, a pea, in which the shell is very much thickened and forms the edible portion. The Indians are known to use it. My own experience with it, however, does not recommend it.

A number of years ago I thought it might be the basis of a desirable new garden vegetable, and I still think there are possibilities in this line. I gathered some of the fresh fruits, boiled them like peas, but did not particularly relish the taste, and after eating them I had a feeling of dizziness, which I attributed to the eating of this plant. It is well known that a near relative of this plant is the common "crazy-weed" of the Western plains, which causes much trouble to owners of cattle. This is known by the name of Astragalus mollisinus. The form about which you inquire, the buffalo plum, or buffalo berry is the Astragalus caryocarpus. I am inclined to think that some day some of our enterprising plant-breeders may find it possible to get a valuable vegetable from this wild plant.

Is Sprayed Grass Injurious?

I suppose it is possible to have so much spray upon the grass in an orchard that was sprayed with Paris green as to do some injury to animals eating it, but the weak sprays that we generally use would not affect any of our domestic animals. A number of years ago, Professor Cook, at that time professor of entomology in the Michigan Agricultural College, fed his horse for a considerable time on the grass in his orchard that was under trees that were sprayed with Paris green in the usual way, and the horse experienced no inconvenience whatever. The arsenic and other sprays that we use are necessarily so very dilute that there is no danger of their seriously affecting any of our domestic animals.

Strawberry-Weevil—Gall Insect on Plum-Leaves

C. J.—I have carefully examined the blighted strawberry-blossoms you sent. I have had specimens like this sent in before this season. They are injured by the strawberry-weevil, a snout-beetle, which cuts into the stem of the plant just below the flower and causes it to break off. In sections where this insect is troublesome the loss may be quite serious. It is seldom, however, that it is injurious for more than a year or two in succession, and then disappears.

There is no practical remedy known for this insect. In appearance the insect that does the damage is a small black snout-beetle with grayish down. It lays an egg in each flower, and afterward cuts the flower-stalk, so as to check development of the bud. The egg hatches and the larva feeds upon the pollen in the bud. Only the staminate varieties of strawberry are attacked.

Where one has but few plants it is practicable to cover the rows of the staminate kinds with mosquito-netting or other material until the buds are ready to open. The insect of which you inclose a specimen is some fly, and has nothing to do with the injury to the strawberries caused by the weevil, nor does it resemble the weevil in any way.

The plum-leaves you inclosed are affected by some gall insect, for which there is no practical remedy.

Root-Killing of Apple-Trees

I have examined the wood from some apple-trees that leaved out weakly this spring, but since have withered up and appear to be dying. This looks to me like a case of root-killing. Many hardy varieties of apples are worked by nurserymen on roots that, while sufficiently hardy ordinarily for the middle states, are liable to be seriously injured under severe conditions in Minnesota. When this occurs, the top of the tree may be perfectly fresh and green and the tree starting into growth; but after starting, the new growth stops growing, looks weak, and the tree dies. On digging up the roots, it will be found that they are black, and possibly rotten.

There is no remedy for this trouble. It may be prevented, however, and I think the best way of doing this is to see to it that the roots about the trees are protected every winter with a cover of six or more inches of snow, or when this is not at hand, cover the ground about the trees with four or five inches of stable litter or other mulch. When this latter is done, however, the trunks of the trees should be protected by wire netting or boxing, so that they will not be injured by mice.

SURPRISED HIM

Doctor's Test of Food

A doctor in Kansas experimented with his boy in a test of food and gives the particulars. He says:

"I naturally watch the effect of different foods on patients. My own little son, a lad of four, had been ill with pneumonia and during his convalescence did not seem to care for any kind of food.

"I knew something of Grape-Nuts and its rather fascinating flavour and particularly of its nourishing and nerve-building powers, so I started the boy on Grape-Nuts and found from the first dish that he liked it.

"His mother gave it to him steadily and he began to improve at once. In less than a month he had gained about eight pounds and soon became so well and strong we had no further anxiety about him.

"An old patient of mine, 73 years old, came down with serious stomach trouble and before I was called had got so weak he could eat almost nothing, and was in a serious condition. He had tried almost every kind of food for the sick without avail.

"I immediately put him on Grape-Nuts with good, rich milk and just a little pinch of sugar. He exclaimed when I came next day 'Why doctor I never ate anything so good or that made me feel so much stronger.'

"I am pleased to say that he got well on Grape-Nuts, but he had to stick to it for two or three weeks, then he began to branch out a little with rice or an egg or two. He got entirely well in spite of his almost hopeless condition. He gained 22 pounds in two months which at his age is remarkable.

"I could quote a list of cases where Grape-Nuts has worked wonders."

"There's a Reason." Read "The Road to Wellville," in pkgs.

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

It is to your advantage to mention Farm and Fireside in writing to advertisers. Farm and Fireside folks get the very best attention.

About Practical Poultry-Raising

How to Treat Crop-Bound in Fowls

Occasionally by carelessness in over-feeding with hard grain or pieces of tough meat or other substance too large for the bird to swallow, the crop becomes so distended and swelled as to close the outlet to the stomach. The crop becomes very hard and sour and a fowl thus affected will not survive long.

Warm water should be poured down the throat and the crop gently kneaded or worked for an hour, if necessary, until it becomes soft, holding the bill open and the head down. Then give a tablespoonful of castor oil and feed very sparingly for several days, to prevent a permanent distention.

If this is not effective, an incision about an inch long should be made at the top of the crop, first removing some of the feathers, care being taken not to open any of the large blood-vessels which are plainly visible. The contents of the crop should then be removed and the outlet examined to see that it is not stopped up. The incision may be closed by making three or four stitches with silk thread or a horsehair in the inner skin, and the same in the outer. Be very careful not to sew the two skins together, as it is almost certainly fatal. Feed on soft or sopped bread and allow no water for twenty-four hours after the operation.

Archie E. Vandervort.

Shade for the Chicks

During the warm months the young chicks will require shelter of some sort, under which they may take refuge from the hot rays of the sun.

Of course, shade for the grown fowls is also important, but the young chicks particularly require it, owing to their thin coat of feathers. Even when the days are only moderately warm, I notice that the brooder-chicks spend most of their time during the middle of the day on the shady side of a building or under convenient shelter.

The chicks running with hens do not seek the shade so much, probably because the hens are on the move most of the time, and keep the chicks moving, too, whether they want to or not; but even they usually return to the yards shortly after noon, and rest for an hour or two where the sun cannot strike them. Late-hatched chicks are especially liable to be affected by the heat unless kept in a well-shaded yard.

In the country the runs for the young chickens are usually located in the orchard, the trees affording plenty of shelter. But in the event that natural shelter is not available, suitable shade can be provided in numerous ways. Posts may be set to support a shelter of rough boards or burlap. Three or four feet from the ground is high enough to have the shelter. A number of varieties of vines trained on trellises will also answer very well, and I recently saw a poultry-yard, one corner of which was planted closely with sunflowers. These will provide plenty of shade through the summer months and later furnish an addition to the food ration of the fowls.

W. F. Purdue.

Early Molting and Winter Laying

Early in the spring an Indiana subscriber wrote me a complaint about her hens. Among other things she said, "My hens are laying very nicely now, and will very likely continue to do so until late in the summer, when they will quit to molt, and unless they change their usual plans they will stay quit until spring comes again. Is there any way of breaking up this method of procedure? I have fed them all kinds of patent foods and egg-persuaders, but without any other result than to make some of them sick. I paid a big price for a bone-cutter, and worked myself half to death cutting 'green bone' for them, but got no eggs for my labors. I see that you state that you get eggs all winter. How do you do it?"

I did not answer this at the time of its receipt, because it was too early and the subscriber would forget; but as molting-time is approaching, I will say something about it now. If well fed, hens will lay right along until they begin to grow a new coat of feathers. Then they will quit until the new coat is grown. Those molting late will not complete their new coats before winter comes on, and naturally will not lay again until spring. Those completing their new coats by the beginning of winter can be induced to begin laying again at once by proper feeding and housing. And if they once begin, it is not difficult to keep them going all winter. Winter eggs are the eggs that pay, providing they do not cost too much. One can feed or throw away all the profits in winter-laid eggs.

One should not forget that it pays to push the pullets to maturity as rapidly as possible. Plenty of good plain food will do this. And one should not forget that the birds need plenty of good water and grit. The grit grinds up the food and water dissolves it, so that the fowl gets the full benefit of every particle. It not only pays to push the pullets to maturity, but also to push the molting of the hens.

A farmer once said to me, "It does make me mad to have a big lot of fat, lazy hens lolloping around all winter eating up my grain and not giving us an egg!" I told him it was his own fault. Hens need a full supply of food when they are growing their new coats. Most people think the molting process is over when the hens have shed their old feathers, but that is a mistake. The main part of the molting process has just begun—the growing of the new coat. This must be completed before the hens will lay.

The growing of a new coat of feathers is a greater drain on the system than the production of eggs. A considerable quantity of mineral matter must be provided, and this comes from the food, so it is necessary to supply food that contains this in abundance. If the hens are running at large they will pick up a great many worms, snails and other insects that contain much mineral matter, but if they are yarded, this must be provided, and I have found that powdered oyster-shell is a great help.

Most people object to feeding hens when they are not producing an egg. But they should keep in mind the fact that they are preparing the hen for laying, and loading her system with egg material, and if they are faithful, the eggs will be produced in good time. Some corn should be fed; but not more than one third of the ration should be corn, because it is too fattening, and as winter comes on, the birds will be loaded down with fat instead of egg material.

An Indiana farmer writes that he has better success with pullets than with hens in the matter of getting eggs in winter. He tells about how he manages his pullets, and in doing so gives away the secret of his success with them and non-success with his hens. He feeds his pullets to the limit until they begin laying, while he lets the few hens he keeps over rustle for their living. If he would give the hens the same care he gives the pullets, they would lay quite as well, and often more steadily. There is no time in the whole year when it pays to let the fowls take care of themselves.

I find there are three essentials in the preparation of hens and pullets for laying, and these are an abundance of a variety of food, lots of crushed oyster-shell, and sanitary sleeping quarters free of lice and mites. I might add plenty of good drinking-water as an essential, but business poultry-raisers make it a point to supply that. Get your hens into good condition for laying, and it is an easy matter to have lots of eggs in winter.

Fred Grundy.

Poultry With Scaly Legs

A friend of Farm and Fireside away across the continent on the Pacific slope is having trouble with his chickens. He writes:

"What is the matter with my chickens? Some of them get white crusts on the legs, eventually of considerable thickness. They have difficulty in walking and later die. I feed them on restaurant scraps."

Without doubt these chicks are suffering from what is known as scaly legs. The cause of the disease is a mite that digs its way under the skin of the legs and just about takes the life out of the poor creatures as long as they are permitted to stay there. From the sores made in this way a liquid oozes, and this gums up and makes the scale thicker and thicker every day. Think what must be the misery of a bird infested with a pest like that!

The first thing to do is to get every bird troubled that way out of the flock by itself. Then the roosts and all the woodwork of the houses should be thoroughly washed with kerosene. Boiling water or whitewash with a few drops of carbolic acid will also do the work. Do anything to kill the parasites which make their home in every crack and crevice. When the houses are clean, keep them so. This is your only salvation.

To relieve the hens which are suffering, take sulphur and lard, mix it, and rub it on the legs once a week till cured. Some good poultrymen use simply gas tar rubbed on well.

E. L. Vincent.

Poultry Notes

Chicken-pox among poultry is an uncommon disease, but when contracted is a nasty thing and not easily cured. Damp quarters and wet yards are the favorite breeding-grounds for the disease. It can be best treated by applying to the spots a salve made of one part powdered iodoform and ten parts vaseline.

June-hatched chicks can be most successfully raised if a strenuous fight is made against lice and the brood-coops placed in a shady location. We have had June chicks reach standard weight by December and gain as high as one and one half pounds a month. From now on there is no cold weather to retard their growth.

What is the best farm fowl? There is no best fowl. The Orpington, being the largest smooth-legged fowl, has many friends. Many swear by the Wyandottes, others bank on the Leghorns. The ever-popular Plymouth Rocks can't be downed. The Rhode Island Reds are here to stay. Having such a wide range of colors, sizes and shapes in our feathered friends, all can be suited.

Of the various methods of preserving eggs, none is so successful as water-glass, or sodium silicate. Eggs preserved in this manner will keep for six months and can hardly be told from those strictly fresh. A gallon of water-glass will preserve about fifty dozen. A ten-gallon stone jar should be half filled with water previously boiled, to which has been added one quart of water-glass, and then the eggs dropped gently in, allowing none to project above the solution. Cover with a heavy board.

J. Coleman.

You Get This Atlas

From Farm and Fireside

It Contains 106 Pages, 70 Colored Maps, Flags of All Nations, Biographies of Our Presidents.

At last FARM AND FIRESIDE has been able to obtain a splendid, comprehensive, up-to-date Atlas of the World, which our readers can now obtain in connection with their subscription. This is the most complete little Atlas we know of. It is bound in full cloth; it has 106 pages, with 70 colored maps—it is right up to date. We are able for a very short time to offer you this magnificent volume with your subscription at a price that will absolutely astound you, for it is less than the Atlas alone would regularly cost.

What's Inside

Special maps show the important ship routes, the distances between ports, also the latitude and longitude of every place in the world. The flags of all nations are shown in their real colors, and a gorgeous display they make.

In addition to all the maps showing the location of countries, towns, rivers and mountains, this valuable Atlas and handbook contains a brief accurate biography and the portrait of every president of the United States, including William Howard Taft, who was inaugurated on March 4th. There is a list of all the most important cities of the world, with the population of each, including every city in the United States with a population of 10,000 or more. The book contains a full-page map of the Panama Canal, with a profile map showing just how the canal will be built, together with full description of the canal.

How to Get It

For a one-year subscription to FARM AND FIRESIDE and the Atlas (postage prepaid), send us only 50 cents—less than the value of the Atlas alone. For a two-year subscription and the Atlas, send 65 cents. This subscription may be either new or renewal.

Without Cost — **We will send you the Handy Atlas without cost, postage prepaid by FARM AND FIRESIDE, if you send us two subscriptions to FARM AND FIRESIDE. The subscriptions may be either new or renewal. One of the subscriptions may be your own.**

Act at once while the chance lasts.

FARM AND FIRESIDE, Springfield, Ohio

Live Stock and Dairy

Butter-Making Notes

Don't get discouraged because the weather is hot, and good butter is harder to make. This is the very eason for persevering and keeping up he quality of your butter. A customer tands ready and waiting for every pound ou make under hot-weather difficulties. The price will be satisfactory, too.

Keep everything clean and cool. Work our butter down in the cellar or cave, nd keep it there till you are ready to se it or send it to market. Soft, oil-like utter never looks very appetizing on our own table, and no customer buys loppy-looking butter, except when no ther can be found.

The difficulty of reaching the market efore the butter melts is easily overcome y making a double box, say fifteen inches vide, two feet long and one foot high larger or smaller if desired). Fill the pace between the two ends and sides vith sawdust which has been dampened vith cold water. The inside of the box hould be dampened, also.

Then carefully wrap up the butter, lace it in a crock or other small vessel, et it in the inner box, throw a heavy, lamp cloth over it, and your trouble of narketing mussy-looking butter will be io more. M. A. Coverdell.

Some Cheap Feeds for Horses

The standard feeds for horses have become so high in the last few years hat it has become necessary to hunt for ome substitutes that are cheaper and till will keep the horse up to average veight and be palatable enough so that he horses will eat them. The old stanlard of timothy hay and oats has become o high priced that especially as a feed n the winter it is almost prohibitive.

This article is intended as a reminder hat now is the time to figure on the proluction of cheap feed for the wintering of the farm horses. Do not neglect to roduce and properly store some cornodder, oat straw, mixed hay, roots, etc., or the horses for next winter. By cornodder is meant corn grown in drills hick enough to produce moderate-sized talks, an abundance of leaves and from one half to two thirds of a crop of ear orn, the whole to be fed to the horse n bundle form. A small part of the orn-field might be planted in this maner.

In the Northern states there is comparatively little work for the horse on the farm during the winter months, and the saying is literally true that "they eat their heads off." It is the aim of most feeders to keep the weight of the horse the same throughout the winter, but in many instances they come out thin and bony or they are fat and indolent. It was this fact that led the experiment station at the Michigan Agricultural College to enter into a series of experiments that are extending over a series of years on the wintering of the farm horse in this state. The results of the first year's work is helpful to the farmer and feeder. The gain or saving is so great that it is worth while to call attention to the feeds and their cost.

The horses that were used in the feeding experiment were under normal winter conditions—that is, they were given the usual amount of winter work. The experiment results centered about twelve horses, which were divided into lots of six each. One lot was used as a check and fed in the ordinary manner—that is, given eleven to twelve pounds of oats and eighteen to twenty pounds of timothy hay daily, and bran once a week. The other six were given the cheap ration, which was as follows:

Morning feed: Oat straw, five pounds; carrots, four pounds; ear corn, three pounds.

Noon feed: Timothy hay, four pounds; oats, two pounds.

Night feed: Shredded corn-stalks, eight pounds; carrots, four pounds; feed mixture, two pounds.

The feed mixture consisted of the following: Dried beet pulp, four pounds; bran, one pound; oil-cake, one pound.

The period covered by the experimental feeding was December 1st to February 8th. All during this period the price of feed was abnormally high; but the raise was general, so the comparisons still hold true. The average cost per head a day for feed last winter for the horses fed on timothy, oats and a little bran was twenty-nine cents, while for those fed on the cheap feed it was 17.7 cents a day. This one statement of the difference in the cost of keeping of the two sets of horses is enough to make it worth while to any farmer that keeps a number of head during the winter. A saving was made by the use of the cheap ration of $49.12 on the feeding of six horses ten weeks.

A third lot of three horses stood practically idle during the ten weeks. These horses were fed the cheap ration, and their keep amounted to only 12.9 cents each a day.

The wintering of the horses has been a problem for some time, and the cheap feed given is one that should be grown where possible. Of course, this feed is not the only one that can be devised, but it has been tried and has been found efficient. Edwy B. Reid.

Hogs and Straw Ricks

Some farmers think that a straw rick is a good place for the sow and her brood to sleep. This is a mistake. Experience has taught me that it is best to keep them away from the straw pile winter and summer. In the winter the pigs will burrow beneath the straw, get too warm, and take cold when they come out into the freezing atmosphere. Coughing and wheezing is the result, and the pigs do no good or die. Besides, if burrowed beneath the straw, they are liable to be stepped on and seriously injured or killed by the stock running to the rick.

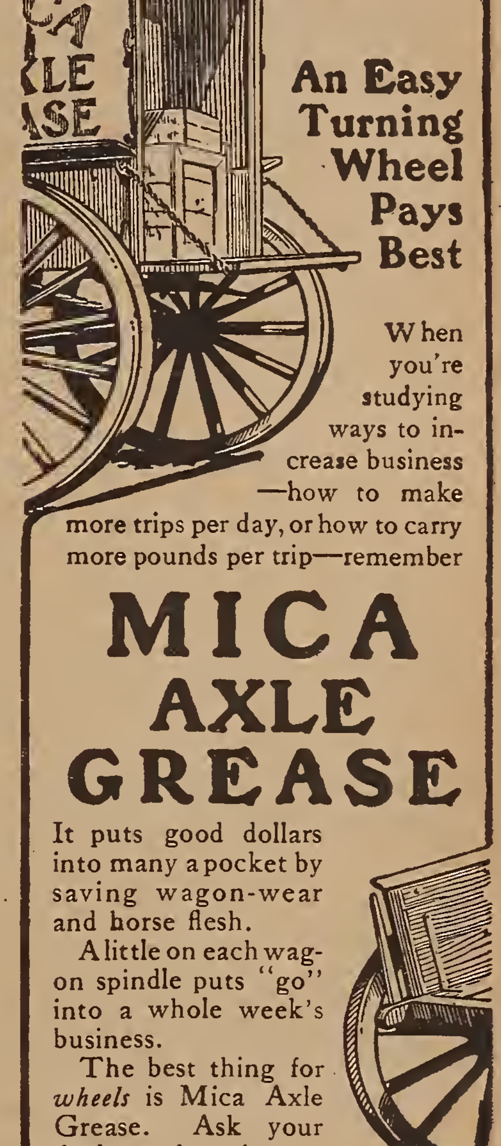
During the summer months especially should the sow and her young be fenced from the straw pile. If they burrow down into the half-rotted straw, they will be very apt to contract some disease. I remember that a young herd of hogs we allowed to run to the straw rick in the summer contracted the cholera, and before the summer was half past all of them had died. There is nothing about a straw rick that is beneficial to a brood of pigs in the summer-time, and one by a little carelessness cannot afford to run the risk of losing his pigs by disease contracted at an old straw pile. W. D. Neale.

Sheep Notes

Cold air will not injure sheep, but a wet coat and a cold wind may prove as dangerous as it would with any other animal.

Corn-stalks are valuable fodder for sheep, and if they are cut green and properly cured, and then put through the shredder, there will be but little waste.

Breeding-ewes should not be allowed to get fat. They should be kept in good condition and so fed as to be plump and hard, but there should be very little surplus fat on them. If pastures fail late in the fall, they should be given extra feed, in order to keep in good condition, so there will be no trouble getting them in lamb. Wm. H. Underwood.



I'll Give You Plenty of Time to Prove That the CHATHAM Is the Best Seed Grader and Cleaner Made

Send me your name—you need not send any money for my **Big Chatham Book FREE**

The Manson Campbell Co. Address Nearest Office Below

Here is my name and address. Send me your Big New Chatham Fanning Mill, Seed Grader and Cleaner Book FREE—Also low factory prices and Easy-Payment Terms so the machine pays for itself.

Name..........

Address..........

Town..........

State..........

Use this or a postal or letter today.

Get my big new Chatham book first—then you can best see why you can't afford to wait a bit longer to get a Chatham to use in your place.

This book tells you all of the interesting and profitable facts that you ought to know about clean seed—tells you about how to do away with the weed crop—will post you on the best way to make money out of your grain—tells you how to grade up your crop—tells you why it's just as easy—and cheaper—to raise good graded crops that bring the highest prices, as it is to raise poor, uneven crops on account of planting poor seed mixed with weeds. Tells you why the **Chatham** is one of the most profitable machines you can have on your place. Over 250,000 owners of **Chathams** have proved that to their great satisfaction. You can prove these facts at my risk.

You can prove this by simply taking my proposition and **cleaning your grain**—before you **sell** it—or before you **sow** it. **$1,000,000** lost by Farmers in every state each season by selling and sowing **dirty grain** is a low estimate. You **won't** haul it to **be cleaned** before you sell your grain, so you are "docked" on the price because of **dirt** in every bushel. Just take me up on my offer—get a **Chatham Fanning Mill** and save its price easily by using on your place. Take 30 Days' Free Trial first.

Here's what it does besides grading. Cleans all kinds of grain—Separates Oats from Wheat better than any mill you can buy—Cleans Red Clover—Takes out Buckhorn Plantain. Cleans Alsike Clover and Alfalfa—Cleans Beans, Oats, Barley—Grades Corn—Cleans Timothy Seed—Takes all chess and cockle out of wheat. Chatham Fanning Mills are fitted with 17 screens and riddles—they will clean—and *grade*—all kinds of seed—from the largest to the tiniest. They will clean and grade *seed corn*—they will take weed seeds and all kinds of foreign matter out of your seed.

Now don't think of buying a Fanning Mill anywhere until you get my book and my prices—and then decide to get—and try—

The Genuine Original CHATHAM FANNING MILL —SEED GRADER and CLEANER

MANSON CAMPBELL, President The Manson Campbell Company

Get our low—direct wholesale factory prices. Our answer will surprise you. *First*, the low price that we will quote you. *Second*, the easy terms on which we'll let you pay for mill. As a matter of fact, the Chatham Fanning Mill is a continual source of surprise to every man who buys it, for it does

It Much More Than Pays For Itself the First Year

so many more things than we mention in our advertising and does them so well.

Now, this mill will actually clean, separate and *grade* (yes, sir, we said *grade*, and we mean it!) from 40 to 80 bushels per hour. Its *capacity* is wonderful, its *ease of operation* is remarkable, its all-around *usefulness* and its importance as a *profit-maker*, makes its owner wonder how he ever got along at all without a Chatham.

The Chatham Fanning Mill will handle all kinds of grain and seed. It tackles any kind of a job.

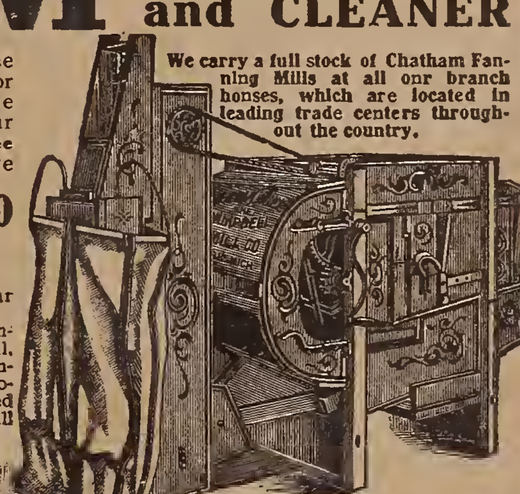
My valuable book tells many other ways than those above that a Chatham Fanning Mill will make and save for you. As a practical man you know that all I've said above is true and you also know that in selling direct from our factory—prepaying freight to you—giving you **30 Days' Free Trial**—and our wholesale price—we have simply **got** to give

I Prepay the Freight On 30 Days' Free Trial

you a **CHATHAM Fanning Mill** that does all we claim for it. Our business life depends on our mills making good.

I'll send you a **CHATHAM Fanning Mill** on 30 Days' Trial without any advance payment, just to prove it will do all we say it will. 250,000 sold already in U. S. and Canada. Experiment Stations indorse them, and Agricultural Papers recommend them to subscribers. So, why take **low prices** for dirty, mixed grain, or sow seed that **grows weeds** and **mixed crops? Write nearest office** for full particulars, prices, etc.

We carry a full stock of Chatham Fanning Mills at all our branch houses, which are located in leading trade centers throughout the country.



Write today for book and Factory Prices without fail

THE MANSON CAMPBELL COMPANY, Detroit, Mich.

Kansas City, Mo. **St. Paul, Minn.** **Portland, Ore.** **Omaha, Neb.**

We have 24 Branch Warehouses, and make prompt shipments.

Don't Be Deceived About Roofings

Don't judge any roofing by the way it looks before it is laid. The only test of a roofing is how it will wear.

There are more than 300 substitutes for the genuine Ruberoid. Some are known as "rubber roofings." Others have names which sound like Ruberoid.

A single summer of use will show the difference.

For there is no rubber in Ruberoid. It is not a tar roofing. Not an asphalt roofing. Not an asbestos roofing.

Its wonderful properties are due to our exclusive product, Ruberoid gum.

This gum is as flexible as new rubber, but it permanently withstands the heat, the cold, the rain, the snow—which rubber will not do.

It is so nearly fire-proof that hot coals thrown on a roof of Ruberoid will set fire neither to the roofing nor the timbers underneath.

RUBEROID

(REGISTERED IN U. S. PATENT OFFICE)

Ruberoid roofing was the first ready roofing by several years.

Asphalt roofing and the so-called "rubber" and "asbestos" roofings have come—and gone—and been replaced. While the first roofs of Ruberoid, laid *more than seventeen* years ago, will see many more years of actual use.

Ruberoid roofing is made plain and in colors. These colors, Red, Brown, Green, are a part of the roofing—they do not wear off or fade. They are impregnated under our exclusively owned, patented process.

Get This Free Book

Before deciding on *any* roofing for *any* purpose, get our free book which gives the results of our tests with *all* kinds of roofings—shingles, tar, tin, asphalt and ready roofings.

This book is a gold mine of practical roofing information, and will be sent free to all who address Department 21F The Standard Paint Company, 100 William Street, New York.

Sold On 15 Days' Free Trial

Rear View — Cost No More Than Old Style

No More Sore Necks or Shoulders

Over 60,000 now in use by farmers—Over 4,500 dealers sell them. Always guaranteed to cure the worst galls, bruises or bunches while your horse works—15 days' trial or money back without question. Keep your horses well with

WHIPPLE HUMANE HORSE COLLARS

Now, hot weather is here, don't use Cruel "Sweat-Pads" and old-style, misfit collars which only make your horses' shoulders worse—Just try these collars—No risk to you—Fit any horse—No pressure on shoulder-blade or bones where sores come—No friction on neck or shoulders—45 sq. in. pulling surface on each shoulder, properly distributed—only 10 sq. in. on other collars. Get our interesting **Free Book.** Thousands of testimonials of users and experience of 3 years proves this the greatest horse collar ever made—You'll say so yourself. Write nearest factory.

HUMANE HORSE COLLAR CO.
1629 Lowe Street, Chicago Heights, Illinois
1976 South 13th Street, Omaha, Nebraska

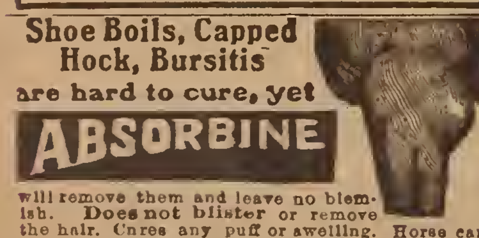
Genasco Ready Roofing

the lasting and economical roofing, made of real Trinidad Lake Asphalt.

Guaranteed in writing. Look for the trade-mark. Write for the Good Roof Guide Book and samples.

THE BARBER ASPHALT PAVING COMPANY
Largest producers of asphalt and largest manufacturers of ready roofing in the world.
PHILADELPHIA
New York San Francisco Chicago

Shoe Boils, Capped Hock, Bursitis are hard to cure, yet ABSORBINE



will remove them and leave no blemish. Does not blister or remove the hair. Cures any puff or swelling. Horse can be worked. $2.00 per bottle, delivered. Book 6 D free.
ABSORBINE, JR., (mankind, $1.00 bottle.) For Boils, Bruises, Old Sores, Swellings, Goitre, Varicose Veins, Varicosities. Allays Pain.
W. F. YOUNG, P. D. F., 284 Temple St., Springfield, Mass.

SAVE YOUR BACK
Save time, horses, work and money by using an
Electric Handy Wagon
Low wheels, broad tires. No living man can build a better. Book on "Wheel Sense" free.
Electric Wheel Co. Bx 96, Quincy, Ill.

HARVEY BOLSTER SPRINGS
Soon save their cost. Make every wagon a spring wagon, therefore fruit, vegetables, eggs, etc., bring more money. Ask for special proposition.
Harvey Spring Co., 729 17th St., Racine, Wis.

Free Trial To You

Send for Booklet Horse Troubles

DEATH TO HEAVES
Newton's Heave, Cough & Distemper Cure
Guaranteed or Money Back. $1.00 per can, at dealers, or Express Paid. 18 Yrs' Sale.
THE NEWTON REMEDY CO. Toledo, Ohio.

YOUR RAZOR ALWAYS SHARP
Buy no more razors. Pay no more hone bills. Shave in comfort. Send us your name at once.
SEDELKE & COMPANY, Dept. 16, ELYRIA, OHIO

WHEELS, FREIGHT PAID $8.75
for 4 Buggy Wheels, Steel Tires. With Rubber Tires, $15.20. I mfg. wheels ¾ to 4 in. tread. Buggy Tops $5.50, Shafts $2.00. Top Buggies $33. Harness, $5. Learn how to buy direct. Catalogue Free. Repair Wheels, $5.50 Wagon Umbrella free. F. F. BOOB, Cincinnati, O.

Live Stock and Dairy

Nursing Sick Animals

When animals get sick on the farm, the first question usually is, What medicine is wanted? Now, medicine has its own part, but no medicine will effect a cure without proper attendance and nursing, while good nursing will often bring a patient around without any medicine.

Good nursing includes everything calculated to improve the condition of the patient. It includes such things as suitable diet, bedding, bandaging, fomentations, temperature, ventilation, etc.

The diet of the invalid has first to be considered. In some cases it has to be laxative and cooling. These would include complaints of a feverish or inflammatory nature, together with strains and wounds. Other cases require strengthening diet to carry the patient over wasting diseases. Most cases require low diet in the early stages, while all require strengthening food during convalescence.

The feeding of sick animals requires great attention in small details. Poor appetite has to be tempted by change of food and by giving a little at a time. It requires some skill to know when an invalid with a poor appetite should be induced to eat and when he would be better without food.

It is a matter of universal experience that it is easier to give too much food than too little at the beginning of an illness. Water for invalids should always be fresh, and it is a good plan in most cases to leave water within the patient's reach. Salt within reach at all times is known to be almost universally beneficial.

The manger or trough should be clean, and all food left over after feeding should be removed without delay. Stale or sour food will often put a sound animal off his feet, to say nothing of an invalid.

The foods suitable for invalid diet are many and varied. Some of them are simply nourishing; some are nourishing and laxative at the same time. Among the former we have milk, eggs, bread, meal of different kinds and beef tea. Among the latter we have the different kinds of gruel, linseed in all its forms, cod-liver oil, bran mashes, boiled barley, green food of all kinds, roots, apples, molasses and others. Alcoholic stimulants also have their uses in proper cases. Selection of a diet will vary according to the nature of the case. Patients in a low debilitated condition should not get food of a distinctly laxative tendency, while those with a feverish tendency and those suffering from the results of accidents require laxative feeding. They should avoid heating food, among which the oily foods and the various grains may be classed.

Eggs and milk make a particularly nutritious and easily-digested food. The eggs are beaten up raw in the milk at the rate of six eggs to a gallon of milk. Most animals take kindly to this combination. Some will refuse eggs and new milk, and yet take eggs and separated milk readily. When the patient is so low as not to attempt to eat, the eggs and milk should be given as a drench. In cases like this small quantities are desirable, and the eggs may be used more freely, say three eggs to a quart of milk.

Warm food is taken freely by some animals, while others refuse it obstinately. Food is taken best when it is lower in temperature than the animal. About eighty degrees Fahrenheit is considered high enough for warm food for horses. Cattle will take it warmer.

Gruel may be of different kinds, but it is most frequently either oatmeal or linseed. Oatmeal gruel may be prepared by adding oatmeal to cold water—one pound of meal to one gallon of water. When soaked it is placed over a quick fire, and stirred continuously, to prevent particles settling down and burning.

This is kept up till the gruel thickens, when it is poured into a clean vessel and allowed to cool.

Probably a better way is to have the water boiling first, and then to drop the oatmeal in gradually, stirring the water the whole time.

The best linseed gruel is made of the whole seed. Sometimes it is made of linseed meal, or even broken linseed cake. The great value of linseed as food lies in its bland nature, due to the oil in the seed. Thus cake is inferior to seed in proportion to the quantity of oil taken from it. Linseed and bran are often combined for gruel. About half a pound of linseed with one pound of bran and three quarts of water, boiled very gently or kept simmering for two or three hours, makes a jelly-like mash that the majority of patients will take freely. It is a matter of experience that horses particularly will take a fairly solid mash when they will refuse a sloppy mess. The greatest care must be taken to prevent the gruel from burning, as linseed is even more liable to burn than oatmeal.

Linseed tea is a very soothing drink in throat and chest affections. It is indispensable as part of the diet of a broken-winded horse. The reason why it is not used more commonly is that it takes practically all day to make. About one half pound of linseed put into a gallon of water and allowed to simmer for twelve hours gets all the good out of the seed. Besides its use as a drink, it is very useful for pouring over chaffed hay or straw. It softens the fodder and prevents the dust, so irritating in throat complaints. All cooked preparations of linseed should be used soon, as they get sour quickly.

Bran mashes are required regularly in every stable, even for healthy horses. Every one connected with a stable thinks he is competent to make a bran mash; yet simple as the process is, it is often made badly or offered to the horse too hot. To make a bran mash, a clean bucket should be scalded; hot water is then put in—about three pints is enough—and three pounds of bran added slowly, while stirring, so as to insure that there will be no dry lumps; the bucket is then covered up and allowed to stand for half an hour. Care must be taken that it has cooled off before giving to the patient. If the mash is so cool that the naked elbow can stand it comfortably it is fit for use, but it must be of this temperature right through.

Hay tea is made by packing a clean, scalded bucket with best sweet hay, filling with boiling water, and allowing to stand till cold; then strain into another vessel, taking care not to let seeds pass. This makes a refreshing drink, and in the olden days hundreds of calves were brought up on this.

Boiled barley is often taken when other foods are refused. It should be boiled thoroughly in about twice its own bulk of water. In this proportion the whole of the water is soaked up by the grain, which turns out whole and plump. Here, again, care must be taken to avoid burning.

Salt should be used in all these gruels and mashes, allowing between one half ounce and one ounce. W. R. Gilbert.

Handling Cream for Shipment

Very few of those who go to make up the bone and muscle of this great dairy industry can afford to start with all the modern inventions, but they must milk their cows "the best they can" and struggle along almost "any old way" until they have made enough with their cows to enable them to do better.

A gilt-edged article will always command a gilt-edged price whenever it is known that you have only such an article for market. Now the question is, How can we always have a gilt-edge cream ready for shipment?

Keeping the Milk Clean

We have found at our farm (I say we; I mean my wife and myself) that absolute cleanliness is the first essential. At the milking-place have some hooks driven up high and in a convenient place, so that the milker will not have to spend any time or take any extra trouble to reach them, one for each milker. On these hang a quart cup or other vessel and a couple of clean cloths or towels. The cloths can be made from something that has served its usefulness in the house, and the cups may be rather old ones, just so they are good.

See that the milkers always take some clean water with them (warm when convenient) to the milking-quarters when they go to milk. Have them pour a little of this into their cups, wet the smaller cloth, and wash or wipe, as the case may be, the cows under the udder before beginning to milk, drying with the larger cloth or towel. These cloths must be laundered or renewed as often as need be.

Now I seem to hear some one say, "Oh, we never would get the milking done if we went through all that before we commenced." Let me say right here that I know from actual experience that after the habit is once formed it will only take one extra minute for each cow, on an average, and think of the value in purity to your milk. Insist that your milkers always start with clean hands, and have a clean, airy place to set the milk as soon as drawn from the cows.

Keeping the Separator Clean

After the milk has been drawn from the cows, next comes the process of separating the cream from the milk. Do I need to say that new milk must never be put into anything but an absolutely clean separator? You may ask any separator man who has been called to investigate a troublesome, balky machine, and he will tell you that lack of proper care causes more dissatisfaction than any other one cause.

It is very much easier to keep your milking-utensils clean and sweet than it is to make them so after they have become impregnated in every possible place with millions of all kinds of bacteria.

Handling the Cream

Always separate your cream into a clean, empty vessel, and not into the cold cream separated at a previous milking.

The reason for this is obvious. The new, warm cream poured into the old prevents the animal heat from escaping, and decomposition commences at once.

After separation comes cooling. Set your pail containing the warm cream into a larger vessel of cold water, and stir frequently for about three minutes, and at the end of this time, unless you have a very large body of water surrounding your cream, you will find that the water is very nearly, if not quite, the same temperature as the cream.

Next drain off this water and renew it with fresh, which in ordinary weather will be sufficient to put your cream in fine shape. If convenient, however, it may in very hot weather be advisable to have a little ice to add to the water, so as to have it good and cool.

It is well, if possible, to leave this cream in the last water till nearly time for next milking, throwing over the pail a clean, thin cloth kept for the purpose.

Washing the Vessels

The sooner the milk utensils and separator are washed after use, the easier it is done and the less danger there is of their becoming foul. To do this properly you need three waters.

First, use a lukewarm water, to remove all the milk.

Second, use water a little warmer, into which should be thrown a handful of salsoda or a few drops of concentrated lye.

Third, use an abundance of boiling water, which must penetrate every nook and corner and remain long enough to destroy every germ that may still be looking for a home.

I know from actual experience that if these directions are carefully followed you will always have clean, sweet utensils and separators and your cream will stand any and all tests that are required.

R. B. Rushing.

Sheep-Trough for Pasture Feeding

This trough most perfectly combines the following conditions: Ease of cleaning; least liable to be overturned; one in which sheep cannot scoop out the feed, and one in which the master sheep cannot monopolize the feed.

To make it, get three one-inch boards of good, sound lumber—one ten inches wide and two nine inches wide, of any desired length. About sixteen feet makes a convenient trough fifteen feet long when finished.

From the end of each board cut off one foot. Use the ten-inch board for the bottom and the nine-inch for the sides and ends. To the bottom nail the sides exactly in the middle, and the piece that was cut from the end of the sides on the end, to form the trough. You will then have a trough, a cross-section of which will look like the letter H—a double trough, in fact, ten inches wide on the inside and each four inches deep. It will be one foot wide on the outside and only nine inches high over all, and so it won't be easily turned over when feeding the sheep.

No matter how much water there may be in the trough, or how dirty it may be, by simply turning it over you will have a trough, dry and clean.

When the feed is put into the trough, it will scatter all over the bottom, and the sides being perpendicular, the sheep cannot scoop it out, nor can the boss sheep keep others from the feed. By using two boards ten inches wide and sixteen feet long, and four nine inches wide and eighteen feet long, two troughs can be made with no loss of lumber at all, each sixteen feet long when finished.

R. B. R.

Live Stock and Dairy

A Sign of Progress

There is a feature of farm progress that is seldom mentioned by the farm press. It is the great improvement that farmers have made in the vehicles in which they haul milk to patrons in town. The disuse of the old rusty can and the dust and dirt gathering tin measure that hung on the spout of the can are "has been's" of milk routes. The sealed bottle has taken the place of both and has claimed an immense amount of attention from both the city dailies and the farm papers, but the great advance taken in the make, shape and conveniences of the modern milk-wagon has to a great degree escaped notice.

Where once the dairyman hauled the product of his dairy to town and around to customers in any kind of a contrivance that might be rolled on one or more wheels, he to-day is seen on the road with a veritable portable milk depot. The vehicle is not built up so that it would require a step-ladder to get into it, but is of the low-down variety, easy to get in or out of. The bottles are packed in ice, are within easy reach of the driver as he sits on the seat, and all other articles that he carries on the route are as easy to get at.

Farmers and dairymen of to-day in many localities vie with each other in the appearance of their outfit while on the road or making the milk delivery. In workmanship the carriage maker and the painter have turned out excellent work. There is an old saw about the man who is known by the company he keeps, but the dairyman who not only runs a clean dairy, but hauls his product to his patrons in a neat, handy and clean outfit, is given a clean bill of health by most all who see him at his work.

There is scarcely any doubt but that a large number of readers of Farm and Fireside will recognize the quaint old character seen in one of the accompanying pictures. Hundreds of people of the Middle West once knew and traded with him during the summer months year after year. None of them will have a word against the faithful old milkman.

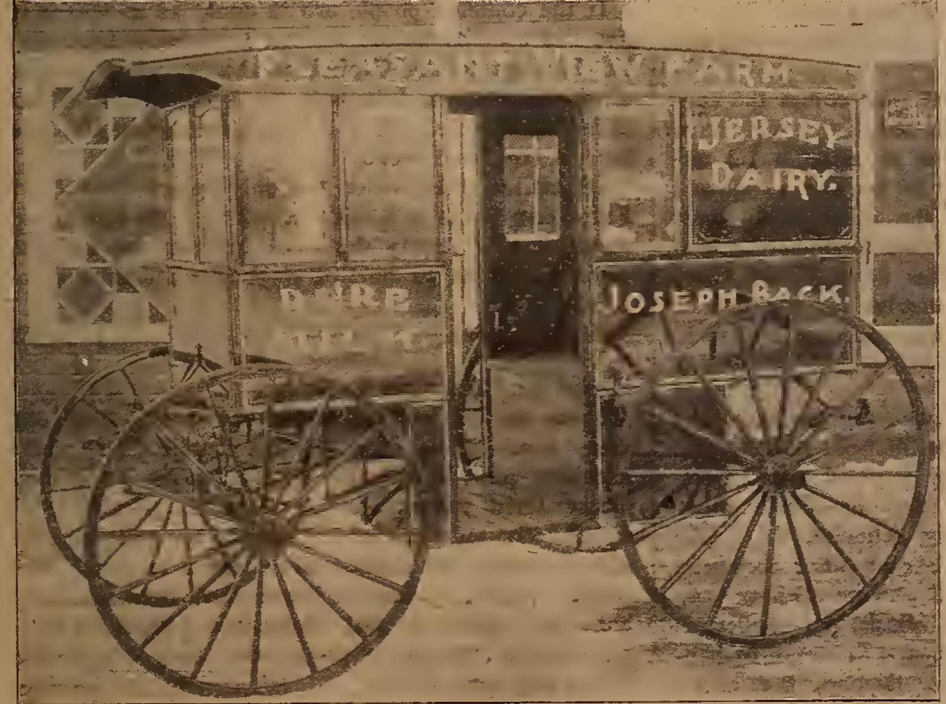
The owner of the queer-looking outfit was Roswell Hart, who for many a season sold milk to the summer colony at Paw Paw Lake, Michigan. Recollections of the good old times at Paw Paw will come back to many when they catch a glimpse of the old tinware through which the holder was accustomed to measure daily supplies to the cottagers, and however crude his old wagon may appear, many will stick to it that Roswell would have had a better wagon had the grim reaper allowed him to live a little longer.

The improved wagon shown in the other picture is owned by a dairyman of Madison County, New York, and the wagon was made in Earlville, where he sells his milk. It is one of the many low-down types, and is supplied with the conveniences demanded by progressive milk-sellers. There is a great variety of designs, and in scores of instances the wagons have been planned by the men who expect to use them on a milk route, the maker simply following the ideas advanced by the man whose experience in his business tells him what he wants. In some instances the wagons are equipped with short-turn running-gear, so that they may be used in places where it would seem that a wagon could not be driven or turned. A great majority of the modern wagons are painted white, to correspond with the whitewashed stables and the white aprons and caps that to-day are seen about the dairy-barns of many up-to-date milk-sellers.

It is these little improvements that seldom, if ever, are heard of by the milk consumer. The city inspector who is sent out into the country to tell a farmer how to run his dairy never mentions such indications of progress. His mission is to find fault, and he does not see or recognize a reading, thinking milk producer when he sees him on the road with a creditable milk-serving outfit.

J. L. Graff.

The Old Way



The New Way

Don't place the horse in a hot stall to eat and rest. Better feed him in the shade of a tree, where the cool breezes will make him comfortable while he eats and recuperates. A barn should be well ventilated if used for work-teams in summer. Good, open sheds are much more preferable for summer use.

W. D. Neale.

The First Perfect Feeding Device for Cream Separators

We have frequently referred to the recklessly untrue statements and claims made by "desperate would-be-competitors" struggling to retain Cream Separator business that is going to the **United States Separator.**

We have repeatedly proved by the records of the United States Patent Office at Washington and by the records in the United States Circuit Courts, also by the records of International Expositions and National Expositions, that most of the claims of these would-be-competitors are false.

They are using desperate and false claims in their efforts to make it appear that they are first in everything desirable in Cream Separators.

The **United States Separator** was the first to employ a feeding device in the Separator bowl to deliver the whole milk beyond the cream zone. This device of the United States prevents all conflict of currents and any remixing of the cream and skimmilk in the process of separation. **It is far superior to any "split wing" device,** more perfect in operation and has won the International prize for the most perfect separation.

The "disc" Separator could not use this device and in its efforts to equal the device of the United States was compelled to resort to an inferior expedient—the "split wing." But the "split wing" does not enable them to equal the United States, as the records show.

The **United States Separator** was the first to distribute the incoming volume of whole milk back of the cream wall.

The **United States Separator** was the first to use nonaligned channels for the currents of the milk through the Separator bowl, on which it holds strong patents, and no others can use this construction and it was the **United States Separator** that beat the "disc" Separator at the greatest International contest of Cream Separators ever held.

The "disc" Separator has never been able to equal this test.

It was the **United States Separator** that beat the "disc" Separator in its own County Fair test and recovered more butter in the cream than the "disc" Separator recovered.

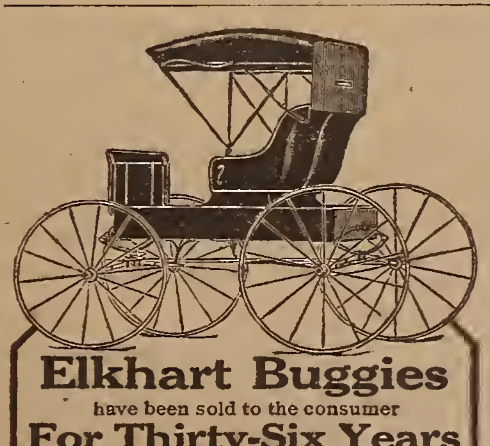
The **United States Separator** is manufactured under patents owned by IT.

The **United States Separator** is the originator of the best things in Separator Improvements.

The **United States Separator** is not an imitator in any particular.

Vermont Farm Machine Co.

BELLOWS FALLS, VERMONT



Elkhart Buggies

have been sold to the consumer

For Thirty-Six Years

May We Send You Our Large Catalogue?

Elkhart Carriage & Harness Mfg. Co.

Elkhart, Indiana

FREE to Bicycle Riders

A handsome gold-plated scarf pin

We make this offer so as to secure your name and mail you at the same time interesting information on the best bicycle tires made.

G & J TIRES

wear the longest—ride the easiest—least liable to punctures. For sale by all dealers and supplied on new wheels when specified.

Send your dealer's name and 4c stamps to pay for mailing, and we will send the scarf pin at once.

G & J TIRE COMPANY, Indianapolis, Ind.

We manufacture **Lawn and Farm FENCE. Sell direct** shipping to users only, at **manufacturers' prices.** No agents. **Our catalog is Free. Write for it to-day.**
UP-TO-DATE MFG. CO., 971 10th St., Terre Haute, Ind.

PATENTS SECURED OR FEE RETURNED.
Free report as to patentability. Illustrated Guide Book, and List of Inventions Wanted, sent free.
EVANS WILKENS & CO., WASHINGTON, D. C.

Ornamental Iron Fence Cheaper than wood for Lawns, Churches, Cemeteries, Public Grounds. Also Wrought Iron Fence. Catalogue free. Write for Special Offer.
THE WARD FENCE CO., Box 865, Decatur, Ind.

SUBSCRIPTION PRICE

One Year (24 numbers) . . . . 35 cents
Four Years (96 numbers) $1.00
Canadian Subscriptions . { 1 Year, 60 cents; 4 Years, $2.00

Entered at the Post-Office at Springfield, Ohio, as Second-Class Mail Matter.

Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."

The date on the address label shows the time to which each subscriber has paid.

Subscribers receive this paper twice a month, which is twice as often as most other National farm journals are issued.

Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope.

When renewing your subscription, please say it is a renewal, and if possible send the label from a recent copy. If all our subscribers will do this a great deal of trouble will be avoided.

PUBLISHED BY

THE CROWELL PUBLISHING COMPANY

SPRINGFIELD, OHIO

Branch Offices: 11 East 24th Street, New York City. Tribune Building, Chicago, Ill.

Copyright, 1909, by The Crowell Publishing Company

ABOUT ADVERTISING

FARM AND FIRESIDE does not print advertisements generally known as "readers" in its editorial or news columns.

Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment.

Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published on the 10th and 25th of each month. Copy for advertisements should be received twenty-five days in advance of publication date. $2.00 per agate line for both editions; $1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2¼ inches; length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

Letters regarding advertising should be sent to the New York address.

Industrial Education

THE normal condition of childhood is a mixture of work and play in the ratio of one to three. Every child should be given work to do. This work, however, should be in the natural ratio, and should be child's work. It is on this account that many of us insist that the public-school system is radically wrong and must be changed.

President Roosevelt, great as he is in so many ways, has done this age and the nation no greater service than in the epoch-making messages relative to education.

The indoor, book-made, so-called mental-discipline method must give way to the constructive method. There must be a great increase of out-of-door, shop and laboratory work. The naturally active hands, with eyes, ears, muscles and nerves acting as servants, must not only be given work to do in the schools, but such work as will give skill to the labor eighty-five per cent of the children must perform when grown.

This kind of work, we have discovered, is the most natural mental discipline. It awakens the mind, fixes attention, cultivates memory and judgment, and, best of all, is true education.

The demand for this change in educational ideas and methods comes most heavily upon the high school. The high school is the people's college. The day has passed when it may be maintained at greatly disproportioned cost as a feeder to the college or university, or even to the technical school. It must be, first and chiefly, an end in itself. Its curricula must be revised to the extent that it may serve the whole people, rather than the institutions of higher learning.

Then will the fatally small per cent now graduating increase to a number somewhat adequate to the demands for skilled labor. Those who finish the course now must either go further or are thrust back into homes and fields of labor from which they have been led away by the training and ideals of the school-room. At present we lose the eighty-five per cent who do not enter the high school, or, entering, drop out during or just after the freshman year, and throw a large per cent of those who do persevere to graduation, upon society, untrained to take up the work belonging to their normal sphere. Such, as a rule, are compelled to wrest a precarious living from society by cunning wits.

Nowhere is industrial education more necessary than in the rural schools with a special application to agriculture. Why should the boy or girl whose future should be evolved where it was begun, on the farm, be taught something of every subject except the facts and methods of the one great subject he must apply afterward as a farmer?

Country-school directors are asleep. While many state normal colleges are giving special instruction in elementary agriculture, the country schools are slow in demanding such preparation in those whom they employ to teach country children. If you want your brainiest sons to become slaves of the city pavement, let the rural schools remain as they are. If you want them to become great farmers, change them.

Then, in addition to the really splendid work the schools are now doing in inspiring civic pride and a national consciousness, let us have the training of the hand for constructive work, and the laws and the constitution will find defenders in every byway, and no organization, whether of labor or of capital, will be other than stanchly American. We may stand uncovered when the national hymn is sung; we will go to the polls on election-day, and will have something to say before election-day relative to platforms and nominees.

But when one has sung "America" and saluted the flag, ever so noisily, in the school-room, but later goes out to blood-sweating toil, poorly paid, and getting nowhere; to dingy and unkept houses, and slowly sinks under the weight of a hopeless task, no martial music or breeze-flaunted flag will awaken any generous response.

* * *

In this Lincoln centenary, have all of us remembered that the Morrill Bill, by which agricultural colleges were established, was signed by the great Emancipator?

Investment in Railroad Securities

THE following statement by the president of an important railway of the Middle West has been going the rounds of the press:

> The farmer is remarkably prosperous and is making money every year. The conditions have changed entirely in recent times, and instead of selling the grain at the moment of harvesting, as was done in the days when the farmer needed cash, he now saves his production until there is a good market.
>
> The farmer has now a large store of savings, and the time is not distant when he will seek an investment for these funds. When that occurs he will naturally turn to the railway stocks and bonds and will become a shareholder in the corporations of which he is a patron. It will be a great day for America when the farmer begins to invest in railway securities.

This statement, specially prepared for wide publicity, is a typical sample in a nutshell of what is now being done on a large scale by Wall Street financiers to further their own ulterior purposes. There are some characteristic points in it to which we now wish to direct attention. First, the taffy about the farmer's remarkable prosperity; second, the untruth about the farmers generally holding their grain for a good market; third, the officious effort to teach farmers how to invest their savings, and fourth, the disingenuous suggestion that they buy railroad securities.

Wall Street smiles at the statement, because it is so cheerfully optimistic. Intelligent farmers smile at it, too, because they can see that it is sticky fly-paper. And so we ought to be happy all around. But if farmers could all have the opportunity of reading the mass of sworn testimony buried in the reports of the Interstate Commerce Commission showing how officials of this same railway company used funds belonging to the stockholders for the purpose of aiding the Grain Elevator Combine to control the handling of grain and to rob the producers, they would marvel at both their elasticity of conscience in handling other people's money and their enormity of gall in trying to induce farmers to invest their savings in railroad securities, or to trust them with anything—even within sight.

Now, there may be a striking though unintentional truth in the last sentence, "It will be a great day for America when the farmer begins to invest in railway securities."

It will indeed. For before that time comes the corporation laws of all the states of the Union will have to be revised honestyward, so as to make it reasonably safe for any small investor to become a railroad stockholder, and the control of the railway will have to be taken out of the hands of the manipulator who runs it with a stock-ticker on his desk. Until these things come to pass it will be unwise for the farmer to invest his toil-stained savings in railroad stocks.

* * *

There is a multiple ulterior purpose in the campaign now being carried on through the financial departments of magazines and newspapers, by inspired articles distributed by press associations, and in divers other devious ways, educating, advising, seducing the public to buy railway stocks and bonds and other securities listed on the New York Stock Exchange. First, Wall Street believes that the great Mississippi Valley is now producing enormous wealth, and it wants to handle, concentrate and absorb it. Second, the larger the number of investors in stocks and bonds, the larger the number of amateur speculators—lambs to be fleeced by stock-gambling operations—and the greater the incomes of stock brokers. Third, if the farmers, merchants and bankers of the Middle West become owners of the stocks and bonds of railways controlled in Wall Street, it is expected that they will oppose remedial railroad legislation in the several states of the Union.

Principally, however, it is only a part of the great, desperate struggle now being made by the "Interests" along every line of business activity—banking, transportation, insurance, trade, commerce, tariff revision Aldrichward, and so on—to maintain New York's financial supremacy over the great Middle West that has broken out of thralldom.

Back Talk to Lewis

Letters From Readers

EDITOR OF FARM AND FIRESIDE:—

Lewis' articles are just fine and timely. I would that our country had more like Lewis, free from cliques and political combinations. The truth must be told and contended for, or liberty will soon be only a name. There are few that can hit the nail at the center and drive it as deep as Lewis. They are rich. Let 'em continue to come. Then among your contributors, Fred Grundy is so plain and practical and unselfish. Wife and I esteem his articles very much. Postal savings-banks, parcels post and better public schools are some of our needs.

Arkansas. D. F. REDDING.

EDITOR OF FARM AND FIRESIDE:—

Let Mr. Lewis hurl his javelins, and may his arm be strong and his aim true. It is all right to tell us how to earn money, but it is even more important to tell us how to save it. No politics! Why, we farmers have been plodding along till we have grown gray of beard and stiff of muscle and let others do politics for us, and incidentally "do us." Mr. Lewis is a political detective—not a secret-service, but a public-service man—and we are the public whom he seeks to serve. He has learned the devious ways of Wall Street and the Capitol end of Pennsylvania Avenue, and "there are others." He gives out this information for our benefit and in such vigorous language as to make us "sit up and take notice." Agitators may not be safe leaders, but they are essential to any great reform.

California. H. H. HOPKINS.

EDITOR OF FARM AND FIRESIDE:—

I would like to see FARM AND FIRESIDE go into the home of every farmer of the land, that he might know the truth of the whole matter as it prevails at the Capitol of our great nation, as shown by Mr. Lewis' pen. The time is coming when the farmers of this country will find it out, anyway, and the sooner the better, if they will only allow it to soak in good, and then act according to their convictions.

If the common people are in doubt as to where justice and equality before the law have taken themselves, let them go to the Capitol of this so-called free and glorious nation and look in upon that dignified body called the Senate. They will find that what Mr. Lewis says is true, and more.

Of course, this is not the only reason that I wish FARM AND FIRESIDE a wide circulation, though the first reason would justify the wish, but for the enlightenment it carries to our rural people concerning their vocation.

West Virginia. J. B. G.

EDITOR OF FARM AND FIRESIDE:—

I am an old subscriber, having taken your paper many years. The page "In the Public Eye" was an excellent idea, a valuable acquisition to its contents. Other farm papers should adopt it. Fearless, able writers who tell the truth relative to the political affairs of our country are needed now, if ever, to enlighten the people. The combines or trusts have been allowed by both the republican and democratic parties to get so strongly intrenched in power that they are virtually above the law.

Your article "Guard the Water-Rights" is very timely and should be in every farm paper. A monopoly is seeking to control in a quiet way the entire water-power of the country, and beside it the combined trusts, large as they are, cut but a small figure in comparison. Our ancestors left us a fair land with great natural resources which greed and graft are fast depleting.

When one seventy-fifth of our population holds in its grip two thirds of the wealth of the entire nation it is certainly high time to sit up and take notice. Under the system of investment of the millionaires it is only a matter of time when the great lords of finance will practically own the earth. Farmers will become vassals upon the land they formerly owned.

Connecticut. HENRY GORDON.

In the Public Eye

What I Saw and Heard and Thought in Washington

By Alfred Henry Lewis

If you don't agree with Mr. Lewis, "talk back" to him, confining your reply to two hundred words. We shall hope to publish some of these replies from time to time.—THE EDITOR.

TARIFF, AS THE SENATE would seem to define it, is no more, no less, than the selfishness of localities concreted and expressed in a schedule. The senator who demands free trade for lumber, demands also locked-door protection for hides. Consistency has no place in the lexicon of the average senator, while principle in the higher sense is as little understood. Wherefore one finds our "statesmen" voting all over the tariff lot, shouting "Protection!" with one breath, only to cry "Free Trade!" with the next. The integrity of such as these appears to suffer from spotted fever. Nor is the malady confined to Republicans. Indeed, as one goes among the senators from Georgia, Alabama, Florida and Louisiana, with their lemons and their iron ores and their lumber and their sugars, it is found that the same spotted fever has made Democratic lodgment, and thus far defied the best efforts of the party doctors to cure. As the Senate roves from one schedule to another, you discover those fighting Mr. Aldrich to-day who followed him yesterday. The situation ebbs and flows for good or ill, as with a tide.

* * *

JUST AS ONE MAY MAKE a match and pull off a race with snails, so tariff, setting all in motion, has shown how much slower, in the sense forensic, one senator is than another. Some have gained, some have lost, by the recent competition. Mr. Borah was among those who gained. His speech in which he made Mr. Lodge climb, as it were, a tree, and drove Mr. Root into the underbrush, was one of the best things of the session.

Mr. Root did not come up to general expectation. This was because he is misplaced. The Senate, rough, butt-end in its methods, a place where only handspike work is done and a crowbar is more important than a dagger, was never meant for the keen, supple, light, finely-tempered Mr. Root. While in no sort comparable to that animal, he as little belongs where he is as would a cow on a front porch.

Mr. Aldrich merely held his place, which years rather than merit have appointed to be the head of the procession.

Mr. Dolliver was "jumped" forward several numbers.

Mr. Lodge is where he was, albeit in the coming of Mr. Taft he lost that artificial weight which has been his as the Senate mouthpiece of Mr. Roosevelt.

Mr. Hale hardly pulled his weight. His tariff business was to put a higher duty on wood pulp. He had few abetters, no admirers.

Mr. Tillman proved himself to be what he always had been, a tail to the New England kite in all essential things; while Mr. Daniel was only the polished echo of Mr. Tillman.

Mr. Guggenheim, Mr. Stephenson, Mr. Du Pont maintained their Senate ground. They were nothing but millionaires in the beginning; they were nothing but millionaires at the end.

Mr. Bristow, new as a senator, developed the possession of claws and teeth when baited by Mr. Aldrich and Mr. Root. Mr. Cummins made his income-tax speech and hardly kept the Senate from falling asleep. One on the heels of the other, full half the Senate passed through the chute of debate and were branded with every fashion of mark, from "A1" to "I.C."—which latter spelled out means "Inspected and Condemned."

* * *

REPRESENTATIVE MURDOCK OF THE HOUSE introduced a resolution. Mr. Murdock is a practical man from Kansas. Kansans roost close to the ground, and thus discover things the solvent merits of which escape soaring spirits circling ever toward the sun.

Mr. Murdock is reminding mankind, in these days when a deficit is growing, that away back in Andrew Jackson's time a rotund thirty-eight million dollars was split up among the states. There were only twenty-one states, and each got its slice of that thirty-eight million dollars. New York's measured up comfortably to an even four million dollars.

These moneys weren't given, but only loaned to the states, which left their "I. O. U.s" in the treasury, where, amid dust and cobwebs, they are to-day. Mr. Murdock is for having the general government notify those twenty-one states to come in with what they owe.

It is a wise thought and timely. That thirty-eight million dollars would build seven battleships and a flotilla of torpedo-boats. Also, there lies the broad Pacific all ready to sail them on.

That Mr Murdock, at the regular session in December, will push his resolution is sure. Kansas was foaled since that thirty-eight million dollars was cut up, and having had no receiving finger in the pie will have nothing to pay.

By the way, while Mr. Murdock is about it, he might as well add a clause to his resolution requesting Arkansas to pay back that original Smithsonian bequest of five hundred and fifty-five thousand dollars which she borrowed at six per cent somewhere in the middle forties.

* * *

THE SUPREME COURT had just descended from its learned perch, and was crossing from the court chamber proper to the robing—or disrobing—room. I paused in the Capitol corridor to see the jurists go by. I paused the more readily, since a rope had been stretched across for a moment, to the end that the judicial file be not broken in upon by the rabble rout.

The judges file by in their official robes, which look like a cross between a black bed-gown and a woman's waterproof cloak. They make an interesting procession. The little Carnegie-sized man, with long white hair, who struts in the erudite van, is Chief Justice Fuller. The giant who comes next, chewing gum, is Justice Harlan. Then there are Justice White, tall, burly, sporting a sky-blue necktie, very gaudy; Justice Peckham, bored, face white, grave, wan; Justice McKenzie, quick, alert, little, reminding one of everything except the bench; Justice Holmes, all stride and strength; Justice Day, small, frail, the sort the winds might blow away; Justice Brewer, who, more than do the others, looks the part.

As Justice Day, lean and little and fragile, his voluminous black robe fitting him like the oft-quoted sentry-box, disappears in the retiring-room, you think of the remark of Lincoln when he saw Alexander Stephens remove his overcoat:

"He's all husk!" observed the astonished Lincoln. "He's the smallest nubbin with the biggest shuck I ever beheld."

* * *

MR. BEVERIDGE OFFERED A BILL to appoint a tariff commission. I am not in favor of commissions. A commission commonly is a slow, dull, fog-bound body of obscurities which thinks and acts like a cow in a swamp and sinks to the mental hocks with every forward step. It is always invented to do the work that somebody else should do, and its real purpose is to save that inventive somebody from responsibility and perhaps condemnation. When the work is dangerous, or a crime is in contemplation, "statesmen" take refuge in a commission. If the work is safe, and honorable celebration sure, the "statesmen" do the work themselves. Let's have no tariff commission, selected by Money, controlled by heaven knows who. Congressmen are elected to make up the tariff bills. Let them do the work. We, the people plundered, can get at a congressman.

* * *

SENATOR ALDRICH to-day isn't looked upon as half the mechanic of tariff his Senate comrades had supposed. One of them possessed what bitterness and force of character were required to tell him so.

"I had thought you a teacher of tariff, Aldrich," said the critical one. "I now see my mistake."

"Yes," replied Mr. Aldrich dryly. "But you should not have been misled by my position. You must understand that I'm in the tariff business a good deal upon the same argument that once set Tom Reed to teaching school. A paper, to which Reed had contributed an article, printed a facsimile of one of his sheets of copy by way of illustration. 'It made my blood run cold when I saw that picture,' Reed remarked to the editor. 'I'm the worst speller in the world—as bad a speller as ever was Marlborough or Washington or Napoleon or Jackson. When I saw that picture of a page of my copy I felt sure that it would show at least half a dozen misspelled words.'

"'You surprise me!' replied the editor. 'You say you can't spell; and yet if I mistake not, you once taught school.'

"'Certainly I taught school,' agreed Reed; 'but I made no secret of it at the time that I taught school, because I needed money, not because I could spell.'

"While our cases differ in several respects," concluded Mr. Aldrich, "the explanation of why Mr. Reed taught school may be taken as explanatory of why I make tariff bills."

* * *

IN AND OUT OF THE STATE DEPARTMENT, among folk official and unofficial, there is the wide-spread belief that Cuba will not stand alone upon its own unsupported legs a twelvemonth. There will be a little sputtering flash of rebellion; no one will get hurt; there will occur much jabber and no blood, and Cuba will fall backward into the arms of her Uncle Sam.

And the reason is this: Every Cuban man with a dollar has his eyes upon this country, and is eager to "join." Already they have a saying in Havana, "Stand a Cuban on his head, and if a peseta roll out of his pocket he's an annexationist."

The foreign capital in Cuba is about three hundred million dollars; the local capital, five hundred million dollars more. Every dollar of that eight hundred million dollars wants to come in under the protecting pinion of the eagle. Those who own that eight hundred million dollars of capital believe, were "annexation" an accomplished fact, every Cuban value would be multiplied by three. In short, that eight hundred million dollars would swell overnight to two billion four hundred million dollars if Cuba could but call herself part and parcel of the United States. With that the common Cuban belief, how should you expect to head off annexation?

Patriotism?

It is often of the pocketbook. The more, too, as you edge toward the equator.

Patriotism when all is in is but a selfish virtue. Colonel Dunc Cooper, recently on trial in Nashville for the killing of Senator Carmack, once told me a story in illustration of this. Colonel Cooper belonged to General Forrest's command. On one close-shave occasion the Yankees had been chasing them for two nights and a day. It was rain and snow and slush, and the mud was up to the saddle-girths. Hungry, without sleep, they pressed forward, the inveterate Yankees crowding their retreating hocks.

Finally a gentleman named Evans drew up alongside of Colonel Cooper. Mr. Evans was a private soldier; his home was in Nashville; also he was deeply worked up. Turning an indignant face, he said:

"Look here, Dunc Cooper, that's one thing I want everybody to understand. This is the last blanked country I'm ever going to love."

And so will it be with the Cubans. Thinking of self, believing that a short cut to riches is to be found in annexation, no consideration of mere "country" will serve to stay the movement. Within the year, those who should know most of Cuba and Cuban feeling look for the Cuban flag to disappear, and what places have known it to be filled by the Stars and Stripes.

For myself the prospect does not rejoice me. We've got enough and more of these black-and-tans as it is. I would sit up all night to open the gates for the coming of Canada, or even far-away Australia. They, the Canadians and the Australians, are of our own tribe, our own family. The Cuban, slight, flighty, only half wise and half honest, doesn't in the sense racial hail from our side of the mountain. To bring such into the Union is but to muddy the national stream.

* * *

COMING TO PURE FOOD, it should rejoice the general soul to know that Doctor Wiley was not dismissed. Doctor Wiley, chief of chemistry for the Department of Agriculture, had said that benzoate of soda was a poison. Standard Oil produced benzoate of soda. It complained of the pernicious honesty of Doctor Wiley. For the moment it looked as though he must go, for truth-telling is the crime most relentlessly punished in Washington. This time, however, it didn't work. Through some unexpected failure of injustice—I hope some proof-reader won't change that to "justice"—Doctor Wiley was asked to remain. Standard Oil retired beaten, gnashing its Rockefeller teeth.

The Mystery at Caldwell

By Elizabeth Janes Budgette

MRS. FISHER'S wealthy daughter had arrived, and the neighbors noted with interest the number of trunks that were carried in, and the grandeur of Mrs. Dunn's traveling toilet, for the yearly visit which this lady paid to her old mother always caused a stir in the little town of Caldwell.

Any Caldwellite could give you a brief but comprehensive history of this grand visiting lady. She had been just plain Mary Fisher, poor, none too young, and not a very nice-tempered girl, when some twenty years ago she had married Will Dunn. They had gone away, and for years had been poor enough. Then things changed; Mr. Dunn had prospered, making a fortune, and now every summer Mrs. Dunn came with endless dresses and gorgeous diamonds to dazzle the eyes of her former townswomen.

This annual visit to her quiet old mother was undoubtedly as great a pleasure to Mrs. Dunn as it was to the pretty, coquettish daughter who accompanied her. Florence Dunn was a most lovable little creature, adored and admired by young and old. More than one heartache she had caused in Caldwell, but so smiling and sweet and elusive was she, and so free of guile, that though heartbroken, the youth of the town forgave, and went on loving her.

Mrs. Dunn had positive plans for her daughter's future. Florence's marriage when it took place should be a brilliant one. Though she and her rather wilful daughter had not always agreed on this point, so far there had been but one occasion for any anxiety in regard to Florence's matrimonial inclination, and this had been during their previous summer's visit. There had come to Caldwell about that time a young Doctor Brown, who, though neither young nor rich, had pleased little Florence. As for the young doctor, one glance, one look into her gray eyes was enough. He actually had the temerity to ask the formidable Mrs. Dunn for her daughter's hand, and needless to say had been refused.

Mrs. Dunn knew her daughter's changeable disposition well, and acted in this case with good sense. Packing their trunks, she had quickly carried Miss Florence back to their home and so surrounded her with gaieties that her daughter soon recovered her former lightheartedness. The poor young man in Caldwell, however, seemed to find life dull enough. He grew thin and silent, and finally gave up his small practice and left the town. Mrs. Dunn was relieved to hear of his departure, and as there was no doubt of the heart-wholeness of her pretty daughter, she prepared for a visit of more than usual éclat.

Sweeter and more arch than ever did Miss Florence look to the admiring friends who gathered on the lawn after tea to welcome her. Walter James, her devoted slave for years, seemed unable to take his eyes from her. All the gossip of the past year was discussed and plans for future merrymakings were numerous. Her cheeks were brilliant and her eyes shone, and Walter, who lingered till the last, received a smile in parting. Turning away, she went to her own room.

It was quite dark there, but the moonlight flooded the adjoining room, which was her mother's, and after a time she crept in there and sat on the window-seat. Her merry mood was gone and she remained long silent and with bent head.

She heard her mother say good-night to her last caller, and then she and Grandma Fisher came in and shut the front door. Florence also heard Mrs. Dunn say that it was late, and knew by the sounds that the house was being shut up for the night, a matter to which Mrs. Dunn always gave the most careful attention. She lived in fear of burglars, for her diamonds were always in her mind.

The locking up seemed to take some time, but Florence was too deep in her own thoughts to notice it. Her little hands moved restlessly in her lap, and as she looked at them an idea appeared to strike her, for she started up from the window.

Before long Mrs. Dunn came up and found everything quiet. Florence was in bed, and soon perfect quiet reigned throughout the house.

Mrs. Dunn's slumbers were heavy, but not pleasant ones, for her waking thoughts entered into her dreams, and after shifting visions of croaching figures and flitting shadowy forms, she settled down to a regular nightmare.

The hideous form of a man with a blackened face was creeping under her bed, and in his hand, which lacked most of its fingers, he grasped a long, sharp knife. This he began slowly inserting into the mattress directly under her, while every nerve in her body waited for the moment when the sharp point would pierce her back, and yet she could neither move nor call out. Gradually, through minutes which were hours of torture, it came up, until at last she could feel the very spot in the mattress raised up, and the next instant— Oh, horrors! what was that? A fearful din, followed by a wild cry and a stifled moan, then dead silence, which was again broken by agonized shrieks of "Help! Murder! Murder! Fire!" and presently Grandma's feeble voice crying for help.

Mrs. Dunn had started from the horrors of her sleep to the worse reality of waking. Dazed with terror and those awful cries filling her ears, she rushed to the stairway, but when half-way down something held her feet back, and with a fearful noise and jar she fell, or rather rolled, to the bottom.

The neighbors were startled out of sleep by the noise and frantic outcry from the Fisher house. Mayor George, the Fisher's next-door neighbor, a man of quick thought and action, had been the first to collect himself. He dressed hurriedly, grasped a pistol in one hand and a lamp in the other, and rushed to the rescue.

Two neighbors followed him, and the three tried the front door first, but finding it firmly fastened, they hastened to the rear, where one of the kitchen windows was found wide open. The floor was covered with Grandma's tinware; dish-pans, sauce-pans, even nutmeg-graters and tea-strainers were scattered everywhere. In the middle of the floor lay a little shoe, and at the foot of the back stairway was its mate, while down the stairs trailed a clothes-line looking very like a long worm.

Our rescuers observed these things more closely later on, however, for entering by the window, they had hastened to the dining-room door. The Mayor, who was ahead, turned the handle and pushed the door open, which action was followed by a loud clatter and clang, such as had first startled them all, and now called forth hoarser screams from some one up-stairs. Even the Mayor was appalled; but when they bravely entered, prepared to kill if necessary, there was nothing to attack but a heap of tinware that appeared to be strung on a rope, one end of which was tied to the handle of the opened door, and the other to that of the door leading to the front hall.

Poor old Mrs. Fisher lay a helpless heap in the middle of her bed, but save for her fright, she had no hurt. She could only gasp that there were burglars in the house, and the men hurried on into the front hall, fearing from the groans they heard that some one there was in need of instant aid. At the foot of the stairs lay the half-fainting and moaning form of Mrs. Dunn. Her face could not be seen, for her head was rudely crammed into a large tin sauce-pan, her feet appeared to be wrapped in rope, and one of her hands was thrust into a little tea-kettle. A number of such utensils lay scattered about her.

That the house was full of something mysterious, all felt convinced by this time, and when at last the Mayor tried Kitty's door up-stairs, no sight would have much surprised him.

It was locked fast, and the louder the Mayor shouted his name, the louder Kitty, the Irish servant girl, screamed. Finally she opened her door and showed a face purple with crying.

Evidently, whatever the danger, no one was hurt nor was the house on fire. Kitty, still sobbing, began to tell her story, for she appeared to be the only one who knew anything of the burglars.

Meanwhile Mrs. Dunn, surrounded by other neighbors who had come in, was examining her trunks. They were all locked, but the keys were not in the place where she had carefully hidden them. A short search discovered them on the floor near one of the trunks, and the first glance at their contents showed that they had been disturbed, for the clothing was tumbled about, and the long, flat case in which Mrs. Dunn kept her money and jewels was missing.

Kitty said she had been awakened by some one brushing past her door, and distinctly heard the back stairs creak. Greatly frightened, she had crept from her bed, locked the door and turned up her lamp, which she confessed she had left burning, when there was the most terrible fall and struggling noise in the kitchen below, and that scream and moan which had aroused the whole house.

"The first yell was like one murthered," explained the excited Kitty, "an' the next like the poor crather had cotton down her mouth."

The last expression caused several to look around for some one, and Grandma's trembling voice asked, "Where is Florence, Mary?"

Mrs. Dunn, who had just discovered the loss of her jewels, looked up blankly. "She is here in her room, isn't she?" she gasped, and as murmurs of "No, I haven't seen her. She's not in her room," went around, the poor woman became almost frantic.

A hasty search in Florence's room failed to discover her, nor was she in any other room up-stairs or down, and after all sorts of impossible places had been searched, it was plain that she also was missing. The thieves had evidently gone through her trunk, too, for it was in disorder, and all her little trinkets and purse had been taken.

By this time the gray light was dawning, and the men were searching the premises. The entrance and exit of the thieves appeared to have been made through the kitchen window, and they had escaped by the back yard and alley. The ground was too dry to show footprints, but the back gate was open, and up to it in the dust were wheel-tracks. They then had had some sort of a vehicle waiting for them, and the Mayor and the sheriff, who were indefatigable, considered this most important.

Mr. Dunn was telegraphed for and told to bring detectives, while the Mayor himself sent messages to the neighboring towns.

About eight o'clock the Mayor, who was with Mrs. Dunn, was motioned out of the room by one of the neighbors. The man did not speak until they were out of the house, when he turned a white face to the Mayor, and while hurrying him around the house, said huskily, "We have just found something back here, but don't tell that poor woman. I am afraid it means murder, George— See!"

They had come to the kitchen window, where two or three others were standing and looking at something on the sill. There was a smear, such as a bloody hand grasping the outer sill would make, and the other was a small red spot. The ground leading to the gate was carefully examined, and no stain was found, but on the upper bar of the gate were some faint finger-marks, doubtless made by the same hand in pulling the gate open.

All now felt sure of poor Florence's fate, but with what was meant for real kindness this last discovery was kept from Mrs. Dunn. As soon as she had been able to talk she had explained to them that the network of stretched rope with tins strung upon it, the thing which had puzzled them all at first, had been an invention of her own, the plan of a burglar-alarm which had come to her like an inspiration when she locked up for the night. Grandma's one hobby was bright tinware, so she had had more than enough for her plan of defense.

The weary hours of the day dragged by, but no word or telegram gave the slightest clue. Mr. Dunn, looking haggard and worn, came on the evening train, bringing with him two detectives. All there was to tell was quickly told, and the detectives began at once their examination of the rooms. Mrs. Dunn now knew all, and her grief was pitiful to see. Her husband, pale but calm, sat beside her, while the Mayor and a few others remained with them.

Suddenly the movements up-stairs ceased and some one came down, while at the same time hurried feet were heard on the porch, the front door burst open, and Mr. Dunn was confronted by Walter James and a detective. Each held something white in his hand, and Walter was greatly excited. "It's her writing! I know it!" he said breathlessly. "I was in the post-office, and they asked me to bring it down."

Mr. Dunn knew the scrawling hand well, but he was shaking so he could not open the letter, and his wife, more calm at that moment than he, took it.

"Here, sir," said the detective in his turn, "read that. We found it behind her dressing-table. It was likely pushed off the table in the confusion." But Mr. Dunn was already reading aloud in a trembling, dazed sort of way the few lines the paper contained.

"DEAR MAMA:—

"I am so awfully sorry that there is no other way for Doctor Brown and me to get married but to run off. It did not seem so hard to do when we first thought of it, but now just at the end I feel dreadfully, for I do love you very much, dear mama.

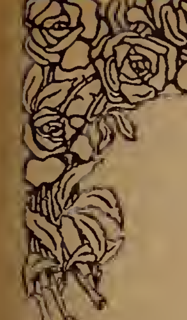
"We are going to be married on the way to Cleveland, and then go right to papa, and I know he will like Jack. Perhaps he won't right at first, but I know he will before long. I wish you would, too, dear mama.

Your loving

"FLORENCE."

Such was Mr. Dunn's excitement that his voice rose high at the end; and he eagerly seized and devoured, only this time silently, the letter which in her amazement his wife had dropped.

[CONCLUDED ON PAGE 15]



The New Maid—Jane

By Annette Norton

In Mrs. Van Rensselaer-Tuller's green-and-gold drawing-room they were discussing the opera, the club and the latest book. No one gave a thought to the time, until the pretty hostess, glancing toward the little golden clock on the mantel, noticed that it was already long past the appointed hour.

"Oh, dear," she exclaimed, "why can't people come on time? It is so annoying, although I am not so much surprised at Hortense. Great heiresses are apt to be capricious. She'll stay away altogether if the fancy strikes her. Wouldn't that be too unkind—when I have planned it all so nicely, and Gerald Dare is here? And Bess?"

"Oh, where was she?" asked Bobbie Carhart. "Or, rather, where is she?"

"I never knew her to be late."

"Nor I," sympathetically.

"Don't grin, Bobbie—it's tragic, I tell you. The dinner will be either cold or overdone. I can't imagine what's keeping her."

"Some pet charity," he suggested, "or—"

"Oh, by the way," Mr. Van Rensselaer-Tuller had sauntered up, "speaking of Mrs. Bartlett's charities, you know—have you heard about our new second-girl?"

"No, not another?" protested Bobbie; "why, Van, the procession of Marys and Kates and Annas and Maggies you've had recently has been something meteoric."

"So it has," admitted the head of the house, laughing, "but wait till you see this one. I've only seen her once myself—she's been here just two days—but, Bobbie, she's a jewel!"

"Her eyes don't shine like diamonds, do they?"

"Well, you'd better believe they just do, and what's more, she has golden hair—the kind you read about. All fluffed and puffed and shining 'round her face like—"

"A halo?" breathlessly.

"A crown of glory."

"Same thing, old man. But say," Bobbie was getting interested, "Mrs. Van, when will this vision of loveliness appear?" appealing to the lady who had once more turned her attention toward the clock.

"If you can possess your soul in patience, my dear Robert, for just five minutes longer," she answered blandly. "We'll have dinner then, Hortense or no Hortense—Bess or no Bess."

"Oh, Mrs. Van," the chorus came from all sides, "dinner without Bess—as well Hamlet without Hamlet—"

Yet "the late Mrs. Bartlett," as she laughingly called herself, was destined to come tripping down the broad stair with two full minutes to spare—indeed, even now she was under the very roof with them, and standing in the little hall, two flights up, giving hurried instructions to a tall, blonde person in cap and apron, who held a silver tray in one hand and listened attentively.

"Now, Jane," the little lady was saying, "you must not forget a thing I've told you, and let them know by your awkwardness that you've never been out to service before. I've given you such a splendid recommendation that you'll have to live up to it somehow."

"Yes, ma'am. Thank you very kindly, ma'am," rejoined the maid.

"Remember, you must stay in your place, which is not at all at the head of the parade. Just speak when spoken to, and whatever you do, Jane, don't laugh at the jokes. Now there, I think that's all—turn around once more, till I see how you look."

The girl turned gravely.

"Yes, you'll do," was the smiling verdict. "The cap and apron, badge of servitude that they are, might be more unbecoming. I must say that you look very nice, Jane."

Jane dimpled suddenly. She was very pretty when she smiled.

"But you needn't be so self-complaisant if you do," declared Mrs. Bartlett sternly. "Remember, too, Jane, that you're deaf, dumb and blind—to all tender glances, you understand. But there, I must go; Clara will be so worried. I will slip down to the dressing-rooms and they'll never know but that I just came in—so good-by, Jane, and good luck to you." The laughing echo rang through the long hallway, as the girl stood still for a moment with the question in her heart, "After all, had it been a mistake to come here? Had she been very foolish to attempt it?"

The company, when seated at last, was a distinguished one—and in number just thirteen. Some one, half unconsciously, had counted aloud. Then the hostess turned pale 'neath the rosy-shaded candles, and there was a moment of blank silence, when every one sat staring at that empty chair beside the returned globe-trotter, Gerald Dare. It seemed a menace upon their merriment. There was premonition of approaching disaster in its every line. In the next moment men and women had plunged wildly into a vortex of small talk, all seized with a laudable desire to dispel the chill of superstition, and Judge Dare, the white-haired guest of honor, took up the conversation where it had been broken off.

"I tell you it's the book of the year." He glanced about as though challenging any one to dispute his word. "And I, for one, would like to take its author by the hand and tell him so."

"Him!" chorused the guests, while Mrs. Van Rensselaer-Tuller explained, "Why, Judge, the author of 'Whom First We Love' is a woman."

"And a very beautiful one, too." Belden Lee, of the 22d Infantry, spoke with the air of one who knew.

"Have you met her?" "Belden, lucky boy!" "What's she like?" a volley of interrogation before which the gallant soldier went down like before a Filipino ambuscade.

"Well, no, I didn't meet her," he was forced to admit, "but Reddy did, and you should have heard him rave. Told me about her eyes—said they were the color of the sea after the sun had gone down, though its brightness still lingered. Oh, Reddy did wax poetic whenever her name was mentioned, and one time he said—"

But what Reddy said will never be written, for there was a choking gasp from the doorway; the clatter of bouillon-cups as they went sliding across a half-tilted tray; the momentary glimpse of a tall figure in white; then the sound of footsteps, as some one banged the door and ran away down the corridor.

Bobbie Carhart voiced the unspoken question that was in every one's mind:

"Ghost, Van, or family skeleton?"

"Just our new second-girl," that gentleman reassured them; then to the lady beyond the candelabras "Are all her advances and retreats thus hurricanic, my dear?"

"I'm sure I can't understand it in the least," she answered, wrinkling her brows at the unconscious Mrs. Bartlett, who was just now regarding her empty plate with a more than passing interest.

Mrs. Van Rensselaer-Tuller was not by half so unconscious as she appeared, and her foot tapped the bell with impatient emphasis that sent a sharp ringing down the kitchen stair till it reached the ears of the girl, who, after carefully placing her tray upon the broad landing, had thrown herself into a little huddled heap beside it, and covering her face with both hands, was sobbing again and again, "I won't go in! I won't! I can't face them! Oh, why did I come here?"

Yet when the little bell rang out its summons once again—more sharply this time—she knew that Fate still held her fast. She was Mrs. Van Rensselaer-Tuller's second-girl—deaf, dumb and blind to all that went on within that charmed circle—what could she do but obey?

Every eye was upon the girl as she entered the room, yet this time she did not falter or draw back, but kept steadily on her slow journey around the long table, serving each with a deftness and a dignity which made them feel just the least bit uncomfortable when they realized how rudely they were staring; that is, all but one among them, for after that first breathless moment when brown eye had met blue, and inquiry, reproach and challenge had flashed between, Gerald Dare had been studying his glass with that inscrutable smile of a man who knows more than he will tell.

Without seeing her, her very nearness cried aloud to him, and he knew that she was close beside him now, the last cup held with fingers that were trembling sadly. He laughed suddenly, just a hearty, boyish laugh with gladness ringing in it, then laughed again, and cried, "Won't you sit here beside me, Jane? Thirteen's such bad luck, you know." And before they could guess what was happening, he had caught the girl by both shoulders and drawn her into the empty chair.

The ladies shrank back in sudden horror, while the men stared at one another, not knowing what to say, nor, indeed, whether to say anything at all. The white-haired father was upon his feet in an instant, his Southern blood fired with this unpardonable thing, while the girl cried and covered her burning face from their sight. Gerald smiled calmly through it all; even when the uninvited guest broke from his detaining hand and was gone through the great swinging door, he made no attempt to follow. Indeed, he did not so much as glance after the flying figure, but faced the little party still with that smile upon his lips, a sudden light in his brown eyes.

"Now, sir, perhaps you'll be kind enough to explain," the storm broke at last, as the Judge stood towering over the table, too angry to consider anything of the proprieties. "If you have so far forgotten yourself, sir, let me remind you that you are in New York—New York, sir, and civilization. I'd like to know what you're smiling about? The situation strikes me as anything but humorous. You are insolent, sir, insolent—and either you leave the table—or I will—"

"Don't disturb yourself, father; I was just going," he said; and before his hostess could protest, he was gone.

The irrepressible Bobbie was first to recover. "If I don't have palpitation of the heart before I get out of this—" he confided to Mrs. Bartlett. "They say Dare had a touch of jungle-fever a while ago—suppose that accounts, though I don't blame him much. She's pretty enough to turn anybody's head, is Jane."

"Bobbie," she told him under cover of the confusion, "you're a fellow of rare good judgment—and so is Gerald Dare, though I must say he carries things with a high hand. But look! Quick!"

Bobbie obeyed. He turned—he saw—then collapsed meekly into his chair, and uttered a despairing "Help!" for there before him, before them all, stood the calm hero of twenty-two tiger-hunts, his arm resting lightly across the shoulders of . . . Mrs. Van Rensselaer-Tuller's second-girl.

No one spoke—no one stirred—no one seemed even to breathe—all sat staring, fascinated—dumbfounded—until there was a sudden sputtering and choking from the head of the table. Judge Dare was trying hard to vent his wrath in words, yet could only stammer out:

"What . . . What is this, sir? Who . . . Who is . . . this . . . this person?"

"This person?" Gerald turned toward her, and there was a manly tenderness ringing in his voice as he said, "This person is—my wife that is to be."

"Enough of trifling, sir," roared the old gentleman. "Her name?"

"Is . . ." Gerald Dare took from his pocket the dainty volume which had lain on the library-table, and turning leisurely to its title page, read, "Langdon Wells." Then, laughingly pushing the girl forward, "'Whom First We Love' is the book of the year, father. Won't you take 'him' by the hand and tell 'him' so?"

But she drew back, her great eyes fixed in wonder upon his face. "Oh, Jerry, you knew?" she cried.

"How could I help it, dear," he answered her. "Wasn't it Geneva, with its blue waters and bluer sky? Wasn't it just you and I all through the pages and that summer-time when we grew to know and love one another? That day was there, too, when—like the hot-headed fool I was—I wouldn't let you explain the breaking of some trifling engagement, but rushed madly off, to climb mountains and shoot tigers, and delude myself into thinking that I could forget."

And then they all knew that it was true. That they had been entertaining an angel unawares—or, rather, a gifted author in search of copy. Bess was beside her, and every one came crowding about to tell her how proud they were to meet her, and what a lucky fellow Dare was; and that Mary Ellen, the housemaid, must serve the long-belated dinner—for Mrs. Van Rensselaer-Tuller's second-girl, with cap and apron, and blue eyes sparkling, was now the guest of honor.

The Mystery at Caldwell

[CONTINUED FROM PAGE 14]

Exclamations and questions were poured out about him, but he read on to the end; then, going to his wife, who sat very pale and quiet, he kissed her.

"The child is safe, Mary," he said with tears in his eyes. "Read the letter." Mrs. Dunn took it and read.

Friday Morning.

My Very Dear Mama:—

I don't know just how to start, but I guess I had better begin right from the beginning and tell you everything.

First of all, though, I hope you found my note all right on the pin-tray.

You see, mama, it all came about in this way because I cared such a lot for Jack. At first, when we went back to Cleveland, I thought I couldn't live, and used to cry every night—which you didn't know, of course—and Jack says he felt just the same despairing way, and one night he really thought he would shoot himself. Wasn't it awful! Well, then he came away from Caldwell, and where do you think to? Why, to Cleveland, and I used to see him almost every day. The first day I saw him I was so happy that I knew you would notice it, so I got some red pepper from the cook and made my eyes weepy-looking. Then we had the greatest fun making our plans, and Jack wanted to run off at once, but I thought it would be nicer if it happened at Caldwell and people wouldn't have so much to talk about at home.

So it was all fixed that Jack was to come with a carriage and we should go off the first night. He was to wait at the kitchen window and I would come down the back stairs. Then I had put a dark dress and my sailor hat in the trunk when you didn't see, for I was not going to be married in anything gay.

I went to bed all dressed up. It was miserable to lie still and wait until one o'clock, but at last the time came. Then I went ever so quietly, for I didn't put on my shoes, but carried them, when all at once I fell over some things in the stairway, and there was the fearfulest noise. I was almost frightened to death, and screamed out loud. If Jack had not already worked the old latch back and had the window opened, I should have screamed more; but he jumped in and put his hand on my mouth. Then he pulled me through the window, and we ran to the buggy; but I felt so badly about you and about my not having any shoes, for I had dropped them when I fell, that I cried for a good while. Then I had hurt my nose, too, when I fell, and it bled dreadfully, so that Jack's hand was all covered with blood. I almost fainted when I noticed it, for it seemed awful; but Jack was lovely in comforting me, and at last, when I had to confess about the shoes, he never even smiled, but said, "Oh, that can be fixed," as if it was nothing at all. He bought shoes for me as we came through Carroll, and he turned his back when I put them on, too. He is so nice and thoughtful, mama.

At Bellville, Robert Dow, a friend of Jack's met us, and Mr. Dow, his father, who is a minister and very nice, married us. We left the carriage with them and came right off on the train, for I did want to see papa so much. Jack and I do want to be loving children to you if you will only let us. If I have given you anxiety and disappointed you, I will try to make up for it in the future; and if you and papa will still love me, and I have Jack, too, I shall be the happiest girl alive. With a heart full of love,

Your own daughter,
Florence Brown.

P. S.—Oh, I almost forgot to say anything about your jewel-case, and I do hope you haven't missed it. It is under the mattress of your bed. Last night before you came up-stairs I happened to think of the ring papa gave me on my birthday, and I wanted to take it with my other little things; so I took the keys from Grandma's shoe in the closet, and hunted in your trunks for the jewel-case. I had to open all three before I found it, and then I was in such a hurry and so afraid that you would come up and ask me questions, that I locked the trunk without putting the case back. You did come in a minute, and I had dropped the keys somewhere, and couldn't find them, so I pushed the case under the mattress and ran to my bed. It was a sneaking thing to do, and I am afraid, too, that the sharp handle on top must have poked up the mattress and made you uncomfortable all night. I hate myself for having done it. F. B.

In the privacy of their room that night Mr. and Mrs. Dunn had a long talk over this letter. What explanations they could make to their friends had been made. Indeed, Mr. Dunn had shown much skill in his treatment of the matter; still, both felt anxious to leave Caldwell as soon as possible. Mr. Dunn had also telegraphed to the young couple a kinder message than his wife could have brought herself to send.

A DELICIOUS DRINK

Baker's Cocoa

made by a scientific blending of the best tropical fruit. It is a perfect food, highly nourishing and easily digested.

Registered, U. S. Pat. Off.

52 HIGHEST AWARDS

Walter Baker & Co. Ltd.

Established 1780 Dorchester, Mass.

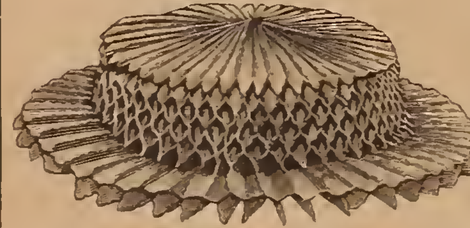
The strength of a child

It is surprising to find how few parents know the great strength giving qualities of good oatmeal. Most of them think of it as a food for the sturdy Scotch or the brawny Englishman, and overlook its value as a food for children. Every now and then a mother will take to feeding her children on Quaker Oats and will be astonished at their improvement in strength and vigor. Of course, she tells her friends, and they prove it for themselves, but every mother in the country should see that her children are strong and vigorous. Plenty of Quaker Oats, eaten often, will do it.

Grocers sell Quaker Oats in regular size packages at 10c, the family size packages at 25c, and the family size package containing a piece of fine china for 30c.

Don't miss a day; eat Quaker Oats every morning for breakfast.

Folding Summer Hats FOR YOU



We want every FARM AND FIRESIDE reader to have at least one of these **Folding Paper Hats.**

They fold flat, and when not in use can be carried in the pocket. Unfolded, you have an ideal summer hat—light, airy and cool.

Just the thing for **Carnivals** and **Fairs.** Amusing, yet serviceable, every one should have one.

Our Offer

Send us only six cents in stamps for a sample and our Agents' Offer.

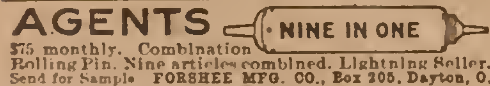
John L. Thompson, Sec'y.
Springfield, Ohio

Agents Wanted

AGENTS PORTRAITS 35c, FRAMES 15c, sheet pictures 1c, stereoscopes 25c, views 1c. 30 days credit. Samples & Catalog Free. Consolidated Portrait Co., 290—81 W. Adams Street, Chicago

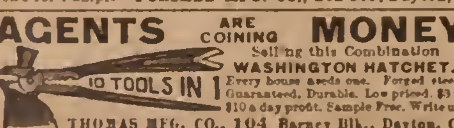
$4.00 A DAY SURE Selling this wonderful Noodle Cut... ...ls at sight. Mrs. M Pickerel... ...small town. Cleared $61.50. You can do as well. W... show you how. Write for Free Outfit. ANCHOR MFG. CO., Dept. G, DAYTON, OHIO

AGENTS WANTED Men or Women to sell Consumers. Big Profits. Groceries, Coffees, Teas, Extracts, Perfumes, Soaps, etc. With or without premiums. Write for catalogue A. Bushway Flavoring Extract Co., 951 N Water St., Decatur, Ill.



AGENTS $75 monthly. Combination Rolling Pin. Nine articles combined. Lightning Seller. Send for Sample FORSHEE MFG. CO., Box 205, Dayton, O.

AGENTS ARE COINING **MONEY** Selling this Combination WASHINGTON HATCHET.



Every house needs one. Forged steel. Guaranteed. Durable. Low priced. $3 to $10 a day profit. Sample Free. Write us. THOMAS MFG. CO., 104 Barney Blk., Dayton, O.

The Household

With an Egg and a Cup of Milk

It is surprising how many good things, sufficient to serve two or three people, can be made from an egg and a cupful of milk with a few simple additions. Here are some more worth-trying recipes to paste in your cook-book:

Popovers

One egg, one cupful of milk, one cupful of flour and a pinch of salt.

Beat together in a deep dish with an egg-beater until light and foamy, place in heated muffin-tins, and bake in a hot oven for fifteen minutes. They do not rise until nearly done.

Wheat Muffins

One egg, one cupful of milk, one cupful of flour, one teaspoonful of baking-powder, one half teaspoonful of salt, one teaspoonful of melted butter and one teaspoonful of sugar.

I use the egg-beater in making the muffins, also. The muffins are improved by beating the white of the egg separately and adding it last.

Cup Custard

One egg, one cupful of milk, one tablespoonful of sugar and nutmeg to flavor.

Put in two or three custard-cups in a pan of hot water, and bake in a hot oven until firm and nicely browned.

Custard Sauce

Yolk of one egg, one cupful of milk, one tablespoonful of sugar and one teaspoonful of corn-starch.

Beat the yolk of egg, sugar and corn-starch together with a little of the milk; heat the rest of the milk, and pour into the mixture, then bring all to the boiling-point. When cool, pour over lady-fingers or sponge-cake. Beat the white of the egg with one tablespoonful of pulverized sugar, and place on top.

Cream Pie

Use the above custard sauce for a small pie, cooking it first on top of the stove.

Italian Cream

One cupful of milk, one teaspoonful of gelatin, one tablespoonful of sugar, one egg, one half teaspoonful of vanilla and two tablespoonfuls of cold water.

Soak the gelatin in cold water for thirty minutes. Let the milk come to a boil. Beat the yolk of egg and sugar together, and stir into the boiling milk. Take from the fire, and add the gelatin and vanilla. When slightly cool, add the white of egg beaten stiff, and stand aside in a cool place to harden.

Cherry or Raisin Pudding

One egg, one cupful of milk, one cupful of flour, one teaspoonful of baking-powder and a pinch of salt.

Mix as for popovers. Add as many cherries or raisins as the batter will hold, and steam one hour. Or use one and one half cupfuls of flour, and bake twenty minutes. Serve with hard sauce or cold fruit sauce made from sweetened fruit-juice thickened with corn-starch.

GRACE L. WENTZ.

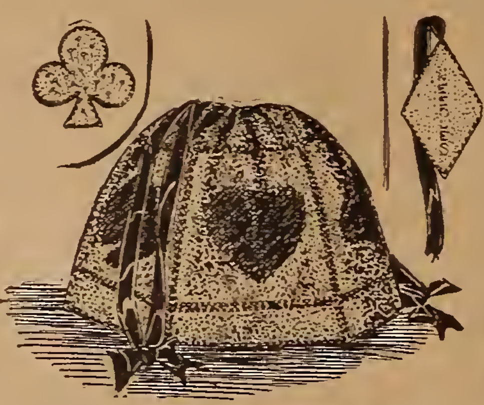
Red Tomato Catchup

Most housewives admire the clear red color of store tomato catchup, and are unable to make theirs as red. Spices improve the catchup, but ruin the color, and few have learned the simple remedy by which a compromise is effected and both flavor and color retained. This is simply to boil the whole spices in a common soap-shaker, bought for the purpose. This has perforations small enough to retain the spices, but large enough to transmit their strength to the catchup, and by its use both the flavor and the color of the catchup is retained. Try this method the next time you make catchup with ripe red tomatoes.

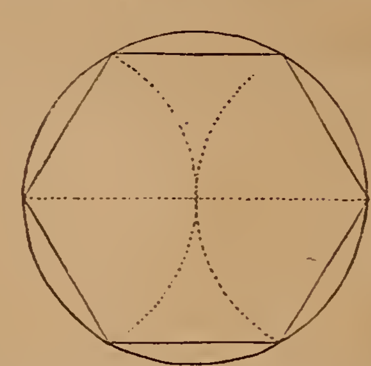
Embroidered Canvas Bag

The work-bag shown in illustration No. 1 would prove very useful to any woman blessed with a quantity of sewing and mending, as the convenient width of its bottom affords ample room for work to be folded and placed within the bag. No. 2 illustrates a good way to measure and cut a cardboard hexagon for the bottom foundation, the outside circle measuring nine inches in diameter. Each of the six sides will then measure about four and five eighths inches.

The body of the bag is made from a straight strip of canvas, twenty-eight inches long by nine and one half inches wide, divided into six spaces by double lines of cross-stitch. In each space is worked alternately a spade and a heart (see worked sample, No. 3). These should be copied from playing-cards, only much enlarged, of course, and are really very easy to do. The heart is thirty-three squares across at the widest part and twenty-seven squares from the depression in the center to the tip. Bars of cross-stitch also cross each space at a distance of about one and one half inches from the embroidered forms.



No. 1—Showing the Completed Bag With Separate Design for Club and Diamond



No. 2—The Diagram Showing How to Cut the Hexagonal Base for the Bag

above and below. After all the cross-stitch is done, the ends of the strip should be seamed, and the body of the bag sewn to the hexagonal bottom, which is covered with canvas. The pin-cushion is cut in the form of a club, also of canvas, and cross-stitched all around, to conceal the seams, and the diamond-shaped cover of the needle-book is finished in the same way. These can be attached to ribbons and suspended from the upper part of the bag, to hang outside, or can be placed loose within the bag in the ordinary style. Ribbon draw-strings are used, and the joining of the two parts of the bag is concealed by cross-stitches.

Any preferred color-scheme may be used, the original model being worked on tan canvas in dark green silk.

C. L. CARTER.

No. 3—Enlarged Pattern for Heart and Spade Cross-Stitch Design

Hot-Weather Desserts

The following desserts are just the thing to serve in summer with a light luncheon or dinner:

Chocolate Cream

Scald one quart of milk. Mix five tablespoonfuls of corn-starch with one half cupful of sugar and one fourth of a teaspoonful of salt; dilute with a little cold milk, and add to the scalded milk, cooking ten minutes. Melt one and one half squares of chocolate, adding three tablespoonfuls of hot water, and add to the cooked mixture, stirring until smooth; then add the whites of three eggs beaten stiff. Stir constantly one minute, remove from the fire, season with vanilla, mold, and chill. Serve with cream.

Tapioca Ice

Cook one half cupful of granulated tapioca in three cupfuls of water with one half cupful of sugar until clear. Clean a good-sized ripe pineapple free from specks, and shred fine. Pour the tapioca boiling-hot over the pineapple, and stir together. The tapioca should sufficiently moisten the pineapple. Pour into molds or glasses, and serve ice-cold, with whipped or plain cream.

Peach Bavarian Cream

Bavarian creams are delicious if made properly. To make it, take one half package of gelatin, one cupful of peach pulp, one cupful of blanched and shredded almonds and one cupful of rich cream. Beat the cream to a stiff froth. Soak the gelatin in a little cold water, and dissolve by steaming; add to this the sweetened pulp and the nuts (the fruit should be cold when added). Stir constantly until the gelatin begins to set, then quickly fold in the whipped cream. This should be flavored with a little almond flavoring, and colored pink with a few drops of red fruit-coloring. Mold and chill on ice. The nuts may be omitted, in which case another cupful of cream should be added.

Cherry Tart

Cook two cupfuls of pitted cherries with one half cupful of water and one cupful of sugar until it is like rich preserve. Pour into a pie-plate lined with rich paste, lay narrow strips of paste across each way, and bake in a quick oven until done. Serve with whipped cream.

Hints by the Way

Never let irons stand on the range or get red-hot. When the temper of an iron is spoiled it will never retain the heat so well again.

Keep a small bottle of kerosene on the bath-room shelf, and clean out the bath-tub with it after every bath. It will remove the dirt quickly and keep the tub at a shining whiteness.

To make glossy, smooth-looking starch, add a lump of butter the size of a walnut when the starch comes to a boil. It gives a nice finish, makes ironing easier and prevents the starch from boiling over.

Treat your oil-cloth to a coat of varnish twice a year. This should first be applied while the oil-cloth is quite new. Then it will be more easily cleaned and the pattern will remain. The varnish will make the oil-cloth wear longer, too.

Smoked ceilings may be cleaned by washing with cloths wrung out of water in which a small piece of washing-soda has been dissolved.

When a decanter becomes so discolored inside that fine coal will not cleanse it, fill the bottle with finely-chopped potato-peelings, cork tightly, and let the bottle remain for three days, when the peelings will ferment. At the end of that time rinse with warm water, and the stains will disappear.

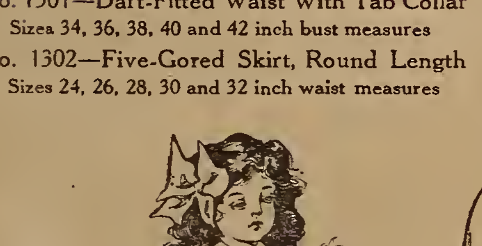
Some New Midsummer Fashions

IF YOU are in need of an all-round, serviceable shirt-waist pattern, you will make no mistake in trying the adaptable pattern illustrated on this page in design No. 1344. You can use it for both the outing shirt-waist with the comfortable Dutch collar, and also the tailored waist with high standing collar and straight-band cuffs. In addition, you get for your ten-cent piece not only a pattern which can be used for both the shirt-waists, but the patterns for the Dutch collar, dainty little jabot and turn-back cuffs. The pattern is an easy one to make, and I warrant you will like your shirt-waist when it is finished.

It is some time since the neck has been so comfortably dressed as this season. Every girl in New York is wearing a Dutch collar. The fact that these collars are fashionable as well as comfortable accounts for their sudden popularity.

The girl who sews only a little can make herself several collar-and-cuff sets like the one shown on this page, and use as the pattern the set included in shirt-waist pattern No. 1344. These collar-and-cuff sets may be made of the same material as the waist and finished with bands of self-fabric caught by tiny French knots. Other sets of sheer lawn and batiste are trimmed with dainty lace. Windsor ties are also being worn with the Dutch collars, and they look most attractive fastened in a loose soft bow and held in place by a gold baby-pin.

This plain tailored shirt-waist with standing collar and straight-band cuffs may be made from pattern No. 1344. The pattern is cut in sizes 34, 36, 38, 40 and 42 inch bust measures, and the quantity of material required for medium size, or 38 inch bust, is four and three eighths yards of twenty-four-inch material, or two and three fourths yards of thirty-six-inch material. The front box-plait and band cuffs may be hand-embroidered or braided as illustrated



No. 1301—Dart-Fitted Waist With Tab Collar
Sizes 34, 36, 38, 40 and 42 inch bust measures
No. 1302—Five-Gored Skirt, Round Length
Sizes 24, 26, 28, 30 and 32 inch waist measures

No. 1076—School Apron
Sizes 4, 6, 8 and 10 years

No. 1344—Outing Shirt-Waist With Collar-and-Cuff Set
Pattern cut for 34, 36, 38, 40 and 42 inch bust measures. Quantity of material required for medium size, or 38 inch bust, four and three eighths yards of twenty-four-inch material, or two and three fourths yards of thirty-six-inch material

No. 1330—Child's Guimpe Dress
Sizes 6, 8, 10 and 12 years

The Pattern for This Collar-and-Cuff Set is Included in Pattern No. 1344

No. 1349—Outing Shirt-Waist—Square Neck
Sizes 32, 34, 36, 38 and 40 inch bust measures
No. 1092—Five-Gored Skirt With Plain or Plaited Back
Sizes 22, 24, 26, 28, 30 and 32 inch waist measures

Madison Square Patterns

HAVE you seen the Summer Style Book of Madison Square Patterns? If you have not, take a look at it. It's just out, and it tells you many new things of interest about fashions in general and summer fashions in particular. In writing for it, inclose four cents in stamps and send your order to the Pattern Department. The patterns here illustrated are ten cents each. Address the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City.

How to Get Patterns Without Cost

We will send you two of FARM AND FIRESIDE'S Madison Square Patterns, without cost, if you will send us two subscriptions to FARM AND FIRESIDE. One of the subscriptions may be your own. Either subscription may be for one year at thirty-five cents or for two years at fifty cents. You may choose any two patterns shown on this page or in any other issue of FARM AND FIRESIDE. Send your order to the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City.

No. 943—Band-Trimmed Waist With Vest
Sizes 34, 36, 38 and 40 inch bust measures
No. 944—Seven-Gored Plaited Skirt
Sizes 24, 26, 28 and 30 inch waist measures

Copyright, 1909, by The Crowell Publishing Company

HOME TESTING
A Sure and Easy Test on Coffee

To decide the all important question of coffee, whether or not it is really the hidden cause of physical ails and approaching fixed disease, one should make a test of 10 days by leaving off coffee entirely and using well-made Postum.

If relief follows you may know to a certainty that coffee has been your vicious enemy. Of course you can take it back to your heart again, if you like to keep sick.

A lady says: "I had suffered with stomach trouble, nervousness and terrible sick headaches ever since I was a little child, for my people were always great coffee drinkers and let us children have all we wanted. I got so I thought I could not live without coffee but I would not acknowledge that it caused my suffering.

"Then I read so many articles about Postum that I decided to give it a fair trial. I had not used it two weeks in place of coffee until I began to feel like a different person. The headaches and nervousness disappeared and whereas I used to be sick two or three days out of a week while drinking coffee I am now well and strong and sturdy seven days a week, thanks to Postum.

"I had been using Postum three months and had never been sick a day when I thought I would experiment and see if it really was coffee that caused the trouble, so I began to drink coffee again and inside of a week I had a sick spell. I was so ill I was soon convinced that coffee was the cause of all my misery and I went back to Postum with the result that I was soon well and strong again and determined to stick to Postum and leave coffee alone in the future."

Read the little book, "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

10 DAYS FREE TRIAL
We ship on approval, without a cent deposit, freight prepaid. DON'T PAY A CENT if you are not satisfied after using the bicycle 10 days.
DO NOT BUY *a bicycle or a pair of tires* from *anyone* at *any price* until you receive our latest art catalogs illustrating every kind of bicycle, and have learned our *unheard of prices* and *marvelous new offers*.
ONE CENT is all it will cost you to write a postal and everything will be sent you free postpaid by return mail. You will get much valuable information. Do not wait, write it now.
TIRES, Coaster-Brakes, Built-up-Wheels and all sundries at *half usual prices*.
MEAD CYCLE CO. Dept. R-83, CHICAGO

GENUINE BARGAINS IN HIGH-GRADE UPRIGHT Pianos. Slightly used instruments: 12 Steinways from $350 up; 6 Webers from $250 up; 9 Krakauers from $250 up; 7 Knabes from $250 up; 3 Chickerings from $250 up; also ordinary second-hand Uprights $75 up; also 10 very fine Parlor Grand pianos at about half. Write for full particulars. Cash or easy monthly payments. Lyon & Healy, 62 Adams St., Chicago. We ship everywhere on approval.

GOLD WEDDING RING GIVEN

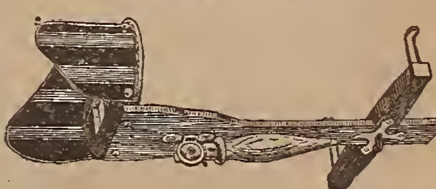
Send for 10 packages of our beautiful silk and gold embossed post cards to distribute at 10c each. Return us the $1 when collected and we will send you by return mail this very fine 14K gold filled heavy band ring, not the cheap kind. Address R. F. MOSER, 331 Household Bldg., Topeka, Kan.

LOVELY POST CARDS GIVEN
Three choicest artistic Souvenir Post Cards, beautiful colors, absolutely without cost, if you send stamp for postage. W. H. GATES, 182 W. 8th St., Topeka, Kansas.

DAISY FLY KILLER placed anywhere, attracts and kills all flies. Neat, clean, ornamental, convenient, cheap. Lasts all season. Made of metal, cannot spill or tip over, will not soil or injure anything. Guaranteed effective. Of all dealers or sent prepaid for 20 cents.

HAROLD SOMERS
150 DeKalb Ave.
Brooklyn, N.Y.

Let Me Send You At My Expense
This elegant stereoscope and 100 views (50 colored) of the most famous places in the World. Full, large-sized scope, aluminum hood, perfect lenses, 100 elegant lithographed views, guaranteed to give satisfaction.



Just cut this ad out and write your name and address on the lines below. Send to me and I will tell you how you can get this outfit by getting only a few 10c subscriptions to my farm paper. I will also send you a sample free of my 12 Flower Language Greeting Post Cards, given with each subscription. VIII

Name.....

Address.....

D. W. BEACH, Editor
Agricultural Epitomist Spencer, Ind.

OUR YOUNG FOLKS' DEPARTMENT

Interesting Legends of the Wood-Folks

Told by Old Ben to Harry Around the Camp-Fire

By Clarence Hawkes

"What I enjoy about camping out," continued Ben, "is the wonderful, mysterious life all about us—the flowers, the trees, the grass, the birds, the squirrels and all the four-footed creatures. God made the trees to shelter man and to rustle their leaves above his head, and it is a pity that we have to cut down so many of them. Why, Harry, there is more wonder to me in an ant-hill than there is in the whole city of New York. The Brooklyn bridge and the tall blocks and the great churches are not nearly as hard for man to build as it is for the ants to do some of the things that they do.

"There is music, too, in the woods—the glad trilling of birds, and the joyous chatter of squirrels; the long roll of the cock partridge, and the merry tattoo of the woodpecker. Then the wind and the waters are always talking, and the leaves are telling secrets overhead.

"There is always a mystery, too, in the woods—something to keep you guessing. Was that pitter-patter in the leaves a red squirrel, a chipmunk or just a shy sweet little wood-mouse? How quickly the ear learns to distinguish the steady, even trot of the fox and the hop of the rabbit, the rustle of a twig that denotes a bird, and the bending of the bough that tells you where a squirrel has just sprung.

"The signs and the sights and the sounds of the woods are among earth's sweetest secrets.

"Sometimes I think that I would like to be the wood-nymph and have charge of all these furred and feathered creatures myself."

"Who is the wood-nymph, Ben?" I asked.

"Oh, just a beautiful young lady who lives in the woods, and looks out for all the wild things, and loves and pities them," replied Ben. "Did I ever tell you how 'twas the squirrel got his brush, Harry?"

"No," I exclaimed all excitement; "please tell me."

Ben filled his pipe, and lighted it with a coal from our camp-fire, and then began.

"Well, it was this way: One morning the squirrel was sitting upon a limb, chattering away for dear life; he was having the finest time in the world. Nuts were thick as spatter on the tree, and the sun was shining brightly. The squirrel was so glad that he didn't know what to do about it, so he just frisked and chattered.

"By and by along came the wood-thrush. 'Hold on, Mr. Scatterbrains,' cried the wood-thrush. 'I wonder if you know what a noise you are making? Why, if I had such a voice as you have got, I would never let any one hear me using it. It fairly sets my nerves on edge. Why don't you sing like this?' The wood-thrush swelled out his breast, and poured forth such a sweet song, that the poor squirrel saw at once that his voice was very harsh and discordant.

"'There,' said the wood-thrush, ending up with a fine trill, 'Now I would keep quiet if I were you.'

"Well, the wood-thrush soon flew away, and the squirrel felt so ashamed that he didn't even squeak again that morning.

"Pretty soon along came a blue jay, and he says to Mr. Red Squirrel, 'What a rusty old red coat you have got, Mr. Squirrel. If I were you I think I would visit the tailor and get a new suit; your old one is really quite dull. Why don't you have a suit like mine?' and the blue jay flashed his bright blue uniform in the sunlight.

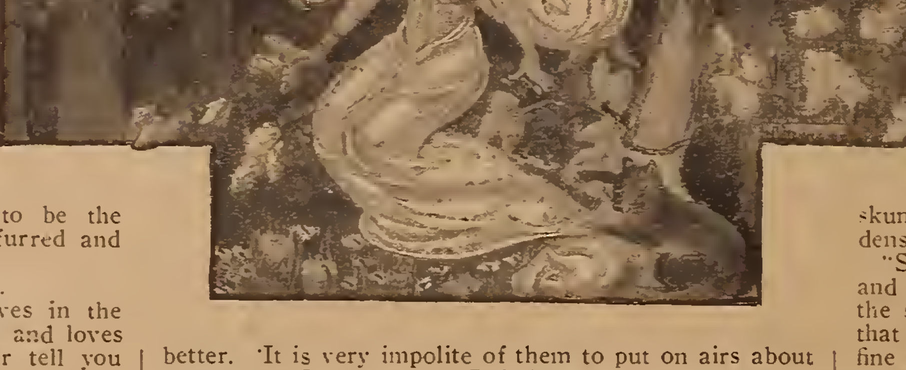
"Then Mr. Red Squirrel saw that he not only had no voice, but that his coat, upon which he had prided himself, was quite dull compared with that of the blue jay.

"In those far-off times Mr. Red Squirrel's tail was not the fine brush that it is now, but a smooth tail like that of the rat. So he really had nothing to be proud of.

"Well, Mr. Red Squirrel felt so badly about it that he finally went to the wood-nymph.

"'Dear wood-nymph,' he said, 'I am very sad. I have no fine voice like the wood-thrush, and I have no gay coat like the blue jay, and they are all making fun of me.'

"'I am sorry, Red Squirrel,' said the wood-nymph in such a sweet voice that the red squirrel at once felt better. 'It is very impolite of them to put on airs about graces that I gave them. I shall have to speak to them about it. But you are really quite as pretty as they are in your way. Why, don't you see, Mr. Squirrel, you have got four legs, and they haven't but two? You are much better off in that respect.'



"'That is so,' replied the red squirrel rather proudly, and he gave a great jump just to show how nimble his legs were. 'If I only had a beautiful tail like a peacock I think I would be perfectly happy.'

"'The peacock's tail would not do for you at all,' said the wood-nymph; 'but I will make yours over, and it shall be your flag that you can wave defiantly at the wood-thrush and the blue jay whenever they tell you you are not beautiful.'

"So Mr. Red Squirrel hopped upon the beautiful wood-nymph's shoulder, and she covered his eyes with one hand, while with the other she worked upon his tail.

"'How long will it take you?' asked the squirrel.

"'See,' replied the wood-nymph, and she uncovered his eyes, and Mr. Red Squirrel saw that he had the most wonderful bushy tail in the woods—that is, for his size.

"Then how he frisked about and chattered, and all the time he kept his tail twitching and waving so all the wood-folks might see how gay he had become. He was so delighted with his new tail that he did not even stop to thank the wood-nymph, but ran away to show it to the wood-thrush and to the blue jay.

"When the poor chipmunk saw what the wood-nymph had done for the red squirrel, he was much dissatisfied with his own smooth tail, so he, too, went to the wood-nymph.

"'Dear wood-nymph,' cried the chipmunk, 'my tail is very homely. Won't you please fix it like the red squirrel's?'

"So the kind wood-nymph covered chippy's eyes with her hand while she made his tail more fluffy and beautiful.

"'It isn't nearly as large as the red squirrel's,' said chippy when she had finished.

"'Why, you are not half as large as Red Squirrel yourself,' replied the wood-nymph, laughing. 'I guess it is large enough for your size.'

"But the chipmunk was not satisfied, so the wood-nymph finally painted his sides with several bright stripes, and that is how he became little Striped Sides.

"There is another pretty good story," continued Ben. "It is about how the skunk got his scent. I presume people have often wondered.

"One day years and years ago a skunk sat down under a juniper bush to think, and he quite naturally got to thinking about himself.

"'What a poor, stupid old thing I am,' he said. 'I am the most defenseless of all the forest folks. I cannot run away from my enemies like the rabbit, because my legs are short. I cannot bite like the woodchuck, because my teeth are not so sharp. I cannot go into my shell like the turtle when I am threatened, because I have no shell. I have no nimble wits like the fox. If something is not done my kind will be exterminated.'

"When the kind wood-nymph saw the skunk's sorrowful face, she was troubled, for it saddens her to see any of her creatures grieve.

"She pondered long and deeply upon the subject, and then a bright smile overspread her face. When the skunk saw the smile he was glad, because he knew that the good wood-nymph had thought of something fine for him.

"'Mr. Skunk,' said the wood-nymph in her sweetest tones, 'I am most sorry that you were left so defenseless, and I have thought of a plan. I will give you this wonderful smelling-bottle, and whenever any of your enemies trouble you, just take out the cork.'

"Mr. Skunk took the magic bottle, and hurried away, eager to try it upon some one of his enemies.

"He did not have to wait long, for soon Mr. Red Fox came creeping by.

"'Ah, here is a snap,' he said. 'My breakfast already cooked. I do believe that the skunk is the stupidest animal in—'

"But Mr. Fox did not finish his remarks, for just at that point, when the fox was about to jump, Mr. Skunk took out the stopper from his magic bottle.

"Mr. Red Fox turned a double somersault and ran away through the woods yelping, and pawing at his eyes and nose.

"To this very day Mr. Red Fox always takes off his hat when he meets a skunk, as do all the other animals in the woods.

"The camp-fire is getting low, Harry. I guess we had better turn in."

We scrambled into the tent like two boys, and threw ourselves upon the luxuriant bed of hemlock. Ben drew the outside blanket over us and tucked it in, and in fewer minutes than it takes to tell it, I myself was standing before the wood-nymph asking that I might be equipped with wings like the eagle.

Cousin Sally's Answers to Letters From Her Boys and Girls

Dear Cousin Sally:—I received with many thanks your nice box of paints, and was very glad you liked my verse. I have written seven pieces besides the one I sent you, but if you will not allow me but four verses, I cannot send but three pieces to you. However, I would like to send them to you for your inspection and criticism, anyway. In this letter I am sending you a poem called "Birds," which I hope you will like. As ever your cousin,

Harter F. Wright, Age Fourteen,
Sims, Virginia.

Dear Harter:—Many thanks for your kind letter and charming little poem. I am glad that you liked the paints. I wish you would send me some of the work that you do with them.

I would be delighted to have you send me your poems, and shall be more than glad to read them and tell you what I think of them. The little poem called "Birds," which you have sent me, has a very good thought in it; the rhythm is good and the rhymes are good, but the second line of the first verse, "Which in effect was more than might," does not seem to me quite sensible. Perhaps you used the word "might" simply to rhyme with "light," and this is not a wise plan. Hoping to hear from you soon.

Cordially,
Cousin Sally.

Dear Cousin Sally:—I live about two miles and a half from town, and during school session I go there every day. I want to go to high school, and am hoping that I will pass my examinations. I have taken part in one contest, but I wasn't successful.

There is an old mission here called the Purisima Mission, which was built by the Spaniards. The rafters are all tied together by rawhide. At first they started to build the mission south of town, but there came an earthquake and broke down part of the walls, so they moved north of town, where they built it, and there it is still standing.

I will close now, as my letter is getting pretty long.

Your cousin,
John I. McDonald, Age Thirteen,
Lompoc, California.

Dear John:—I can't tell you how interested I was in reading your letter telling me about the old Purisima Mission. I am sure the other boys and girls will also enjoy hearing about it. I always like to have the boys and girls tell me something about the city or town in which they live. You must tell me more about this old mission the next time you write to me.

I am sorry that your drawing was not chosen to win one of our prizes. But you must not let this discourage you. Try again. Assuring you of my constant interest.

Faithfully,
Cousin Sally.

To Gussie Jones, Macon, Missouri.

Dear Gussie:—Your letter made me very happy. I am so glad that you are fond of your Cousin Sally. I am sure she, too, is just as fond of you and all her flock of little cousins. I am glad that you have such a congenial little chum. You must ask Katie to write to me. Don't you think you could get her interested in our "corner?" You know the old saying, "The more, the merrier." It was sweet of you to write to me when you were so sleepy, and I loved your morning message. I am interested in that garden of yours, so you must tell me how you make out with it. Good-by for this time, dear little cousin. I wish you would write to me often. Your letter cheered and pleased me. Your loving
Cousin Sally.

To Carrie Randall, Indiana.

Dear Carrie:—I am so sorry, dear, that you have been so unlucky with the post-cards that you sent to the different boys and girls whose names appeared in the Post-Card Exchange. Perhaps the boys and girls to whom you sent the cards received so many from the other cousins that they did not feel as though they could afford to send any more. I wish there was some other way in which I could run this exchange, for if the boys and girls keep on complaining about not receiving cards in return, I shall, in all probability, drop the exchange from our page. I trust, dear, that you will not lose interest in our department because of this, for I shall expect to find your name among our regular monthly contestants.

Lovingly,
Cousin Sally.

Prize-Winners in June 10th Contest

Isabella F. Donnell, age fourteen, Donnellson, Illinois. Emma Peterson, age fourteen, Minden, Nebraska. Winifred Rhey Schirmer, age sixteen, Jefferson City, Missouri. Susie Ruth Lapp, age eight, Chalfont, Pennsylvania. Kenneth C. Agee, age ten, Boulder, Colorado. Eloise Leitch, age fourteen, Coon Rapids, Iowa.

Sunday Reading

Look Up!

We can begin every day of our life by looking up! Do you know the third verse of the fifth Psalm? It is what I call a dear verse. It is as fresh and sweet as an early morning in June. The rays of the rising sun pour their glory into it. It is this: "My voice shalt Thou hear in the morning, O Lord; in the morning will I direct my prayer unto Thee, and will look up." How perfectly natural it is to look up in the morning when you are in the country. When I am down in the country I come downstairs and go out on the big, breezy piazza, and the very first thing I do is to look up. I take a look at the sky; I see which way the wind is blowing; I find out what kind of a day it is going to be. Ah, how much in your life and mine depends on that wondrous habit of looking up in the morning, of starting up from our rest as if, almost, we were rising up to begin a new fresh life, and before we have been compelled to fix our eyes on things around us (to look at our books or at our practising or at our home duties), to look up and greet with conscious thoughts that blessed One who has gone up on high to pray for us and to prepare a place for us; to look up and think of Jesus—holy, blameless, undefiled, separate from sinners, kind, noble, glorious, patient, tender, self-sacrificing. What a beginning to a day that makes; how much it has to do with the way the wind shall blow all that day, and what sort of a day it shall be. Do not tell me you have not time for this. No arrow in its flight, no strong bird, no flash of lightning, was ever so quick as the thought, the look, of the soul that can be shot upward in the morning. Rise five minutes earlier if necessary, and that five-minute look—if that be all you can spare—that conscious look upward, will follow you like a blessing all day long. . . .

Look up, and keep your face toward the highest and the best, that you may be more worthy of Him who gave the highest and the best He had to give, even His own holy life, for your sake.

Look up, O my friend! I would whisper it in the ear of your soul. Look up and fix your thoughts and your desires on that lofty life of Jesus in the hour of moral weakness, faltering and temptation. There are people whom I know that cannot trust themselves to look down in climbing the peak of a mountain or standing on the top of a tower or on the roof of a high building. They know that if they look down to things below, a terrible dizziness would make the brain to swim, and an impulse they might not be able to resist would take possession of their wills and cause them to throw themselves down. We are all like that when we come to those dangerous hours in life when we must pass along the edge of great temptations. Look up! Look up! He will hold you up and steady your mind and keep your eyes from the tears of shame and your feet from the dreadful stumble. Look up, and win your victory! Look up, and let your very look be a prayer—a prayer like this:

Grant, I beseech Thee, Almighty God, that the thoughts of my heart may thither tend whither Thine Only Begotten Son hath entered in; so that as I ascend thither by faith, my whole conversation may be in heaven. Amen.—From "The Silver Cup," by Charles Cuthbert Hall.

Teaching Nuggets

No great truth is treasured save by telling it.

Even heavenly orations are for earthly obedience.

All our gifts without the great first Gift are bare.

There are always stars somewhere to those who look up.

Too many think that heaven is mute because they are deaf.

The most glorious crowns have been found in service at a cradle.

Angelic anthems are audible only to ears attentive to earth's duties.

There is no good cheer better than the cheer that comes from giving good cheer to others.

If you are God's child you will have some of God's thoughts whenever you look on a child.

No one ever really knows why the angels sing so much until he brings some one good tidings.—Henry F. Cope in the Sunday-School Times.

God Knows Our Secrets

God knows us through and through. Not the most secret thought, which we most hide from ourselves, is hidden from Him. As then we come to know ourselves through and through, we come to see ourselves more as God sees us, and then we catch some little glimpse of His designs with us, how each ordering of His Providence, each check to our desires, each failure of our hopes, is just fitted for us, and for something in our own spiritual state, which others know not of, and which till then we knew not. Until we come to this knowledge we must take all in faith, believing, though we know not, the goodness of God toward all. As we know ourselves, we, thus far, know God.—E. B. Pusey.

Getting Ahead of Whom?

Our business in life is not to get ahead of other people, but to get ahead of ourselves. To break our own record, to outstrip our yesterdays by to-days, to bear our trials more beautifully than we ever dreamed we could, to whip the tempter inside and out as we never whipped him before, to give as we never have given, to do our work with more force and a finer finish than ever—that is the true idea, to get ahead of ourselves. To beat some one else in a game, or to be beaten, may mean a great deal. Whether we win or not, we are playing better than we ever did before, and that's the point, after all—to play a better game of life.—Maltbie Davenport Babcock.

In the Darkest Hour

In the darkest hour through which a human soul can pass, whatever else is doubtful, this at least is certain. If there be no God and no future state, yet even then it is better to be generous than selfish, better to be chaste than licentious, better to be true than false, better to be brave than to be a coward. Blessed beyond all earthly blessedness is the man who, in the tempestuous darkness of the soul, has dared to hold fast to these venerable landmarks. Thrice blessed is he, who, when all is drear and cheerless within and without, when his teachers terrify him, and his friends shrink from him, has obstinately clung to moral good. Thrice blessed, because his night shall pass into clear, bright day.—F. W. Robertson.

Stylish and Becoming

Dresses made of such beautiful cotton dress-goods as **Simpson-Eddystone Shepherd Plaids** have the air of elegance that accompanies much more costly material. These superior calicoes do not fade with repeated washing. Standard for over 65 years.

Ask your dealer for Simpson-Eddystone Prints. If he hasn't them write us his name. We'll help him supply you. Don't accept substitutes and imitations.

The Eddystone Mfg. Co., Philadelphia
Established by Wm. Simpson, Sr.

Three generations of Simpsons have made

THESE TEN POST-CARDS

A WONDERFUL OFFER FROM FARM AND FIRESIDE

These ten exquisite post-cards—"Flower Friends"—are printed in many colors, and will delight every Farm and Fireside reader. We want you to have a set, and we have made extraordinary efforts in order to obtain them for you.

Each card contains a favorite flower, printed in colors on a solid gold background, which gives a very rich and stylish effect. The flowers have been made by a special photographic process, by which the flowers have actually been photographed in their exact colors. This is the most costly way to reproduce in color, but we wanted to have them the most perfect post-cards ever made. In addition to the beautiful flower picture—so real that you can almost smell its fragrance and pick it off of its gold background—each card also contains a charming piece of poetry appropriate to the flower pictured beside it. These are the most unique and beautiful you ever saw.

Our Special Offer

And now we have a surprise for you! These cards would sell for 25 cents to 50 cents in a store. We will send them to you, with the compliments of Farm and Fireside, if you will send us three 2-cent stamps to cover the cost of postage, packing and handling. When we send the post-cards we will tell you how to obtain a large and beautiful collection of post-cards without a cent of cost. Send three 2-cent stamps to-day to

FARM AND FIRESIDE
Springfield, Ohio

You can use the coupon opposite.

Mail This Coupon To-day

Farm and Fireside,
Springfield, Ohio

Gentlemen:—
Please send me at once the 10 "Flower Friends" post-cards. I inclose three 2-cent stamps to pay for postage, packing and handling. Also please tell me how to obtain a collection of post-cards without cost.

Name..............................

Address..............................

....

Try a Singer at Home Without Cost or Obligation

The red letter "S" is on the front of 6,000 Singer Stores. There is one in your neighborhood, where every type of the Singer machine is displayed.

Many women are quite sure they'd like to own a SINGER—but want to be very, very sure before they buy. Many women are not so situated that they can go to a SINGER store and inspect things to their entire satisfaction. Many women want to *know* how a SINGER will do *their* kind of work.

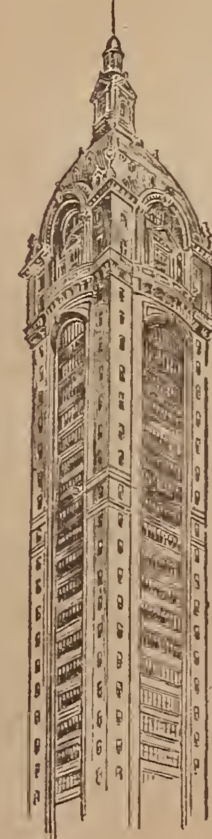
To every woman we make this proposition. No matter where you are—if you are where this advertisement can reach you we can reach you—a SINGER Sewing Machine can be placed in your home for you to try to your heart's content and it won't cost you a penny.

Can any offer be more fair or any test more conclusive?

Here's how to get a SINGER for a free trial. Drop us a postal for our booklet, "A Wireless Message from the Singer Tower." It shows all the SINGER Styles and tells all about them. Pick out the SINGER that you think will suit you the best—that machine will be sent you free of all cost for a thorough try-out. If you decide to keep it, terms will be made to suit *you*. If you decide not to keep it, it will be taken away without expense to you.

Don't experiment with inferior kinds.

It is easy to own a SINGER and if you ever should need new parts, you are near a SINGER Store. If anything should go wrong, the SINGER Store, backed by a great organization, stands ready to make it good.



Address

SINGER SEWING MACHINE COMPANY
Room No.1130Singer Building, New York

Just Jokes

Class-Room Wit

Once upon a time a child who was asked on an examination paper to define a mountain range replied, "A large-sized cook-stove." The same method of reasoning seems to go with older growth. A recent examination paper at the Sheffield Scientific School at Yale contained the question, "What is the office of the gastric juice?" And the answer on one paper read, "The stomach."—Everybody's.

Where Ignorance is Bliss

Mistress—"Look here, Susan! I can write my name in the dust upon this table!"

Susan—"Ah, mum, there's nothing like eddication, is there, mum?"—Purple Cow.

Wise Guy

"Why don't you take a vacation, Bilkins? The boss can get along all right without you."

"I know it; but I don't want him to get wise to it."—Judge.

What's in a Name?

An old German wearing a faded blue coat and a campaign hat limped into the office of a palatial dog and horse hospital bequeathed by a humane millionaire to the town of X.

"I wish to be admitted to dis hospital," he announced to the superintendent. "I've got heart trouble. I'm a G. A. R. man, und I can prove it."

"But you can't enter this institution, my good man," said the superintendent.

"Sure I can. I fight at Gettysburg. I haf got a veak heart efer sence. I can prove it."

"Yes, but you can't enter this hospital; it's a—"

"Can't, huh? Vhy not? I vas a solcher. I can prove it."

"But this is a veterinary hospital."

"I know dot. Ain'd I choost tellin' you dot I'm a veteran?"—Lippincott's.

Aroused Curiosity

"Beg pardon," said the hotel clerk, "but what is your name?"

"Name," echoed the indignant guest, "who had just registered. "Don't you see my signature there on the register?"

"I do," answered the clerk calmly; "that is what aroused my curiosity."—Chicago News.

Classic But Complicated

He had just heard one of those classic and complicated pieces of parlor music, which, for reasons best known to the composer, had been dubbed a waltz.

"What do you think of it?" he was asked.

"Well," he answered reflectively, "if that thing's a waltz, none but a centipede could keep time to it."—New York Times.

Unappreciated

As the celebrated soprano began to sing, little Johnnie became greatly exercised over the gesticulations of the orchestra conductor.

"What's that man shaking his stick at her for?" he demanded indignantly.

"Sh-h! He's not shaking his stick at her."

But Johnnie was not convinced.

"Then what in thunder's she hollering for?"—Everybody's.

The Penalty of Borrowing

"I got a lickin' fer borrowin' a quarter from Skinny yestidday."

"How's that?"

"Well, I had t' knock him down afore he'd lend it t' me."—Princeton Tiger.

Does It?

Postmaster—"This letter is too heavy. You'll have to put on another stamp."

Coon—"Sah, will that make it any lightah?"—Princeton Tiger.

Was All the Same

The guest glanced up and down the bill of fare without enthusiasm.

"Oh, well," he decided finally, "you may bring me a dozen fried oysters."

The colored waiter became all apologies.

"Ah's very sorry, sah, but we's out ob all shell-fish 'ceptin' aigs."—Everybody's.

Youthful Observation

Little Helen—"Sister, that new beau of yours makes me tired."

Elder Sister—"Why, dear?"

Little Helen—"He has the manners of a street-car conductor. When I went into the parlor last night he said, 'How old are you, little girl?'"—Chicago Daily News.

Social Amenities

Little Marion was about to make her first call unattended by a member of the family. She was to stay a half-hour, inspect a wonderful new doll belonging to a small friend, and return home.

"Now, Marion," was her mother's parting admonition, "Mrs. Rogers may ask you to stay and dine with them. If she does, you must say, 'No, thank you, Mrs. Rogers; I have already dined.'"

"I'll 'member, mama," answered Marion, and trotted off.

The visit finished, the little girl donned her hat and started for the door.

"Oh, Marion," said her hostess, overtaking her in the hall, "won't you stay and have a bite with us?"

This was an unexpected form, and for a second the child hesitated; then she rose to the occasion.

"No, thank you, Mrs. Rogers," she answered quickly; "I have already bitten."—M. P. T.

The Present Day

Mr. Dodds—"Hello! Got a new brooch?"
Mrs. Dodds—"No, you horrid thing! It isn't a brooch—it's a belt-buckle."

The Old Story

A picnic in a festive spot,
Where—oh, the bitter spite of it!—
We take the best cake of the lot
And never get a bite of it!

—T. E. McGrath.

Stirring Times

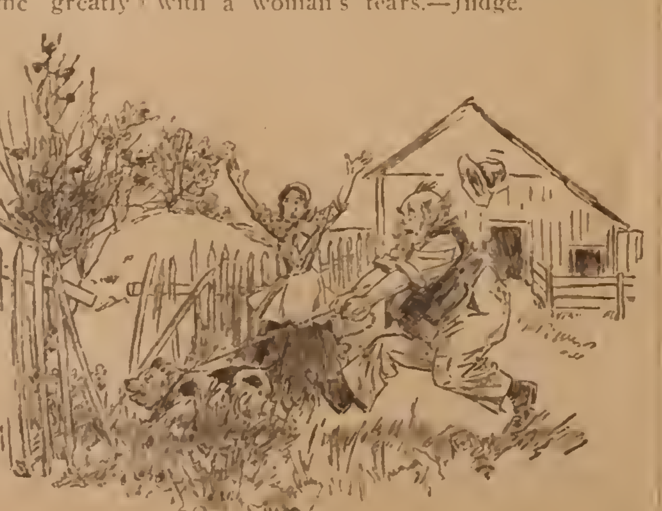
"These are stirring times," remarked the spoon, as it chased the sugar around the bottom of the coffee-cup.—Harvard Lampoon.

Graceful

Tiresome Clergyman—"Give me grace—"

Voice From Back Pew—"Ask the lady's father."—Harvard Lampoon.

No doubt the little fellow meant well who got up early and watered the flowers on his sister's new hat, and yet one cannot help sympathizing at times with a woman's tears.—Judge.



Wifely Censure

"Don't run him so, Jabez. Don't run him so!"
"There you go again, 'Liza, blamin' everything on me!"

ATLAS PORTLAND CEMENT

Makes The Best Concrete

The cement bought by the U.S. Government for the Panama Canal

SEND FOR OUR FREE BOOK "Concrete Construction about the Home and on the Farm." Contains over 100 drawings and illustrations.

THE ATLAS PORTLAND CEMENT CO., Dept. 122 30 Broad Street, N.Y.

Daily output over 40,000 barrels, the largest in the world.

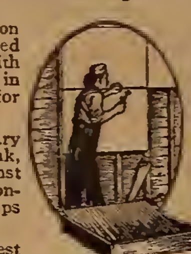
Better and Cheaper Than Lath and Plaster — BISHOPRIC WALL BOARD — No Dirt, Cracks or Damp Walls

You Yourself Can Nail It to Studding—Ready for Immediate Decoration

This wonder-worker in building construction is made of kiln-dried, dressed lath, imbedded in hot Asphalt Mastic, which is surfaced with sized cardboard. It is cut at the factory in 4 x 4 ft. sheets, and shipped in crates ready for immediate application and decoration.

Bishopric Wall Board is clean, sanitary and odorless; is guaranteed not to shrink, warp, crack, flake or blister; is proof against moisture, vermin, heat or cold. Being a non-conductor, it saves fuel in winter and keeps the building cool in summer.

It is suitable for costly dwellings, modest cottages, bungalows, flats, pleasure and health resort buildings, office and factory buildings, new partitions in old buildings, finishing attics, back porches, laundries, cellar ceilings, garages, poultry houses, dairy barns and buildings—in short, it is the ideal material for a hundred purposes.



Write to-day for FREE Sample, descriptive booklet and prices, freight paid, from Cincinnati or factories in New Orleans, La., and Alma, Mich.

Dealers Should Write for Our Attractive Proposition

The Mastic Wall Board & Roofing Co. 47 East Third Street, Cincinnati, Ohio

It is to your advantage to mention Farm and Fireside in writing to advertisers. Farm and Fireside folks get the very best attention.

Our population increases a million each year. Our land area doesn't increase an acre. That's why it pays to buy good farm lands now in the

"Santa Fe Southwest"

Everybody knows that the United States is growing fast.

Few persons realize that our population increases **a million a year!**

That's the average annual rate of growth since the last census. Part of this is excess of births over deaths. The remainder comes from foreign immigration.

These "million-a-year" new mouths all must be fed with food from our farms. These "million-a-year" new bodies all must be clothed with other farm products.

Factories are necessary, but they only take what the land produces and make it into food and clothes.

Always the **demand is greater,** year by year, for what the earth can grow. The supply of land remains about the same. To be sure the cultivable area is added to a little, but it does not keep pace with the added population.

Just a simple sum in arithmetic: Amount of land a fixed quantity; population rapidly growing; result — **land goes up in price.**

In most European countries values are so high that landless farmers are compelled to seek the cheaper lands of this country. If only one-quarter of the foreign immigration finds its way to the agricultural lands of the United States, it takes a big acreage off the market every year. What's left is worth more.

The Eastern farmer seeks the Middle West. The Middle West farmer pushes on to the Far West. **No longer is there a frontier.** And salaried city men, country-bred, are buying small farms, too.

The day of so-called "cheap" lands is almost gone. There are still a few score thousand homesteads left in the semi-arid region, which ultimately can be made productive by irrigation.

Dry farming is adding other areas to the crop-producing territory.

But these, though welcomed, are only a drop in the bucket.

Land is the **basis of all values,** so why not get in now on the "ground floor?" Temporary periods of stationary prices may come. For a long hold — ten, fifteen, twenty years — your Southwest farm, if bought right, will surely double or **quadruple in value,** to say nothing of crops raised meanwhile.

The Santa Fe has no land to sell. Its business is to haul passengers and freight. It wishes, however, to help build up the communities along its lines.

Write me to-day, for our Southwest land folders, describing Kansas, Oklahoma, Texas, Colorado, New Mexico, Arizona and California — the best part of the best country on earth. They tell the truth. Say which section you are most interested in. Give your full name and address. I will also send you our immigration journal, *The Earth,* six months free.

C. L. Seagraves, Gen. Colonization Agt.,
A. T. & S. F. Ry. System,
1171-P Railway Exchange, Chicago.

CONGO ROOFING | GUARANTEED BY A SURETY BOND

To convince the public that 3-ply Congo Roofing will really last *ten years*, we furnish with every roll a bond of the National Surety Company backing up our guarantee.

THIS BOND gives you absolute certainty that our promise will be made good.

WE DON'T CONSIDER that the bond is necessary, but it serves to show how firmly we believe in the *durability* of our product.

ANY MANUFACTURER could say as we do, that his roofing will last ten years, but we show that we mean business when we *back up* the guarantee with a genuine Surety Bond.

THE ONLY THING for us to do under these circumstances is to make a roofing which will stand the test, and outlive the guarantee period.

That is what Congo will do.

OTHERWISE, we could not afford to bind ourselves over to a Surety Company, and thus insure the thousands of Congo roofs which are being laid every year all over the country.

FREE SAMPLE

WE SHALL BE GLAD to send you a copy of the bond without charge. We will also send you at the same time a sample of Congo, so that you will see the reason for our confidence.

UNITED ROOFING AND M'F'G CO.
Sucessors to Buchanan-Foster Co.
553 West End Trust Bldg., Philadelphia, Pa.
Chicago San Francisco

LIBRARY
U. S. Department of Agriculture

EASTERN EDITION

ESTABLISHED 1877
The Illustrated Farm and Family Journal

24 NUMBERS 35 CENTS

Vol. XXXII. No. 21 Springfield, Ohio, August 10, 1909 Terms { 1 Year, 24 Numbers, 35 Cents / 4 Years, 96 Numbers, $1.00 }

The Work of the Crop-Improvement Associations

By Prof. V. M. Shoesmith, Ohio College of Agriculture

During the past decade an important agricultural movement has been in progress. Up until recent times our vast country has offered immense tracts of fertile soil to the settler at a nominal price, and the tendency of the American farmer has been to secure as large a portion as possible of this cheap land, and to till the same in the easiest possible manner, rather than to make a study of his business and acquire scientific methods of farming.

But during the past few years so many people have taken advantage of the opportunity offered in these cheap lands, and the supply of new land has become so short, that the price of land the country over has been materially advanced. This has necessitated a higher production on the same land, in order to make satisfactory returns upon the increased valuation. Then the farmer began to realize that there were others who knew more about farming than he did, that the agricultural college and experiment station might be used as valuable assets, and that farming was a business worthy of study.

When the farmer began to comprehend the importance of these things he began to organize. This organization has taken various forms. One which has been very popular and which has had much to do with this movement for better agriculture is the Crop-Improvement Association, with its institutes, its exhibitions of corn and other crops, its coöperative variety tests and other phases of practical work. The development of these associations is worthy of our consideration.

One of the first farmers' associations aimed specifically at crop improvement was the Illinois State Corn-Breeders' Association, organized in 1900. This was not a popular organization in the sense that it included a large membership or was designed to reach the masses.

The Growth of the Movement

During the past seven or eight years Corn-Improvement Associations designed to benefit agricultural conditions generally have been organized, not only in all the surplus corn states, but in the adjoining states, in Maryland, Virginia and other Atlantic Coast states and in most of the Southern states. Colorado not being well suited to the production of corn has organized an association designed to improve the condition of wheat, oat and barley production. Alabama has a Cotton-Improvement Association. In fact, the movement has spread until most of the states have their crop-improvement associations of some kind. In order to get a better idea of the work being done by these various associations, let us consider a few specific examples.

In Wisconsin the crop-improvement association is known as the Wisconsin Agricultural Experiment Association. This association, which was organized eight years ago with a charter membership of two hundred and seventeen, now has a membership of sixteen hundred and is planning for the organization of county orders, so as to facilitate the work of the association. The membership is composed largely of the graduates and ex-students of the College of Agriculture, who, in joining the association, become experimenters with improved seeds.

This work has been of immeasurable benefit to the farmers of Wisconsin, in giving them improved types of corn, wheat, oats and barley, and in getting them to study in a scientific way their own problems. Moreover, the Wisconsin farmer has made a name for himself outside of his own state, and he is receiving orders for seeds from every state in the Union and from several foreign countries.

Prof. R. A. Moore, who is secretary of the association, estimates that at least two hundred and fifty thousand dollars has been sent into Wisconsin from other states for improved seeds during the past year, and the farmers are unable to supply the demand.

The Indiana Corn-Growers' Association was organized in 1900 and now includes a membership of about eight hundred. Besides arousing the agricultural interests of the state, it has been largely responsible for large appropriations and other support to the agricultural college and experiment station. They started the Farmers' Short Course at Purdue, the first two courses being held under the auspices of the association, after which the work was turned over to the university, but was still loyally supported by the association. The number of corn shows held in the state during the past year approximated two hundred and sixty.

In Missouri the Corn-Growers' Association which was organized in 1903 is actively pushing the movement for better selection of seed-corn, improved varieties and better cultural methods. One feature of the work which promises much for the College of Agriculture and the future of the state is the Boys' Corn-Growing Contest, which includes annually about one thousand boys.

In Iowa the Corn-Growers' Association, which was organized about seven years ago, has been one of the chief factors in creating enthusiasm for better farming and better agricultural education. The enthusiasm is no longer confined to corn, as is evidenced by the recent Seed-Oats Special and by the recent organization of a Small-Grain Growers' Association and a Seed-Registry Association, and by the formation of Seed-Improvement Associations in the student classes at the State Agricultural College.

In Ohio the relation between the State Corn-Improvement Association and the county or local associations is very close. In fact, the main object of the state association might be said to be to stimulate and direct the work of the local associations.

Although the association is only a little over a year old, it is on a firm working basis. Forty-three local associations were organized within three months after the organization of the state association, and this number was materially increased during the past fall and winter, and in some of these local associations the membership numbers several hundred.

Crops Must Be Studied Under Local Conditions

Realizing the importance of studying corn under local conditions, the association has inaugurated contests in the testing of varieties of corn, in farm management, in the cost of production of corn, uniformity of stand, etc., and there is no question as to what this work will mean to the future of Ohio agriculture.

The work of the several states mentioned is by no means exceptional. Illinois, Nebraska, Kansas and other states have strong organizations which are doing a great work for the betterment of agricultural conditions in their respective states. Other states which have been considered backward agriculturally, or of little agricultural importance, have caught the spirit and fallen into line.

It is a great movement that has swept over the entire country, which means that the careless, slipshod methods of the past must go. And with the growth of this movement we have seen a steady increase in the price of farm lands; many farmers have sold out their high-priced lands and bought cheaper lands elsewhere. The price of the land has been increased in both communities, which means that better farming must be practised in order to pay satisfactory returns upon the higher valuation.

The function of the Crop-Improvement Association is to reach the masses and improve agricultural conditions generally. Its aim should be not so much to increase the maximum yield of corn or wheat, as to increase the average yield of corn or wheat; not so much to help the better farmers who organized these associations, as to help the great mass of farmers who have not given a very loyal support to this movement and who have not been sufficiently interested by the agricultural college and the farmers' institute.

The Purpose of the Associations is Twofold

The work of these associations might be said to be of a dual nature: First, the arousing of interest and the giving of an incentive to study, and, second, the giving of instruction or educational work. The former is by far the more important of the two. Our colleges and experiment stations and our farmers' institutes are ready to instruct the farmer, but they cannot well furnish an organization for the farmer and arouse the enthusiasm in agricultural matters afforded by a popular organization of this sort.

The purpose or function of these associations and of their exhibitions of farm products is often misunderstood. To use a specific illustration: It is a more or less common belief among farmers that a sample which wins a high award and is sold for a high price at public auction is unquestionably the best exhibit in the show and the particular kind they should secure for their own farm, not realizing that the judge is not infallible and that the exhibit might have been bred or grown under conditions quite different from his own.

The pedigree or breeding, the adaptability, the soil and climatic conditions are all important factors in determining the yield of corn products, and the judge has little or no opportunity to judge of these when only the ears or grain are placed before him for examination. He should, however, in a local show, be of great help to the farmers in a practical study of crop production as applied to local conditions.

The Future of the Movement

The field for the future work of the Crop-Improvement Association is large; there are many sections in which the farmers are still unorganized, many farmers in organized districts have not been reached, and there is no end of valuable work that may be taken up. Of course, the corn show, as well as the exhibition of other farm crops, should be continued, but care should be exercised to make these exhibits popular.

In some sections, where certain parties have won the lion's share of the premiums for two or three years or more, there is a tendency for the poorer farmer, who should be most benefited by such a show, to drop out. This difficulty could easily be remedied by offering premiums of less value, but a larger number of premiums; by restricting exhibitors to one premium each, or by requiring professionals and amateurs to exhibit in separate classes.

Perhaps the best field of work for these

[CONCLUDED ON PAGE 3]

Around the Farm

Items of Interest and Value to the Progressive Farmer

The Fertility of the Farm

The prevailing opinion that live-stock feeding and dairying make rich soils, regardless of their management, and that every torture of Nature may be easily corrected by the application of a few loads of barn-yard manure, has caused many men to neglect every improved method of soil-handling and look to the manure-heap alone as a source of fertility. We must abandon old and unprofitable methods of managing our soils before it will be possible to begin any systematic correction of two or more generations of plant-food dissipation.

We need to make a careful study of the benefits derived from intense tillage and cultivation, the advantages of short-rotation farming, the use and function of fertilizing and renovating crops, and the most economical and efficient methods of applying manures and chemical plant-foods.

It is not my purpose to discourage one man from feeding live stock, for stable manure is the best and most economical source of fertility for the man who is practising general farming and live-stock husbandry. The practical point that we need to understand is that with proper tillage and cultivation a small amount of manure will go a long way toward maintaining soil fertility. On the average farm the soil is not cultivated enough to derive the maximum benefits from the manurial fertility. It is to this phase of the question that we need to devote particular attention.

How are we to plan our cropping systems? What crop can we grow on our farms that will pay the increased cost of intense tillage and cultivation? These are questions that should be worked out by the individual himself, according to his likes and dislikes, the location of the farm and the adaptability of the soil for certain special crops. Some men will make a success of potato-growing, others will succeed better with fruit-growing, others with such crops as beans, cabbage, celery and other truck or canning-factory products.

The intense tillage and clean cultivation given a special market crop will greatly benefit every other crop that is raised in the rotation. All practical farmers know the value of the old summer fallow that was practised years ago. It made it possible to grow large crops of wheat, but the increased cost of land and hired labor makes its use actually prohibitive under the conditions at the present time.

Agricultural conditions are constantly changing. In those days the demands for truck crops and farm produce was very limited, but the rapidly-increasing population of the large cities is reaching further and further into the country for these products, while the rapidly-increasing transportation facilities are bringing us to the very doors of large city markets. For this reason it is many times more profitable for us to lengthen our rotation of crops one year and make our farming operations subservient to our one chosen special crop, rather than to devote all of our time and attention to growing and feeding live stock.

A hoed crop given intense tillage and clean cultivation during the whole of the growing season will accomplish all that a bare fallow possibly can, reducing the loss of nitrogen to a minimum by preventing the exposure of the soil to the sun, which is disastrous to its humus content and checks the bacterial action that we are fast coming to appreciate as an important factor in crop production.

Advantages of Short-Rotation Farming

In various sections where live-stock feeding and dairy farming are the leading branches of agriculture, as well as on farms that are devoted to the growing of truck and market crops, the advantages of a short system of crop rotation and the growing of legumes is every year becoming more apparent.

Whether the legumes are plowed under, or cut and fed to live stock, must depend upon the ability of the owner to make a profit from his feeding operations. The man who lives close to a large city market where he can find a ready sale for all of his truck and market crops will seldom find it very profitable to make a fetish of his manure-heap and feed animals that fail to pay for their food and care. The farmer who is situated further from desirable city markets and on cheaper lands may find a reasonable profit in feeding out his farm crops to live stock and marketing his beef, pork, mutton, butter, poultry and eggs. Either man will find that a short system of crop rotation and the growing of a legume crop every third or fourth year possesses many advantages over the common methods of growing crops practised on the average dairy or stock farm.

Growing Fertilizing and Renovating Crops

The growing of the clover-plant as a food for live stock and its use as a source of nitrogen are generaly better appreciated than its use and function as a soil-renovator.

In the management of the soil there are a number of important functions that tillage and fertilizers cannot perform. When we discuss the clover-plant as a soil-renovator we have a particular reference to that particular function which puts the soil into a loose and friable condition and prepares it for more perfect pulverization by the implements used in tillage.

The long root system of the clover-plant penetrates the subsoil while silently searching for mineral plant-food, which it brings up from below and deposits within easy reach of the roots of the plants that follow in the rotation.

Clover is a great weed-exterminator, and when it is rightly managed enables us to clean up and renovate a field more cheaply than by any other method. The roots reach every part of the soil and disintegrate it, and by their natural decay deposit vegetable matter and food brought from the atmosphere and subsoil.

We may study the clover-plant. We may read what other successful farmers think of it and what experiment stations and agricultural colleges tell us about its good qualities and what the agricultural press says about it, and draw but one conclusion—that we can find no more economical means of renovating our soils and putting them in a good physical condition than by the intelligent use of this valuable crop.

Applying Manure and Chemical Plant-Foods

On all farms where live stock is kept and where clover is grown a light dressing of stable manure on the sod-ground will afford an abundant supply of nitrogen for the succeeding crop. The bacteria contained in the manure, after completing their work of making its elements of plant-food available, will seize upon the organic matter in the roots, stubble and weeds that are turned under, and hasten their decomposition, thus affording the growing crops an abundant supply of this element during the whole of the growing season.

Of course, large crops may be produced by the use of manure alone, but in my opinion better economical results can be obtained by supplementing the manure with a fertilizer carrying considerable available potash and phosphoric acid in a form readily available to the growing crops. This enables us to make a better and more economical use of the surplus nitrogen contained in the manure and clover sod, and the use of the mineral fertilizers promotes the growth and development of the clover-plants and enables them to do more efficient work at nitrogen fixation, besides enabling us to properly fertilize a larger acreage each year.

Phosphoric acid may be purchased in various forms, but the potash had best come in the form of a high-grade or low-grade sulphate. The muriate might give equally as good results for the one crop for which it was used, but on many soils and during many seasons the sulphate will promote a better growth of clover or mixed hay that follows in the rotation.

The great problem that confronts us is not so much the need of more manure and fertilizers as the more intelligent use of what we have.

W. Milton Kelly.

Coöperation Among Farmers

It has always been a matter of surprise to me that in all my agricultural reading for a number of years, I have never seen but once an easy and effective way of accomplishing this object. In my opinion, the method warrants a place in every agricultural paper and in every issue until it is thoroughly impressed upon the minds of both farmers and railway officials, yet I have never seen it published but once, and from a clause in Mr. Streeter's article in the June 25th issue of Farm and Fireside I fancy he has either never seen it or failed to catch its full significance.

The method, as I recall it, is about as follows: The railroads in a certain grain-growing section had run out all independent operators of elevators by their usual tactics. One man thought he saw a way to successfully compete with the railroad. The elevators controlled by the railroads were not paying Chicago quotations less freight and charges from each respective station. This man went to the farmers in a district tributary to a certain station, where he could rent an idle elevator, and got them to sign contracts to bring all their grain to him so long as he paid Chicago quotations less freight and charges. That in the event they were offered more than Chicago quotations less freight and charges, they were to bring their grain to him for weighing, and were then to take it to the elevator offering the higher price, and were to bring back to him one cent for each bushel of the excess.

They all gladly entered into such contracts, and he opened up for business and he got it all. Then the railroads played their first and theretofore trump card. They offered five cents a bushel over Chicago quotations less freight and charges. Result: They got all the business. But in a few days they got onto the fact that they were doing all the work and paying their competitor's expenses. Then they stopped that move and dropped back to Chicago quotations less freight and charges, and they lost all the business.

Then they played their second card—they failed to supply cars. Now, there was an agreement among all the roads that they would not permit cars to be loaded direct by farmers, the object being to force all grain through the elevators; but this man found no trouble in convincing a rival line located two miles distant that they were strictly within that agreement if they permitted cars to be loaded from wagons with grain that came from an elevator, and they were eager to get the traffic. This man had the wagons drive over his siding and under his delivery-spouts, loaded, and sent to the rival line two miles distant.

This move was promptly reported to headquarters, and that night the siding was filled with loaded coal-cars. Then this man employed carpenters to build delivery-spouts across the elevator from the track side to the wagon side, and went ahead again. Reports to headquarters brought down officials to investigate. They found no obstacle to investigating all they pleased. This man had adopted a policy of quiet and silent courtesy. When they attempted to block him, he quietly went around and continued business.

The result of their investigations was that they found him doing all the business and a rival line getting all the traffic, and they capitulated. They offered to close up their elevator at that point and to give him all the cars he wanted and whenever he wanted them if he would let them have the traffic. They found him just as ready to coöperate with them as to do without them. Thereafter that railway would let any of its own elevators wait for cars if necessary in order to promptly supply this man's needs.

Just see how easy it was done! And yet the agricultural press either failed to see its significance or the railroads found means to suppress its extensive circulation. In my opinion, the same tactics can be pursued to-day and just as successfully, and without limiting them to the grain business.

Jan H. Kan.

Paints and Painting

A certain number of dollars invested in one way will often show up much better than invested in other ways, but on the farm one of the best investments is that of improvements.

Few things make a more marked improvement on the farm than well-painted buildings. Though the buildings may have become time-worn and shabby-looking, yet a few gallons of paint will improve their looks and their life almost beyond conception.

It is so common that it is almost natural to hear one say of one who has a "set" of well-painted buildings, "Well, that man must be well-to-do," or, "He must be making some money," when, in fact, it is partly the man's fancy in having the surroundings look neat, and partly because he knows paint is much cheaper than building material, preserving the material as it does.

As with everything else, there are all grades of paints on the market, the highest-priced paint not necessarily being the best, while the lowest-priced ones should be avoided, except in certain cases. Firms that have been in business for years are generally satisfactory to deal with, while some of the mail-order houses also carry a good grade.

Owing to lack of experience with many farmers, ready-mixed paint is preferred to oil and lead, as the manufacturer has the benefit of years of experience in the mixing.

To any farmer of ordinary intelligence I would say do your own painting, provided, of course, you find time to do the work, for painters usually charge plenty for their services; however, in cases of dwellings, when a very neat job is wanted, and the farmer lacks experience and skill, a painter can be employed, especially to do the more particular parts, such as the painting of verandas and other ornamental parts of the building, including the trimming.

A great deal of the beauty of the finished building is in the trimming, so study the subject carefully enough to get the correct color; for instance, when driving through your town, note the various trimmings, for the town is an index, as it were, for the various colors in painting.

A strong but light extension ladder is indispensable when painting. A good brush or brushes should be used, but of course not necessarily the highest-priced ones in town.

When the kit of paint is opened it usually contains the oil on top, while of course the lead or heavier portion has settled to the botom. With a paddle it should be thoroughly stirred—in fact, we cannot give this point too much attention, for no paint will work well or last well which has not been thoroughly mixed. As the paint is ready-mixed, it is thick enough for the finishing-coat. For the prime coat it should be thinned with linseed-oil, the amount of oil added depending on the nature of the surface to be covered. Thus, on buildings which have been painted before, the amount of oil required will not be so great as on unpainted, weather-beaten or unplaned surfaces.

One thing which should be done thoroughly is priming, for if there is not sufficient oil worked into the "new wood" before the last coat, the oil will be drawn from the last coat, and the lead in a few years, or even months, will crumble or rub off like chalk. I am of the opinion that this is partly the cause for the complaint of paint not wearing well.

There are few readers who cannot recollect somewhere at some time a dilapidated set of farm buildings which by a little carpentry and a thorough painting took on the appearance of tidy, well-kept premises, which was an improvement, rather than an "eyesore," to the community.

Omer R. Abraham.

Shall We Increase Our Wheat Acreage?

Shall we heed the advice so freely given and so ably put by so many of our agricultural writers and a few editors of farm journals, that we as farmers bend our energies to very materially increase the 1910 wheat crop? Would it have been advisable for us to have plowed up our meadows and pastures and planted to corn this season and follow with wheat for 1910?

An increase in yield of either crop of ten to twenty per cent would mean a great many bushels of each.

We have recently been in the midst of many ably-written articles on maintaining and increasing soil fertility. We have been told often lately to leave off crops known to draw heavily on soil fertility and to leave nothing in return, and to grow alfalfa and all the legumes and less corn and cotton.

And now so soon we are told to do the opposite.

It would seem altogether rational and good farm practice for more of us to see how much of our grain requirements we could produce on our average farm, perhaps have a little corn, wheat and oats to sell, but we must not forget to have a few steers to feed for the market and a few to graze next season.

The trouble is, we forget too soon the lesson often dearly learned, that when prices are above normal on any commodity the tendency is for concerted effort in the production of that commodity, and in most cases the result is overproduction, with a correspondingly low price.

O. P. R. Fox.

Around the Farm

Items of Interest and Value to the Progressive Farmer

About Taking a Vacation

A farmer's wife writes that last year she read an article of mine in Farm and Fireside in which I advised people to take an outing of a week or so along in the summer, just for a change from the regular routine of farm life. She then describes how she is situated, and asks what I would suggest that she, and a large number of others similarly placed, should do in the matter of getting an outing. She has five children, the youngest seven months old, and all the others too young to leave at home by themselves. Then there is her husband and a hired man, and occasionally other help to cook and fix for. And she says, "I am run down and played out, but what am I to do for an outing? And there are lots of others like me."

Well, when one cannot get away, the thing to do is to make the best of the situation. One cannot make it better by worrying about it or complaining. If a person will note closely he will quickly discover that there are two kinds of people nobody has much use for, and one is the complainer and the other the worrier. One's troubles are his own, and if he tells them to others just to get empty sympathy, he will get it. People will say, parrot-like, "I'm sorry for you," and the next minute be chatting and laughing with somebody else, not giving you another thought. Every one has trouble, and instead of unloading it onto somebody else, he should keep it to himself, unless he is sure the other person can give him advice in the matter that will be of use to him. To be a common complainer or a common worrier is to be a common bore.

I know a little woman who has four children, all under six years of age, and she has a whole lot of cooking and other work to do besides taking care of them, but she does it quite cheerfully. Her husband likes high-class food and is quite an eater, and when she had time she fed him highly on the best dishes she could construct. But as her family and cares increased, high-class cooking decreased. Now he lives on plain food that is easily and quickly prepared. He howled about the increasing plainness of the viands set before him, but she cheerfully informed him that if he would engage some one to care for the children she would return to the old-style cookery. The proposition is open to him and he may do as he pleases about it.

Instead of complaining when one gets in a tight place, it is better to set about finding a way out. If work piles up, as in the case of the woman with the four little children, seek a way of reducing it. Cut out the fancy cookery. Find a way of shortening the washing. Limit the ironing to articles that must be ironed. Let such things as sheets, underclothing, towels, etc., go unironed. They will stay clean just as long and do just as good service if shaken out and laid smooth as if doubly ironed. Cook yourself such good things as you like, because you need your strength, every bit you can get, to enable you to do the work, but let the men live on plain food. Add variety in the form of pies, etc., when it can be done, but don't work the liver out of yourself to supply them with titbits all the time.

In the matter of an outing, it is a little difficult to get away from home when there is so much to do, but by watching one's chances it can be done. I would not advise any woman with a family of little tots like these to go to a circus and broil under a tent, nor to a picnic of the general sort on a hot August day when the dust rolls up in clouds, nor to the woods along the river to have them poisoned by malaria-laden mosquitoes, but I would show the little ones how to have little picnics of their own under the home trees, where they will not have to drink iced slop out of a barrel, nor eat dust-covered chicken and pie on the ground among the flies and ants. A little picnic on a board table under the trees or in the shade of the house with half a dozen neighboring tots is enjoyed far more and is a thousand times better than one of the big, sweltering, dusty jams of the usual sort. It can be made doubly interesting by adding ice-cream, a little candy and a few toy balloons, whistles, etc., such as are found at the regular picnic. These things cost very little, and they not only give the tots bushels of enjoyment, but they also furnish lots of amusement for those who manage these little affairs.

If you cannot get away from home without the wearisome added labors and annoyances of dressing and fixing up a lot of little tots and caring for them in a great crowd, why, stay at home and get the pleasure of their company when they are comfortable and happy. Don't get into the habit of envying Mrs. De-Jones, who has no children, and wishing you could trot back and forth and be a member of mysterious orders and circles for the cultivation of social ethics in the wild tribes of Uganda, as she is. Don't bother your brains for one moment with the affairs of other people who are constantly striving to get into public notice by taking journeys to neighboring towns, or entertaining clubs or lodges, or acquaintances from distant points. Make your own life as pleasant as possible by doing all necessary work the easiest way you can to be satisfactory to yourself, and by enjoying the company of healthy, well-trained children.

It is a fine thing to be able to take the children to the woods or on a boat-ride, but when this is done, hire a suitable person to help you fix and take care of them, and go when all conditions are favorable for having an enjoyable time. After a while, when the children grow up, they will be more than willing to take up your burden while you take the trip of your life, which every one has in mind. For my part I would not now care a copper to go anywhere without one or more of the children to enjoy the sights and scenes with me.

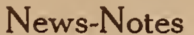
Years ago, when I was a hired man, I took two vacations alone—once to a noted summer resort and once to the lakes in Minnesota. At the summer resort I saw all sorts of people seeking what they called pleasure, and finding very little of it. To most of them the place was "dead dull" and not at all what they were expecting. I learned a lesson there, and that was never to go to a commercial summer resort for rest and a quiet time. At the little lake in Minnesota I found lots of people past middle age who were there to enjoy the cool breezes and good fishing, and quite a number of tired mothers with their children, having an easy, restful time. Most of these mothers had an assistant to help them with the tots. In several instances I learned these assistants were daughters of relatives or neighbors, people in very moderate circumstances, and they appeared to get lots of enjoyment out of their sojourn there. They helped the mothers care for the youngsters, and took care of them entirely whenever the mothers went sailing or fishing. I then thought, and still think, that the idea of taking a young lady relative or the daughter of a neighbor along as assistant is a most excellent idea.

But it costs money to take a trip and rest of this kind, and there are large numbers, like the farmer's wife who asks the question, who cannot think of it. To all such I would say, do not let it worry you for a moment. You can get along all right at home if you will take things easy and be contented. I know lots of fat and happy women living on farms, and they have lived there all their lives, took things easy as they went along, and now think they have had about as good a time as the average mortal. As one old lady said, "I worked along pretty steady and did all I could without exhausting all my strength, but when I got real tired I stopped and rested. I just told my old man I was not made of iron, and I was not a machine, and I had sense enough to stop when tired, and he could sing just as high or low as he pleased, I proposed to rest!"

Fred Grundy.

These ears are of a desirable type and also are very uniform in size, shape, color, indentation, etc., indicating that the type is well fixed, due to careful seed-selection year after year.

These ears show lack of uniformity. The exhibitor of such a sample is growing a corn which has little breeding or type, and he shows little knowledge of seed-selection, as evidenced by the almost entire lack of any standard in his selection. The Corn-Improvement Association has been one of the chief means of instruction as to types of corn and methods of selection.



News-Notes

Spitzenbergs and Yellow Newtowns are the favorite apples in Oregon. The supply of trees is very limited this year.

At Holly Springs, Mississippi, one hundred and twenty acres are devoted to the growing of strawberries. The Klondyke is the leading variety.

The owners of the seventy-acre cherry farm near Clyde, Ohio, have adopted the California method of using sheet-iron kettles in which to burn crude petroleum when a severe frost is likely to destroy the fruit-buds. *

The Work of the Crop-Improvement Associations

[continued from page 1]

associations is in testing of varieties, farm-management studies and various practical experiments which have a direct application to local conditions. It is well known by experiment-station workers in agronomy that varieties of corn grown in a community of only a few square miles in area will vary in yield when placed under like conditions from a few bushels to the acre to around one hundred per cent. Few farmers realize that this is so large, and that it is possible to increase their yields of corn from ten to fifty bushels to the acre without extra expense outside of the first cost of seed.

The importance of uniformity of stand in corn is not generally recognized, but it could be brought out nicely in a friendly contest to see who could get the most uniform stand, allowing no replanting or transplanting.

Perhaps there is no one thing of more importance in the management of a farm than a carefully-kept record, so that it may be known which operations are paying well and which should be discontinued. The importance of this work could be brought out by an annual contest in which suitable prizes are offered for the most accurate record of a field of corn or wheat.

Certainly there are many practical local problems to be taken up, and doubtless these offer one of the best fields for future work of our Crop-Improvement Associations. That effort along this line will be rewarded a hundredfold, there is no doubt; that it is essential to the progress of the times is likewise self-evident.

In the Field

Practical Discussions on Timely Questions

For the Ear of the Busy Farmer

"The busy farmer? Where is the farmer who is not busy?"

I know, but just now, when the crops are to be gotten in for the season, when everything seems to pile up, and perhaps a new barn is to be built or an addition to be made to the old one, it seems as if most farmers are rather more busy than usual; and it is for such times as these that these words are spoken.

My thoughts were turned in this direction by seeing the doctor driving along past the farm this morning. In days gone by we used to depend on the man who dashed along by the place with his horse all afoam to give us the news as to the sick neighbor. We would wait till he had reached town, delivered his message and was leisurely making his way back home, and then go out to the side of the road to talk with him and see who was sick.

That time has gone by, with a good many others that marked the country life of the past. The telephone does the work of the man on the horse, and does it so quietly and so quickly that we have no time to make the old friendly neighborly inquiries. So it was only by calling up the folks along the line and asking about the health of the various members of the family that we at last learned where the doctor was going this morning.

It was a case of sudden sickness. A neighbor up the road down with chills and fever, vomiting and bowel trouble—"terrible sick," the friend at the other end of the line said, and nobody seemed to be able to discover the cause. Nobody but the doctor, and he has learned to "hold his tongue" and go about his business. But what does Aunt Emma, the dear old woman who keeps all the "yarbs" and the other sweet-smelling things upstairs in the attic, and knows how to use them—what does she say about it? I smiled a good many times as I listened to her this morning after the doctor had whirled past, a great cloud of dust in his wake. After all, there is a lot of good, sound common sense in what she said.

"Probably overeat again! Last time the doctor was there he told him if he didn't look out he would die in one of them spells, and the poor feller just prayed right out loud, 'Oh, Lord, help me to restrain my appetite!' It's what a good many folks need to pray for, too, especially this time of the year. They tell about folks diggin' their graves with their teeth. I think it's worse than that; they go to their own funeral about twice a year—once in the spring, after they've stuffed themselves all winter and Nature has to have a housecleanin' time, and then again in hot weather, when they have worked hard and eat and drinked without usin' a mite of reason!"

If every farmer who reads this paper would see the wisdom of Aunt Emma's remarks, and act accordingly, they would enjoy life many fold more than they do, and live a great many years longer. The fact is, no class of people is more intemperate about these things than are the farmers. I know. I have been through this mill and have myself suffered from just the things the dear old lady tells about.

Stop now and ask yourself, "What are my methods of eating, working and drinking?" I will leave it just to yourself to say whether it is not more frequently than otherwise that we are to blame for the sudden and serious sick spells that come to us on the farm. Isn't it something like this:

Up early and do half a day's work before breakfast. Hurry to eat, swallowing the food taken at a two-forty gait, and washing it down with alternate draughts of cold water and hot coffee. Then, allowing no moment of time for digestion to get fairly started, set right out for the field, where we do a hard forenoon's work. Then while hot, tired and thirsty, call at the pump at noon, fill the stomach with water, eat a lot more of food at a breakneck speed, rush back to the field, and so on till night, to repeat the process of eating and drinking in the same terribly disastrous way. On more than nine tenths of the farms of this country this is the way food and drink are taken. The wonder is that we do not all die of some fearful bowel or stomach disease long before our time.

Now, at Aunt Emma's a different plan is followed. I have been there at noon and have been helped and rested to see how deliberately things are done. After coming in, the men sit back at the table and rest while Aunt Emma brings in the food. This puts the stomach and bowels in a good condition to receive the food that is to come. A few sips of water are taken from time to time, and this not ice-cold, just from the well, but quite warm. A small drink taken this way will do more to quench thirst than a whole pitcherful swallowed at a few gulps. Then the meal comes, and a long time is taken for this. No hurrying, no bolting of half-chewed victuals. Lots of fun is mixed with the food. After it is over, all sit back and rest again for a few minutes, reading the paper and letting digestion do its first work.

In the winter season there are only two meals a day at this farm home—one along about eight o'clock, the other a couple of hours after noon. If anything more is taken, it is fruit in the evening, of which there is always a plenty. Do you need to be told that there is seldom any sickness at this farm? The ounce of prevention is figured at its true value and taken regularly. Hence the pound of cure goes on to the farm where everything is done in a rush.

It would be a good plan if the methods of Aunt Emma could be adopted in every farmer's home in this country. And why not? We have all the time there is, fellow-farmers. Life is too precious to be wasted in one never-ending round of rush and pull and haul to do more than we should in a day.

I am preaching at myself now, not you. I have felt the sting of faulty living severely, and it has cost me sore to heal up the wound. The world is a good place to live in. It would be far better if we would be a little more reasonable in our ways of living. Just ask yourself if this is not so, and if the answer is favorable, won't you try it the rest of your lives?

E. L. Vincent.

Moving to a New Country

A German farmer in Grundy County, Illinois, is giving half the crops he grows to his landlord for rent, and six dollars an acre for grass-land. He thinks that is a rather high rental, and he is almost decided to move to western Canada and buy land up there. He asks for advice in the matter.

The best thing he can do is to go up there and see for himself. Look the section of country over and talk with the farmers, especially with the German farmers, and get the facts about the soil, water, fuel, and climate in winter and summer, the cost of making and marketing a crop, getting help when needed and its cost. Don't listen to the booming of the boomers, but talk with the best farmers you can find, and those who have been there for some time and know by actual experience just what you need to take with you in the way of tools, etc.

There is no doubt whatever that western Canada is one of the greatest small-grain-producing sections on this continent, and in time it will be peopled with well-to-do farmers. If the outlook and the reports you get are favorable, I would advise you to buy at once and build up a good, permanent home, similar to those in Germany. I would go up there about harvest-time, or immediately after, and see the crops, and how they do things during the busiest part of the year.

In this matter of moving to a new section of the country I always advise a thorough investigation by the man himself. The hurried run with a land-agent is of no value to one seeking information. If one gets up there about the time they are harvesting and threshing he can learn a whole lot in a short time. By all means go and see for yourself, and see thoroughly.

Fred Grundy.

After-Harvest Reminders

Shed all the hay-tools. Weather soon cracks, warps and rusts them out of commission. In fact, more machinery is damaged by the weather than is worn out by use in the fields.

It really will pay you to put up a machinery-shed, but if you can't see it that way, keep the tools from the heat, at least, by running them under a good shade.

Now that you have the hay, don't waste it nor let it spoil. Feed is getting to be scarce and high-priced in the spring. See that the top of each stack settles straight, with no low places on the slopes to catch water and spoil the hay.

A furrow run around the stack, close to the base, will act as an effectual drain for all the water running down the sides and ends of the stack. By this plan no moisture settles under the stack, and there will be very little, if any, musty hay in the bottom.

Most farmers use the meadow for fall pasture, and many leave the stacks exposed to the stock. That's another way of wasting just about half the feed, for stock will trample nearly as much underfoot as they eat. Besides, you might as well have that supply of decayed hay and manure scattered around over the field, and save hauling it. Three good wires prevent this useless waste.

This being a somewhat slack season, it's a good time to catch the colts and grow better acquainted with them. Teach them to lead, and get used to standing tied, etc. We find it an excellent plan even to introduce them to the harness—no real work, of course, but letting them become acquainted with straps and buckles. It's no use to be yanked around by them after they grow older and stronger. They'll make better and more sensible horses, too, if handled when young.

If you have any small-grain stubble, now's the proper time to plow it up. The good points of fall plowing are too numerous to be enumerated here, but the saving in time when the rush work comes on next spring is the most important item. Then there's the weeds in the fence-corners and the fields. They ought not to be allowed to go to seed. Burdock, cockle-burs and butter-prints in particular should be slain without mercy. Trim up the hedge-rows, and add to the appearance of the farm, as well as to the comfort of the traveling public; for a high hedge-row is a nuisance in shutting out the air from the road during these sultry days. In short, this is the very season for you to figure on cleaning up all the odd jobs around the farm, so as to be ready to harvest the corn crop. It will be right on hand before we scarcely realize it.

M. A. Coverdell.

Our Country Schools

"Hat in hand, you safely wander all over the land." This is my own translation of an old German saying. This saying has a meaning and conveys a lesson. I often think of it when I see some of the young lads (and girls, too) passing older people of their acquaintance, and among them perhaps some of the prominent men or women of the community, without so much as looking up or passing the time of day.

I think back of our school-days in the Old Country when we boys would have considered it decidedly rude, and even a studied insult, to pass an older person of respectability without taking off our hats to him or her. Even to the young ladies of our own age (fourteen years or over) we paid this tribute of politeness. Its influence was wholesome. It served to prevent undue familiarity between boys and girls. It was an essential part of the education of the young, and their bringing up to be true gentlemen and true ladies in the best sense of these terms. This, of course, was in the city and under a school system of almost complete segregation of the sexes. In country schools a greater degree of familiarity existed between scholars of different sexes, but the habit of taking off their hats when meeting their elders was in vogue among the boys just the same. Here we often find the politest boys and girls in the smallest country schools, and the nearer we come to cities and city conditions, the more rude, as a rule, are the boys, and the less respect they show to older people.

One of the great mistakes that people, and among them teachers and educators (so called), often make is to imagine that the main purpose of going to school or sending children to school—the first purpose of an education—is to learn how to read, and write, and "figure," etc. Doctor Schurman, the scholarly president of Cornell University, in his little speech to farmers during "Farmers' Week" in February last, gave his version of it in this way: "The purpose of an education is to teach people how to live." It surely is essential for a person, in order to live—that is, to live the life of a human being rather than that of an animal—to be able to read and write, and all that. But even more essential than to know how many bones he has in his body, or what crops the people of Japan or China or Russia raise and export, or what is the capital of some obscure principality in the central part of Europe, or the name of some negro ruler of a kingdom in Africa, is the knowledge and ability to get along in the best and easiest way with his fellow-men. The teacher in a country school who makes no attempt to instil into his pupils the principles of true politeness, the trustee or school commissioner who fails to exact from his staff of teachers proper attention to the manners of their pupils, and some instruction to be given to the children along this line, fails in an important point of his plain duty.

By all means let us see to it that our children are taught early how to live, and how to slide through life with the least possible friction and inconvenience! Let us add good manners, and true politeness, and the best ways of getting along with our fellow-men and the world at large to the common school curriculum!

T. Greiner.

Dealing With Weeds

Weeds are enemies to the farmer. They are largely the cause of the sweat of his brow in earning his daily bread. He therefore has sworn eternal war upon them. To pull, to cut and to smother weeds at any time necessary has been and ever should be his motto. Even with all his efforts it will almost be impossible to rid a farm entirely of weeds, for the seeds are carried by the winds and birds and scattered broadcast over the land.

Every farmer ought to have a well-defined plan for the extermination of weeds. First, all crops should be kept free from them. I have known farmers to go into their fields of wheat, oats and timothy and pull up weeds found growing there. This was wise, for they were not allowed to go to seed and sow their crop for next year. When careful plowing will not eradicate the weeds from the corn-fields, the hoe and the hand should be resorted to. I have pulled and chopped weeds from corn many times, and found it was worth while.

Then, too, when weeds grow up in pastures they should be mown down with sickle or scythe. We have discovered in our section that the ragweed is most frequently found in pastures. I have spent day after day on a mowing-machine cutting them down when they were just in bloom. The work was not in vain.

Many farmers keep the weeds out of their growing crops and from their pastures, but let them grow profusely along the fences and the watercourses. So year after year they are compelled to be weed-fighters at cropping-time.

A good weed-scythe is an essential farm tool, and should be used to cut the weeds from fences and draws. It is a good plan to go around the fences every summer once or twice, cutting the weeds that have lifted their heads here and there. Not only should the weeds be cut from the inside of the fence, but it is a wise idea to mow them along the highway. One can afford to mow on his neighbor's side, too, if he won't do it himself—that is, if the neighbor will permit it. Otherwise the crop of weed-seed grown by your neighbor is liable to land on your place when the wind blows from that direction.

July and August are the best time to cut weeds, as most of them bloom in these months.

W. D. Neale.

Ridding a Field of Weeds

A subscriber, J. R. S., writes that he has a ten-acre field that has been only half farmed the past four years, and has become very foul with weeds. He says that last year it was a perfect wilderness of weeds. He asks whether I think it will do to try smothering them out with crops like rape or cow-peas.

I would summer fallow—that is, plow the field before the earliest weeds go to seed, then disk as often as necessary to prevent all growth. Some of the weed-seeds will not start this year, but will be all ready for business next, so he really has a two-year fight on his hands. However, I would prepare the land well next spring and plant to corn, cultivate clean and not permit a weed of any kind to go to seed in summer or fall. This will give him a clean field for seeding to alfalfa or red clover.

F. G.

Don't burn the straw-stack; it is valuable to the soil as a mulch and as plant-food, and is a better feed than nothing.

R. B. R.

Farming Down Yazoo Way

Changes in Southern Crop-Growing

JUST before I met Mr. E. R. Lloyd of the Mississippi Agricultural College during the meeting of the Farmers' Institute Workers at Washington last November I had heard a story about John Sharp Williams, who is a compatriot of Mr. Lloyd's. This great statesman and leader of the opposition had said that it might be all well enough to have soil-surveys made for New England and those places in the North where there wasn't much soil anyhow, but it wasn't needed in his section; not in the Yazoo Delta. Why, sir, they could raise a bale of cotton to the acre there, sir. A bale of cotton to the acre! And what use could they have for soil-surveys and such fantastic nonsense?

So, just for spite, the department sent down and had a careful soil-survey made in John Sharp Williams' own neighborhood, and a few interesting things came to light.

And when he was all loaded up with information, and could deliver the goods, an official went down to visit Mr. Williams, and went out driving with him in the most innocent way. He saw this wonderful cotton-land, and then pointing another way, he inquired, "And what's this soil good for?"

"Good for nothing," said Mr. Williams. "Absolutely worthless."

They drove on, and presently came in sight of low land, grown up in a jungle, and flooded with water until July 1st every year.

The department official called attention to that, but did not press the matter until he saw a negro farmer driving by with a wagon.

"What's he got in there?"

"A bale of cotton," answered Mr. Williams. "He'll take that to the store and trade it for pork and corn-meal."

"Home-grown pork and corn-meal?"

"Oh, no; our crop is cotton."

"At five cents a pound," said the official, and then he waded in:

"D'you know what that low land all grown up in brush is? That's as good corn-land as can be found anywhere in this country. And there is hardwood on it now worth a lot of money. But if you put that corn-land to its proper use you could afford to let the timber go. Instead of importing your own hog and hominy and paying dealers' profits all along the line you could grow it right here."

"But I tell you the land's flooded every year till the first of July."

"A few hundred yards of embankment would reclaim it permanently. And that land back there that you said was absolutely worthless, do you know what it is? It is exactly the same soil as the Norfolk truck soil that has made the truck farmers of Norfolk rich and renowned. Right through this territory the Illinois Central trains carry truck to Chicago from Texas, a thousand miles farther away, and you send them nothing. Cotton's your crop, and you let the far more profitable market-garden soil go absolutely unused."

But Mr. Williams is what you call a "practical man"—that is, he won't do anything different from the way it always has been done. Such a man considers that an ounce of excuses is worth a pound of accomplishment. It would take a lot of capital, and the South had no capital.

"But you can get all the money you want to develop such resources. All you've got to do is to show Chicago men what the soil-survey indicates."

Then the nub of the story came. It was not the triumph of the soil-survey man, not the acknowledgment that the smartest of us can always learn something, but the vehement declaration that he, John Sharp Williams, the owner of some forty thousand acres, didn't want Yankee capital coming down there, upsetting things and putting notions into people's heads.

As I say, it was right after that story was told to me that I met Mr. Lloyd. And I'm mighty glad I met him then and there. Because it isn't good to believe that the people in your particular section of the country are the enterprising ones and that the people in another section of the country are all of them slow-pokes, wedded to old ways, a lot of fifteen-bushels-of-corn-to-the-acre fellows, if they raise any corn at all. Most of us who live north of Mason and Dixon's Line are willing to admit that, industrially, the South isn't so slow, but agriculturally—we shake our heads. We forget that the world's record for corn yield was made by a North Carolina man—two hundred and fifty-five bushels to the acre, green weight; two hundred and seventeen bushels to the acre, chemically dry weight. Which is not so slow.

And this man Lloyd was just as up-and-coming as anybody I met, just as enthusiastic a believer in the great revival of agriculture which is coming nearer and nearer every day, just as keen and eager to take in the new ideas and theories which explain and correlate the facts which experimental and empirical farming is bringing out. We had a long talk. What he said was interesting to me, and I set it down here, in the hope that it may be interesting to you.

"I'm a landlord myself," he said, "just like John Sharp Williams. Not on quite so large a scale, though. And we landlords haven't been as useful to the community as we might be in proportion to the wages we draw for being landlords. Down in my neighborhood we have some Italians, tenant farmers. One of them came to his landlord and asked for another pair of mules. My friend didn't know about it. Was the Italian sure that he could use the mules? Yes; and he wanted some more land. Well, there was some talking, and finally my friend, seeing that the Italian had been a good tenant, prompt in his payments and all that, consented to buy him the extra pair of mules, and went to the local bank to draw the money to buy the mules for Tony (we'll call him Tony). The cashier smiled a dry smile.

"'What are you laughing at?' asked my friend.

"'I reckon you don't know that that Guinea has twenty thousand dollars on deposit here.'

"So my friend went to Tony and asked him why he couldn't buy the mules for himself. Well, if he went to buy them, they'd rob him as an ignorant foreigner whom it would be a pious duty to rob. But my friend could buy more advantageously.

"'And how did you make all that money? Not out of cotton?'

"'No,' says Tony. 'Pep'.'

"'Pep'? What's 'Pep'?'

"He had been growing peppers and garden truck and sending it to New Orleans and Chicago and selling it to other Italians. He had been diversifying agriculture all on his own hook. Instead of the lord of the land justifying his position by being of increasing usefulness to the community, he was simply permitting the tenant to be increasingly useful.

"But we're getting over that. We're coming along. Not long ago, a friend of mine was out walking in the country, and hailed a negro passing in his wagon for a ride. In the wagon were Irish potatoes, and sweet potatoes, and squash, and other vegetables. Fine-looking. Rather surprised to find such things in the wagon of a negro farmer, my friend said, 'Hello! What does all this mean?'

"'Well, I tell you, sir,' said the farmer. 'Last year there was a train come down here, and there was a white man told all about how to raise this kind of truck, and I got kind of interested, and I thought I'd try it, and sure enough, sir, everything come out just like he said.'

"That was the institute train which Capt. J. F. Merry of the Illinois Central Railroad put through for us, so that we might preach the gospel of diversified farming. We had two cars that would seat about one hundred each, a baggage-car, a sleeper and a diner. We made ninety-five stops in Mississippi and twelve in Louisiana, and in all we reached about thirty thousand people. If we were to accomplish anything in the Yazoo Delta at all, we had to reach the negroes, for there are about twenty of them to one white man. And yet we didn't want to arouse prejudice in either race. We finally arranged it to hold an institute in one car for one race and an institute in another car for the other race, and got along without any mishaps."

Mr. Lloyd laughed a little laugh, as one does when he recalls a time when the joke was on him, and went on:

"I was talking alfalfa one time, and was wondering whether I wasn't wasting my time on my negro audience, for, you know, they're great for moving. They keep shifting about from one farm to another. Maybe they get into debt, and move away to avoid paying up; maybe they don't get along well with the landlord, or maybe they feel that they need a change. Anyhow they move next year. So when an old fellow that had been paying close attention began to ask questions, I said to him, 'Now, uncle, you must understand that alfalfa isn't a one-year crop. To get your money's worth out of it you ought to stay by it for five years or so.'

"'Yes, sir, I understand that.'

"'And it will cost you somewhere in the neighborhood of six dollars an acre to put in alfalfa.'

"'Yes, sir, I understand that.'

"'How much land have you got, uncle?' I finally asked him.

"'Oh, about two thousand acres, I reckon, sir.'

"'Well,' I said, 'I want to talk to you.' And I filled him up with all I knew about alfalfa. Come to find out, that old codger had about a thousand head of cattle. And he didn't look any different from any tenant farmer in the car."

"Do you find that institute work really gets to the negro?"

"Oh, yes indeed. They're teachable. They want to learn. All they need is a higher standard. They need to be shown a more excellent way. Well, we're all of us like that. The negro is teachable, but you've got to stand right over him. With the Italians it's different. You can depend upon them to fulfil a contract. They're neater workmen, too. Where Italians have the cotton-lands they'll have it all picked and cleaned up ready for the new seed-bed by the first of February, whereas you'll see the negroes picking only a little way ahead of the plow. You see, cotton doesn't ripen all at the same time, yet it wants to be picked as soon after ripening as possible, or it deteriorates. Yet you'll see negroes dragging sacks of cotton through the muddy ditches. But we're coming along; we're coming along."

And that's the pretty thing about being with institute workers. They're the most enthusiastic set of people. They sort of feel it in their bones that a new day is dawning for agriculture.

EUGENE WOOD.

Good Plowing

One Indication of Good Farming and a Prime Requisite of Large Yields

Does a Telephone Pay?

I WAS in a home one day when a lady called over the telephone to a merchant and asked the price of turkeys. He informed her he was paying thirteen cents a pound. She rang off and called a merchant in another town in the opposite direction, asking the same question. He told her he was giving fourteen cents a pound. She at once engaged her turkeys to him. Hanging up the receiver, she remarked to me, "I just made enough by that deal to more than pay for our telephone one year." Then I thought to myself that if farmers and their wives use their telephones to keep in touch with the markets, they surely find them very profitable year after year.

Again, a number of farmers had been summoned to a home for threshing purposes. They were to come at eight o'clock in the morning. The machine was to be at the home late the previous evening. Some of the farmers lived three miles away. That morning before daylight the telephones were busy. These farmers were informed that the machine would not arrive before the afternoon. Each farmer went to his corn-field to plow instead of spending half a day at the neighbor's waiting for the arrival of a delayed threshing-machine. Here again the telephone saved money for the farmers, for time means money to the farmer in corn-plowing season.

A farmer ordered a bill of goods by mail. They were to arrive on a certain date. He lived ten miles from the railroad. He simply called up the freight-agent over the telephone and asked if the goods had arrived. When informed that they had not, he went to his field and spent the day in profitable work that might have been consumed in a trip to town. Again the telephone was a saver of money and time.

A farmer's horse was stolen, and by telephone the thief was detected before he was able to make his escape from the neighborhood. The horse was returned, and the farmer gave the credit to his telephone.

Yes, a telephone pays. A farmer can ill afford to do without one. Besides the saving of money and life, there is the social chat greatly enjoyed by the women, and the men, too, especially on rainy days. The farmer who invests in a telephone as a general thing never has occasion to regret the deed.

W. D. NEALE.

Lodged Wheat

is dead loss, because you can't harvest it—you can't thresh it—you can't sell it.

If your wheat is lodged resolve that next year you will get straw strong enough to bear the heaviest wheat your land can produce.

That means **Potash**. It fills out the grain and makes a sturdy, elastic stalk for the grain to ripen on—keeps it standing for the harvester.

Potash Pays

Unless your wheat fertilizer is 2-8-6, it's too low in **Potash**. Two pounds of Muriate of **Potash** to each 100 pounds of fertilizer increases the **Potash** total one per cent.

Send for new Farmers' Note Book—about soil, crops, manures and fertilizers—a practical book compiled by experts. Mailed on request, **free.**

GERMAN KALI WORKS, 93 Nassau St., New York
CHICAGO—Monadnock Block
ATLANTA, GA.—1224 Candler Bldg.

$1,500 PROFIT MADE ON CIDER

Write for our free catalog which fully describes and illustrates The Original **Mt. Gilead Hydraulic CIDER PRESSES** For custom work in your locality, they are money makers. Built in sizes 10 to 400 barrels per day. Hand or power. Also Steam Evaporators, Apple-Butter Cookers, Vinegar Generators, etc. We can show you how $1,500 clear profit can be made. Fully Guaranteed
Hydraulic Press Mfg. Co., 106 Lincoln Ave., Mt. Gilead, Ohio. Or Room 119D, 39 Cortlandt St., New York, N. Y.

Monarch Hydraulic Cider Press

Great strength and capacity; all sizes; also gasoline engines, steam engines, sawmills, threshers. Catalog free.
Monarch Machinery Co., 603 Cortlandt Bldg., New York

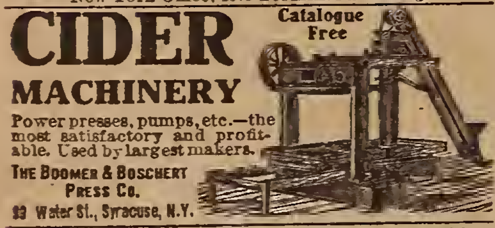
Saw Mills

If you need anything in saw mills or wood working machinery, send for our catalog. Our line is complete. Goods highest quality and prices reasonable. American Saw Mill Mach. Co., 130 Hope St., Hackettstown, N. J. New York Office, 1576 Terminal Building.

CIDER MACHINERY

Catalogue Free

Power presses, pumps, etc.—the most satisfactory and profitable. Used by largest makers.
The Boomer & Boschert Press Co.
93 Water St., Syracuse, N.Y.



PATENTS Watson E. Coleman, Washington, D. C. Books free. Highest references. Best results.

Gardening---By T. Greiner

Cabbages Directly From Seed

W. R. K., of Belle Center, Ohio, asks whether it is absolutely necessary for cabbages to be transplanted before they will make good heads. He says, "On June 5th I planted a small field to winter cabbages, dropping the seed in hills eighteen by thirty-six inches apart. After the plants are well set, it was my intention to thin them to one in each hill. In the meantime, however, several persons have told me that in order to get good heads it is necessary to transplant. What is your opinion about it?"

I will say that during dry weather, when plant-setting at this time is difficult, or when we do not have the plants, I frequently make use of this direct method of raising cabbages, and I find that it is by no means necessary to transplant the cabbages in order to make good and solid heads. By sowing seed of Early Winningstadt cabbage, for instance, even as late as along in July, we can usually grow very good cabbages before winter. Seed of Ballhead and other late sorts of course should be sown correspondingly earlier. But take good care of your cabbage-plants, even if not transplanted, and they will come on all right if the land is in the right condition, which especially means "rich enough."

Soil for Tomatoes

I do like nice and well-prepared soil for all garden crops. And if I have a patch that is rather rough and lumpy, and cannot easily get it in proper shape, I would use it for tomatoes rather than for potatoes, corn or anything else. Last year I planted tomatoes on a patch where it was hard to find fine soil enough to cover the plants. Yet the crop was immense. Of course, I used the cultivator freely during the earlier part of the season, and rains after a while slaked and broke up the lumps.

I have another experience of this kind this year, with this difference—that up to date the rains have been lacking, and the lumps are lumps still. But the plants seem to be growing and setting fruit, showing that the tomato-plant is extremely rugged and able to adjust itself to outward conditions. But as I said before, I prefer well-prepared and rather fertile soil. The plants show greater thrift under favorable circumstances. If any one tells you that tomatoes do best on poor soil, don't believe him. I never let my tomatoes suffer for lack of plant-food in the soil. And plenty of cultivation—deep cultivation, besides—is also a good thing for the crop.

Managing Sweet Potatoes

An Oklahoma reader states he is told that sweet potatoes will yield much better when the vines are pruned than if left to grow as they will. If this is so, how old should the plants be when given the first pruning, and how much if it should be cut away?

We must bear in mind one great principle in plant growth—namely, that good and healthy foliage is required to make good and healthy growth of root, bulb or fruit; and usually the better and heavier the foliage, the greater the yield of tuber or fruit and the better the quality. Therefore I would not prune sweet-potato vines. Yet these vines have a tendency to strike root along the joints of the vine, and if there is much vine growth, and this is left undisturbed, then each vine may begin to send its roots down in a dozen or more different places, and in each place attempt to grow a number of long and slim bulbs of no particular value, thus greatly weakening the original root and reducing its yield of tubers. This is the case more particularly when the soil is very rich and during wet weather. It is perhaps an advantage to select soil of only medium fertility for sweet potatoes, and put the manure in the hill (or under the hill) rather than apply it broadcast. The vines may then be lifted up occasionally with a hoe or fork handle, in order to break their hold on the soil, should they already have acquired such hold. But this is about the only "pruning" that I would give. The vine when in contact with moist soil strikes root so readily that whole fields in the Southern sweet-potato regions are planted for a late crop by taking pieces of vine, say eight or ten inches long, form an earlier field, and pushing them down into the hills, where the plants are to grow, with a forked stick in such a way that just the ends of the vine are sticking out. Warmth and a little moisture will make them strike root quickly, almost without a miss.

In Times of Drought

Occasionally we get a reminder, more or less severe, that the measure of success in our gardening operations depends to some extent on conditions which we cannot fully control. The present one is really the most unsatisfactory gardening season which I can remember. The soil seems not only without moisture, but without life, so that the free application of water to the parched land does not bring the response in growth of crops that even a light rain does in a normal season. The early excessive rains in April and May seem to have closed the pores of the subsoil. All vegetation seems to be at a dead standstill. Even weeds refuse to grow. Watering helps some, and the gardener in the suburbs who can get his supply of water from a near hydrant, or any one who has an irrigation plant of his own, has a material advantage over the great majority of gardeners who must carry water in pails or barrels.

The artificial use of water is of especial value for plant-setting at times like these. I have plenty of nice cabbage and celery plants, and would like to plant a good many, the ground being all in readiness. But it is of little use to set them without water, and watering the soil before planting, and the plants afterward, requires considerable time and labor, and so the work progresses very slowly. As to other crops, such as beets, onions, lettuce, carrots, etc., I notice that these crops in neighbors' gardens where water is available from village hydrants are not very much better than my own. My first plantings of garden peas have been doing fairly well. My later ones do not promise big yields. The vines lack thrift. Dry soil and summer heat are too much for them. A good long rain, however, one that will reach down to the subsoil, would do us a lot of good. It would save our early potato crop, and possibly our late ones, and everything that is planted. And so we live in hopes, and in the meantime continue planting, although at a somewhat slower rate than usual, and just a trifle disheartened.

Fertilizers for Growing Garden Crops

Many of our friends seem to think that the use of fertilizers might enable them to do wonders in growing garden crops. A subscriber in Washington (state) just asks me what is the best fertilizer to apply to ground where onions and turnips and potatoes are growing.

Fertilizers do help sometimes. In a general way, however, we use them supplementary to ordinary farm or stable manures. I like to depend on the latter more than on the fertilizers, but can often give plants a little extra boost by applying chemical manures in addition. My way of applying these is that of broadcasting after plowing, thus getting them well incorporated with the soil. The only "fertilizer" which I put on the growing crops, and this usually only in the fore part of the season, from April to June, is nitrate of soda, which is very soluble and almost immediately available. It often gives good results on onions, spinach, beets, radishes, celery-plants, cabbages, cauliflower, etc. I seldom use it on early potatoes, and never on late potatoes. I do not use it on eggplants, turnips, peas, beans, etc.

Some gardeners put a little nitrate of soda, or in its absence nitrate of potash (common saltpeter), in the water with which to water melon or similar plants. I never do. I do not use it on tomatoes, although some authorities claim that its application in the early season, when plants are first set out, will tend to make the crop earlier. This is not true for my own locality where the soil is strong loam, but it may be true of localities having sandy loam. For potatoes and turnips on soils that are fairly fertile, and have recently been in clover sod, I like to use a dressing of superphosphate (acid phosphate), putting it on broadcast or with the drill after plowing, or scattering it over the land after furrows are opened for potatoes, and then running the furrower through the rows the second time, in order to mix soil and fertilizer together; and I would recommend the use of such fertilizer for such purposes, especially for the inquirer in Washington, whose soil, as he says, contains considerable alkali.

Early Bunching-Onions

C. F. H., a reader in New Lexington, Ohio, asks me when he should sow onion-seed so as to have bulbs that will reach half an inch in diameter before winter sets in. He sowed Danvers Yellow a year ago last spring for dry onions, but they failed to make large dry onions the same season, and were left in the ground until this last spring, when they made good large bunch-onions, that sold well along in March.

I once sowed Yellow Dutch about July 1st, wintered the half-grown bulbs, and sold them readily the spring following. They are liable to go quickly to seed, however, and must be pulled and disposed of quickly. In our days, however, the market demands a better, sweeter green onion than we could sell twenty years ago. I now only use White Strasburg or Silverskin onion for this purpose, and sow seed about August 1st. Will try a lot sowed the middle of July, too; but August 1st is usually about right. This Silverskin onion is very hardy. The only difficulty I meet is to get a good stand of plants by this midsummer sowing. Many of the young seedlings are apt to die after coming up all right, and I am unable to discover the reason therefore.

Tulips From Seed

C. M. B., a Pennsylvania reader who is a lover of tulips, wonders whether she could raise them from the seed. She has gathered a lot of seed, but does not know how and when to plant it.

Yes, propagation from seed is possible, but it is such a lengthy job that it is not generally practised. The ordinary way of increasing the bulbs is by the little offsets formed on the old bulbs, or by means of the bulb scales. The only real practical way for a lover of tulips to manage is to carefully save the bulbs which form inside the old bulb after flowering, and replant them in the fall.

About the Wonderberry

It's a pity that so worthless a thing as the Wonderberry, or Sunberry, whatever you prefer to call it, should be the means of wrecking a good name and a world-wide reputation!

Breese Bros. Rubber ROOFING

We are practical roofing men. You can depend on our statements and knowledge of roofing. Don't let our **lower** prices scare you. We invite most rigid examination of B-B Roofing beside any other roofing made. Our sales have grown—doubled and tripled by **repeat** orders from satisfied users and their friends for several years. Why pay more? We save you **half**. Keep the **cash Savings** yourself. Why pay it to dealers?

Big Book and Sample FREE When you buy Breese Bros. Rubber Roofing you are protected for years to come. Our guarantee is absolute. We stand ready to make good on every claim.

We pay the freight to all points East of the West lines of Minnesota, Iowa and Missouri and North of the South line of Tennessee. If you live beyond, we pay it that far. Take advantage of this opportunity and send in your order or ask for free samples and book at once. Delay may cost you money.

Easiest To Lay

—only a hammer and knife needed. Cement and metal nails free with each order.

Promptest Delivery
(Quicker than Dealers Get)
Lowest Direct Factory Prices
Freight Prepaid on 100 lbs. or More
35-lb. Roll—108 Sq. Ft.—1-Ply—$1.35
45-lb. Roll—108 Sq. Ft.—2-Ply— 1.85
55-lb. Roll—108 Sq. Ft.—3-Ply— 2.25

THE BREESE BROS. COMPANY, Roofing Dept. 24, Cincinnati, Ohio

There's Good Money in a Good Press

The Ohio leads them all because it is the strongest and lightest, and turns out eighty well made, compact bales an hour, all day long.

The Automatic Foot Button Block Dropper times the work perfectly. Every minute a money-maker. No stops for oiling. All steel construction. No time lost in repairs. Get the Ohio catalogue and see the big advantages it offers. Souvenir Baler's Hand Book mailed Free.

OHIO CULTIVATOR CO., 202 Ohio Street, Bellevue, Ohio

Puts Double Wear in a Machine

Harvesting Machines require a heavy oil. Most bearings on such machines are loose, either from design or wear, and a "light" oil soon runs off.

Ruddy Harvester Oil

puts double wear in a machine because it *stays*, wears longest and has a remarkable friction-reducing quality. Never rusts or gums. Supplied in quarts, gallons, barrels and half barrels.

STANDARD OIL COMPANY
(Incorporated)

Fruit-Growing---By Samuel B. Green

Lice on Currants—Grafting Cherries

M. F., Oak Harbor, Washington—The currant-leaves you sent, which have blisters on them, have been injured by little green lice that work on the under side of the leaves. These generally appear early in the spring, and as soon as they commence to work the leaves form blisters, which protect the young aphis.

The only practical way of keeping them off is to spray the plants with strong tobacco-water early in the spring before there is any sign of the blisters. At this time the lice are exposed and are much more easily killed than later, when they can be reached only from the under side of the leaves, and are protected in the blisters which the leaves have formed. Spraying with Bordeaux mixture or Paris green, as you have tried, would not afford any relief whatsoever. Your spraying with kerosene emulsion might have helped. You should remember that Bordeaux mixture is intended solely for diseases and Paris green for biting insects, and this is a sucking insect, which must be reached with something like kerosene emulsion or tobacco-water, that will destroy by contact.

As for grafting cherries, these should be grafted early in the spring, before growth starts. In the case of large trees it is customary to employ the whip or cleft graft when young; stocks are crown-grafted by whip-graft or side-graft at the surface of the ground.

Plum-Rot

Mrs. J. C. J., Hale, Missouri—You state that when your plums are two thirds grown something (you think it is an insect) webs them together, and that by the time they ripen they are rotten. I do not think that an insect has any part in this injury, but that it is caused entirely by a fungous disease known as brown-rot on plums. This generally starts where the plums touch one another, but may start at any other point where there are favorable conditions. It soon destroys the plums, causing them to rot and to become worthless. They then shrivel up and remain on the trees over winter, and the following spring produce spores, which form new centers of infection.

The best remedies for this disease consist in removing and burning, or burying deeply, shriveled-up plums which are on the trees on the approach of winter. In addition to this, the trees should be sprayed early in the spring with strong Bordeaux mixture, or with sulphate-of-copper solution, and after the fruit has set it should be again sprayed with weak Bordeaux mixture.

I know this means a great deal of work, but it is the only practical way of raising the domestic class of plums, and, to more or less extent, other plums in sections where this rot is troublesome, and it is practised by all the best plum-growers. Thinning the fruit, so that no two of them touch, is something of a remedy, and together with the picking of the fruit will afford some relief.

Aphis on Apple-Trees

Mrs. O. C., Walhonding, Ohio—The lice on apple-trees winter over in the egg stage. These eggs consist of minute, black, shiny bodies, that are frequently found in winter around the buds of apple and plum trees. These hatch in the spring, and after mating, several asexual generations occur. This accounts for the rapidity with which they breed. They are seldom seriously injurious except on the new growth of young trees. On these they often cause the foliage to curl up and become so weak that they interfere with the growth of the tree.

The best-known remedy is probably tobacco-water, made from raw tobacco and of about the color of strong tea. In applying, gather the twigs of the apple-trees together, and dip them into a basin containing this decoction.

Diseases of the Currant

A. W., Hinckley, Minnesota—The brown spots on the currant leaves you sent me are probably caused by some fungous disease. It seems to me, however, that in Minnesota our common varieties of currants, such as Red Dutch and Victoria, ought not to be subject to any such trouble as this. If the soil is well drained where they are and they have a reasonably free circulation of air, and yet they continue to be badly affected by disease, I think I should throw them away and start with new plants.

If, however, the ground is too wet about the bushes, or the plants do not have a fair chance, then I would try to remedy these conditions. The dropping of the leaves in August is not unusual, nor is it very harmful to the bushes.

The injury to the berries is probably caused by some fungus, perhaps the same as that which attacks the leaves, and will undoubtedly yield to the same treatment. I have sometimes sprayed currant and gooseberry bushes with Bordeaux mixture to prevent the falling of the leaves in August. This works quite successfully, but I could not recommend you to do so in a case like yours, although it is quite likely that the disease on the berries and fruits will yield to this treatment.

Apple-Twigs Blighted

C. H. F., Zumbrota, Minnesota—I have looked over the apple-twigs sent, the foliage of which is well expanded, but the leaves on the twigs, together with the fruit-buds, are blighted, and the wood is drying up. You state that the whole tree is injured and the variety is Elgin Beauty.

I do not think the injury has been caused by any spray that you have used, or that this spraying had any injurious effect upon the trees. It looks to me like a case of the well-known fire-blight, which has entered the twigs through the flowers. This is a common way for infection to enter apple-trees, and is quite injurious in many portions of Minnesota at this time on varieties that are especially susceptible to it, such as the Elgin Beauty, Transcendent and others.

Fungous and Insect Enemies

Mrs. C. A. H., Cheecarta, Oklahoma—You state that your cherries drop their leaves in the summer, and that a Burbank plum drops all its fruit before it is ripe, and apricots and blue damsons the same. I do not know the cause of this, but think the leaves drop on account of injury from the shot-hole fungus. This may be prevented by spraying with Bordeaux mixture. It is possible that your plums also failed from some fungus, but I am more inclined to think it is due to a snout-beetle, known as the "curculio."

Your pear-trees die at the end of the branches from what we know as blight. This is a disease that is quite troublesome, and there is no practical remedy for it except the planting of varieties that are resistant to it. The Kieffer is a variety that is perhaps more resistant to this disease than any other marketable sort. The grape-rot will also yield to treatment applied about once in three weeks, until the fruit begins to color, after which it will probably be unnecessary to apply any more, as if the Bordeaux was applied after they begin to color, it might stay on and spoil their appearance.

I am quite sure that where you have used the Bordeaux mixture for the grape-rot and leaf-fungus you could not have used it thoroughly enough to afford protection, for I am convinced that where Bordeaux mixture is carefully used it will be effectual in ridding orchards of both the grape-rot and the leaf-fungus, although it will not destroy the pear-blight.

The Strawberry-Bed

C. B., Midvale, Ohio—You should have kept the weeds out of your strawberry-bed by cultivating as long as you could in the autumn, and again in the spring if there were many weeds, after which they could have been mulched, so as to prevent the berries from getting dirty.

You state that you set out the bed two years ago, but now they have run wild over the garden and that it is but a small patch. I take it you wish to have some strawberries next year, even if it costs you some considerable amount, more than would be profitable in a commercial way.

In such a case I would suggest that after the strawberries have been gathered, you mow the foliage close to the ground with a scythe, cutting off weeds, strawberry-plants and all, and then selecting the portions of the bed where the plants are thriftiest, line them off in beds about eighteen inches wide, with about eighteen inches between the beds. When this is done, spade up between these plants, turning under the strawberry-plants and weeds. Then hoe out the weeds growing between the remaining plants, and give the best of cultivation, keeping the soil stirred.

Treated in this way, the plants that are cut off will soon show a fine new growth, which will be much thriftier than if not cut back. Keep them well cultivated, and the weeds out until autumn, and when winter sets in, so that the ground is frozen hard, cover them with about three inches of marsh hay, corn-stalks, oat straw or similar material. This of course should be removed early in the spring, as soon as there is any sign of growth on the strawberry-plants.

Flowers of Strawberry Injured

E. S., Pierceton, Indiana—The samples of strawberry-blossoms which you sent are stung by the strawberry weevil. This insect is causing a great deal of injury throughout the Eastern and Central states this year. There is no practical means of eradicating it. The best way to prevent its being seriously injurious is to plant as few perfect-flowering varieties as possible and still secure good pollination of the pistillate sorts. This beetle attacks only the perfect-flowering kinds. It is seldom injurious for more than two years in succession. Where strawberries are grown in a small way, it is practicable to cover the plants with mosquito-netting or similar material to keep off the weevils until the flowers have expanded.

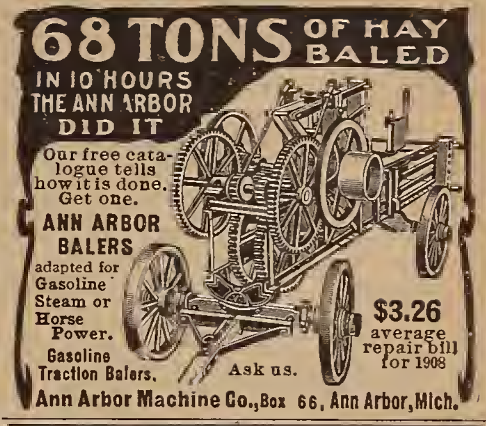
Compass Cherry

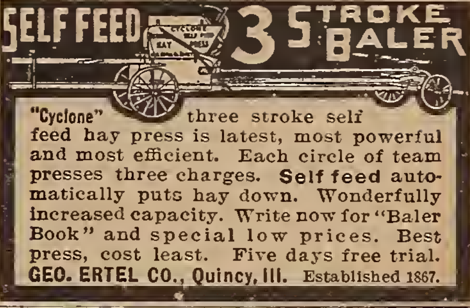
A. H. O., New Rochelle, New York—In regard to my article in Farm and Fireside of June 10th, stating that the Compass cherry is of poor quality, in which statement I disagree with the write-up in the catalogue of some nursery concern concerning this fruit, I would say that I have been in close touch with the Compass cherry ever since it originated, that I have fruited it for many years, and also judged it at many state fairs, perhaps at some state fair for each of the last ten years. I know a few parties growing it who say that when thoroughly ripe they like to eat the fruit out of hand, but to my taste there is altogether too much pucker to it. The Compass cherry tree, however, is extremely hardy and productive, and the fruit is desirable for cooking purposes.

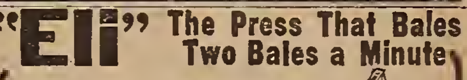
GRAIN and FERTILIZER DRILL

The YORK FORCE FEED DRILL combines lightness with strength. Most complete drill made. No complex gearing to get out of order. Boxes are close to ground. Easily regulates quantity of seed or fertilizer. AWARDED GOLD MEDAL St. Louis World's Fair. Fully Guaranteed. Weight, Only 700 lbs. Agents Wanted. Write for catalogue.

THE HENCH & DROMGOLD CO., Mfrs., York, Pa. MADE ALSO WITH DISC







Leads them all in speed, good work, safety, convenience. Come to headquarters. We make 18 styles of Horse and Steam Power presses. Get an "Eli" and be sure of being right. Send for free catalog today.

COLLINS PLOW CO., 1116 Hampshire St., Quincy, Ill.

Stickney Gasoline Engines ARE THE BEST

Why? Because of the outside igniter, modern open cooling system, straight-line valve motion and ball-bearing governor. Thousands in successful operation because of our years of experience in building the best. Seven sizes: 1½ to 16 H. P. Send for our Free Catalog and our Catechism telling fifty-seven reasons why Stickney Engines are the Best. Agents everywhere sell them.

Charles A. Stickney Company
MAIN OFFICE & FACTORY ST. PAUL, MINN.

ATLAS PORTLAND CEMENT
Makes The Best Concrete

The cement bought by the U.S. Government for the Panama Canal

SEND FOR OUR FREE BOOK "Concrete Construction about the Home and on the Farm." Contains over 100 drawings and illustrations.

THE ATLAS PORTLAND CEMENT CO., Dept. 122 30 Broad Street, N.Y.

Daily output over 40,000 barrels, the largest in the world.

About Practical Poultry-Raising

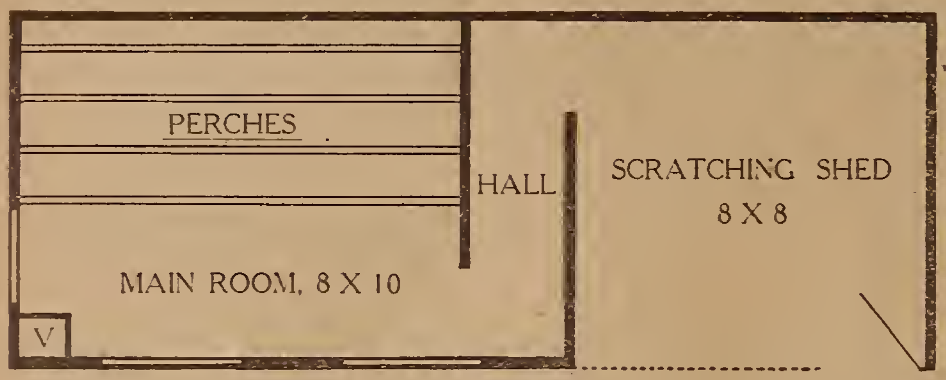
A Poultry-House Plan

Having heard a great deal about the virtues of open-front hen-houses, also the drawbacks, and being about to build one of some kind, I determined to build one that would give plenty of fresh air without drafts, and yet not take the chances of getting up of a morning to find it drifted full of snow. After due deliberation I built one that seems to me to exactly fill the bill.

This house is twenty by eight feet, six feet high at the rear (north) and seven and one half at the front. The scratching-shed is eight by eight feet, with an open front. The hall shuts off all the wind. The nests are under the dropping-board (in front), with a door to let down, to prevent egg-eating. The thirty feet of perches accommodate forty hens. The ventilator, marked V in the illustration, gives an outlet for foul air. There are three windows in the main room—one on the west and two on the south side.

One foot of forest leaves in the main part and one foot of dust in the scratching-shed give plenty of exercise. This house gives all that can be desired in the way of a hen-house and at little cost; it is battened tight and covered with metal roofing.

W. H. Shay.



Ground Plan of Hen-House

Incubators

An Ohio man takes some exceptions to my article about incubator experience in Farm and Fireside of July 10th. He appears to think that it will work some injury to the manufacturers of incubators, who are patrons of his journal. The article in question is part of a lecture I delivered to a meeting of practical poultry-raisers. These men and women declared that it was the most practical and sensible talk about real poultry-raising they had ever listened to. Two of them informed me after the lecture that they had determined to purchase incubators. They said they now understood why those of their neighbors who had tried incubators had lost so many of their chicks. That the great mortality among the chicks hatched was largely due to mismanagement. They were perfectly willing to give the extra care required, and would purchase the machines. That did not look like my talk had injured the business of the factories, or of the papers that carried their advertising.

Hundreds of people have asked my advice about buying incubators, and I invariably told them to buy—if they were willing to give the chicks the extra care required to rear them. When I was asked which particular machine is the best, I invariably replied, like the editors of poultry journals, that I do not know. I do this because I am well aware that there are incubators and incubators. Some are well made, and some are not so well made. I became interested in incubators twenty-three years ago, and my interest has not abated. I have studied this problem thoroughly, and spent a good deal of money on it buying several different makes of machines, and not only given them a thorough trial, but also took them apart and tried hard to remedy their defects. I have worked over the problem of variation of heat in the different parts of the egg-chamber and tried to remedy that, with partial success in three instances. Four of the machines I tested were honestly constructed, and the makers seemed to have made a careful effort to apply the heat equally to all parts of the chamber and had succeeded fairly well. Two of the machines I bought were made to sell, as I ascertained when I took them apart after failing miserably with them. Two others were made, apparently, of lumber that was not adapted to this sort of machinery, or it was not properly seasoned, for it warped and sprung badly. The tank of another leaked before the end of the first season, but I think that was caused by an overlooked defect in the material it was composed of. My later investigations of these machines have satisfied me that there are a smaller number of defective machines on the market than formerly. The one fact stands out boldly, and that is, a well-constructed machine cannot be made, advertised and sold for a cheap price. In buying an incubator it is a good idea to keep in mind the fact that good material costs money, and that careful workmen do not work for fun, and the factory that employs both must charge a fair price for their machines.

Incubator Management

I have hatched thousands of chicks, and can say positively that the management of an incubator is no child's play. A good deal of sense and some skill are required to get out fair hatches. Still more sense and skill are required to raise the chicks after they are hatched. Without the aid of incubators the large commercial plants could not exist. Those that are skilfully managed pay a fair profit, but some do not pay a fair interest on their cost. But that is a matter of no interest to farmers. What they are interested in is to hatch and rear a goodly number of chickens without interfering too much with their other work. In my lectures at farmers' institutes I have invariably told the farmers and their wives that unless they were fixed to give the chicks extra good care they would not be satisfied with an incubator. Those who have not been through the mill like I have will take issue with me in this matter, but the fact remains, nevertheless. If one grown member of a family has full charge of the poultry, and will give it the attention necessary, he or she can make good use of an incubator. But the already overburdened woman should not add one to her cares, and the man who is too busy to give it particular attention should not put money in one. Any sensible person who has tested the matter will say I am right in this.

The wife of a farmer I am acquainted with has a summer kitchen with a stove in it. She also has a good incubator. This she fills early in March, and usually gets out about a hundred and thirty chicks. These are kept in this summer kitchen until ready for open weather, when they go into a chick-tight yard. She has coops for them in the summer kitchen, and also in the yard, and she keeps about twenty in each coop. When they are a week old they have the run of the kitchen, the floor of which is covered with chaff from the haymow, and after they have been in the yard a couple of days and become accustomed to their surroundings they have the run of that. The past four years her losses of this bunch of early-hatched chicks have not exceeded fifteen in any one year, while last year she lost but one. Any one who is equally well prepared to rear the chicks can make equally good use of an incubator, but unless one is so prepared it is better to sell the eggs than waste them hatching chicks that cannot be reared.

Incubator Nonsense

The fact is, there has been too much tommy-rot injected into the poultry-raising business during the past few years, chiefly by those who are interested in farming the farmer for the sake of the advertising or other perquisites they get by working the graft. The statements that hatching with incubators is child's play, and that they are absolutely necessary to the proper equipment of the farm, etc., etc., is silly nonsense, and is invariably made by people who have little or no experience with incubators as a means of earning a livelihood. The incubator has a place in the poultry business. It is not a plaything. It is a piece of machinery that requires some degree of skill to successfully operate, and its product requires even more skill to rear. Those who have, or will take, the time to acquire that skill will have good success with an incubator, and not only find it an intensely interesting machine, but also one that will help to increase their income.

Practical Experience

I have hatched and raised probably a thousand chicks to every five hatched and raised by my critic in Ohio, and when it comes to incubators and other poultry machinery it is more than likely I can give him points and items of instruction he knows little about. I do not claim to know it all by a long shot. After I have told all I know about poultry-raising there is lots left for the other fellow to tell, but in my talks to farmers' institutes and poultry associations I have been told hundreds of times that I put more common sense and practical ideas into what I did say than any one they ever heard. I have been called four years in succession to one institute, and the audience was doubled each time. But for an affection of the throat I could have addressed hundreds of meetings of this nature. I do not mention this in boasting, but to show that some other practical people think I know a few things about poultry-raising.

Fred Grundy.

Douglas Mixture for Poultry

This preparation, simple as it is, is one of the best tonics for poultry known. It is alternative as well as tonic, and possesses, besides, antiseptic properties which make it a remedy as well as a tonic. It is prepared as follows: Take of sulphate of iron (common copperas) eight ounces; sulphuric acid, one half fluid ounce. Put into a bottle or earthen jug one gallon of water; into this put the sulphate of iron; as soon as the iron is dissolved, add the acid, and when it is clear, the mixture is ready for use.

In hot weather or when the flock is small, less may be prepared at once, but the above proportions should be observed. The "mixture" or tonic should be given every other day in the drinking-water. A gill for every twenty-five head is about the right amount to give. When there is an infection it should be given every day, but where there is no disease, not so often, or in smaller quantities, if it be used every day.

A. E. Vandervort.

Poultry-Manure

Poultry-manure should never be stored in or near the poultry-house unless it is mixed with land-plaster or dry, pulverized muck. When put into boxes or barrels it makes a good breeding-place for mites and lice.

When mixed with plaster or muck its value as a fertilizer is increased and mites and lice will not live in it. It is good for forcing most all vegetables. It is not so good for peas and beans, but is excellent for vines, corn and potatoes. It will nearly double the yield of pumpkins and squashes if a handful is worked into the soil around each vine. A handful put on each hill will grow more corn and ripen it two weeks earlier than any corn phosphate. When used for top-dressing it should be well covered with soil.

M. L. Piper.

Duck Notes

Take all sick birds out of the yard forthwith.

Have a hospital coop somewhere for sick birds.

Ducks must have water, but it must be pure water.

Ducks and other fowls do not thrive well together.

Be careful that well birds do not eat with sick ones.

Even a few bushes or vines are better than no shade at all.

Above all, remember that exposure to hot sun is apt to be fatal.

We cannot make up for lack of cleanliness by pills and powders.

Small doses of all kinds of medicine are best. Don't kill more than you cure.

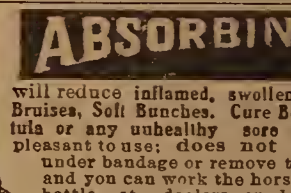
It is not worth while to try to doctor ducks if you do not remove the cause of the trouble.

It is not well to keep any kind of poultry too long on the same ground. Move them at least once in three years. The very earth is apt to get foul, and so breed disease.

E. L. Vincent.

Steel Wheels

WITH GROOVED TIRES 4 in. wide. The Groove protects the heads of spokes from wear, which makes wheel good and strong till tire is worn out. We make plain tire wheels in other widths. We make wheels to fit any thimble skein or straight steel axle. Get our free catalog of Steel Wheels and Low Down Handy Wagons.
HAVANA METAL WHEEL CO., Box 55 Havana, Ill.



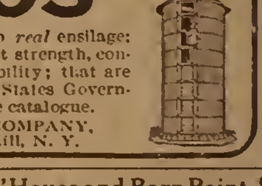
will reduce inflamed, swollen Joints, Bruises, Soft Bunches. Cure Boils, Fistula or any unhealthy sore quickly; pleasant to use; does not blister under bandage or remove the hair, and you can work the horse. $2 per bottle at dealers or delivered. Horse Book 7 D free.
ABSORBINE, JR., for mankind, $1.00 per bottle. Reduces Varicose Veins, Varicocele, Hydrocele, Goitre, Wens, Strains, Bruises, stops Pain and inflammation.
W. F. YOUNG, P. D. F., 23 Temple St., Springfield, Mass.

Shoo Fly The Animals Friend

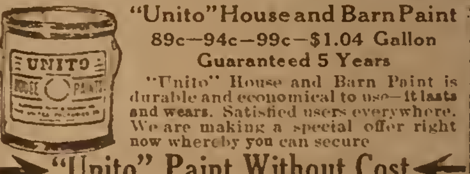
Keeps off flies and insects in pasture longer than any imitation. Kills every fly it strikes! Protect your stock and they'll take on flesh. Cows give ⅓ more and richer milk, and horses do more work on less feed. ½c. worth saves 3 qts. milk. 1 gal. protects 3 animals a season. Cures all sores. Prevents itching. Nothing better for galls. Used by leading veterinarians and dairymen since 1885. Kills lice and mites. Accept no substitute. If your dealer hasn't it send his name and $1, and we'll send enough Shoo-Fly to protect 3 animals 30 days and improved 3-tube gravity sprayer. Name express office. $1 refunded if animals not protected. Shoo-Fly Mfg. Co., 1316 N. 10th St., Phila., Pa. Agents wanted everywhere. Special terms. Write today.

Farm and Fireside guarantees Shoo-Fly to be O. K.

PAINT GUARANTEED FOR 8 YEARS
$1.10 Per Gall. Freight Prepaid.
We are High-Grade Paint Manufacturers who sell DIRECT TO YOU, eliminating jobbers' and dealers' profits, a High-grade Paint, at factory prices. This will save you money. We do not sell dealers. Write for color-card and booklet.
The Wilcoxson Paint Co.
200 Chestnut Street Lorain, Ohio



that make and keep *real* ensilage; that have the utmost strength, convenience, and durability; that are used by the United States Government. Send for free catalogue.
HARDER MFG. COMPANY, Box 31, Cobleskill, N. Y.



OLD BAGS

What do you do with your old bags? Don't throw them away, we will buy Feed bags of all kinds—Gluten, Beet Pulp, Bran, Oats, Corn, Cotton-Seed Meal Bags, etc., and pay you highest prices. Write us today for prices and particulars. We pay the freight.
ST. LOUIS BAG & BURLAP CO.
330 N. Main St., St. Louis, Mo.

Ross Co., Ohio, Farms in the famous Scioto and Paint Valleys. List of fifty farms with half-tone views just off the press. Send 2c stp today. W. L. SEELING, Chillicothe, Ohio.

Live Stock and Dairy

More Sheep in the Corn Belt

While the corn-belt states comprise a great live-stock territory, it will grow much greater in animal husbandry. The climate, the grains, grasses and fodders produced in such abundance all combine to make that region preëminently adapted to the rearing of live stock. It has already made an enviable record with horses, cattle and hogs, but has fallen down woefully in the sheep industry, and this in face of the fact that it is so well suited for sheep-raising.

Ohio is the only prominent corn-grower that consistently raises any considerable number of sheep, having on hand at the beginning of the present year 3,110,000 head. This was as many, approximately, as were reported for the great corn-growing states of Illinois, Iowa, Missouri, Nebraska and Kansas combined, while Indiana had something over one third as many as Ohio. Possibly some explanation of these conditions may be found in the situation as presented by Kansas, where in 1908 the aggregate number of sheep was 159,241, as against 188,943 dogs, as a rule the implacable and relentless enemies of the sheep.

This failure to raise sheep is difficult to understand; it affords a marvelous instance of where farmers and stockmen seem studiously to ignore opportunities that offer large returns for the investment of capital and labor. While the efforts of the few pretentious sheepmen in this region have met with signal successes, it is ventured that there is scarcely a farmer in the whole vast area who would not be amply rewarded by adding a few sheep to his holdings. The food for maintenance would not be missed, owing to the foraging proclivities of the sheep, and farmers would be infinitely richer by their keep, not only in the benefits of closely-cropped weeds of various descriptions, but in contributing to the fertility of land, and in the value of carcasses—in this manner exemplifying their right to be regarded, even in this later day, as animals "of the golden hoof."

There is no question as to the adaptability of the corn belt for sheep-raising, and it is contended that not less than fifty head should be maintained on every farm in the states popularly considered as comprising its area. Sheep are gleaners and cleaners and easy to handle. They are manure-spreaders, and enrich the land by their droppings more than any other class of animals. Besides, they give two crops a year—a crop of lambs and a crop of wool—and if the farmers could be induced to give sheep a trial they no doubt would prove a most profitable acquisition to the farm's live stock.

With more sheep and fewer dogs a still larger prosperity would be realized, and at the present lofty prices of mutton, sheep look especially attractive. One big sheep-feeder who recently marketed twenty thousand wethers at Chicago is quoted as saying, "The season just closing practically marks the extinction of the mutton-finisher on a big scale, and fat mutton will be a farm product, the feeding being done in small bunches from this time on. The man who feeds twenty thousand sheep in a bunch is under more than one disadvantage, not the least being that he is compelled to market them in a bunch. It is recognized as a risky game and will be turned over to the farmer, whose methods are less expensive."

Hence it seems a particularly auspicious time for the farmers in the corn belt to more generally take up sheep, and those who may do so will doubtless find them money-makers.

As Secretary F. D. Coburn of the Kansas Board of Agriculture has so finely said, referring to the sheep, "No husbandman is so poor he cannot profit by its partnership; none so rich he can afford to ignore its helpfulness. Where sheep graze, the grasses have added luxuriance and grains grow more abundantly. No other animal is so inexpensively reared and none is at once so happily adapted to generously clothe and nourish humankind."

J. C. Mohler.

Coach Stallions—Oaklawn Stock Farm, Wayne, Illinois

Care of the Farm Team

There has been much written on the care of the horse, but it has had but little effect on a number of horse owners.

I wish to write more on the care of the farm horse, as I consider its work more important than any other work done by horse-power. When we consider a train of cars without an engine, then we can see what a farm is without a good, well-fed team.

These faithful animals raise our crops which not only feed cattle, sheep, hogs and poultry, but all humanity. Thus we see how important it is that we give them the very best of care and the very best of feeds.

My horses come to the bars every morning, and they are put in the barn and fed grain, whether they work or not. They are also brushed and looked over to see if they are all right.

My colts come in with the horses, and are fed a smaller amount of grain. Thus we are developing power for future farm work, and by handling them we do not have to break them, but train the awkwardness out of them, as they are not vicious like those that have never had a halter on.

Some claim that corn chop gives their horses colic. I grind my corn on a coarse-grinding feed-mill, and mix wheat bran with it. I have followed this plan for several years. This gives my team both flesh and power, and I do not feed as much as when I fed whole corn. I occasionally see a poor, hard-worked team turned out at noon on grass, this being all they get for their faithfulness.

Frank C. Pake.

Choosing the Sire

In selecting the sire for a herd of dairy cows it is an established fact that the sire is half the herd. That is, if the sire comes from a strain of cows that is ten per cent poorer than the ones already owned, his get will be five per cent poorer than their dams.

To make it plainer, let me say that by constantly crossing a good herd of dairy cows with a sire from a beef breed, the dairy breed will be ruined for dairying and the get would likewise be poor beef cattle. Each year, however, the herd will be lowered in productiveness just one half the difference between the sire and the dams. The dam's superior breeding offsets the sire's poorer qualities to this extent.

In choosing the herd boar the same principles of breeding are involved as in choosing the sire for the dairy herd. A boar from parents known to produce generations of small litters, when bred to a prolific sow, will invariably show the effects of the sire's inferior breeding on the sow's usual prolificacy. So, in choosing a boar it is well to select one from parents of known prolificacy. But this is not all, by any means.

A boar to be a good breeder must be very vigorous. Vigor and prolificacy go hand in hand and denote good health and breeding stamina. In addition to this, he should have a large bone and stand well up on his toes. He should also be wide through the hams and long of body, have good depth and grow quick. A sire that is slow in maturing has no place in the breeding-yards. The sire that produces the most pigs and the quickest-growing pigs is without question bringing the farmer the largest profits. A good boar costs more than a poor one, but in the end a good one is well worth the extra cost. The best is none too good, even for the "lowly" farmer.

Fred W. Greene.

Clip This Slip For Free Book

The Pritchard-Strong Co., 6 Circle Street, Rochester, N. Y.
Please send me your book, "Lighting the Farm."
Name
Address
Dealer
Address

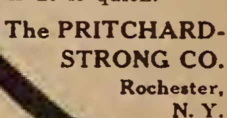
We call it "Lighting the Farm." It puts in a handy form all there is to say about lanterns.

If your lantern gives more trouble than light, you'll find the reason for it in this book. It tells you some things about lanterns that you never knew and others that you may have known, but never realized. For instance, the reason why

PRISCO COLD BLAST LANTERNS DON'T SNEEZE

will explain to you why some other lanterns sputter and flicker at every opportunity. The book tells you all about Prisco lanterns and Prisco points of improvement. About the clever patented wind-break. How the patented flame-spreader makes a Prisco give twenty-five per cent more light with a saving of oil. It tells a dozen and a quarter other reasons why Priscos are enough better than any other lantern to make it worth your while to learn all about them.

It is full of the kind of information that makes you say "That's so" at every page. It costs almost nothing to get it. Just fill in the coupon and mail it to us to-day. We'll do the rest and we'll do it quick.



The PRITCHARD-STRONG CO. Rochester, N. Y.

The United States Cream Separators

Lead the Separator procession in every particular

The UNITED STATES make **cream of any desired density** from **twenty (20) to sixty (60)** per cent. butter fat.

Read what experts and users say:—

Montana Agricultural College and Experiment Station.
Bozeman, Mont., Feb. 8, 1909.
This is to certify that the United States Separator that has been constantly in use here at the Dairy Building of the Montana Agricultural College **has given us splendid satisfaction.** In light running and durability, the machine is strong and in skimming capacity the No. 5 that we have at the present time has **skimmed as close as .02 of 1 per cent. taking a 35 per cent. cream.**
W. J. Elliott, *Prof. of Dairying.*

Ohio State College.
Columbus, O., April 20, 1907.
The No. 6 U. S. Separator in our laboratory with the low milk can is a great improvement. We have required it to take a **thick cream over 40 per cent.** fat and **several times it has been over 50 per cent.** The **test of the skimmilk** is usually **.01 to .02 per cent.** fat. I am glad you still keep up the solid frame and fine workmanship on the running parts, as competition with cheap machines is getting keen.
John W. Decker, *Prof. of Dairying.*

Everett, Washington, Jan. 8, 1907.
I hereby certify that I tested a sample of cream and skimmilk taken from Geo. Crocker's U. S. Separator some time ago and the **cream tested 66** per cent. and **skimmilk a little less** than **two one hundredths** of one per cent. I will further state that I am not now, nor never was, agent for the U. S. Separator.
F. J. Adkins, *Buttermaker,* Everett Creamery.

Subscribed to and sworn to before me this 8th day of January, 1907.
Thomas W. Cobb, Notary Public in and for the State of Washington, residing at Everett.

We can furnish thousands of testimonials of like tenor.
Send for "U. S. Short Story" booklet, also Catalogue No. 69

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

Live Stock and Dairy

The Worst of the Sheep's Enemies

Among the ills the ovine race is heir to, none can be so cruel as the attack of the maggot-fly. As a rule this trouble lasts through the summer and autumn, but in a season when we have no summer to speak of, the trouble from the fly has been only slight. The importance of this subject, both from a humane point of view and also a pecuniary one, is so great that one who has gone through the grill as a shepherd may be excused for writing at some length on the subject.

Poets have written about the "gentle shepherd," but, alas! they are few and far between. At the same time, a shepherd ought to be a kind-hearted man, with a fondness for his charges; when one considers the amount of suffering that is entailed on the flock through any neglect on the shepherd's part in attending to individual sheep, the necessity of a careful man is appreciated.

Prevention

As a matter of fact, every practical farmer or flockmaster knows there is no such thing as preventing the flies troubling the sheep, but at the same time there are several plans that may be adopted which will to a great extent lessen the trouble; and considering the loss incurred both on fleece being damaged and carcass lessened through the sheep being continually harassed at a time when the greatest progress ought to be made, it behooves every flockmaster to see that no precaution is neglected.

Generally it is the sheep soiled at the rump that are most likely to be attacked by the flies, and it should be the shepherd's business to trim every sheep and lamb that is so soiled. This business with careless shepherds is often neglected, consequently flies are attracted by the filth and smell, and sheep are never at rest.

As a young man, the writer knew a man in the capacity of shepherd for some years who made a point of not only trimming dirty sheep, but those that did not even require it, and after trimming with the shears any lamb with a suspicion of scour, had a little weak carbolic lotion, of the strength of one part to fifty parts of water, poured on. In some cases paraffin mixed with buttermilk was used. This acted as a great deterrent to flies.

Another matter worth considering is to change the corner for shepherding or holding the sheep in at inspection-time. Naturally a number of sheep held up in a corner day after day soil the ground and make it a collecting-place for flies. These corners and hedge bottoms where sheep in the very hot weather congregate for shelter, also around the trunks of trees, should have lime sprinkled about. The lime will sweeten the spots and to a certain extent drive off the flies; at the same time the lime will act in a secondary beneficial way—namely, keeping the hoofs in a healthy condition. Dusting the sheep with the following powder has been very beneficial in wooded districts: White lead, flowers of sulphur, white arsenic, of each one pound. Mix all together in a fine powder. This quantity will be sufficient to dust sixty sheep. If divided into packets there will be no mistake as to quantity.

The plan of dusting is to have one man hold the sheep, and another dust with a pepper-box in the right hand and a stick in the left. Draw the stick gently from the head to the tail, and follow with the dust. The use of the stick will be seen, from its pressing down the wool while the powder is dusted on, and as the wool rises it shakes and spreads the powder. Next take a small watering-can and sprinkle a small quantity of water on the sheep, then draw the stick backward and forward, so that the powder will be made to adhere to the wool.

Or the following powder may be used: White lead, flowers of sulphur, white hellebore, one pound of each in a fine powder. Mix all together in a mortar, and add half an ounce of the essential oil of wormwood, and rub it well in the powder. This powder may be used in the same manner as the former, but the quantity may be somewhat larger.

The foregoing recipes are very old, but have been found very effective. There is also the more modern plan of dipping, which as a means of keeping the sheep clean, and for a time rendering them free from the attacks of flies, cannot be too much advocated.

The process of dipping ought to be repeated at the end of from six to eight weeks if it is to be satisfactory as a preventive from flies.

Symptoms

In the early fly season it is generally at the rump and tail that the flies make their attack; at that time a "flied" sheep may be spotted by its holding down its head, shaking its tail, and running about from place to place, and turning its head around toward its hind quarters. But later in the season, during August and September, the sheep are struck indiscriminately over the body, under the belly, on top of the back and shoulders. More care is required in shepherding at this season, to avoid missing a sheep affected with maggots, and very often it is not until the wool shows a dampness that it is discovered. The shepherd ought to go quietly among the sheep, not using his dog; he will then more readily discover anything amiss.

Remedy

A wash made of the following ingredients will be found useful to kill the maggots: Mercurial sublimate in powder, one ounce; spirit of sea salt, two ounces; boiling water, three quarts. Put in a stone bottle, and when cold add spirit of turpentine, one quart. Mix, and shake well every time it is used.

The best way to use this mixture is as follows: Shake the bottle well, and instantly fill a quart bottle with it before the turpentine has time to separate; cork the bottle up, then bore a hole through the middle of the cork, and pass a goose quill, cut open at both ends, through to the middle of it. By this means a proper quantity may be forced out on the affected parts without much waste. If one ounce of tincture of asafetida be added to a quart of the mixture it will prove a means of preventing the fly from striking the same part a second time.

Sore Heads

This is a common complaint during the summer among sheep, and if not well attended to the animals not only suffer themselves, but with the constant worry of the flies shrink perceptibly, and so lose value. There is nothing to prevent this nuisance but "capping," and the following ointment may be used: Black pitch, two pounds; tar, one pound; black brimstone, one pound in fine powder. Put all into an iron pot, and just give a boil over a slow fire, and as soon as the sulphur begins to unite with the rest of the ingredients instantly take the whole from the fire, or it will swell and run over into the flames. Take strong brown paper cut into proper shape for laying on the sheep's head, and while the ointment is melted take a small paint brush and spread it thickly on the paper, and when near setting apply the cap to the head. Evening is the best time for applying the caps. By morning they are generally set on fast. Or the above ointment may be warmed and spread on the head with a spatula, and immediately a little short wool applied on it. If the ointment gets too thin in hot weather, add one half pound or one pound of black rosin to stiffen it.

If some of these simple preventives and remedies are used, many of the troubles connected with the "fly season" may be mitigated, the animals' comfort increased, and much pecuniary loss on the part of the owner saved. At the same time the shepherd may be spared a lot of unpleasant and unnecessary work.

W. R. Gilbert.

Selecting Brood-Sows

The selection of sows for breeding purposes is a matter of prime importance, especially where one is just beginning the business. The beginner may purchase his sows already bred, thus saving quite an item of expense. Then, by the time the sows have been noticed and studied for a season, and have each raised a litter of pigs, the owner will be much better prepared to select a suitable male, and he can get one to use on both dams and offspring.

The sows selected should be nearly the same age, preferably twelve months, and all be safe in pig to the same boar. Their individual characteristics should first be looked to. While hogs do not show the strong difference of sex that we look for in a cow or mare, these always constitute a marked feature of a good brood-sow. The smoother forehead and lighter, finer neck are points of decision from the signs of masculinity in a boar.

I prefer sows with the forehead broad between the eyes, the throat clean and trim, the neck moderately thin, the shoulders smooth and deep, the back fairly wide and straight, and ample room for the vital organs provided by a good depth and width of chest, well-sprung ribs and straight, deep sides and a deep, capacious body from end to end.

Depth of chest and abdomen are especially important in a brood-sow. I always avoid those with pinched chests and waists. It is generally advised that sows with much length of body should be selected for breeding purposes, length of body being regarded as an indication of fecundity. I find the surest means by which to select prolific sows is to keep an accurate record of the herd and cull all sows that do not yield a certain percentage annually. Each sow should have at least twelve well-developed teats.

It is essential that brood-sows show quality, but they must not be over-refined and delicate. Extremes of refinement often lead to delicacy of constitution and often accompany sterility. The sows should be uniform in type. Some breeders may often be disappointed in the results from sows that they thought were a uniform type. Their pigs are a mixed lot, unpleasing to the eye, unsatisfactory in the feed-lots and a loss to the pocket.

It is comparatively easy to select sows that are uniform in quality, constitution and conformation. This may be done by any skilful judge of hogs. But our only basis for the selection of animals uniform in reproductive powers and hereditary of type is the breeding records of their sires and dams and the standard of the herd from which they come. For this reason it is readily apparent why it is an advantage for the beginner to select his sows from one well-established herd. Whether the sows will be uniform in breeding powers can only be determined definitely by testing them.

When a sow has shown herself to be a prolific breeder she should be retained as long as her reproductive powers are maintained. A uniform lot of pigs will feed better, look better when fattened, and command a higher price on the market, than a mixed lot.

W. H. Underwood.

Raising Heifer Calves for the Dairy

It is much better practice to raise heifer calves from the best cows in the herd to keep up the number of profitable milkers than to depend upon buying the mature animals as needed. Where there is a supply of skim-milk, it can be put to no better use than the growing of calves. Even when the milk is sold, I am led to believe that it will pay to save enough of it for this purpose. Of course, this is assuming that the calves have the benefit of good breeding, at least on the sire's side.

It is not to be supposed, however, that every heifer will make a first-class cow, but the manner in which she is fed and cared for from birth will have something to do with deciding the question. More depends upon this than many people realize. Either the making or the marring of the future cow is to a great extent done in the first year or two of the calf's life.

If the calf has been half starved it will be undersized. If annoyed by vermin its energies will have been depleted.

The calf must be taught to drink. After the first week sweet skim-milk should be substituted for new milk, the change being made gradually, until at the end of two weeks the entire ration is composed of it.

Feed the young calf moderately. Give two quarts three times a day at first, or even less, gradually increasing as the animal grows. Indigestion is frequently the result of too much milk before the stomach is strong enough to take care of it, and scour has been brought on by just this very thing. Feed sparingly until the calf begins to eat hay, or for about one month.

Great care should be exercised as regards the temperature of the milk. Let it be blood-warm, not more nor less.

Calves will begin to nibble at bright hay or grass by the end of the first two or three weeks, and some of it should be kept where they can reach it. Turn it over occasionally, giving them a chance to get the best parts only, and change it for fresh as often as needed. Every care that will make for development should be provided while they are young.

R. B. Rushing.

The wool-growers and lamb-raisers in Wyoming are to coöperate in opening a supply-store at Evanston. It will be likely to prove a success if the manager be required to give a commercial bond, buy at wholesale rates and deliver supplies at cost, the manager to reserve only enough of the profits to pay himself a reasonable salary. *

Causes of Weakness in Wool

Soundness in wool is a characteristic which concerns every wool-grower in every part of the world. Only those who have seen wool through every stage in manufacture can have an adequate idea of the importance of this matter, hence I desire to call the attention of wool-growers to it.

Wool may be good and satisfactory in quality, of nice length, well put up for the market, but there is the inevitable "break," and when weakness of staple occurs it always means that the value of the clip is depreciated. When wool is tender and mushy users know that it will mean increased cost of working, hence no one will pay as much for wool lacking in strength as they will for wool that is well grown and is sound.

The cause of the weakness in wool fiber is usually improper nourishment of the sheep, which may be caused by sickness or scarcity of food. Of course it is impossible for any man to keep in good health every sheep where a large number is kept, but the pity is when the whole clip shows this failing of sound staple. Even a flock going without water for several days in hot, dry weather has been known to cause a "break" in the staple.

The sorter often finds a fleece of wool illustrating in a remarkable manner the effect of ill health of the sheep. He knows it almost by instinct; there is something in the feel, an absence of life and elasticity, which betrays it. A closer examination will reveal an irregularity unmistakable, and will even show whether the indisposition was temporary, recurrent or continuous. If the first, a true line of demarcation will show plainly across the staple, the fiber at this point will be thinner, less elastic and weaker, also of different color, and here the breakage is sure to occur.

The return of the health of the sheep will cause a healthy addition to the staple, and another interruption by sickness will show another fault. Constant sickness will cause a staple weak and diseased throughout.

A sick sheep is liable to be found in any flock, and may be expected, though such cases are usually isolated ones, but in case of deficiency of feed the whole flock is affected, and for this reason the buyer is careful to satisfy himself before purchasing.

The climate also affects the wool, as severe winters make the wool coarser and more irregular, and the undergrowth of short wool is more noticeable. Constant wetting and drying make it tender, the brilliancy and luster are lost, and the fiber is dry and dead, owing to the continual washing away of its usual protector, the natural oil, which coats the fiber in healthy sheep under normal conditions. The wool of sickly sheep is generally not only finer than that of a healthy sheep of the same breed, but it possesses the tender quality.

Age has much effect in deteriorating the fleece. The yolk lessens in quantity after the sheep, and especially the ewe, is six years old, and to the decrease of the yolk there soon follows a hard, inelastic, unyielding character of the wool that renders it useless for several purposes for which the younger, and especially the wether wool, is bought; "it dies in the bowl," it sinks in the water in which it is washed, and acquires there a shriveled and dead-like appearance. It is difficult to spin, and it materially injures the fabric in which it is employed.

The wool often becomes considerably injured by felting while it is on the back of the sheep. This is principally seen in the heavy breeds, especially those that are neglected and half starved.

It generally begins in the winter season when the coat has been completely saturated; and it increases until shearing-time, unless the cot separates from the wool beneath, and drops off. The cotting of wool is only an injurious extension of the process of felting—the wool forms into a hard, thick knot that can scarcely ever be unraveled. Some breeds are more subject than others to this defect.

Wool is sometimes injured by keeping for a long time in its grease. It will probably increase a little in weight for a few months, especially if kept in a damp place, but after that it will become light, until a very considerable loss will often be sustained. This, however, is not the worst of the case, for unless very great care is taken, the moth may get into the bundle and injure and destroy the staple, and that which remains untouched by it will become considerably harsher and less pliable.

W. H. C.

Live Stock and Dairy

Feeding Green Corn to Hogs

It is a common practice to begin feeding green corn to hogs as soon as it is in the "roasting-ear" stage, giving stalk and all. Green corn fed thus may be made very beneficial to the growth of the hogs or very detrimental to their health. If fed sparingly at first, without decreasing the amount of old corn or the regular ration for a period of several weeks, the animals will eat just enough of the green corn to become accustomed to it. Then as the green corn turns it may be gradually increased and the amount of old corn fed decreased till by the time the new corn is ready to gather the hogs can be on a full feed of the new crop.

The fact should be borne in mind that sudden changes from one distinct diet to another, and especially from dry corn to green corn, derange the system of the hog and makes it susceptible to disease, if it does not cause disease outright. Many of the so-called attacks of hog-cholera are but results of sudden changing to new corn. A great many farmers will feed their swine on an exclusive diet of old corn till it is all fed, and then begin feeding all of the new crop the hogs will eat. The sudden change causes trouble and often is the means of ushering an epidemic into the herds.

My plan has always been to begin feeding a little green stalk about August 1st. It does not matter whether the corn is out of or just in silk, the hogs will eagerly devour the leaves and the larger part of the stalk. I usually begin by feeding one good-sized stalk to each hog. In no case do I decrease the amount of the old corn; thus the animal does not eat the green stalk because he is compelled to, but because he wants to. After feeding one stalk a day to each hog for a week I increase the allowance to two stalks a day. When they cease eating the leaves and stalks.I then feed them the snapped ear. By this time I have decreased their old ration somewhat, and by the time the new corn is ready to gather I give them a ration of half old and half new corn. By gradually increasing the amount of new and decreasing the amount of old corn, in a short time after the new crop is gathered I have the hogs on a full feed of new corn.

I had this demonstration made quite plain to me several years ago. Cholera was raging in our neighborhood, and I dreaded the time when I must change from the old to the new corn, fearing that I could not maintain the good health of my herd. Along the latter part of July I began feeding a little green corn, though but a very little of it had begun to "shoot." As the weeks passed I gradually increased the amount till the middle of August, when I began to decrease the amount of old corn, and by the middle of September I had them on a full feed of new corn. I was compelled to have them on new corn early because the supply of old corn was very limited that year and the price was quite high. I never saw a bunch of hogs do nicer, and though a neighbor just across the lane lost nearly half his herd, mine showed no signs of disease. Of course, I do not claim that this gradual change from the old to the new corn was alone responsible for the good health of my herd. I kept everything clean around the pens and used carbolic acid and slaked lime freely for disinfectants.

Wm. H. Underwood.

Raising Pork for Profit

In breeding hogs for pork, I raise two litters each year, except from one good sow, which I breed only once a year, and use her progeny to keep up and increase the number of the herd. I have the spring pigs come the last week in March, wean the litters when two months old, and then turn the sows out to clover pasture as soon as bred.

If the pasture is supplemented with a light grain ration of almost any kind of grain, the sows will do well, for with plenty of exercise and liberty they will keep healthy. About ten days to two weeks before farrowing-time, I bring them in and give each a separate pen, bed lightly with chaff or cut straw, and feed a ration composed of one half bran and shorts mixed to a thin slop with either skim-milk or water.

I feed very lightly for the first few days after farrowing, but give all the sweet milk or water the sow will take. After the pigs are three weeks old it is safe to feed her all she will eat of shorts and sweet milk. Let the sow have the run of a yard after the pigs are a few days old, and give them liberty until it freezes up.

I have found nothing better for preventing scour than some crushed oats and barley slop, run through a screen to remove most of the hulls, placed in a low trough in a corner of the pen. The young pigs go for this greedily.

At two months old the pigs are ready to wean, and I put them in the two large pens, culling out the weaker ones and putting them in a couple of pens made vacant by grouping three agreeable sows together.

It requires much more skill to raise young pigs in the winter than in summer. After taking them away from their dams, I like to feed them warm new milk for their first meal, and after that warm skim-milk with a good sprinkling of shorts in it, increasing the quantity of shorts each day until it is about the consistency of thin porridge. I mix a quart of oil-meal with each barrel of feed, and have a box in the corner of each pen containing wood-ashes, charcoal and a little salt and sulphur.

When the pigs are three months old or a little later I make a ration composed of equal parts of shorts and either crushed wheat or barley. If some unthreshed peas have been stored in the loft, there is nothing which will do the young pigs more good than to throw them in a forkful every day. I let them out into the yard when the weather is suitable. When five months old I confine them in their pens and change the ration to a mixture composed of equal parts by weight of shorts, crushed barley and corn-meal, feed four times a day all they will eat up clean, and insist on regularity and quietness in the piggery. At the end of six months they should weigh one hundred and eighty-five to two hundred pounds.

For the spring litters a different method is pursued at Hillside Farm. As soon as the pasture comes up good the young pigs are moved out to it. For a hog-pasture I prefer a field fenced with a good hog-proof fence, and it is a good precaution to string a barbed wire along about four or five inches from the ground, to prevent the hogs from rooting under the fence.

I keep the brood-sows and the young hogs separate, as the growing pigs will have to receive a good grain ration as well as the pasture to keep them growing well. I have never yet had young pigs satisfy me when kept on pasture alone. The kind of grain fed is not so important as in winter. A ration composed of equal parts of crushed barley and shorts mixed with skim-milk or buttermilk is our favorite ration at Hillside Farm. They must not be fed too liberally, either, or they will become too lazy to pasture well.

I sow some rape in the spring and have it ready for the hogs in August. Five acres of rape should do to finish off sixty young pigs until they are five months old, when I bring them in and feed them a full ration of equal parts of barley, corn and shorts; I cut some rape and bring it into the yard for them to pick over.

Care, constant care, is one of the great secrets in successful hog-raising for profit. Of course it is only the man who likes it that will find pleasure and profit in hog-raising, but it is the pig that makes the most gain for the amount of food consumed.

C. A. Umoselle.

Advantages of Silage

I find that on my farm I can cut an acre of corn yielding thirteen to fourteen tons and put it in the silo for seven dollars, or about fifty cents a ton. The same acre of corn would have one hundred and fifty bushels of ears that would cost me eight dollars for husking alone, which, with the cost of cutting, shocking, shredding and grinding, costs me double what it does to put the same crop into the silo.

It is usually estimated that it costs seventy cents to one dollar a ton to put corn into the silo, but I know that my neighbor and myself put it in for fifty cents to sixty cents a ton.

My silos last year were filled very full, holding twenty-two acres, close to three hundred tons, and the total expense, figuring men at one dollar and seventy-five cents a day, would be one hundred and fifty dollars, exclusive of the board of the men. In what other way can one handle a crop of corn so cheaply and have it ready to feed right where it is wanted?

Not only is silage the most economical of rough feeds, which I think is the greatest claim that can be made in its favor, but it is also greatly relished by almost all kinds of live stock, and is absolutely necessary for the production of maximum yields of milk in the winter-time.

It is an easy matter to tell by the condition of a cow's coat in the winter-time whether she is getting silage, as its succulence has the same effect on a cow's system that pasture-grass has, and it keeps her thrifty and in the best of condition for her every-day work. Silage is also more digestible and nutritious than the same amount of dry feed.

Another point in its favor is its convenience. With silage ready for feeding every day in the year, much less help is required to care for the herd than will be needed where it is necessary to cut or shred fodder in the winter-time. Ten to twenty minutes a day will be all the time required to get out the silage and feed the herd.

Practically all the talk about silage for feeding is concerning its use for winter feeding, but I insist it is almost as necessary in the summer as in the winter.

If we could be sure we would have plenty of rain and resulting good pastures all summer, silage would not be so necessary; but almost every summer brings a dry period, when the pastures get poor and the cows shrink so in their milk, unless we feed them, that it is hard, even if later we do have good pastures, to get the cows back to their normal milk flow.

Nearly all of the best dairymen like to supply some feed to their cows even when on the best of pastures, both for its food value to the cows and for its manurial value to the pastures, and nothing is more convenient for this purpose than good silage.

W. H. U.

Sheep Notes

It does not pay in any sense to perpetuate the qualities of poor sheep, and the cullings should be made close enough to eradicate all poor animals, and thus eliminate their blood forever from the flocks.

Plan to work up a local market for dressed lambs this winter. Grow some nice winter lambs, dress them in good shape and sell to the local butcher. I will guarantee that he can dispose of them at fine prices and his customers will cultivate a tooth for choice mutton.

W. H. U.

CURE YOUR HORSES

While They Work On 15 Days' Free Trial

Rear View — Cost No More Than Old Style Collars

Without Cruel "Sweat-Pads"

Cost no more than old-style collars—fit any horse—over 4,500 harness dealers sell them on 15 days' free trial to prove satisfaction or money back without question on our guarantee to cure the worst bunches, galls, sores or bruised necks while the horse works.

Keep your horses well with

WHIPPLE HUMANE HORSE COLLARS

Don't use Cruel "Sweat-Pads" and old-style, misfit collars which only make your horses' shoulders worse—Just try these collars—No risk to you—No pressure on shoulder-blade or bones where sores come—No pressure top of neck or on windpipe—45 sq. in. pulling surface on each shoulder, properly distributed—only 10 sq. in. on other collars. Get our interesting FREE BOOK. Thousands of testimonials and experience of 3 years proves this the greatest horse collar ever made. 60,000 in use. Write nearest factory if your dealer hasn't got them yet.

HUMANE HORSE COLLAR CO.
1629 Lowe Street, Chicago Heights, Illinois
1978 South 13th Street, Omaha, Nebraska

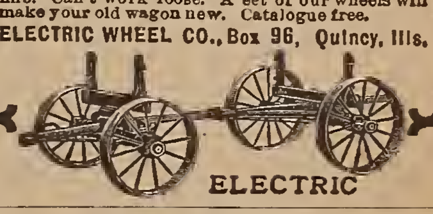
Let Us Send You Our Book.

about good wheels and good wagons that will save you a lot of work and make you a lot of money—the

ELECTRIC STEEL WHEELS —and the— ELECTRIC HANDY WAGON.

By every test, they are the best. More than one and a quarter millions sold. Spokes united to the hub. Can't work loose. A set of our wheels will make your old wagon new. Catalogue free.

ELECTRIC WHEEL CO., Box 96, Quincy, Ills.



PATENTS SECURED OR FEE RETURNED.
Free report as to patentability. Illustrated Guide Book, and List of Inventions Wanted, sent free.
EVANS WILKENS & CO., WASHINGTON, D. C.

PATENTS that PROTECT
Our 3 books for inventors mailed on receipt of 6 cts. stamps.
R. S. & A. B. LACEY, Washington, D. C., Dept. 49, Est. 1869

SUBSCRIPTION PRICE

One Year (24 numbers) . . . . 35 cents
Four Years (96 numbers) $1.00
Canadian Subscriptions . { 1 Year, 60 cents; 4 Years, $2.00 }

Entered at the Post-Office at Springfield, Ohio, as Second-Class Mail Matter.

Subscriptions and all editorial letters should he sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."

The date on the address label shows the time to which each suhscriher has paid.

Suhscribers receive this paper twice a month, which is twice as often as most other National farm journals are issued.

Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope.

When renewing your subscription, please say it is a renewal, and if possihle send the label from a recent copy. If all our subscrihers will do this a great deal of trouble will he avoided.

PUBLISHED BY
THE CROWELL PUBLISHING COMPANY
SPRINGFIELD, OHIO
Branch Offices: 11 East 24th Street, New York City,
Tribune Building, Chicago, Ill.

Copyright, 1909, by The Crowell Publishing Company

ABOUT ADVERTISING

FARM AND FIRESIDE does not print advertisements generally known as "readers" in its editorial or news columns.

Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment.

Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, hut if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published on the 10th and 25th of each month. Copy for advertisements should he received twenty-five days in advance of publication date. $2.00 per agate line for both editions; $1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2¼ inches, length of columns two hundred lines. 5% discount for casb with order. Three lines is smallest space accepted.

Letters regarding advertising should be sent to the New York address.

The Factor of First Importance in the Country-Life Problem

IN THE course of an eloquent address on "A Campaign for Rural Progress," Dr. Liberty H. Bailey, Dean of the New York State College of Agriculture, and who was President of the Country-Life Commission, has given us all wholesome food for serious thought, on a subject about which there are diverse opinions, in the following statements:

"We have heard a great deal during the last few years about the country-life problem. Now, the country-life problem differs with respect to the point of view and the varying interests of those who look at the problem. To one man it is merely a question of better agriculture, better prices for crops; to another man it may have to do chiefly with the organization of schools and colleges which will put men in touch with rural affairs.

"We must, in the first place, of course make farming profitable if we can possibly do it. There was a time a few years ago when persons expected professors from colleges of agriculture to tell them how to make farming profitable. That time is past, because persons have found out that we cannot do it. In other words, we can merely express recent results of science, we can give some general advice, but it remains for the men on the farm to make the land profitable. If they cannot do it, certainly no one else at long range can.

* * *

"It is first necessary, as I conceive it, if we are to develop a more effective rural civilization, to remove the handicaps under which the farmer labors. Because farmers are not organized, because they do not work together, it is natural, of course, that the individual farmer should be at a disadvantage as against persons in commercial occupations, or as against manufacturing interests, or as against organized interests of all kinds. It is time that the farmer should be freed from the disadvantages to which he has been subjected by the corporate combines and syndicated interests of the country; yet there is no power within himself so long as he is not organized to accomplish this.

"This is not a criticism of any organized or syndicated business, but merely a statement of fact.

"Perhaps I might illustrate this as well as in any other way by speaking of the whole subject of the farmer's relation to the marketing of his products. The farmer is, as you should know, by nature individualized, because he owns land, because he is separated from his neighbors, and thus he tends to be self-dependent—independent. This individuality, this independence, he loses, if at all, when he goes to market his produce. He finds that he is practically powerless; he finds that the regulations as to trade are made by other persons than himself. In many cases they are the working out of natural laws which no man can work out otherwise. But he is powerless so far as having any voice, practically any voice, in the marketing of his goods.

* * *

"The whole question of the middleman in the development of a rural civilization is one that has been discussed a great many years, as you know. There are certain persons who think and say that the case is so hopeless, that the farmer is so much at a disadvantage, that the only way in which he can protect himself is by some kind of means to do away with the middleman, to do away with all intermediary tradespeople through the organizations which have that purpose as a part of their general movement. All of you know that is impossible.

"Certain men, of course, become skilled in transportation; they become skilled as salesmen; they become skilled as distributors. It is unreasonable to think that a man, however skilled he may be in raising wheat, or in raising cantaloups, or in raising fruit, it is unreasonable to expect that he can develop the skill that will allow him to place his products on the market where they will return him the best prices.

"But the middleman has been unrestrained; he has had all the wealth of the country to play in; he has developed almost to the point of license in many cases.

"I had something to do with the report of an investigation which was made in the past few months in respect to the distribution of fruit crops from the Pacific coast to the East. The Pacific fruit-growers felt that the returns from the products were not properly represented, and they conceived the idea of placing in the bottom of their packages sealed and addressed return postal-cards, asking the purchaser to reply stating who he was, where he bought the package, and when, its condition and what he paid for it; and the returns showed that the produce which was said to be sold to a gentleman in Boston at a very low price, and in some cases reported to have been unsalable because of its bad condition, had actually been sold for good prices in Denver and Omaha. Now, of course one does not have recourse to the law against practices of this kind, but, as a matter of fact, the farmer is practically powerless to prevent a condition of that kind. He has not the organization; he cannot get proof; he cannot follow up cases of that kind, and dishonesty has crept into the middleman system of handling agricultural products.

* * *

"I am not arguing against the middleman system. I conceive that it is necessary in our modern civilization. I would have eliminated from it, however, dishonesty; I would have some means whereby an individual producer may feel that he is having a square deal. I have come to feel that the whole middleman question in the country must be studied fundamentally. It must be regulated. If necessary, it must be controlled by some kind of public-service commission or some kind of public-service agent. This not for the purpose, or would not be for the purpose, of curtailing the liberty of any honest middleman. By eliminating dishonest practices it ought to benefit the middleman system."

For and Against the Parcels Post

IN THE same address from which the foregoing extracts have been taken, Doctor Bailey made this statement:

> "I am convinced that the parcels post must come; it must come not only as a means of aiding the farmer to get his mail, but also to enable him to transact his business with the world."

The full report of the Country-Life Commission, which, by the way, Congress suppressed by not providing for its publication and distribution to the public, contains this clear, strong statement on the subject:

> "At the moment, one of the most available and effective single means of giving the farmer the benefit of his natural opportunities is the enlargement of government service to the people through the post-office. We hold that a parcels post and a postal savings-bank system are necessities; and as rapidly as possible the rural free delivery of mails should be extended. Everywhere we have found the farmers demanding the parcels post. It is opposed by many merchants, transportation organizations and established interests. We do not think that the parcels post will injure the merchant in the small town or elsewhere. Whatever will permanently benefit the farmer will benefit the country as a whole."

Friends of the parcels post, take this as a timely reminder of your cause, particularly appropriate at the present time. It is reliably rumored that certain "established interests" have decided to make a very large "appropriation for advertising" to be used the coming fall and winter in the farm press.

Now, the plain, ulterior purpose of this procedure is to subsidize or bribe indirectly the farm papers of the country and get them either to oppose parcels post or let up in their fight for it.

Made desperate by the increasing force of popular demand for parcels post, the express companies, backed by the short-sighted traders in country towns, are now resorting to an attempt to use farm papers against the interests of their subscribers.

Farmers, guard your cause, watch your papers and give due attention to the doings of your local dealers.

Back Talk to Lewis

Letters From Readers

EDITOR OF FARM AND FIRESIDE:—

I thought I would just drop a line to let you know how I love to get the FARM AND FIRESIDE every two weeks. I like your honesty and square dealings. All praise to Mr. Lewis for his plain talk, coming as it does through one of the best papers in the world.

Maine. ORIN J. LYFORD.

EDITOR OF FARM AND FIRESIDE:—

Just received the last number of FARM AND FIRESIDE. It is full of good things. Surely you are doing the farming world much good. I take great interest in friend Lewis' dissertations—he is right, none too radical. Go on with the good work. The tide will turn, and right, not might, will prevail.

Indiana. J. H. HAYNES.

EDITOR OF FARM AND FIRESIDE:—

I am an interested reader of the FARM AND FIRESIDE, and read all of Mr. Lewis' articles, and think they are doing good by helping to expose the political corruption that the people should know about. Those who have objected to his articles have not denied their truthfulness nor explained away the charges. They would simply have him shut up. I say let him fire away.

Ohio. THOMAS STRATT.

EDITOR OF FARM AND FIRESIDE:—

I will take this opportunity to say that I do not take your paper for the politics that are in it, and if you do not think it is to your interest to confine your paper to farm life and to the things that pertain to farming, I will try to find some paper that does let politics and religion alone and confines itself to farming and farm life, thus leaving every one free to take such papers upon politics and religion as they like.

Washington. J. M. WHEELER.

EDITOR OF FARM AND FIRESIDE:—

Let the good work go on. If we had more like Mr. Lewis in the public eye to expose the corruption in this country, we could get our just dues. I think that if people read Mr. Lewis' articles and note the exposure of graft that is going on, they would change their way of voting. I think through pages of a farm paper like FARM AND FIRESIDE is the only way we can get the truth, as our dailies and local papers print as money and politics dictate.

Illinois. L. R. TAYLOR.

EDITOR OF FARM AND FIRESIDE:—

It seems the "Back Talk to Lewis" is rather agreeing with Lewis. We naturally expect that farmers and laborers will agree with him, for when graft is being exposed, only the grafter will howl.

The worst curse on the people to-day is politics. What we need is more of an adherence to principle and less to partizanism. When the masses come to the conclusion that they are the government and the officers are the servants, then will the grafter get his just deserts and the wealth-producer will enjoy the product of his labor, and Mr. Lewis can turn his pen on some other topic.

Oklahoma. E. M. CLARK.

EDITOR OF FARM AND FIRESIDE:—

What do men mean who refuse to read politics and vote for their leaders who constantly enslave them to the advantage of the giant trust monopolies. Let Mr. Lewis give some figures and hard talk about our officials, confining himself to bare facts and figures. I think he tries to write too much to please every one. I have just finished reading his article on Senator La Follette of Wisconsin, and can't tell which side he is on. Sometimes the article seems to be an invective, but shortly takes panegyrical inclinations. I am a Democrat and La Follette is a Republican, but when a man is trying to represent his people honestly in Congress, let us all unite in commending him, whether he is a Democrat or a Republican. Keep the good work up and let the people know what congressmen are wearing the veil of hypocrisy.

Oklahoma. L. H. MCALISTER.

In the Public Eye

What I Saw and Heard and Thought in Washington

By Alfred Henry Lewis

TARIFF? Had you been there you would have seen that which had made you understand what General Hancock meant when he said "Tariff is a local issue." Also, the lobby like was never before witnessed in Washington! There were lobbies in the day of the McKinley Bill, and again when the Wilson Bill was being tacked together, and "Brice's Terrell" at the Shoreham, and "Deacon" Searles at the Arlington, kept open house for Sugar. Also the Dingley Bill was by no means guiltless of lobby features, but, on the corrupting contrary, exceeding rich therein.

And yet in the teeth of a lobby past it remained for the so-called Aldrich-Payne Bill to cast, all and singular, those others into the deep convincing shade. If aught was to be deduced from signs, tenfold the money was spent in fixing the Aldrich-Payne Bill to match the sharkish greed of the "interests" than was ever put out since a time when Sam Ward came down here on behalf of Pacific Mail.

Tariff is a tax levied to pay the expense of government. From such a definition one might suppose that filling the public purse would have been a first consideration. It wasn't. The first thought, even among honest men of House and Senate, was to fill the private pocketbooks of the "interests"—oil, steel, coal, beef, sugar and what other hungrily gaping scores claim as from heaven above the right to reap where they have not sown.

* * *

HERE IS A CONCRETE INSTANCE OF TARIFF. It concerns directly the single item of barley. Indirectly, however, it illuminates every other item, from pins to coffee. It illustrates how tariff works, and what by it is done as well as undone.

Sober, sagacious, persistent, Mr. Tawney of Minnesota is a congressional force. He has been fourteen years in the House. Also he is chief of the appropriation committee. And because every other member, who seeks money for his district, must go hat in hand to Mr. Tawney, the latter's position as appropriation chief vastly augments his general power. In tariff, for example, he can frown upon what appropriation is desired by some member, and so compel that member to come his, Mr. Tawney's, tariff way. A wise man once said that "an ambassador is an honest man sent abroad to cheat for his country." By the same token, it would appear as though a representative was an honest man sent to Congress to cheat for his district. Mr. Tawney, I should argue, is a case in eminent point.

Over barley, Mr. Tawney found himself at moderate tariff loggerheads with Mr. Payne. As one seeking barley light, I put queries to Mr. Tawney. That gentleman replied as follows:

"Until the McKinley Bill, barley was on the free list. The McKinley Bill put a tariff on it of thirty cents a bushel. The Wilson Bill cut it to twenty cents. The Dingley Bill put it back to thirty cents. The present measure fixed the tariff on barley at fifteen cents a bushel. I made a fight to raise it to twenty cents. Twenty cents a bushel is prohibitive. No barley could come in. Fifteen cents a bushel would let in Canadian barley.

"When barley was on the free list and came in untariffed from Canada, Ogdensburg was the greatest barley center in the country. The effect of the thirty cents a bushel under that McKinley Bill was to remove to Chicago, Milwaukee and other points further west not only the distribution, but the consumption, of barley. Barley ceased to come in from Canada. New York's loss became the Western gain.

"Every farmer in my district, on the heels of the McKinley Bill, went to raising barley. Land there that can be plowed is to-day worth one hundred dollars an acre, and rents for six dollars an acre. This prosperity for my people, which, beginning with the McKinley tariff, has lasted and been protected through the Wilson tariff and the Dingley tariff, would be threatened if Mr. Payne had his way and cut the tariff on barley to fifteen cents a bushel. He claims that such a cut would help New York. It would hurt Minnesota, and so I fight it. I'll do my best to fix the tariff on barley at not less than twenty cents a bushel."

The very honest Mr. Tawney gives you a literal lesson leaf in tariff. He makes no bones about it, but tells you that so far as barley is involved he isn't after a tariff that would put money in the public coffers. What he seeks is barley exclusion.

If you don't agree with Mr. Lewis, "talk back" to him, confining your reply to two hundred words. We shall hope to publish some of these replies from time to time.—THE EDITOR.

And yet you are not to condemn Mr. Tawney. He is an honest man, who honestly meets his dishonest day half way and does in tariff Rome what Romans do. Mr. Tawney's pet interest is barley. Wherefore he is careless of tariffs, high or low, for every other commodity. There wasn't one congressman in ten but had, like Mr. Tawney, his pet interest.

* * *

WHEN MR. ROOSEVELT LEFT FOR LIONS he felt exceeding sore over the turn-down Arizona and New Mexico received in their quest after statehood. Not a little of Mr. Roosevelt's feeling was leveled at Mr. Beveridge, who in the face of Mr. Roosevelt's message urging statehood, and the pledge in the party platform that it should be "immediate," had given himself, cat's-paw fashion, to the New England plot against it.

Mr. Aldrich was the bug under the anti-statehood chip. Mr. Aldrich merely used Mr. Beveridge. Mr. Aldrich was "Bill Sykes;" Mr. Beveridge was "Oliver Twist." Only, in this statehood coil, Mr. Aldrich stuffed Mr. Beveridge through the window not to unlock the door, but to lock it.

Mr. Roosevelt had reason to feel injured by the Beveridge attitude. Of all in House or Senate, Mr. Roosevelt had bestowed most favors upon Mr. Beveridge. And, as the Roosevelt sun was setting, Mr. Beveridge used its declining rays to show him the path to Mr. Roosevelt's enemies!

The pretense for refusing statehood to Arizona and New Mexico was that "gangs" existed in the territories, that "corruption" was rampant there. No one said what "gangs," what "corruption."

Those charges of "gangs" and "corruption" were veriest slap-trap, sorriest invention. There is more corruption in Indiana than in Arizona, more gangs in Rhode Island than in New Mexico. Mr. Aldrich, the Tom Ryan of Newport and relative by marriage of Standard Oil, is a good deal of a gang in himself. But those who were plotting against the advent of the territories as states must possess an excuse, and so they cried "Gangs!" and "Corruption!"

New England doesn't want any more Western senators than it can help. The effect of more Western senators would be to shift the center of political gravity nearer and still more near the Mississippi. Already the center of population lies west of Chicago. To bring in the territories would make that same center of population the center of politics. This would be to increase the West, decrease the East, politically, and politically the East is having a bad enough time as it is. And so the territories were barred out.

* * *

THERE WAS THE ELEMENT OF INSULT to Mr. Roosevelt running in and out, through that statehood refusal, like a snake in the grass. No little of the argument employed to bar the door was a sneering assault upon what Mr. Aldrich and Mr. Beveridge were pleased to call the "Rough Rider" element. It was a Rough Rider effort to turn the territories into states, they said, and they insisted that this of itself should align law-abiding folk against it.

The Rough Riders are as the apple of the Roosevelt eye. Nothing so fires him, naught so whets his anger to a feather-edge, as to cast a slur upon them or muddy them with slander. Those sneering attacks upon the Rough Riders will last much longer with Mr. Roosevelt as a "casus belli" than any mere refusal of statehood, however much he personally may have urged the latter, or the same have been solemnly promised by the party in convention.

Likewise Mr. Roosevelt is not one to forget the Beveridge ingratitude. On that interesting point, interesting at least to Mr. Beveridge, Mr. Roosevelt spake briefly but pointedly to a Western caller.

The Western caller referred to the two territories left out in the national cold.

"I cannot trust myself to speak of it," said Mr. Roosevelt, a frown chasing the smile from his face like a black cloud crossing the sun.

"Can you," returned the Western caller, "trust yourself to speak of Mr. Beveridge?"

"Never mind Mr. Beveridge now," said Mr. Roosevelt; "all things in their turn—all things in their turn. I shall be away in Africa and Europe a little over a year. Mr. Beveridge will be about ripe when I return—yes, the case of Mr. Beveridge should then be fairly ripe."

Nota bene—Mr. Beveridge will be up for reëlection in 1910. Mr. Beveridge might better begin digging cyclone-cellars. It is my impression that he will need them.

* * *

THERE IS A GROWING IMPRESSION that the Japanese are more to be feared in peace than in war. Of half our population, half our naval strength, one tenth our riches, and two thirds our virility considered as mere men, the upcome in event of their trying the grim experiment of war with us is easily foreseen. But to let them peacefully bore into the foundations of our society, in the way they are now doing in the West, is a widely different business. No one can foretell the finish of that. The Japanese, living on less, working for less, would rust us, corrode us, eat into our heart. They would surely weaken us and might one day even bring us down. More nations have been peace-conquered than war-conquered—have fallen before the dollar than before the sword.

There is a plant called the Japanese ivy. The Japanese as a race are like unto that creeping, crawling, clinging vegetable. Permitted to take root, it is but a matter of time when they will have overrun everything in sight.

"America for Americans" is not without its virtues as a saying, and should be given just compass in any tangle with the Japanese. Also, our fleets would look well in the Pacific. The powers that be would lift their heads but sheepishly in history were war to break forth between us and Japan, and our war-ships four oceans away.

* * *

APROPOS OF THE TARIFF STRUGGLE, and as showing what might have been done, let me tell the following of the late Mr. Quay. In a day of Mr. Cleveland and the Wilson Bill the Democrats possessed the Senate upper-hand. Senators Gorman and Brice were the Aldrich and the Hale of that occasion.

In the loftiness of their spirit they turned cold, deaf, forbidding ear to Senator Quay when he came begging a tariff on glass bottles and what other junk was near and dear the Pennsylvania heart. Mr. Quay should have nothing—he was a Republican and a sinner.

This elevated attitude did very well until the Wilson Bill came into open Senate. It was then the Quay turn—Mr. Quay, whom the Gormans and the Brices had flouted and tariff-wise scorned.

Mr. Quay claimed the floor, and got it as a Senate matter of course. His type-written speech was piled before him on his desk. It made a stack of manuscript eighteen inches deep. There were millions of words in that formidable oration.

Worse remained behind. Mr. Quay began reading that awful speech. Slow of utterance, rasping of voice, he had not been exasperating the Senate for more than ten minutes before the speech ran into a reference to an article in the "Encyclopedia Britannica," which Mr. Quay desired read from the secretary's desk. This article itself contained twenty thousand words, and the reading clerk's tones were as harsh, as rasping, as much like the strident notes of a hen-hawk as were those of Mr. Quay.

When the clerk had finished, Mr. Quay picked up the second leaf of that portentous mound of manuscript. Thus affairs wagged on for weeks. Not a forward tariff foot could the Democrats budge. The obstinate Mr. Quay stood like a speech-making lion in the path, checking all onward movement.

And in the end Mr. Quay broke the backs, if not the hearts, of his opponents. Yield he wouldn't, wherefore yield they must. Mr. Quay was with sheep in the seventeenth century and iron during the reign of Prester John when the Gorman-Brice combination surrendered. They said, "Concerning glass bottles, take what you will!"

And Mr. Quay took it.

Also, Mr. Quay took twice as much as he had originally demanded. When his triumph came, not five per cent of that wonderful speech had been delivered.

RACHEL'S SON

By Winifred Kirkland

Illustrated by Harriet A. Newcomb

A GRIMNESS had settled down upon the little house ever since he had come home. David wondered about it miserably, but he was one who asked no questions of anybody but himself. Rachel's son was even more silent than Rachel herself, for with her there always had been times when there broke through her quiet—that large, serene quiet of hers—moments of swift, righteous anger or moments of bubbling gaiety sweet and surprising as blossoms bursting from snow. To David even when a little lad, thoughtful and voiceless always, these moments had always seemed the revelation of another Rachel whom he had never known; once, perhaps, his mother had been blithe-hearted as a boy.

Day by day, week by week, David had waited for the strange unhomelike gloom to lighten, but his mother's eyes were still impenetrable and unchanging. Her words were kind, her voice even, except when it rang sometimes with a tension that startled him; side by side they worked together day after day, aloof. From the first hour of David's return he had felt the difference. He had come home in January, and now it was March. He had climbed up to their hollow in the hills by the short cut through the marsh. It was a January thaw, and he had had to spring from hummock to hummock that gurgled beneath his foot, and he had come at last to the top, splashed and muddy, cheeks and eyes aglow and breath quickened with the climb and the sharp wet air.

The blue and windy sky overtopped the brown rim of the hills that rose all about the little farm-place like a cup. The farm-house was brown as the sodden fields and the circling hills; painting the house was one of the many things David's father had never quite accomplished. Against the brown boards the snow that lay on the banking of leaves around the house was a sharp white. Other patches of snow, glistening and ragged, gleamed on the wet pastures and off on the hills. Very small the house looked beneath the flooding sun after the gray cañons of the city streets. The bright window-panes blinked in the light. David went around to the back porch. Rachel had brought her wash-tubs outdoors that morning. She was rubbing with steady, even motion. The sleeves of her blue calico dress were rolled high above her muscular arms and the low-cut neck showed her strong, full throat. Wisps of sunburned hair fell damp across her temples. She was bronzed, forehead and cheeks, with summer farm work. Beneath heavy blonde brows, eyes gray-blue and very clear looked out at one. Bending over the wash-board, she did not hear the boy until he said "Mother!" She sprang up straight as a bow snapped from its curve as she turned toward him.

"David!"

With burning face he stood there before her. He was large of limb and of feature, like Rachel herself, and his eyes matched hers.

"David, why did you come home?"

"They thought they could get along without me for a while," he faltered.

"You've said so little about your work." Only her heaving breast showed her feeling. "When are they going to need you back, Dave?"

"I don't know exactly, mother." Then his eyes fell before hers, so long and quietly she looked at him before she turned back to her wash-board. After a while David asked, "How is he, mother?"

Rachel glanced about at him. "You knew about it, then? Who told you? You know I did not."

"Aunt Sarah wrote. When was the stroke?"

"Three weeks ago." Then, after a pause, "He's lying inside."

David opened the sagging kitchen door and entered. The kitchen was so exactly the same that something swelled within him as he saw it all again. In the white-curtained windows the geraniums flaunted in their tomato-cans. A wood-fire crackled in the great ebony range. The gabled wooden clock ticked noisily on the painted mantel-shelf. The rag carpet lay bright in the streaming sunshine. The cheap white crockery gleamed on the pink cotton table-cloth. It was all the same except for the figure lying on the black settle beneath a patchwork quilt of staring crimson and white. David touched the waxen-tinted hand. In his stalwart young manhood he looked down helplessly at the waxen-tinted face.

"It's Dave, father," he said. "I've come home."

The paralytic babbled incoherently. David could not tell how much he was able to comprehend, yet as the boy moved about the room the little close-set eyes seemed to watch him with their old sharp furtiveness. Soon David went up through the cold hall to his cold little room. On the porch below he still heard that steady rubbing going on and on. A long time he waited to hear his mother come in, to hear her step upon the stair coming up to him, but she never came.

The days that followed were no better—dull wintry days, one after another. Always David watched his mother's face for the old greeting light in the morning, the old tenderness at bedtime, but Rachael's clear eyes had turned to slate, and her kiss was merely kind. She was, in fact, very kind to him in numberless little ways, as if he had been a stranger, so that he wished she had been harsh. It was the first time in his life that his mother had really puzzled him. True, she had sometimes hurt him before, but only briefly. Even when he was little, her temper had sometimes fallen upon him suddenly for some seeming inefficiency or failure. She had been of a Spartan sternness in regard to any pleading off, any cowering before pain or effort. But that was all long ago. The other boys in those days had thought David's mother hard; but David had known that if he could but meet her approval, she gave him a comradeship such as no other boy's mother gave. Then, too, even when a little boy, David had known that the reason his mother was thus stern with him was on account of his father.

"'I couldn't stand to have you pick them all alone, Dave'"

The weeks went by externally the same as before David had left home, with two differences—one the presence of the sick man there in the corner. Rachael and David tended him untiringly, but there was something alien in their touch. It would have been different if he had ever been good or kind to them; his had been the snarling voice by the kitchen stove that had driven Rachel and her little boy to the outdoors for life and freedom and kindliness, to the glad winds of the hills, to the healthy joy of berry-picking, to the springing sweetness of the arbutus bloom. Within doors they had learned to shut their lips and build their dreams in silence. Proud as she was, Rachel could have forgiven the man his failures if they had not been selfish failures. Time after time had he set forth on some new hazard of fortunes, only to come home, driven by selfish love of ease, to the little farm Rachel strove to manage in spite of his neglect, and from which she had somehow wrenched the money for David's going away. Now David's father lay, a paralytic, on the kitchen settle, always watching his wife and son with small bright eyes. They did not dream that, not good enough or wise enough to pity them for the past, he pitied them bitterly for his helplessness in the present. In the silence of the life in the little brown house that spring, solitary within the narrow circle of its brown hills, none of them knew of the secret things that were pushing beneath the surface to break forth in the springtime of the years. None of the three remembered that we are never so stern as we think we are, and that however just our condemnation, out of helplessness and pity there surely shall be born one day the little bright flowers of forgiveness.

In one other way the days were different—there were no dreams. Rachel and David no longer talked about the factory and his work, about the name and the fame he was to win, dreams into which Rachel had poured all the energy back of her still face, building high for her boy out of broken hopes. David did not tell his mother about the factory; he could not, nor could Rachel question him. David thought her silence was for the same reason that locked his own lips; yet if this were true, why had she built this wall between them? As a matter of fact, the two talked more than they had ever done, for they had always understood so well before, without words.

Meanwhile the dull duties went their busy round—feeding of cattle and horses, chopping wood, carrying water, mending of fences, planning for the spring plowing and planting. Once a day David drove down with the milk to the creamery, thus once a day passing beyond the rim of hills that locked in the three. The mud splashed the legs of the shaggy old horse and the wheels of the buckboard, the milk-cans rattled, rattled, noisily, and day by day, as he sat driving with head bent against the sharp March wind, David's gray eyes beneath his heavy brows burned brighter with longing and his lips were drawn more doggedly; then home again to the narrow hills, growing more stifling every day.

Sometimes, on a sunny, wind-swept morning early, David heard the honk-honk of the wild geese high in the sky, or saw the crows' flight across the blue. The call of the birds was a clarion to the boy's will crying to him from the world beyond the hills. Rachel, too, stirring early about the kitchen stove, saw the birds' flight beyond her narrow window-panes, heard their myriad voices as the birds swept on toward a world she had never seen, a world from which David had turned back.

There were a few hours each day when David forgot, out in his little granary workshop in the barn. There he had his batteries, his electrical appliances, the small, breathless inventions he had toiled over from his childhood. Childish enough they all looked to him now in the larger knowledge he had gained at the factory; but he worked over them still with the old abandon of delight. He had supposed that his mother knew that he went to the workshop every afternoon, but one day he came to himself to find her looking at him from the door.

"Do you still do that, David?"

His surprise was as great as hers. "Why, of course! Why shouldn't I? The work is done. Is there anything else you want me to do, mother?"

"There is no reason why you shouldn't. I was just surprised to find you here, that's all," she said quietly, turning away.

He looked after her in bewilderment. How could she have supposed he could stop working with his batteries? Then a sudden smile touched his lips with ironic humor. Could it be possible he had really succeeded in deceiving her? Did she really think he did not care? He need not have been so careful to tear up those two letters on the way home from the mail if even on those two days his voice and manner had betrayed nothing to her! David was not quite grown up. The man within him was glad his mother did not understand, glad this pain was spared her, but the little boy of him cried out to her to understand.

The two letters had caused him sleepless nights; the third he ground beneath his heel in the mud. Even when thus obliterated, the type-written words danced before his dizzy eyes. The letter came upon a gusty April morning, when the very air sang of freedom and of hope. Every springing shoot had its will, had its way. There was no nonchalant robin but could go winging wherever he wished. The very least of blossoms, the winking heads of the arbutus David had for weeks been watching swell to bloom—watching that year for the first time alone—might cleave the mass of clauber that held them down where and when they willed. Young April piped at the boy's ear; everything was free except himself! At the crest of the hill-line David drew rein. He looked down at the brown cup of the tiny valley, at the tiny brown house at the bottom. He was chained to that tiny house helplessly as his father, and more sadly, for his body and blood were still young and strong. He had had none of this bitterness when he had first come home. Then he had faced his fate without hesitating; now he asked, "To what end? To what end if it was to be as it was now between his mother and himself always?" Suddenly he whipped up his horse, shaken through and through by his temptation and his resolve. He would put it to the test. A day like this, he knew, always cried to his mother's mood as it did to his. There had never been a lonely springtime before. He jumped

[CONCLUDED ON PAGE 18]

The Housewife's Club

This department is just for housewives. It is their own "corner" where they may tell each other the way they manage their household affairs, how they cook, how they make their work easier and life happier. We want every one who has originated any labor-saving device or convenience to write to the "Housewife's Club," so that our other readers may be benefited by their experiences. We would also be glad to receive recipes that have been tried and proved. For all contributions available we will pay twenty-five cents. Contributions must be written in ink, on one side of the paper, and must contain not more than two hundred and fifty words. We would suggest that contributors retain copies of their manuscripts, as no contributions will be returned. Address THE HOUSEWIFE'S CLUB, care of Farm and Fireside, Springfield, Ohio.

Two Breakfast Dishes

To use scraps of bread, dip them in milk, and then in beaten egg, and fry on a hot buttered griddle until brown.

Another acceptable dish may be made from left-over potatoes. Slice them, fry on griddle, and when nearly done, break eggs over them and let fry.

N. B., Kansas.

Salad From Left-Overs

A few cold beans left from dinner, with one or two cold hard-boiled eggs cut rather fine, a small onion cut fine and a little vinegar make a most appetizing salad. Or just the beans, onion and a little tomato catchup is tasty.

Mrs. C. C. T., Washington.

Salad-Dressing

The following is an excellent recipe for salad-dressing. I have used it for several years, and I would like our readers to try it.

One fourth of a cupful of sugar, one fourth of a cupful of butter, one cupful of vinegar, one even teaspoonful of salt and mustard, the beaten yolks of four eggs. Mix well; heat until it thickens, stirring all the time. When using, add as much sweet cream as you do dressing.

Mrs. F. M., Iowa.

Burned Bones for Chickens

Do not underestimate the value of burned bones for the chickens, for these contain elements not obtained in any other food. Where the family is large, many bones will accumulate from the table, and these, if burned, will be much relished by the fowls. An excellent place to burn them is in the "middle hole" of the range. Anything, from bones to a whole animal, will burn absolutely without odor if placed on the framework just over the oven. When the bones are white, break them up, mix with dried and crushed egg-shells, and watch the eagerness with which the fowls pick it up.

M. E. S. H., Michigan.

Deviled Eggs for Picnics

Boil six or more eggs until hard, place in cold water until they cool, then cut in halves. Take out the yolks, and rub to a smooth paste with a very little butter, celery-seed, cayenne pepper, a touch of mustard and a dash of vinegar. When thoroughly mixed, put back. Deviled eggs are especially nice to take on a picnic, and will keep nice and moist if wrapped in waxed paper.

M. S., Virginia.

Useful Hints

If you are unfortunate enough to spill kerosene over anything, bury it for forty-eight hours in buckwheat flour, then shake well, and you will find all traces of kerosene removed.

If your irons stick to the clothes, rub them on some salt, or rub the irons backward and forward on a piece of carpet that is in daily use.

M. V. D., New York.

To keep cake from sticking to the tins, grease them while cold and dust over with a little flour. Always be careful to see that the tins are cool each time.

Mrs. J. H. W., Virginia.

Questions Asked

I would appreciate it if some one would send me, through Farm and Fireside, directions for making elderberry "blossom" wine, and "elderberry" wine, also.

Mrs. F. L., Ohio.

To Mrs. P. H., Indiana—I have been watching the "Housewife's Club" for some time to get the recipe for dill pickles, and was glad when I saw yours in Farm and Fireside. But part of it is not plain to me. You said to use pickles. Do you mean fresh cucumbers or the real pickle? Where can I get dill leaves, and how much salt to the gallon of water should be used? Do you pour it on hot or cold, and do you boil your brine? I would appreciate it if you would answer these questions for me, as I am anxious for a good, tried recipe.

Mrs. W. A. R., Texas.

Mrs. F. W. P., of Missouri, would also like to ask Mrs. P. H., of Indiana, how strong a brine she uses, and if there is no vinegar used?

To Cook Green Beans

Cut the beans fine and put them in a kettle in which one tablespoonful of butter has been melted. Cover very closely and they will generate steam enough to cook in without adding water. When nearly done, season to taste. Beans cooked in this way have a more delicious flavor than when boiled in water. They should cook slowly.

Miss C. R., Nebraska.

Potato Salad

After trying numerous ways for making potato salad, we have at last found one which we pronounce perfect. Ten medium-sized cold boiled potatoes, three medium-sized onions, one half bunch of celery and two hard-boiled eggs. Cut the potatoes in small pieces, also the celery, onions and eggs, and cover with dressing made as follows: One cupful of rich milk or cream, one egg well beaten, one half cupful (scant) of vinegar, one tablespoonful of sugar and a pinch of salt. Cook in a double boiler until thick like cream, and mix through the salad. The celery and onions may be omitted if desired.

Mrs. A. S., Ohio.

Ice-Cream Without a Freezer

For those who do not own or who cannot afford a freezer, many delicious iced desserts may be prepared by using simply a lard-pail in a preserving-kettle, dish-pan or pulp pail, and packing in cracked ice with coarse salt, using one part salt to three of ice.

Be sure to fasten the cover on tightly. It is well to bind around the cover a strip of cloth dipped in melted butter, to prevent the salt from getting to the cream. The cream should be ready for use in about four hours. The receptacle in which the pail is placed should be covered with several thicknesses of old carpet or rug.

C. E. H., Massachusetts.

Novel Short Kimono

A pretty kimono can easily be made by taking a large square in any desired material and hemming it on all sides. Cut two slits in the center, crossing each other, making a hole large enough to put over the head. Turn back the four points made by the slits, hem, and trim with lace or bind with ribbon. Slip on over the head, with the points falling in full folds to the front, back and sides.

C. E. H., Massachusetts.

Mending Torn Waists

A nicely-embroidered shirt-waist began going in little holes in the front. The worn places were darned, then dots embroidered over them to correspond with other parts of the original embroidery. Of course it necessitated embroidering a similar figure on the opposite side to keep them balanced, but the waist was well worth it. Eyelets or little embroidered leaves or flowers would do just as well, according to the original design.

"Ajam," Pennsylvania.

How to Make Fly-Paper

Put into a sauce-pan one pint of molasses, one half pint of linseed-oil and one pound of rosin. Cook for thirty-five minutes after the mixture begins to boil, and stir frequently. Spread this very thinly on common brown paper, then spread another sheet of paper on the first one. Continue laying these double sheets in this manner until all of the mixture has been used. With the quantities which I have given four large sheets of wrapping-paper may be covered. When you want to use any of it, just cut off a piece and draw the sheets apart.

A. H. M., Virginia.

Orange Souffle

Cut stale sponge-cake into thin slices, and saturate with orange-juice. Place in a dish, and pour over it a rich custard. Cover with meringue, and brown lightly.

Answers

Answer to E. M. F., Indiana: I always use rolled oats (commonly called oatmeal) in my oatmeal cookies.

M. E., Ohio.

New Subscriber: A. M. V., South Dakota, sends a recipe for ice-cream that calls for no eggs. One quart of cream, one quart of milk, one cupful of granulated sugar and two teaspoonfuls of vanilla or any flavor desired. Then freeze!

Cottage Cheese From Separated Milk

Many farm people think it impossible to make cottage cheese of separated milk, but this is a mistake. There is no need of any one foregoing this healthful food because the milk happens to be separated, when the secret is learned—and that is that the milk must not be heated. Heating the separated milk will turn the curd into a sticky mass as elastic and quite as indigestible as indian-rubber, and because we have always been in the habit of heating the clabber milk when making cottage cheese, one is likely to fail the first time when making it of separated milk, but when the "knack" is learned it is easily done.

In the morning take warm milk from the separator, and set it in a granite vessel on the back of the range just as far from the fire as possible, where it will keep lukewarm. If the temperature is kept right, the milk will be a thick curd by evening. Now break up the curd, and move the vessel over where the whey will warm up a little, stirring it up from the bottom, but do not let it get too warm, or the cheese will be spoiled. As soon as the whey is warm, lay a thin cloth in a colander, and pour in the mixture; let it drain until it is as dry as liked, then break up, and salt to taste. Some people like cottage cheese very dry, and for this add butter, and make up into rolls. If liked moist, stir in one cupful of rich cream; and here again some like sweet cream and some sour, and my German neighbor adds a sprinkling of caraway-seed, which is always liked by the children.

E. C. H., Wisconsin.

Cheap Kitchen Curtains

I want to tell the readers of "The Housewife's Club" about the pretty curtains I made for the kitchen. I took one width of white mosquito-netting, hemmed the bottom, made a double shirr for the top, and hung them, letting the ends reach to the window-sill. You would be surprised to see how cheerful and dainty they look. Curtains of this kind would look most attractive in a bedroom, provided the netting is draped over some bright color.

Mrs. E. C. N., Illinois.

Use Casters for Kitchen Table

Have the kitchen table on casters. It will be found a great help toward saving steps. When work is being done at the sink, the table may be rolled over near it, and the clean dishes put on the table; or when cooking is being done, the table may be pushed near the stove, and the necessary cooking articles placed conveniently at hand.

B. R., New York.

To Bleach Muslin

Place a boilerful of deep blue water on the stove, and unrolling the muslin, put it in and let come to a steady boil. Remove from boiler without wringing, and hang on line to drip dry in full sunlight. When dry, iron and depend on the first washing to make it a clear white, or wash again in usual way before using.

Refreshing Drink for the Sick

One quart of cold water, two cupfuls of sugar and two cupfuls of chopped pineapple. Cook twenty minutes. Add one cupful of orange-juice and one half cupful of lemon-juice; cool, and strain. Keep in glass jars on ice. Dilute with iced water when serving.

C. E. H., Massachusetts.

To Prevent Fading

To keep bright colors from fading, soak the fabric for an hour in a pailful of cold water in which has been added a large handful of salt, and then launder in the usual manner.

Mrs. B. B., New York.

Camphor for Mosquitoes

Camphor is hated by mosquitoes and other insects, and if used in either liquid form or lumps will keep them at a distance when other methods fail.

Z. M. N., New Jersey.

Pickling Hints

In pickling, alum helps to make pickles crisp while horse-radish and nasturtium-seeds prevent the vinegar from becoming muddy.

Mrs. T. F. B., Pennsylvania.

Every package of
Post Toasties
Contains a little book—
"Tid-Bits made with Toasties."
A couple of dozen recipes
Of fascinating dishes,
A help in entertaining
Home folks or company.
Pkgs. 10c and 15c—
At grocers.

This Atlas

For Our Readers Without Cost

At last Farm and Fireside has been able to obtain a splendid, comprehensive Atlas of the World, which it now offers to its readers for a limited time, absolutely without cost.

106 Pages,
70 Colored Maps,
Flags of All Nations,
Biographies of Our Presidents.

What You Will Get

By our special arrangements you can obtain the famous Hammond's Handy Atlas of the World without one cent of cost, if you act at once. We have secured for our readers the latest 1909 edition of this great Atlas, which is just off the press, revised up to date. This volume contains 106 pages, 6 by 8 inches in size, and is bound in substantial and attractive red cloth. There are 70 full pages of maps, containing new maps of each state and territory in the United States, and every country in the world.

Right Up to Date

In addition to all the maps showing the location of countries, towns, rivers and mountains, this valuable Atlas and handbook contains a brief accurate biography and the portrait of every president of the United States, including William Howard Taft, who was inaugurated on March 4th. There is a list of all the most important cities of the world, with the population of each, including every city in the United States with a population of 10,000 or more.

How to Get It

For a one-year subscription to Farm and Fireside and the Atlas (postage prepaid), send us only 50 cents—less than the value of the Atlas alone. For a two-year subscription and the Atlas, send 65 cents. This subscription may be either new or renewal.

We will send you the Handy Atlas **without cost**, postage prepaid by Farm and Fireside, if you send us two subscriptions to Farm and Fireside. The subscriptions may be either new or renewal. One of the subscriptions may be your own. Act at once while the chance lasts.

FARM AND FIRESIDE
SPRINGFIELD, OHIO

OUR YOUNG FOLKS' DEPARTMENT

For the Sake of the Flag

By Mary Minor Lewis

Martin Canby sat on the doorstep of his mother's cottage dreaming day-dreams. For the greater part of the ten short years of his life Martin had dreamed these dreams—had seen himself a soldier, resplendent in the uniform of his country, a gleaming sword at his side and gold braid on his coat, mounted on a white horse which charged and reared as he rode proudly at the head of his regiment! He had dreamed the dream so often that he could almost hear the band play, and the giant mullen stalks growing down the hillside to the garden fence of his humble home seemed to him a real and invading army, made on purpose to be conquered by his marvelous generalship.

The sun dipped behind the blue mountains, long shadows began to creep down the hillsides; a chill came as the shadows deepened, and gathering up the toy soldiers with which he had been playing on the doorstep, the little boy entered the room where his mother was preparing the evening meal.

How pale she looked, and how tired, as she went about her task! Martin could remember her when she had roses in her cheeks and when her bright hair curled about her temples like a girl's. But that was before his father died and before they grew to be so poor that they gave up their pretty home in town and moved into this cottage, where, all day long, and sometimes far into the night, his mother bent with patient face over her fine sewing and dainty embroidery, for which she found a ready sale among the rich cottagers and visitors to the neighboring "Springs."

After the supper things were cleared away, Mrs. Canby took from out her work-bag a square of red silk on which she had sewed white strips. While Martin was away at school that day she had cut out a lot of tiny white stars, and then, while the boy sat happily watching her sew them on in the corner of the flag, she, who was a soldier's daughter, told him stories of the world's great heroes—of Cæsar, Napoleon, Washington. She told him how, for the sake of the flag, men have in all the ages of history been glad to lay down their lives.

And when it grew to be his bedtime, and she had tucked him safely in, he asked her, "Mother, do you suppose I will ever get a chance to do anything really brave and great?" And as she kissed him good-night she said, "You certainly will, dear; all of us do get the chance, but sometimes the world never hears about it. But when your opportunity comes, I hope I shall be very proud of my boy, and that he will some day do some brave deed inspired by his country's flag."

The next morning, with books under his arm and the precious flag folded in his pocket, he started off for his two-mile walk to school.

"At recess-time," thought he, "I will fasten it to the end of the fishing-rod which I hid under the corner of the school-house, and how beautifully it will wave over the heads of 'The Boys' Brigade' as we drill up and down the school-yard!"

His road led for some distance along the mountain's side, and then he followed the path by the side of the railroad track, over which the great trains crossed the mountains to the West. A stone bridge spanning a deep and rocky ravine, through which a clear stream sparkled, was supported by buttresses of native sandstone at each end. Here Martin had often come, and climbing down into the rocky gorge, had looked up and watched to see the great express-trains go thundering across the bridge, making the very hillsides tremble and reverberate with the shrill shriek of their engines. It was almost time now for the eight-forty-five.

So full of brave dreams was he to-day, so absorbed in plans for the drilling of his company of schoolmates, that he had almost stepped upon the bridge before he saw that there was anything wrong. Then, all in a moment, the horror of the thing that had happened was upon him, clutching at his heart-strings, paralyzing him with dread, so that he could neither move nor cry out. There had been a "landslide" during the night! The other end of the bridge was down! The earth had given way under the rocky supports at the end of the structure, and nearly half of the bridge had fallen into the chasm below! And the Western Express was due in ten minutes.

For only an instant he stood there, wide-eyed with the terror at his discovery; then, dropping his books, he ran, scrambled, climbed, swung himself down the rocky sides of the precipice. The stones cut him cruelly, the thorns and briers tore his hands and face, but he kept straight on. With nimble feet he leaped from stone to stone across the narrow stream at the bottom of the ravine, and then began the still more difficult climb up the precipitous banks of the other side. His lips were parched and dry, and his breath came in quick, short gasps. At last he reached the top, and

"Waving wildly his bright little flag, he raced on down the track"

darted down the track. He drew from his pocket his little flag, and held it fast while he ran. "I must be brave," he whispered. "I must warn the train in time. It is for the sake of the Flag!"

As he neared the "Dead Man's Curve" he heard the distant whistle of the oncoming train, bearing hundreds of souls, ignorant of the doom awaiting them. On! On! Brave little man! Never did more gallant soldier bear the Stars and Stripes! Never did a general in all history charge into battle with a braver heart! With flying feet, but with strength almost spent, he rounded the curve, and between the blue hills ahead he saw a column of white smoke ascending. Then in an instant the engine rushed into sight! Waving wildly his bright little flag, and forgetful of his own danger, he raced on down the track! The locomotive gave a piercing shriek! Surely the engineer has seen the piteous little figure and his warning signal! Surely it is not too late! With a final wave of the flag about his head, the boy staggered and tried to reach the side of the track. His foot caught; he fell, and rolled down the steep embankment, and lay very still, his leg doubled under him! Then a mist and darkness came over him as the great monster rushed past.

When he came to himself the train was standing a short distance away. A crowd of excited people were gathered around him, and bending over him was a Gentleman With Blue Eyes, who said, "Brave little boy! You have saved the day!" And he took from him the flag which the boy still clutched to his breast, and waved it above the heads of the crowd, and the people whom he had saved from an awful death broke into wild cheers!

Martin was taken on board the train, and carried back to the nearest town, and there the doctors found that his leg was broken. For six weeks he lay in a little white bed in the hospital, but every day The Gentleman With the Blue Eyes came to see him, and brought him books and toys and told him wonderful stories. And one day, when it was almost time for Martin to leave the hospital, the Gentleman With the Blue Eyes came and told him his story:

"Once there was a little boy, and all his life he had planned to be a soldier. But the boy lived far away among the mountains, where there were no good schools, and his mother was a widow and very poor. Now one day this boy had a chance to do a brave and noble deed, and instead of thinking of himself and the danger, he thought only of his duty and of his flag. And so he saved the lives of a great many people. One man, whom the boy calls 'The Gentleman With the Blue Eyes,' feels that he owes his life to this boy's courage. He knows that the boy has the material out of which great soldiers are made. So he is going to send him off to a splendid school in the North, where he will be taught and trained for his life work. And later, when the President knows what this brave boy did, he will give him an appointment to West Point up on the Hudson River, where some of the greatest men of our country have learned to be soldiers. And always, through all his life, the boy is to remember that 'The Gentleman With the Blue Eyes' is his best friend."

"Why," cried Martin, sitting up in his cot, "that's you! And the boy? It can't—it can't be me?"

Garden Puzzle

Perhaps some of the cousins will enjoy working out this interesting puzzle. Hidden in each sentence is the name of a vegetable, flower or a necessity or help in making the garden. The answer to the first is "harrow." Get your wits together, boys and girls, and find the rest.

1. As a relish arrowroot pudding may be said to "take the cake."
2. Why not give father a dish of cream?
3. If you want to please Ed send him some rhubarb.
4. There was a hush o'er all the scene.
5. When you empty the pans your work is done.
6. Ugh! He held in his grasp a dead snake.
7. The deacon's prayers are pathetic.
8. Let us look over Akenside's rules for reading.
9. We can take a wheel and go in five minutes.
10. We will visit Boston, the dear Hub, Arbor day.
11. The queer name, Eros, escaped my memory.
12. She was instigated by rancor, not love.
13. They rode a camel on starting, later used horses.
14. Do they keep ink-stands for sale?

Eleanor E. Kelso.

Note—All boys and girls desiring the answers to the Garden Puzzle can obtain them by sending a stamped and self-addressed envelope to Cousin Sally, care of Farm and Fireside, 11 East 24th Street, New York City.

Cousin Sally's Letter

Dear Boys and Girls:—

After a delightful camping trip in the mountains of New Hampshire, Cousin Sally came back to New York feeling like a different person. Really, you have no idea how much good a short rest in the open can do for you. Why, if I lived within walking distance of the woods, as a great many of you boys do, I'd coax my father to rig up a tent for me, so that I could go camping for a few days at a time.

We just had the jolliest time imaginable! I am sure you'll be interested to know that there were two boys (one fourteen and the other sixteen years old) and one girl (thirteen) in our party of eight. The fathers of the boys and girl acted as our guides, so we had nothing to fear. Our camping spot was most ideal—right at the foot of a high, steep mountain. Oh, how good it was to be in so charming a place! I shall never forget the first morning. I was up and out before the others were stirring. The sun played through the trees and danced on the rippling streams and brook, and turned them to molten gold; the air was heavy with the delicious odor of pine; the forest and fields echoed with the songs of birds and the drowsy hum of the bee; and the waterfall softly tinkled as it gently dripped over the rocks and stones, bubbling and rippling lazily on its course, as though it, too, were on a holiday. Oh, I cannot tell you how delightful and fascinating it all was!

The two boys—John and George—had been on camping trips before, and of course knew a great deal about cooking. Even Lucile had been trained in the art. When we sat down to breakfast I suggested that we each take turns in preparing the meals, and also that the one who found fault with the food should prepare the next meal, whether it was in turn or not. Of course, every one was most cautious not to complain, and no matter how badly things were cooked, they were invariably praised.

When it came my turn to cater, I thought I would have tomato soup for dinner. So I opened a can, put the contents in the pan, and started to season it with a little pepper. But somehow the pepper wouldn't sift out of the box, so I kept on shaking and shaking, until, to my dismay, I discovered that it was RED pepper. I tasted the soup, and it was burning-hot. However, I served it, and when everything was ready, I joined the party, and we commenced to eat. John took up his spoon—and I waited. In a second he dropped it in his plate with a clatter, and blurted out, "My eye! but that soup's hot!" and as the tears streamed down his face he meekly added, "But I like it." This last remark made us shriek with laughter, for we knew why he had said it. Anyway, we took pity on him, so he didn't have to cook the supper.

Our days were spent in much the same way that you spend yours—I mean those of you who live near woods or a lake. The boys went trout-fishing and we girls would canoe or go mountain-climbing.

Now I have told you all about my vacation. I was glad to go away, but more glad to get back. I once heard an old German remark, "Ach, it is nice to go away, but I chust luf to get back again!" And that is just the way I feel about it. After all, there is no place like home. It's the dearest place in the world, isn't it?

I found your letters waiting for me, and I thank you for writing to me. With a great deal of love, and hoping that you will write often,

Lovingly always,
Cousin Sally.

Monthly Prize Contest

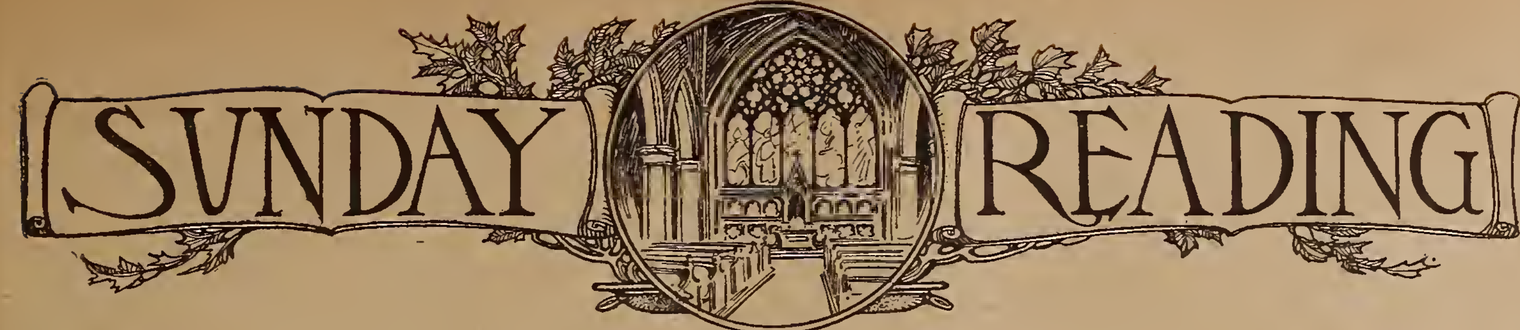
For the four best pencil, pen-and-ink, or water-color copies of the above illustration, Cousin Sally will give prizes of splendid water-color paints in Japanned tins.

The contest is open to all boys and girls who are under seventeen years of age. Please make your copy larger than the original here shown. Write your name, age and address plainly on your drawing, and do not roll it, but send it flat.

The contest closes August 25th. All work should be sent to Cousin Sally, care of Farm and Fireside, 11 East 24th Street, New York City.

The Post-Card Exchange

Henry Lyon, age sixteen, Toledo, Washington. Ruby M. Faulhaber, age twelve, Brownlee, Nebraska. Fannie Wertenberger, age twelve, R. F. D. 2, Box 17, Pierceton, Indiana. Margery L. Leaverton, age fifteen, R. F. D. 1, Box 107, Hillsboro, Ohio. Frank Schmitt, age sixteen, Expo, Virginia. Carl Martcke, age twelve, Atalissa, Iowa. Sherman H. Bloom, age eight, Oakharbor, Ohio. Minnie Albrecht, age fourteen, R. F. D. 2, Box 54, Oberlin, Ohio. Mack D. Long, age ten, Charlestown, Indiana.



A Sermon in Character

Among the news of accidents in a great city the other day there was a sermon—a sermon that preached itself. It was a sermon in character.

Some men seem never to tire of telling what they would do in time of danger, of hazardous emergency, when peril looms large, when the crisis comes. Some of these men are rank braggarts, others simple prattlers that idle their time away with talk, and all are cowards at heart.

The really brave man does not prate of the heroic things he would do on the instant in some prospective situation that would try men's souls and courage; he does not boast of his prowess, of the valorous deeds stored up in his system against the time of need, of how he will perform daring feats with nerve and brawn while others stand aghast and paralyzed with fear.

The really brave man does not talk. He acts.

The man who possesses courage, who has in his character the making of a hero, is more or less innocent of a knowledge of it; at least, he does not seek to make others conscious of it.

The bravest men who have gone into battle were those most fearful lest their courage fail them when they should stand under fire. But it was such men as these whose aim was steadiest, whose blow was strongest and the most effective, who won the battles, covered themselves with martial glory and made their names and their country illustrious and revered in history.

As with the soldier and the private citizen, so with men whose vocation in life leads them often into thrilling situations, into uncertain dangers, where they hazard their lives in the line of duty or for the sake of the lives of others, with the venture favoring the contingency that they may forfeit their own. Many such men have gone to their death unflinching, unhesitating, their greatest consolation in the last moments before the Great Night came upon them being simply that they had done their duty, that they died fighting, their face to the front.

In such a city as Greater New York, with its total of ten thousand policemen, there is no lack of deeds of valor; the records are full of notable acts of heroism, of rescues from fires, from river-drowning, from injury by thugs, from the trampling hoofs of the mad runaway, from death in a hundred ways that threaten in the streets of a great city, among the rush and swirl of traffic. These meritorious things are done by the quiet, unassuming men of the force, men whose private life is as clean as their official records.

Then there are the other kind; men who are a disgrace to their uniform and to the city, who do dishonorable, sordid, infamous, cowardly things; men who—But let them pass. They are too worthless to claim recognition here, they are beneath criticism.

Of all heroes, the man who subordinates self to an obvious though distressing duty deserves the greatest praise and credit. Unselfishness is the keystone in the arch of a heroic character.

Some time ago a New York policeman, John Sheehan, saw a boy struck and knocked down by a street-car, the forward wheels passing over his body. He was at a distance, but the childish form was familiar to him.

As is typical of a Gotham Street crowd, an angry mob immediately formed, savagely assaulting the helpless and blameless motorman. Here, then, was the first duty of the policeman, to rescue the motorman from the violence of the infuriated mob. Blowing his whistle for assistance, he fought his way through the crowd, to stand by the motorman, warding off the blows of the attackers with his club.

But his heart cried pitifully to go to the relief of the poor little bruised and mangled form under the trucks of the car, and as the suffering lad's plea for help reached him where he stood, stubbornly beating back the onrushes of the half-mad people, he winced with the sting of pain in his heart: his very soul was scorched and seared with the burning agony of anguish, his face blanched at the unseen spectacle of horror, his muscles twitched, his nerves snapped and stung, the blood raced hot through his veins: it was the cry of the weak to the strong, the natural appeal from child to father—for the little crushed shape under the car was the policeman's son.

And he knew it from the first, and, knowing it, still had the supreme courage to act first "in the line of duty"—the almost superhuman courage to sacrifice self, his parental feeling, to disregard for the time the appeal of his own flesh and blood, that he might faithfully perform his official duty as a policeman.

There are not many John Sheehans on the police force of New York City—or anywhere else.

When the reserves arrived to handle the crowd, the heartbroken father quickly crawled under the car to free his little boy from the wheels that had hurt him so cruelly. But little Charlie was wedged fast; the agonized father could not free him, so he lay down beside him and did what he could to comfort him until the weight of the car should be lifted.

The little fellow's legs were both cut off, but only for a while did he cry. The father tenderly caressed him and spoke gentle, soothing words to him, coaxing him to be "a brave little man;" whereupon he stifled his pitiable cries and bore his pain with the pluck and fortitude of a Spartan hero.

"Did my little kitty get hurted, too?" and his face expressed anxious concern. "No, kitty didn't get hurt," he was assured; and he smiled contentedly—he felt it was his duty to protect poor, helpless kitty.

Then came the ambulance with the surgeon and his anesthetics; then the "trouble wagon" with its jack-screws and crowbars and tackle, and the car was raised and Charlie was taken out. But poor little, brave little Charlie. He died in his father's arms shortly after they reached the hospital. And so another courageous little life was snuffed out, another hero lost to the world.

No, there are not many John Sheehans; nor many sons who inherit the moral stamina, the exemplary courage, the distinguished and illustrious character of the father. R. M. W.

Practical Religion

Adversity is one of the teachers in the school of experience, and is as necessary for the soul as food is for the body. But life is not all winter. Glorious springtimes and summers are bound to follow even the dreariest of winters. Therefore, let us bear all our trials with good grace and a cheerful countenance. Christ is never nearer and dearer to us than in the "cloudy and dark day" or in the night of weeping.

Our religion should be of a sort that we can use every day in the week—not one to be carefully aired on Sunday, and then folded away for the remaining six days. Our religion should help us to be cheerful in performing our daily duties, in the little, bothersome, perplexing problems which we are constantly obliged to solve.

If we would only cast our burdens on the Lord, instead of trying to carry them ourselves, and if we would learn to think of Him as an ever-watchful Father, ever ready to help us, how much happier and contented we would be. "Cast thy burdens on the Lord" is the blessed invitation that is extended to us all. Why not accept it?

The Bible tells us that God is all-in-all, and when adversity comes we should not forget that He is able and willing to watch over us. B. V. A.

Let Us be Patient

We have need of patience with ourselves and with others; with those below and above us, and with our own equals; with those who love us and those who love us not; for the greatest things and for the least; against sudden inroads of trouble and under our daily burdens; disappointments as to the weather or the breaking of the heart; in the weariness of the body or the wearing of the soul; in our own failure of duty or others' failure toward us; in every-day wants or in the aching of sickness or the decay of age; in disappointment, bereavement, losses, injuries, reproaches; in heaviness of the heart or its sickness amid delayed hopes. In all these things, from childhood's little troubles to the martyr's sufferings, patience is the grace of God, whereby we endure evil for the love of God.—E. B. Pusey.

Peace in God

"Jesus, keep me." It is a prayer of perfect confidence in what the Holy Spirit, whom Jesus has sent, can and will do in us. Jesus has sent the Comforter, the Holy Spirit, to be in us. And day by day Jesus will keep us through the Spirit. The Holy Spirit guides the judgment of those in whom He lives, showing us the right thing to do when we get into a tangle of circumstances, influencing our minds with pure and wise and wholesome opinions, and making us incline to things that are safe and sweet and strong. The Holy Spirit strengthens the will of those in whom He dwells, so that more and more, in the hour of temptation, we shall choose light rather than darkness. The Holy Spirit gives us brave and calm thoughts in times of danger. When, for example, we are out sailing, and a sudden storm comes up, and we know not but that the next squall of wind may capsize the boat and throw us into the sea; or when the fierce thunder-storm bursts forth at midnight, and the blazing lightning strikes a tree or a house near by, and we know that the next instant it may be our turn to receive the dreadful blow; or when we become sick, when pain and fever are growing worse, when we know that we have some dreadful disease, and that in a little while we may be dangerously ill—in such times it is the Holy Spirit who makes us perfectly brave and calm. We pray the greatest and most comforting prayer, "Jesus, keep me," and He answers that prayer by sending that sweet influence of His Spirit freshly through our hearts. It may be the danger does not go away; perhaps the boat does capsize, perhaps the lightning will strike the house, perhaps the doctors or nurses cannot stop the disease, and we may grow worse and worse until we know that we are dying—these things may come to us as they come to others. God has not promised to keep trouble and sickness away from us because He is our keeper. No! But He has promised to give us, by His Spirit, that sweet, strong trust that in the end that which is best shall conquer in our life, and that perfect peace which neither danger nor sorrow shall utterly abolish or destroy. Hear these words about the "keeping:" "Thou wilt keep him in perfect peace whose mind is stayed on Thee, because he trusteth in Thee." "The peace of God, which passeth all understanding, shall keep your heart and mind in the knowledge and love of God," "Yea, though I walk through the valley of the shadow of death, I will fear no evil, for Thou art with me; Thy rod and Thy staff they comfort me."—From "The Silver Cup," by Charles Cuthbert Hall.

The Need of Contrast

If all the skies were sunshine,
Our faces would be fain
To feel once more upon them
The cooling plash of rain.

If all the world were music,
Our hearts would often long
For one sweet strain of silence
To break the endless song.

If life were always merry,
Our souls would seek relief
And rest from weary laughter
In the quiet arms of grief.
—Henry Van Dyke.

A Prayer

O Lord, Thou knowest what is best for us; let this or that be done, as Thou shalt please. Give what Thou wilt, and how much Thou wilt, and when Thou wilt. Deal with me as Thou thinkest good. Set me where Thou wilt, and deal with me in all things just as Thou wilt. Behold I am Thy servant, prepared for all things; for I desire not to live unto myself, but unto Thee; and oh, that I could do it worthily and perfectly.—Thomas à Kempis.

Cheer-Bringers

Those who bring sunshine to the lives of others cannot keep it from themselves.—J. M. Barrie.

Some people are always finding fault with Nature for putting thorns on roses. I always thank her for putting roses on thorns.—Alphonse Karr.

Anybody can make good pictures now that the

KODAK

has removed all of the dark-room difficulties. Every step simple—inexpensive too.

Ask your dealer or write us for a free copy of the Kodak on the Farm.

EASTMAN KODAK CO.
382 State Street,
ROCHESTER, N. Y.

Rider Agents Wanted

in each town to ride and exhibit sample 1910 model. *Write for Special Offer.*
Finest Guaranteed 1910 Models **$10 to $27** with Coaster-Brakes and Puncture-Proof tires.
1908 & 1909 Models all of best makes **$7 to $12**
500 Second-Hand Wheels *All makes and models, good as new*........... **$3 to $8**
Great Factory Clearing Sale.
We **Ship On Approval** *without a cent deposit, pay the freight* and allow **TEN DAYS' FREE TRIAL.**
Tires, coaster-brakes, parts, repairs and sundries, half usual prices. **Do not buy** till you get our catalogs and offer. *Write now.*
MEAD CYCLE CO., Dept. R83 Chicago

WARD FARM FENCE

40 carbon spring steel, extra heavily galvanized. 30 days' free trial. Free: Farm and Poultry Fence, and Ornamental Wire and Wrought Iron Fence Catalogues. **Write for Special Offer.**
The Ward Fence Co., Box 532 Decatur, Ind.

GOT TO

Have Sharp Brains Nowadays or Drop Back

The man of to-day, no matter what his calling, needs a sharp brain, and to get this he needs food that not only gives muscle and strength, but brain and nerve power as well.

A carpenter and builder of Marquette, who is energetic and wants to advance in his business read an article about food in a religious paper and in speaking of his experience he said:

"Up to three years ago I had not been able to study or use my thinking powers to any extent. There was something lacking and I know now that it was due to the fact that my food was not rebuilding my brain.

"About this time I began the use of Grape-Nuts food, and the result has been that now I can think and plan with some success. It has not only rebuilt my brain until it is stronger and surer and more active, but my muscles are also harder and more firm, where they used to be loose and soft and my stomach is now in perfect condition.

"I can endure more than twice the amount of fatigue and my rest at night always completely restores me. In other words, I am enjoying life and I attribute it to the fact that I have found a perfect food." Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Rachel's Son

[CONTINUED FROM PAGE 14]

from the buckboard and hurried to the kitchen door. His mother stood at the ironing-board within.

"Mother, do you know the arbutus is out? Will you go with me to the South Hill this afternoon?"

Eager as the blue and windy morning he stood there. His face belonged to a little lad of long ago, and seeing it, Rachel's own face grew white beneath her ruddy color. He saw her eyes soften, saw her hesitate; then she turned to try an iron at the stove.

"No, David; I am very busy to-day."

David turned from her and went out to the barn, to the workshop.

When he came in to dinner he had made his decision. He was very gentle with his mother, very tender with his father as he fed him his porridge, smiling down at him happily, as if he had been a baby. Rachel watched the boy's high serenity, wondering. When he kissed her on the forehead before he went away in the afternoon, she restrained an impulse to lay her hand upon his arm and hold him, he seemed so far away.

David strode forth to the South Hill. He told himself there was no reason why he should not have his joy with the flowers just because he must have it all alone. He picked them slowly, lingeringly, putting the leaves aside gently, pausing to smell. There was plenty of time, all the afternoon. Often he looked back at the little house, but without bitterness, now the temptation had passed. It was as if the letter had never come, when he had picked a great bunch, David stopped, seating himself on a fallen log at the edge of the leafless maple grove that crested the hill. He looked down at the blossoms in his big brown hands, their petals pink and sweet as a baby's finger-tips. The wind stirred his mop of tawny hair. Across the clean sweep of blue above him the little white clouds went scudding. The ground released from frost felt springy beneath his foot. The pink mist of swelling buds wrapped the tree-tops of the encircling hills. David smiled down upon the flowers, for April no longer tormented, but comforted him. His life lay a clear white road before him, and still not understanding, he had forgiven. He must have sat thus a long time, thinking, when he was startled by a hand upon his shoulder.

"I had to come, after all, Dave."

Joy crimsoned all his face. "I think they're prettier than they ever were this spring," he said.

"I couldn't stand to have you pick them all alone, Dave." She sat down on the log, flinging off the man's straw hat she wore. David laid his tribute of gathered bloom in her lap. The little flowers caressed her strong calloused hands, so that Rachel lifted them in hollowed palms to her face, breathing deep the sweetness. "Sometimes seems a pity," she murmured dreamily, "that folks aren't more like flowers." Then she dropped her hands upon her knees and looked at David.

"Dave, I can't stand to have it go on, no matter what's happened. I can't stand it. You and me are too near being one person for us to live this way."

His great eyes were feverish with their eagerness as he waited.

"It's best to speak out for once," she went on, "even if it's not easy. Dave," she mused, "I wish I was like most mothers, 'twould be easier for you if I was. But I believe there's more man in me than woman. That's what's made it so hard for me."

His eyes questioned her; but Rachel was looking not at him, but at the little brown cup of their valley, as she said, "If I was like most mothers I'd just be glad to have you home, helping, and always good—that ought to be enough for me—working on without complaining, and kind to me, always so kind to me! It ought to be enough for me."

"It's enough for me, anyway, to look after you, mother," he said sturdily.

"Oh, Dave," she turned on him, "how can it be? Nothing to do but the farm, nothing to see but the hills! How can it be?"

His face grew white, but his second thought was for her, not for himself. "Mother, do you mind like that?"

"Me?" she queried wonderingly. "I'm a woman, and my way's plain, but for a man—" There was even more of puzzlement than of reproach in her tone. "After the way I've poured myself into you from the time you were a baby! Living myself out in you so the valley wouldn't smother me! Counting the months till I could get you out of it, out to your work! You off in the city doing something, me home here thinking every minute how I had made a man!" Then her voice died to a heaviness that hurt more than its bitterness. "And then, Dave, you came home."

"Mother," he said very quietly, "why talk so when we both know why I came?"

"Because they sent you off!"

"What?" He had sprung up, while in his white face his eyes slowly burned to clear comprehension. "Mother, why have you thought that?"

"Didn't you say so when you first came home? Have you ever said a word about the factory, you knowing I was wild to hear? Have you ever said anything about going back, I waiting every hour to hear you say something about trying again!"

David was trembling so that he had to sink down again upon the log. "Mother," he said, "I got along all right at the factory."

"Oh, Dave, why didn't you tell me?"

"I thought it would make it harder for you if you knew how I felt about leaving my work there."

"Dave!"

He went on dully, "They want me back. They've written three times. They've offered more each time, and higher up. The last letter was to-day. I could show you, but I threw it away."

"Oh, Dave, why, why did you come home?"

"Mother, you don't know why!"

"No; why, Dave?"

"Because you needed me."

"And you, my own son, thought I was like other mothers?"

"You were all alone, with the farm and him; you had done everything for me. I thought it was my turn now."

Rachel looked at him long and silently, studying the wide tired eyes, the dear tight lips of him.

"Sonny, sonny, did ever two people misunderstand each other so?"

"Mother, what is it you want I should do?"

"Sonny, you've known me nineteen years and you still thought I was a woman, didn't you? Dave, I'm twenty men! See that arm—my muscle's as big as yours! Feel it! But you can't feel the will that's in it! You can't see the doing there is inside of me! What's a farm and a sick man to me! There's strength in me to tend 'em both, and send my boy to his work, besides. Dave, I can do anything if I've you to live in—but if I hadn't, if you had to give it all up, I'd be an old woman in a year! That little brown hole down there would smother me, but it's big as the world when I've you to think about!"

"You want me to go back, to leave you, mother!"

Rachel's laugh rang out young as the spring. "Ah, Davie boy, that I do!" She drew his hand into her lap, pressing it down upon the sweet pink bloom. "My boy who didn't understand his mother," her eyes grew misty, "any better, any better, than she understood him. I should think," her lips were tremulous, "I should think the May-flowers would laugh at the two of us."

He smiled, saying, still half dazed, "And you didn't want me to take care of you, and my coming home was all a mistake, and a waste?"

She answered, speaking very slowly, "No, I didn't want you to take care of me, and it was a mistake, yes. And a waste? Perhaps. But, David, son, it hasn't always been easy these twenty years down below there! But I think your coming home is the most precious thing that ever happened to me. I guess I'm that much like other mothers, Dave!"

Ten Post-Cards

In Many Colors For Our Readers

These ten exquisite post-cards—"Flower Friends"—are printed in many colors, and will delight every FARM AND FIRESIDE reader. We want you to have a set, and we have made extraordinary efforts in order to obtain them for you.

Each card contains a favorite flower, printed in colors on a solid gold background, which gives a very rich and stylish effect. The flowers have been made by a special photographic process, by which the flowers have actually been photographed in their exact colors. This is the most costly way to reproduce in color, but we wanted to have them the most perfect post-cards ever made. In addition to the beautiful flower picture—so real that you can almost smell its fragrance and pick it off of its gold background—each card also contains a charming piece of poetry appropriate to the flower pictured beside it. These are the most unique and beautiful you ever saw.

FARM AND FIRESIDE,
Springfield, Ohio

Gentlemen:—
Please send me at once the 10 "Flower Friends" post-cards. I inclose three 2-cent stamps to pay for postage, packing and handling. Also please tell me all about the Surprise.

Name..............................
Address..............................
....

Mail This Coupon To-day

Our Special Offer

And now we have a surprise for you! These cards would sell for 25 cents to 50 cents in a store. We will send them to you, with the compliments of FARM AND FIRESIDE, if you will send us three 2-cent stamps to cover the cost of postage, packing and handling. What is more, we have another **Surprise** for you—a very delightful one, about which we will tell you when we send the cards. Send three 2-cent stamps to-day to

FARM AND FIRESIDE
Springfield, Ohio

You can use the coupon opposite.

Crowding the Earth

How long will it be before our earth is populated to the greatest possible extent? Authorities differ on this point, but here is the estimate of one scientist:

The present population of this little planet of ours is figured at 1,467,000,000, the average distribution being thirty-one inhabitants to the square mile. Making allowances for deserts and regions of small productiveness, it is estimated that the forty-six million square miles of the globe can support 5,994,000,000 people, and that at the present rate of increase this limit will be reached in the year 2072, or only one hundred and sixty-three years from the present time! So perhaps our great-great-great-great-grandchildren will be obliged to emigrate to Mars.

Wit and Humor

It Made No Difference

While ex-President Roosevelt was on his famous Louisiana bear-hunting trip he passed by an old colored man's cabin and saw two fine hounds in the yard. Mr. Roosevelt made several offers for the hounds, each larger than the last; but the old man shook his head. Finally the President said:

"If you knew who I am you would sell me those dogs."

"Sell you dem houn' dawgs if I knowed who you is!" exclaimed the man. "Who is you, anyhow?"

"I am President Roosevelt," was the reply, uttered in an impressive tone.

The old man looked at him a moment, and then said:

"See heah, I wouldn't care if you was Bookah T. Washington—you couldn't get dem dawgs!"—D. M. Stewart.

Nothing Extraordinary

An American tourist hailing from the West was out sight-seeing in London. They took him aboard the old battleship "Victory," which was Lord Nelson's flagship in several of his most famous naval triumphs. An English sailor escorted the American over the vessel, and coming to a raised brass tablet on the deck, he said, as he reverently removed his hat:

"'Ere, sir, is the spot where Lord Nelson fell."

"Oh, is it?" replied the American, blankly. "Well, that ain't nothin'. I nearly tript on the blame thing myself."—Pittsburg Chronicle-Telegraph.

A Spendthrift

Publican—"And how do you like being married, John?"

John—"Don't like it at all."

Publican—"Why, what's the matter wi' she, John?"

John—"Well, first thing in the morning it's money; when I goes 'ome to my dinner it's money again, and at supper it's the same. Nothing but money, money, money!"

Publican—"Well, I never! What do she do wi' all that money?"

John—"I dunno. I ain't given her any yet."—Pick-Me-Up.

Keep on Trying

A little girl who had a live bantam presented to her was disappointed at the smallness of the first egg laid by the bird. Her ideal egg was that of the ostrich, a specimen of which was on a table in the drawing-room. One day the ostrich's egg was missing from its accustomed place. It was subsequently found near the spot where the bantam nested, and on it was stuck a piece of paper with the words: "Something like this, please. Keep on trying."—Dundee Advertiser.

Mother Was Present

It was the first time in three days that Mrs. Very Rich had seen her children, so many were her social engagements.

"Mama," asked little Ruth, as her mother took her up in her arms for a kiss, "on what day was I born?"

"On Thursday, dear," said the mother.

"Wasn't that fortunate?" replied the little girl, "because that's your day home."—Success Magazine.

A Steady Thing

Something had gone amiss with Bobbie and he had sought the comfort of tears. Noticing his wet cheeks, his mother said in a consolatory tone:

"Come here, dear, and let me wipe your eyes."

"'Tain't no use, muver," returned Bobbie with a little choke; "Ise doin' to ky again in a minute!"—L. P.

Began Young

When Mark Twain was a boy at school in Hannibal, the Philadelphia "Bulletin" reports a veteran Missourian as saying that the schoolmaster once set the class to writing a composition on "The Result of Laziness." Young Clemens at the end of an hour handed in as his composition a blank slate.

Herbert Knew

Mother—"Herbert, you mustn't ask your papa so many questions. They irritate him."

Herbert (shaking his head)—"It ain't the questions, ma. It's the answers he can't give that make him sore!"

At the Glee Club

Director (in a thundering voice)—"Why on earth don't you come in when I tell you?"

First Bass (meekly)—"How can a fellow get in when he can't find his key?"

The Pattern Fashion Page

Modified styles are in favor this summer. The most fashionable women have discarded the extremes of dress.

The fashionable figure is now allowed to reveal the fact that it possesses a waistline, and it may dare to disclose the pretty curves of bust and hip. The slender silhouette is still necessary, but the perfectly straight up-and-down effect now belongs to last season's modes.

In place of the scant sheath skirt, we now have skirts which show plaitings inserted in different attractive forms. We have wáists finished with belts which actually come at the natural waistline, and many of our newest gowns are two-piece costumes consisting of waist and skirt. The most fashionable of these waist-and-skirt dresses, however, are so made that they simulate the princess effect, for one-piece dresses are still very much the vogue, though they no longer reign supreme.

A charming illustration of a cleverly modified princess effect is shown on this page in illustration Nos. 1355-1356. Though this dress consists of a separate waist and skirt, yet it is made in such a way that the vest of the waist and the front gore of the skirt give the effect of the long, continuous princess line. Both the vest and the front gore of the skirt are tucked. The long, close-fitting sleeves are also tucked, and there are tucks on the shoulders, back and front. Both pongee in the natural color or any of the new pretty foulards would be attractive materials in which to develop this design, using for the trimming either cream-color all-over lace or lace dyed to match the color of the material. Faded rose is also a pretty color to use for this dress.

No. 1355—Tucked Waist With Vest
Pattern cut for 32, 34, 36 and 38 inch bust measures

No. 1356—Gored Skirt With Tucked Panel
Pattern cut for 22, 24, 26 and 28 inch waist measures

Clothes for little folks used to be divided into really just two classes—fashionable clothes which were uncomfortable, and comfortable clothes which were not fashionable. Now things are most delightfully different. Children can be dressed, and are dressed, both fashionably and comfortably at the same time.

There is the Russian suit, for instance, and incidentally what would the mother of the small boy do without it? It is just the most comfortable little suit imaginable, and to-day it is seen in so many different variations that the small boy may have a whole wardrobe of just Russian suits, and yet not two of them need look alike.

The double-breasted Russian suit illustrated on this page is made of khaki linen with very narrow brown cotton soutache braid as the trimming. The upper part of the little coat is cut single-breasted, the lower part buttoning over in double-breasted style. There are four inserted pockets, which are sure to make the youngster who wears the coat feel very proud and grown up. The coat is collarless and worn with a shield having a band collar. The one-piece sleeve is tucked to form a cuff. At the wrist the sleeve is opened, buttoning over at the inside seam.

Though our new gowns are to be less sheath-like and scanty, yet women are as particular as ever that no extra bulk, not even a third of an inch, in fact, shall be added to their figures by their underwear.

Petticoats and drawers cling to the figure as if a part of it, and combination underwear keeps right on being favored.

No. 1257—Circular Skirt With Plaited Panel Front
Pattern cut for 24, 26, 28 and 30 inch waist measures

No. 1352—Double-Breasted Russian Suit
Pattern cut for 2, 4 and 6 years. Quantity of material required for medium size, or 4 years, four and one half yards of twenty-four-inch material, or three yards of thirty-six-inch material

The mother who is anxious—and what mother is not—that her small boy shall always be well dressed may rest assured that he will be if she makes a Russian suit for him after this design. The Russian suit for small boys has long since been regarded as a staple fashion.

No. 1202—Tailored Waist With Tucked Front
Pattern cut for 34, 36, 38 and 40 inch bust measures

No. 1143—Combination Corset-Cover and Petticoat
Pattern cut for 34, 36, 38 and 40 inch bust measures

Madison Square Patterns

Have you seen the Summer Style Book of Madison Square Patterns? If you have not, take a look at it. It tells you many new things of interest about fashions in general and summer fashions in particular. In writing for it, inclose four cents in stamps and send your order to the Pattern Department. The patterns here illustrated are ten cents each. Address the Pattern Department, Farm and Fireside, 11 East 24th Street, New York City.

How to Get Patterns Without Cost

We will send you two of Farm and Fireside's Madison Square Patterns, without cost, if you will send us two subscriptions to Farm and Fireside. One of the subscriptions may be your own. Either subscription may be for one year at thirty-five cents or for two years at fifty cents. You may choose any two patterns shown on this page or in any other issue of Farm and Fireside. Send your order to the Pattern Department, Farm and Fireside, 11 East 24th Street, New York City.

No. 1094—Wrapper With Yoke
Pattern cut for 32, 36 and 40 inch bust measures

Copyright, 1909, by The Crowell Publishing Company

Shop in New York
through our
Mail Order Department

which is thoroughly equipped for the prompt execution of orders, affording you a selection from the most comprehensive stocks in New York, from the most inexpensive to the highest grade, at the lowest possible prices for reliable goods.

We carry at all times the latest productions of the leading foreign and domestic centres in

Women's, Misses',
Boys' and Children's Apparel,
Men's Furnishings,
Silks, Dress Goods,
Laces and Trimmings,
Household Linens, Blankets,
Lace Curtains and
Upholstery Fabrics,
Jewelry, Leather Goods,
Silverware, Toilet Articles

Our Illustrated
Fall and Winter
Catalogue No. 117F

will be issued September 1st, and will be Mailed Free upon request. Send your name and address now.

Stern Brothers
28 TO 46 WEST 23d STREET
15 TO 35 WEST 22d STREET
New York

Boys!
PLAY BASE-BALL AT OUR EXPENSE

Base-Ball Supplies Free to Our Farm and Fireside Boys!

Every red-blooded American boy should play base-ball. It's the national game and the sport of the nation. That's why we want the Farm and Fireside boys to play the game and to play it right. To do this our boys must have the proper equipment.

Look at the Supplies We Are Giving Away!

Men's Professional Base-Ball, the kind that the professional players use. A lively, durable, well-made base-ball that will stand hard wallops and rough handling.

The Catcher's Mitt and Fielder's Glove are of the best quality and workmanship, and are well padded. They are made of good strong leather, and are durable in every respect.

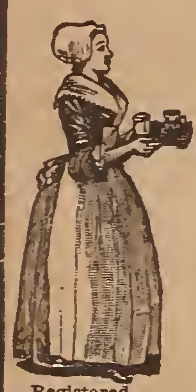
The Mask is made of strong, heavy wire, and is up-to-date in design.

We will supply complete outfits, including suits and caps, to your entire team. Write for information.

FARM AND FIRESIDE
SPRINGFIELD, OHIO

A DELICIOUS DRINK

Baker's Cocoa



made by a scientific blending of the best tropical fruit. It is a perfect food, highly nourishing and easily digested.

Registered, U. S. Pat. Off.

52 HIGHEST AWARDS

Walter Baker & Co. Ltd.

Established 1780 Dorchester, Mass.

What would you take?

Suppose you were required to live for a certain length of time on only one article of food. Which would you choose?

There is one food that stands without a rival for such a test. Quaker Oats is that one. It furnishes more strength with least wear and tear on the digestive organs than any other food. You'll feel well and strong at the end of the time. Try it. Don't stop eating other things, but eat more Quaker Oats and you'll notice the gain in strength.

The regular size package of Quaker Oats sells at 10c, the large family size packages cost 25c, and the family size package containing a piece of beautiful china for the table costs 30c. All grocers sell these.

Eat Quaker Oats daily for breakfast, it strengthens you for the day's work.

LEARN JEWELERS' ENGRAVING

A high salaried and easily learned trade, taught thoroughly by mail. We will teach the beginner better engraving than he can gain in years of rigid apprenticeship. We will also improve the skill of any engraver. Send for our catalog. THE ENGRAVING SCHOOL, Page Building, Chicago

GENUINE BARGAINS IN HIGH-GRADE UPRIGHT Pianos. Slightly used instruments: 12 Steinways from $350 up; 6 Webers from $250 up; 9 Krakaners from $250 up; 7 Knabes from $250 up; 3 Chickerings from $250 up; also ordinary second-hand Uprights $75 up; also 10 very fine Parlor Grand pianos at about half. Write for full particulars. Cash or easy monthly payments. Lyon & Healy, 62 Adams St., Chicago. We ship everywhere on approval.

Free 200 Page Book About Minnesota

Compiled by the state, describing industries, crops, live stock, property values, schools, churches and towns of each county, and Minnesota's splendid opportunities for any man. Sent free by STATE BOARD OF IMMIGRATION, Dept. G, State Capitol, St. Paul, Minn.

ESTABLISH a Permanent Agency in Your Locality for the most attractive and comfortable men's and women's shoe ever offered the public. KUSHION KOMFORT SHOE CO., 9 F SOUTH ST., BOSTON

PARKER'S HAIR BALSAM

Cleanses and beautifies the hair. Promotes a luxuriant growth. Never Fails to Restore Gray Hair to its Youthful Color. Cures scalp diseases & hair falling. 50c. and $1.00 at Druggists.

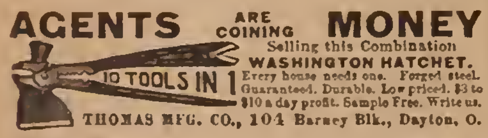
It is to your advantage to mention Farm and Fireside in writing to advertisers. Farm and Fireside folks get the very best attention.

Agents Wanted

AGENTS PORTRAITS 35c, FRAMES 15c, sheet pictures 1c, stereoscopes 25c, views 1c. 30 days credit. Samples & Catalog Free. Consolidated Portrait Co., 290—81 W. Adams Street, Chicago

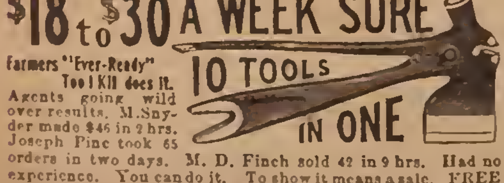
AGENTS. New Invention; never before sold in your territory; horse owners wild about them; automatic hame fastener sells at sight; coin money; a fortune in your territory; free sample to workers; write at once. Automatic Fastener Co., 6669, Cincinnati, Ohio

AGENTS ARE COINING **MONEY** Selling this Combination WASHINGTON HATCHET.



Every house needs one. Forged steel. Guaranteed. Durable. Low priced. $3 to $10 a day profit. Sample Free. Write us. THOMAS MFG. CO., 104 Barney Blk., Dayton, O.

AGENTS NINE IN ONE $75 monthly. Combination Rolling Pin. Nine articles combined. Lightning Seller. Send for Sample. FORSHEE MFG. CO., Box 205, Dayton, O.



Farmers "Ever-Ready" Tool Kit does it. Agents going wild over results. M. Snyder made $46 in 2 hrs. Joseph Pine took 65 orders in two days. M. D. Finch sold 42 in 9 hrs. Had no experience. You can do it. To show it means a sale. FREE SAMPLE to workers. Foote Mfg. Co., Dept. 801 Dayton, O.

Tempting Recipes for Summer Days

Summer Salads

STRING-BEAN SALAD—Cut string-beans into inch lengths, and cook until tender. When cold, mix with mayonnaise dressing, and serve on crisp lettuce garnished with rings of pickled beet or hard-boiled eggs.

FAVORITE SALAD—A most appetizing salad is made of celery, green peppers, tomatoes and cucumbers. Cut the vegetables in small pieces, mix with a rich mayonnaise dressing, and serve on crisp lettuce-leaves.

Tongue Toast

TONGUE toast makes a very pleasing breakfast or luncheon dish. Mince cold boiled tongue fine, and add just enough cream or milk to wet it thoroughly. To every cupful of mixture add the well-beaten yolks of two eggs. Let it simmer very gently over a slow fire for a minute or two, then spread it on small slices of golden-brown toast, well buttered and very hot. Serve at once on a hot platter.

Vanilla Ice-Cream

PLACE one quart of milk over the fire to boil, being careful that it does not scorch. Have ready three heaping tablespoonfuls of corn-starch made smooth in a little milk, and when almost to the boiling-point, add the starch to the milk. Stir rapidly, to avoid scorching and lumps, and when like thin starch pour through a sieve over the sugar in a large pitcher or crock. One and one half cupfuls of sugar is about right, though many like it much sweeter. Stir up the custard and the sugar and add the flavoring to taste. Beat a little, to melt the sugar, and add one quart of separated cream and one pint of milk. Stir well, and freeze. This is the pure cream and requires no eggs nor gelatin. All sorts of combinations may be made by adding chopped nuts, preserves, fresh fruits, other flavors and powdered macaroons, but the plain cream is always a good dessert and very pure and healthful.

Peach Salad

SELECT large, ripe, but not mellow fruit. Peel, halve, and remove the stones. Arrange the peaches, cut side up, on a shallow salad-dish; put one teaspoonful of powdered sugar and a few drops of lemon-juice in every cavity, and set on ice. Blanch the kernels of half the stones, chop or pound fine, put on in a little cold water, and simmer for thirty minutes. Strain, and to the water add four tablespoonfuls of sugar, one half teaspoonful of ground mace, and stir until the sugar is dissolved. When cold, add four tablespoonfuls of grape-juice or any fruit-juice, pour over the peaches, and keep on ice until served.

Cherry Shortcake

SIFT together two cupfuls of flour, one fourth of a cupful of sugar, four level teaspoonfuls of baking-powder, one fourth of a teaspoonful of salt and a pinch of nutmeg. Rub in one third of a cupful of butter, and add one well-beaten egg mixed with two thirds of a cupful of sweet milk. Roll out, and bake in a layer-cake tin for twenty minutes in a hot oven. When done, split, spread with soft butter, then with pitted and sweetened cherries between the layers and on top; sprinkle with sugar, heap whipped cream on top, and serve at once.

Cherry Pie

LINE a pie-plate with rich paste, fill with stoned ripe cherries, add one cupful of sugar, and sprinkle over one teaspoonful of corn-starch or flour and one tablespoonful of butter cut in bits. Wet the edge of the crust, and cover with a perforated top crust. Bake in a quick oven about twenty-five minutes.

German Cherry Pie

MAKE the cherry pie as above, but omit the top crust. When nearly done, beat one egg until light, and add it to a scant half cupful of rich cream, and pour over the pie. Bake until the custard is set.

Peach Custard

PARE, and rub through a colander enough ripe, juicy peaches to make one pint of pulp. Add the beaten yolks of three eggs, one cupful of cream or rich milk and sugar to taste. Bake very slowly, then cover with a meringue made of the whites of the eggs beaten stiff with three tablespoonfuls of sugar. Or the meringue may be omitted, and the custard put in glass cups and served very cold, with a spoonful of whipped cream on top.

Pepper Toast

CUT large bell-peppers into four rings, removing the seeds, and boil fifteen minutes. Meanwhile cut rounds of stale bread of appropriate size, and slowly dry and toast in the oven. Butter the slices, lay a pepper ring on each, and fill the center with well-seasoned cold minced meat. Moisten all with the water in which the pepper was boiled, adding salt and butter to season, and set in the oven to reheat. If the pepper is fiery, the water in which it is cooked may be changed once.

Plum Shortcake

SIFT together one quart of sifted flour, one teaspoonful of salt, one teaspoonful of sugar and two heaping teaspoonfuls of baking-powder. Rub in one cupful of butter, and mix to a soft dough with sweet milk. Roll it out to an inch in thickness, and cut into two pieces of equal size. Brush over the top of one with soft butter, place it in a shallow buttered tin, put the other layer over it, and bake in a quick oven. When done, separate the two cakes gently and place one of them on a large plate. Cover it with a thick layer of rich stewed plums, and over the plums heap whipped cream. Put on the other cake, and cover with more of the fruit and plenty of whipped cream. If preferred cold, boiled custard may be used instead of the cream.

Pineapple Whip

EITHER canned pineapple or those found in the market can be used for this purpose. If the whole pineapple is used, take a sharp-pointed knife to remove the eyes, and instead of slicing, commence at the stem end and with a silver fork pull the flesh in small pieces from the outer edge to the core; or, if preferred, it can be grated. Sprinkle with powdered sugar, and let stand for thirty minutes. Put over the fire with half a lemon and one half cupful of sugar, and cook until thick. Beat four eggs very stiff, adding a pinch of salt before beating; then add one spoonful at a time of the thick pineapple while still hot. Pour into a buttered dish or mold, and bake in a slow oven for twenty-five or thirty minutes, placing oiled paper over the top, to prevent burning. Invert on a dish, and fill up the center with whipped cream.

Appleade

WASH eight apples, and quarter, but do not pare them; add to them the grated rind and juice of one lemon, one half cupful of washed raisins, the same of currants, one stick of cinnamon and two quarts of water. Boil until the apples are tender; strain, sweeten to taste, and serve cold, with a few candied cherries in each glass.

Raspberry Vinegar

COVER six or eight quarts of ripe raspberries with cider vinegar, and let stand for twenty-four hours. Mash them well, and strain through a cloth. Boil the juice for twenty minutes, then add one pound of sugar to each pint of juice, and boil for ten minutes longer. Seal hot in glass cans or bottles. A delicious drink is made by adding a pint of this to two quarts of cold water, or a spoonful or two in a glass of water.

Plum Jelly

SOAK one ounce of gelatin in one cupful of water for one hour. Cook one and one half pounds of damson plums with one half cupful of water and one cupful of sugar until tender, then rub them through a sieve. Dissolve the gelatin in a little hot water, then strain it into the plums. Color with a few drops of cochineal to a nice red, turn it into a wetted mold, and let it get firm in a cold place. When time to serve, turn it out on a glass dish, and put cold boiled custard or whipped cream around the base.

Fruit Salad

PARE three juicy oranges, removing every vestige of the white covering, pull the sections apart, and cut into fine pieces.

Scald one cupful of English walnuts, rub off the skin, mix with the orange, and set on the ice until thoroughly chilled. Serve on crisp lettuce-leaves with mayonnaise dressing.

Rhubarb Wine

TO EACH gallon of juice add one gallon of soft water in which seven pounds of brown sugar have been dissolved. Fill a keg with this proportion, leaving the bung out, and keep it filled with sweetened water as it works over until clear; then bung down or bottle, as you desire. T. E. H.

Stuffed Peppers

REMOVE the stem end and seeds from green peppers, and parboil in salted water for ten minutes. Cool, stuff with dressing such as is used for fowls, cover with buttered cracker-crumbs, and bake. Hash stuffed into peppers, and the whole baked, is an appetizing dish.

Jolly Jacks

PARE and core the desired number of large tart apples, and steam until tender, taking care to keep them whole. While they are steaming, cook rice very slowly in salted milk that has been diluted with about one third its quantity of water; one half cupful of rice measured before cooking will serve six persons. When done, line deep individual dishes with the rice, place an apple in the center of each "nest," and fill the center of the apple with any jelly or preserve. When ready to serve, pour over all a generous quantity of maple-syrup.

Chocolate Caramels

THREE pounds of brown sugar, three fourths of a cupful of cream, one cake of chocolate (grated), one fourth of a pound of butter. Flavor with vanilla after removing from the fire. Boil until it stiffens, usually twelve minutes; stir constantly, as it burns easily. Turn into buttered plates, and when cool cut in squares. Half of the quantity makes enough ordinarily.

Veal Loaf

CHOP two pounds of cold cooked veal very fine. Add one teaspoonful each of pepper, salt and onion-juice, also a few minced mushrooms. Pack in a greased mold, and place in a roasting-pan filled with boiling water. Cook in a steady oven for two hours. Slice when very cold.

When Selecting Beef

IN SELECTING beef, see that the grain is smooth and open; if the fiber parts or breaks readily on being pressed by the finger, it will be found to be tender. The color should be a deep rose, and the fat a rich cream color; if the fat is white, it is an indication that the beef is young and lacking in flavor, and if of a deep yellow, the meat will be apt to be tough and of inferior quality. The choicest cuts for roasting are the sixth, seventh and eighth ribs, the sirloin and porter-house cuts. In selecting steak, avoid the first three or four cuts, as they are apt to be broken and stringy. Beef tenderloin cut across the grain makes most delicious steak.

THE NEW WOMAN
Made Over by Quitting Coffee

Coffee probably wrecks a greater percentage of Southerners than of Northern people, for Southerners use it more freely.

The work it does is distressing enough in some instances; as an illustration, a woman of Richmond, Va., writes:

"I was a coffee drinker for years and for about six years my health was completely shattered. I suffered fearfully with headaches and nervousness, also palpitation of the heart and loss of appetite.

"My sight gradually began to fail and finally I lost the sight of one eye altogether. The eye was operated upon and the sight partially restored, then I became totally blind in the other eye.

"My doctor used to urge me to give up coffee, but I was wilful and continued to drink it until finally in a case of severe illness the doctor insisted that I must give up the coffee, so I began using Postum and in a month I felt like a new creature.

"I steadily gained in health and strength. About a month ago I began using Grape-Nuts food and the effect has been wonderful. I really feel like a new woman and have gained about 25 pounds.

"I am quite an elderly lady and before using Postum and Grape-Nuts I could not walk a square without exceeding fatigue, now I walk ten or twelve without feeling it. Formerly in reading I could remember but little, but now my memory holds fast what I read.

"Several friends who have seen the remarkable effects of Postum and Grape-Nuts on me have urged that I give the facts to the public for the sake of suffering humanity, so, although I dislike publicity, you can publish this letter if you like."

Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Western Edition

ESTABLISHED 1877
The Illustrated Farm and Family Journal

24 NUMBERS 35 CENTS

Vol. XXXII. No. 22 Springfield, Ohio, August 25, 1909 Terms { 1 Year, 24 Numbers, 35 Cents / 4 Years, 96 Numbers, $1.00

The Jewish Farmers in America

By Eugene Wood

Believe the comic papers, and the farmer of this country carries a long bunch of whiskers on the under side of his chin, wears his pants stuffed into cowhide boots, and speaks with a Yankee twang and with many an "I dew vum," and "By gosh, Mirandy." But we know better. We know that besides the old-line stock, descendants of the early settlers along the Atlantic seaboard, and besides the later comers whose blood is so near akin and so closely intermingled with the old-line stock that there is and can be no separation, are farmers undoubtedly German, Scandinavian, French, Italian, Polack, Slovak, Bohemian, Russian, Syrian, Chinese, Japanese, and even Hindu. It may occasion some surprise to know that there are Icelandic farmers—Iceland seems too far away—and even Malays down about New Orleans, but we really are quite prepared to learn of any nationality in any occupation in this great big country, with one seacoast facing Europe, and the other seacoast facing Asia and the islands of the Pacific, and all full of people who have such a hard time of it making a living that they are glad to take chances in America, where they don't exactly have an easy time of it making a living, and the ships going back and forth all the time, yet it does make us wonder a little to learn that Jews are farming it here.

Why, look! How long has it been since Israel was dispersed among the nations, and from being an agricultural people, dwelling under their own vines and fig-trees, have been wanderers, forbidden to own land at all? Something like two thousand years, isn't it? That's a long time, two thousand years. You kind of get out of the way of it in two thousand years. A long time—if you neglect the fact that religions have long memories. The religion of the Jews, which is their nationality, still celebrates agricultural rites and makes a festival of the ingathering of the crops, as if twenty centuries of absence from the tilled fields and imprisonment in the ghettos were nothing at all. It is true that in Spain, under the Moors, the Jews owned lands and tilled the soil, but in all the rest of Europe and all the rest of the time, racial and religious prejudice has shut them up in certain quarters, refused them access to productive employment, and forced them to live the best they could by trading, and working at such small industries as were too small to bother about. So that we think of them always as money-lenders, peddlers, and, saddest of all, as sweat-shop workers, toiling frantically in the most unsanitary conditions, huddled together to save rent, yet clinging to their religion, which is one of scrupulous—even fussy—cleanliness, toiling unbelievably long hours for unbelievably small wages, and enduring such hardships as only Israel can endure.

And to those of us "Goyim," or Gentiles, who know something about this wonderful people it isn't that they aren't physically strong enough or industrious enough to become farmers, or that they wouldn't know a horse-collar from a whiffletree, that makes us wonder at their going into agriculture. Where there's a will, there's a way; that part is comparatively easy. Nobody doubts that the Jew can learn, or that the Jew is industrious, or that the Jew has the physical strength when he has victuals on his inside. The difficulty is in farming itself, in that it is separative—or has been—while Judaism is collective. The Gentile can go out into the wilderness, and if he can get enough to eat, clothes to wear and a tight roof over him, he is all right. At any rate, his faith is not particularly hindered. With the Jew it is teetotally different. It isn't only that he will miss the "shool," or synagogue (if you will persist in speaking Greek); his "shool" is to him college and club in one. The "shool" isn't like the church, kept up by the women-folks. There have to be ten adult males to maintain it, and ten adult males within convenient distance are not so easy to get together in a wilderness. No, nor in the ordinary country districts. And that isn't all. The Jews are crazy for education, and the scanty schooling that the old-line American stock will put up with or even enthusiastically do without will repel a Jew more than anything else. In New Jersey, well within a hundred miles of New York, are farmers—if you can call them by that honored name; at any rate, they live on farms—who cannot read or write, can't even tell the time of day, and don't want to know. They think "book-larnin'" is all foolishness. But the Jewish peddler with his pack on his back is almost certain to be a deeply learned man, generally because he is too much of a student to be a success in business. He knows at least two languages besides his Hebrew, which is as if a ditch-digger had a smattering of Latin, and he knows his Bible, and the Talmud, which is a wonderful commentary upon it, and he knows "the fences," which is commentary upon commentary, the whole the most astounding mix-up of philosophy, fairy-story, cases of conscience and jokes—everything you can think of. Not very far from these old-line Americans who cannot tell the time of day is a Jewish settlement whose public school is the model of the borough. Unless the public school is a much better one than most of the rural schools, you cannot get Jews to stay there.

But religious services and educational facilities are not all or even the greater part of the difficulty that the orthodox and strictly pious Jew finds in rural life. The main question with everybody is food, and you can talk vegetarianism till you are black in the face, and the main part of food is meat, flesh meat. Now, on the farm the standard flesh meat is pork. As Paddy says, "The pig can ate what we can't ate, an' we can ate the pig." Come hog-killing time, there are big doings on the farm—big doings, even festivities—hard work, too; but when all's over, you can draw a long breath of satisfaction, for there is some mighty good eating in the pork-barrel and in the smoke-house. All of that the Jew must forego, for when he dreams of the devil he sees him as a hog.

He can't even kill his own beef or eat the beef his Christian neighbor has killed and sent him over a piece. It hasn't been slaughtered by a true and proper "shochet," who knows all the signs and marks which make a carcass "trepha," or unclean, marks by which practically all the diseases are discerned as accurately as by the most approved of modern scientific methods. Also, the beef must have its throat cut by a knife sharper than most razors. It would turn a Jew's stomach to know that the meat he is

Delegates to the First Annual Conference of the Federation of Jewish Farmers of America

eating had been knocked in the head or shot. It must be bled just so, and even after all precautions have been taken, the meat must be soaked in water and stand covered with salt for so long a time before it is "kosher," or clean and fit for folks to eat. And at that they won't eat the hind quarters. "Kosher" meat, such as a religious Jew eats, costs more than other meat, which means that it is harder to get.

"But there are the chickens," you will say. "Surely he can go out and wring a chicken's neck for the Sabbath dinner."

Chicken is almost a necessity for dinner on "Shobbas," I know, but to go run down a chicken, and while it is all excited and frightened, to wring its neck—faugh! No. It, too, must be killed properly with a knife thrust into the roof of its mouth and bled to death.

Also, when Moses said, "Thou shalt not seethe a kid in its mother's milk," he probably thought that he was going as far as he sentimentally dare. It did seem kind of hard to kill a kid and use its own mother's milk to seethe it in. But the Jew goes farther, and so as not to run any chance at all of doing such a thing, he will not have meat and any milk product whatever at the same meal or even on the same set of dishes. Two separate sets of dishes and kitchen utensils the careful housewife must provide—one for milk foods, one for meat foods—or else be little better than a castaway. Also, she must have a "Krisht," or Christian, or some Gentile come in on Saturdays to mind the fires and light the lamps, a thing she dare not do.

Jewish Farmers Form a Federation

If you will add to these difficulties the necessity of providing for the women of the family a bath big enough for them to get clear under water on prescribed and regular occasions, you can begin to see why it is the Jews have not more largely taken to farming; you can see how wonderful it is that there should be five thousand Jews engaged in agriculture in America. And this is not less wonderful to the Jew than it is to you. When, last January, in New York City, there was held the first annual conference of the Federation of Jewish Farmers of America, delegates properly elected to represent a thousand constituents, and they held a meeting in which they told of their experiences on the farm, the great auditorium of the Hebrew Educational Alliance was packed and jammed with eager listeners till 'way past eleven o'clock at night. Just a little incident: One speaker was introduced to make his talk in Russian. Instantly there was a hubbub. "Yiddish! Yiddish! Kein Russky!" They didn't want to hear him speak Russian. They have got all through with Russia. They wanted Yiddish, their own language, which is a queer mix-up of old German pronounced with an odd accent, Russian, English and Hebrew, written with curious curlicues and printed in regular Hebrew letters, read from right to left.

This Federation of Jewish Farmers of America is to have an exhibition of farm produce of their own raising in New York City next Succoth, which is September 30th to October 8th next. And if you do not know what Succoth is, I will tell you that it is the Feast of Tabernacles or the Feast of Booths that you read about in your Bible; and if you do not read your Bible, I do not know what I can do further to enlighten you, except to say that this people exiled from the soil for nearly two thousand years still celebrates the ingathering of the crops and tries to find a green branch or two under which to eat its meals even in the crowded and unwholesome city.

Not only are there certainly five thousand Jewish farmers in America, and maybe more, according to the computation of Mr. Joseph W. Pincus, the editor of "The Jewish Farmer," an agricultural paper printed wholly in Yiddish and in Hebrew type, but many of them are graduates of agricultural colleges. Prof. J. G. Lipman, whose book on soil bacteriology is a high authority, is one such, and the government entomologist at Honolulu, Hawaiian Islands, is named Jacob Kotinsky, which is not a Scotch-Irish name at all. At Cornell at present there are twenty Jewish students of agriculture, and from two to half a dozen students at the agricultural colleges of New Jersey, Connecticut, Massachusetts, Ohio and Michigan. Besides these, the Jewish Agricultural and Industrial Aid Society began last December to give out short-course scholarships in agricultural colleges, paying the expenses of worthy Jewish boys and girls. There are four of them now in Connecticut and three in New Jersey. By the way, it is mostly in Connecticut and New Jersey that there are settlements of Jewish farmers.

The Objects of the Organization

This society is organized to overcome a difficulty in settling its co-religionists upon farms that has not yet been mentioned in this article, the little difficulty of—ahem!—money. The old saying, "As rich as the Jews," is only true when it is entirely reversed. No people is so poor. And it takes money to buy a farm and outfit it so that you can live upon it and work it at all, let alone properly. This will not be disputed by any one with agricultural experience. And when it comes to one that has had no agricultural experience, who doesn't know a horse-collar from a whiffletree, anybody, I don't care who, can see that it is going to take money to see him through. The society has not unlimited resources; it cannot undertake, however much it would like to do so, to transport any considerable number of Jews from the crowded city, with its nerve-exhausting noise and strain, out into the spacious country; it cannot all by itself solve the problem of the unemployed, a problem that is going to tear this country wide open some of these days unless it is solved, and solved right. All that it can hope to do is to warn away from farming all those foredoomed to make a failure at it; to advance small loans on mortgages at four per cent to such as have at least five hundred dollars to start with and seem to be made out of farmer stuff; to advise about buying, for not all who have farms to sell are to be trusted implicitly and without investigation, and to help with counsel all along the line, with instruction by lectures and publications in Yiddish, and by telling where to send for the different bulletins that will benefit them, by urging them to attend farm institutes, and by forming this federation for coöperative buying and selling.

Besides this, the society has bought two large farms in New Jersey of three hundred and six hundred acres each, and cut them up into holdings of fifty and sixty acres, built dwellings and farm buildings on them, and sold them on mortgage with sometimes as small a payment as five hundred dollars down.

Mr. Pincus, the editor of "The Jewish Farmer," is himself the son of a farmer, a graduate of an agricultural college, and he goes out and lectures to his people in Yiddish, attends the regular farmers' institutes with them and explains points on which there may be difficulty. Why not publish the state and national bulletins in Yiddish? Well, it isn't deemed advisable to ask for that yet awhile. In Wisconsin the state bulletins are published in German as well as English, but Yiddish— Wait a while. And anyhow, there is almost always some one in the large families of the Jewish citizen to understand English. Maybe it is the wife, that Mr. Pincus tells about, who could read, but not remember, and who took the bulletins out into the field where her husband was working, and read and translated them to him as he did what the bulletin said he should. And be assured of this, nine out of ten Jewish farmers will pay closer heed to instruction written and spoken than will nine out of ten American farmers, who have forgotten more, as the saying goes, than these greenhorns ever knew. Alas! The forgetting. Sometimes it isn't such a disadvantage to be a greenhorn. There's such a thing as coming at a subject with a fresh and teachable mind.

Is the Project a Success?

Well, and how have these Jewish farmers made out? About as well as you might expect. All of them have had a hard row to hoe, and some have quit and gone back to town. It was so lonesome in the country. But if out of a hundred that try it, ten stick, that's something, isn't it? Mr. Pincus seems to think it is. It is a little hard to teach the Jew to be stingy. He is a spender, and he will put more into his house than he ought to in proportion to what he puts into his farm. But to look at these farm delegates, to notice the strong grip they gave your hand, to see the sunbrowned faces and hearty appearance, and to compare them with their paler, softer brethren of the city, was something illuminating. Yes, it was worth while.

And here is how one, for example, made out. The story is told as briefly and compactly as he told it himself, leaving you to imagine all the color in it. His name is Max Ettinger. He lives near Carmel, New Jersey. He came to this country nineteen years ago, spent three days in New York City, and then struck out for Carmel with his wife and three children, the eldest five years old, the youngest three months old. He took up ten acres of bush land, scrub oak and pine uncleared—you can guess what sort of soil—and paid thirty dollars down, leaving one hundred and ninety dollars on mortgage. For twelve years he eked out, with what he dug out of the ground, by working in a shirt-waist factory in Carmel. That tells a lot. Now he owns thirty acres, twenty-one of which are cleared, and there yet remains a mortgage of one hundred and eighteen dollars. He estimates that his farm is worth thirty-five hundred dollars exclusive of live stock and machinery. Himself and his two eldest sons (he has five children now) work the farm, and last year their gross receipts were thirteen hundred dollars cash. He has a house of six rooms, two barns, sweet-potato bins and such, two horses, three cows, some chickens, and he's going to have more of them. He raises mostly sweet potatoes. He had four acres in strawberries, two acres in lima beans and a quarter of an acre in celery—the first time he tried raising celery "on a large scale," as he puts it. It brought him in seventy-five dollars.

How did he learn to farm? First off, he knew nothing, absolutely nothing, but he watched other people, and his boys read. And there you are.

Well, it isn't a swift way to get rich, but anybody can see that it will be a hard thing for that man to starve to death. And as for losing his job, he has bought his job. That's what any man does that buys a farm. And he won't ever have a chance to complain that he has no work to do. The complaint will be likely out of the other side of his mouth.

This is just the beginning. What is it to be like when there is really a considerable number of Jewish farmers, and when the restoration of Israel to the soil is no longer a wonderful thing? The very first thing they discussed at the federation meeting was coöperation in buying and selling. And that's something the old-line stock American farmer hasn't learned yet as thoroughly as he ought. And the next thing was a resolution calling upon all to favor the Davis Bill, and write to their respective congressmen about it. And education won't hurt the old-line stock of American farmers, either.

It is natural to us, who were "foreigners" once ourselves, but who have now got in, to be opposed to "foreigners" coming in here. It is probably a manifestation of the Old Adam in us. But of all who have settled on these shores from lands across the sea it would be hard to find a more peaceful, sober, industrious, intelligent, liberty-loving people than the Russian Jews. Let us wish them good luck in the name of the Lord.

Easy Rounds of the Ladder

"Easy rounds of the ladder? I don't believe I can answer that question! Guess I never found any one round that was easier than the rest. You have just got to keep climbing if you get to the top. It is just about the same kind of work the nearer you get to the top that it is lower down; only, you get so you can breathe freer and not worry so much about falling."

The man who said that knew what he was saying. I felt sure he did, and I snuggled up to him, believing that I would get some good hints from him as to how success on the farm may be won. He has a good place, with everything nice and handy about him—good cows, good, big orchard and sugar-bush, plenty of tools and some money laid by in the bank; but best of all he has a place in the world, is a part of the community in which he lives and is loved by all who know him.

"I wish you would tell me about it," I said. "You have come pretty nearly to the top of your ladder. How was it down there at the first round or two?"

He looked away across the fields to the house, from the chimney of which the smoke was curling in the dreamy way it always has when it comes from a farm home. On his face a still, peaceful expression rested. You have seen that look on the faces of some men, and it always makes you wish your heart were calm enough to reflect a heart-life like that!

"It isn't much of a story—that is, I don't suppose anybody would be as much interested in it as I have been. Every man must be bound up in his own work more than any one else is; if he isn't he will not win much. It is what you put into your work of yourself that counts.

"I began by getting out staves in the woods. That house wasn't there then. It was woods all around. A neighbor and I worked together cutting the trees and working them up, such of them as would make staves, and burning the rest. We burned up lumber enough in those days to make us both rich if we had it now. Then I set out a good, big orchard. I have always liked fruit-trees. Since then I have kept setting out trees, and they have been more to me than any other part of my farm work. I love trees. You might know that by looking at my woods down there."

"You have saved your forest-trees?"

"Nobody will go into my woods and cut and slash as long as I am alive! Why those pine-trees down there, some of them, are a foot and a half through now. When I came here they were only little shrubs not higher than my head. I thought I would let them grow and see what they would come to. Now there is a small fortune in them. I could sell the timber alone for more than I could the land without them. I wish all our young men would remember not to cut their trees down. Let them grow. While you are sleeping they will be making money for you."

There was a time of waiting and thinking.

"Well?" I said, and the dream came to an end.

"Oh, yes! I was telling you about the orchard. Well, I set out a few early-apple trees, and they brought me in a good bit of money every year. They came when other fruit was scarce, and they always sold for a good price. I usually got a dollar a bushel for them. It always seemed to me I did better when I went with the fruit myself. I have learned that people like to see the man who does the work and talk with him. I used to go right around among the people myself, selling the apples from house to house. Some men say they haven't the time to do that. It does take time, but I never was in too much of a hurry to stop a minute and have a little chat with people who bought fruit of me. What stories have come to me that way. I tell you most everybody likes to pull up the latch and let you into their hearts if you leave a good word and a warm feeling behind when you go.

"And that's what I always did try to do. You can drop a word of good cheer here and there and make folks say, 'What a nice man he is!' It doesn't cost much and who knows how much good it may do?

"But it helped me in other ways. When you sell apples you will find folks that want other things—butter, or eggs, or potatoes, or something from the farm. Why, I got so I had a load of farm stuff every time I went to the city. Sugar and syrup in the spring, or some potatoes and nice apples, always come handy. I try not to come back without a little more money than I had when I went. It is leaving more than you take that makes farmer folks poor.

"And that was the bottom of the ladder. It was prety hard work then. I used to let it worry me when I went, because I didn't know how I was coming out. I would get quite nervous over it some days, but there is no need of that. Just keep cool and say something encouraging! That's the secret of it all the way along. If you get rattled and sour you might as well stay right on the farm. Why, I know a man that tried to sell things from his farm that way and he didn't follow it very long. He was all out of patience if people did not buy, and I presume said some things that he was sorry for afterward, and that only made matters worse. You can't do it and win.

"But now, as for it being any easier the nearer the top you get, I don't think it is. You have just about the same load to carry at one end of the ladder that you have at the other. The only thing is that you don't feel so dizzy. You get used to climbing. You breathe more comfortably and carry your load more easily because you know the steps you must take better. And then you get so you look up more. Keeping your eyes back toward the foot of the ladder is what brings many a man down, and brings him down hard. You have got to keep your eyes toward the top. And then it never pays to worry. So long as you are sure the rounds of the ladder are good and sound, just keep on digging in. You'll get to the top if your grit holds out and you don't forget to speak encouraging things to everybody you meet!"

Then we went down through the field to the house and I had my life-story. You catch its secret. Keep climbing and say encouraging things!

Edgar L. Vincent.

Agricultural News-Notes

The national forest reserves have during the past year been increased to some seventeen million acres.

In Canada the principal investigations which relate to agriculture are carried on at the Central Farm near Ottawa.

Extensive works are now being erected at Niagara Falls for the manufacture of calcium cyanamide, or lime nitrogen, for use as a fertilizer. The estimated yearly production is fifteen thousand tons.

It was Liebig who, by his researches, led to a correct knowledge of plant life, and how to feed the growing crops to produce the best results and at the same time keep up the fertility of the soil. As Liebig once wrote, "Agriculture is the foundation of all trade and industry—it is the foundation of the riches of states."

The Federal Experiment Farm at Arlington just west of Washington, D. C., has made a wide distribution of basket-willow cuttings. For information respecting the cultivation of the osier willow for basket-making and other purposes see the United States Department Annual Report for 1886, page 223, and 1893, page 365. *

The Business Side of Farming

Farmers Should Know the Cost of Producing the Various Crops

Some Suggestions as to Business Methods for Farmers

As every one probably knows from experience, it is possible to expend a lot of energy with small resulting profits. The man who wields a pick and shovel at one dollar and fifty cents a day does a great deal of physical work, yet he feels fully compensated at the week's end when he receives his wages of nine dollars; and it must be said that if he is faithful and steady, even giving good measure, he can feel satisfied that he is doing his share of the world's work.

But when we come to consider economy and efficiency in planning large enterprises, it becomes necessary to secure as large results as possible with the least expenditure of effort and money. This is seen in the construction of engineering works, like a railroad or a canal, where the steam shovel displaces the man with the pick and shovel, doing the work of many men in less time and at less cost, and much more efficiently. What truck-gardener, who wishes to derive the largest profits from his four or five acres of miscellaneous vegetables, would be without the modern, up-to-date garden device that combines in one implement a hill and drill seeder, a wheel-hoe, a cultivator and a plow? Would any farmer nowadays mow his ten-acre field of hay with a scythe in preference to the horse mowing-machine? Truly, a traveler through the rural districts would conceive a poor opinion of the man who might be seen out in his field of oats reaping all the ripe grain with a cradle. No; to make progress in these days of fierce competition, the farmer, just like the manufacturer and the merchant, must avail himself of all those improvements in machinery and methods that are found, after careful calculation as to first cost and cost of maintenance, to produce better results than the same time and money would if expended in the old-fashioned way.

Yet even after he has sown, cared for and harvested his crops, the farmer of to-day requires a further knowledge of markets, prices and business methods to enable him to reap the full results of his thought and labor. A simple system of bookkeeping will afford information as to cost of maintenance of, and returns from, the several kinds of live stock kept and the various products of field, garden and orchard. It will show at a glance what is due from customers and from commission men, and what is owing to the hired men and to the storekeepers and farm-supply houses. The boy or girl of the family who is bright and quick at figures, ready, perhaps, to enter the graded school or academy, can easily gather from a book on the subject enough knowledge to arrange a system of accounts, and thus add a few dollars to his or her monthly income.

Up here at Pleasant View Farm we have found it helpful to keep accounts, as well as records, of our work and observations. Located in the Adirondacks for a shorter or longer period to recuperate in health by living the outdoor life, after too strenuous office work in the city, we undertake everything in the same businesslike way that previous training has made second nature to us. One idea we have put into practice in connection with our truck-garden has proved a convenience to our customers, and we are sure it has turned our way trade which we could not otherwise have secured without spending much time in personally soliciting it. This is our weekly bulletin, sent out every Saturday afternoon, showing what vegetables, fruits, poultry and other farm produce we shall have for sale the following week. The copy herewith is of one recently sent out. The labor in connection with it is slight.

Bulletin

Pleasant View Farm

During the week of June 21st we shall be prepared to deliver the following:

Young Spinach	40c. peck
Young Lettuce	10c. head
Asparagus	10c. bunch
Radishes	5c. bunch
Young Onions	10c. bunch
Rhubarb	5c. bunch
Horse-radish	5c. bunch
Chickens	21c. pound
Turkey	21c. pound
Thick Jersey Cream	40c. quart
Fresh Eggs	25c. dozen
Maple Syrup	35c. quart; $1.25 gallon
Soft Maple Su[gar]	15c. pound

Deliveries will be made in the afternoon on Tuesday, Thursday and Saturday. We shall be pleased to receive your orders by 9 A.M. of the day desired; poultry orders the day before. Local Phone.

P. S.—We expect to be able to furnish home-grown strawberries on Saturday, June 26th. As the supply will be limited, orders should be placed well in advance.

The bulletin is first written out with a specially-prepared ink, and then this original is transferred to the hectograph, from which can be made as many as one hundred copies like the original.

The hectograph No. 2, nine and three fourths by twelve and one half inches, is of the size to take a regular commercial letter-head. We find it requires about an hour and a half to write the original, take off forty-five copies, and address about thirty-five envelopes from our mailing-list. Some copies are kept for calls from prospective customers and for our own use. Several of our customers have told us what a help this list is in making up their daily orders. Some of the cooks tack them up in the kitchen over the working table. On the bulletin are entered not only those things produced on our own place, but some others which we can buy in the neighborhood, and which our customers need. Maple syrup and soft maple sugar are such. In this way we accustom our trade to look first to us for their needs, and there is much less danger of losing trade than if other dealers had to be called upon for even one or two items in making up orders for the day.

The list here shown is short as compared to what it will be later in the season. The season is backward and we can offer only some early vegetables from the hotbed, besides asparagus and rhubarb. In the latter part of July and in August there will be forty or fifty different items on each weekly list.

The cost of this weekly advertising is about as follows:

1. Hectograph, cost $2.00, expressage 55c., total $2.55. To be used during the months of June, July, August, September, 4 months, 13 weeks, per week	.20
2. Paper, per ream (480 sheets) 50c., about 50 sheets a week used	.05
3. Labor, 1½ hours at 15c.	.22
4. Envelopes, 35 per week, at 1c.	.35
Total	$ .82

As we may not remain here another year, the total cost of the hectograph is distributed over the four months of the season. This weekly expenditure of eighty-two cents is not to be considered when compared with the time and labor that would be required in personally soliciting orders. A copy is tacked up beside the telephone for reference when customers call us up. All our orders are received by telephone, by mail or are taken for later delivery by the person who makes the deliveries.

Why would not those engaged in truck-gardening, especially near large towns, and who have many private customers find this idea of weekly market bulletins a means of bringing before their trade in a quick and attractive way information as to what they have to offer and what will soon be ready for delivery? Much convenience to customers would be afforded, time and talking would be saved, and an additional barrier against competition would be set up.

George F. Brown.

The Vegetable Garden on Pleasant View Farm in the Adirondacks, New York

Business Principles on the Farm

If business men were as negligent in their affairs as farmers are in theirs, bankruptcy would result.

If manufacturers were as ignorant of the actual cost of the article manufactured as most farmers are of the actual cost of producing a bushel of wheat or a pound of meat, they, like the farmer, could not go on the market and sell their products intelligently.

When the season for planting comes, all is bustle and stir to get the seed in the ground, regardless of fitness of the soil for the grain to be planted, or weather conditions existing, or methods of the planting; the idea is simply to plant.

We believe that one half of the crops planted in general is done in ignorance of the above very essential principles of successful farming. We contend that the low average of twenty-six bushels of corn to the acre or sixteen bushels of wheat to the acre is due to the unfitness of the land for such grains.

We contend that with those general averages and fifty cents a bushel for corn or one dollar a bushel for wheat the farmer is a loser.

In 1860 we sold corn at twelve and a half cents, and barely saved expense, although the hoe and single-shovel plow were all the implements we had. In 1893 we sold one thousand bushels of wheat at forty-four cents, and did not get back actual cash outlay. We did not know it then as well as we do now, but we began to learn something. Having no voice in the fixing of prices, neither in buying nor in selling, we began to inquire as to what things cost to produce and what we should receive to pay a fair per cent for labor involved. The result of the efforts in that line show clearly the mistakes made in working blindly.

The work consisted in keeping an itemized statement of all expenses in producing wheat, corn, oats or any farm product.

The farm consists of a variety of soils ranging from rich river bottom to gravelly, sandy or clay soils.

For this purpose four fields of about ten acres each were selected for rotation test; two were in the bottom-lands, two of clay and gravelly nature—the former suited especially for corn, the latter for wheat.

The crops grown were in the order here tabulated:

Fields	1st Year	2d Year	3d Year	4th Year	5th Year
1	Corn Peas	Oats Clover	Clover Wheat	Wheat Peas	Corn
2	Pasture	Corn Peas	Oats Clover	Clover Wheat	Wheat Peas
3	Pasture	Pasture	Corn Peas	Oats Clover	Clover Wheat
4	Pasture	Pasture	Pasture	Corn Peas	Oats Clover

The peas were sown in the corn for a secondary crop feed and turned under. The clover was sown with the oats the second year and left for hay the third and followed in the fall with wheat.

After harvest the fourth year cowpeas were sown to feed and enrich the soil for another rotation to begin the fifth year and in the same order.

Up to the fifth year we thus had four crops of corn and two of wheat. No record was kept of oats or clover, nor of secondary crops, as these were designed for keeping up the fertility of the soil.

We now give the cost of producing an acre of corn and an acre of wheat based on the cost of the ten-acre field in each year and averaged.

Corn:

Rent and interest	$ 5.32
Seed and use of implements	1.14
Hours manual labor—40 at 15 cents an hour	6.00
Hours with team—26 at 30 cents an hour	7.80
Total cost	$20.26
Value of crop in grain at 40 cents a bushel	24.60
Profit an acre	$ 4.34

The cost of producing one acre of wheat averaged from cost of ten acres for two years—one on black bottom-land and one on clay loam soil.

Wheat:

Rent and interest	$ 5.32
Fertilizers	.90
Seed, twine and use of machinery	1.61
Hours manual labor—7	1.40
Hours with team—34	10.20
Threshing, 4 cents a bushel	1.08
	$20.51
Average yield 27.1 bushels at $1	$27.10
Expenses	20.51
Net profit	$ 6.59

From these reports one can easily see where the farmer loses with an average of twenty-six bushels of corn or sixteen bushels of wheat to the acre. These conditions should be changed so that he may receive some remuneration for his toil. There are many other items to be considered that we feel sure he does not dream of.

We want a progressive farm movement in every sense, for the world is demanding our products more year by year.

Some one has said, "Lucky is the land that is tilled by the men who own it;" and Emerson truly said, "He who gives us better homes, better books, better tools, a fairer outlook and a wider hope, him will we crown with laurel."

J. H. Haynes.

Unprofitable Pastures

As a general rule the farmer pays little attention to his pasture-lands. If they thrive, and produce fine pasturage, well and good; if they run out, and grow up in weeds, the man thinks he hasn't time to look after and improve matters.

These conditions are allowed to exist till the land has to be broken up and put to grain of some sort, in order to fight the weeds successfully; and while few realize it, such lands have lost their owners from two to three dollars an acre every year they were left to run as they might.

The "stitch in time" saves all this trouble and loss. At the first encroachment of weeds see that every patch and cluster of them is promptly and completely destroyed. Then sprinkle a generous supply of blue-grass or timothy seed over these spots, to crowd and smother out the weeds. Yes, this is somewhat tedious, but isn't the land worth that much of an effort to keep it up?

If there is a good crop of weeds all over the pasture, hitch onto the mower some day before the weeds head out, and make a thorough job of mowing the whole pasture. Then, as soon as it rains enough to soften the ground thoroughly, run over the land with a harrow, and seed after it. You'll find it time profitably spent.

But the new and tender crop of grass must be given a good start before turning in on it, for there is little doubt but that the real cause of these weedy pastures is but a natural result of overpasturing—trying to keep too much stock on a small number of acres.

M. Albertus Coverdell.

Selecting a Location

About Choosing the Place to Establish the Farm Home—By W. M. Kelly

Every agricultural section has its advantages and its disadvantages. Few sections are free from some serious drawbacks, none present conditions that will suit all people. There is no agricultural correspondent, there is no man, that can didactically fit each inquiring farmer into new circumstances and conditions and guarantee success and satisfaction.

During the past five years my work has been among the farmers of the best agricultural sections of the Western, Eastern and Southern states, and it is my purpose to briefly discuss the advantages and the disadvantages of these agricultural sections in a fair and impartial manner, believing that my observations and experience may prove interesting and beneficial to many readers of Farm and Fireside who contemplate selling out and beginning life anew in some distant part of the country.

My advice to the farmer who contemplates selling out and buying land in some distant locality is to avoid being influenced too much by the masterpieces of art that embellish the advertising pages of the agricultural papers and magazines, and to dwell upon the facts and actualities as they exist. Selling out and investing in a farm in some distant locality is no longer a dream of fairy-tales and air castles, but a plain business transaction and in many instances the most important one he ever makes.

Conditions are changing. We are getting through with our free lands. Outside of a few irrigation projects, every acre of land that can be considered as an agricultural possibility has been taken up. The value of good agricultural lands in every section is fast becoming equalized. Success in farming nowadays means hard cash. Our population has caught up with the soil; old-country conditions are fast coming and are right on our track. Many people, especially the young men who are leaving the farm, do not seem to realize that agriculture is fast being elevated to its proper level, that farming is going to mean something and that to own a good farm and know how to manage it is going to mean more.

To buy a farm and change his location not only means selecting a piece of land upon which he is to spend the greater portion of his lifetime and labor, but it also means the place where he is to begin life anew, to establish a new home for himself and family, to make new friends and new business acquaintances, and last, but not least, to establish a new name and credit for himself. A man may stint himself in many ways, but it seldom pays to neglect every opportunity to improve his home and brighten the condition of his family. No man has been successful who has failed to bestow a delicious home feeling on his family and himself. Educational advantages, social advantages and church privileges should all be considered before a man buys a home in any agricultural section.

Advantages of the Western Farmer

The growing of staple crops on virgin soil is the most simple form of agriculture. The soil in the agricultural sections of the West is more uniform in character, the fields are larger and the farmers of a certain section specialize upon a few staple crops, for which a ready market is found at every elevator and railroad station in their locality. It requires less skill and intelligence to grow wheat, corn and oats for market than to grow the more highly-organized cash or market crops grown on the Eastern farms, especially if the farmers employ the slipshod methods practised by the average Western farmer.

The soil is rich in natural fertility and the farmers are not compelled to study its adaptability for special market crops, to study the demands of local markets or to cater to a class of exacting customers. The price of all his products is regulated by the speculators and packing-house operators, so that about all he has to do is to haul them to market when the price is the most favorable.

He is not compelled to practise a rotation of crops or to depend upon manures and chemical plant-foods to maintain and stimulate the productivity of his soil. He looks down with pity upon the Eastern farmer, and he actually believes that he is plodding around among the rocks and gravel with seed-corn in one pocket and commercial fertilizer in the other looking for a place to plant a hill of corn.

The topography of the country and the even quality of the soil enable Western farmers to employ more efficient farm machinery and to carry on a more extensive system of farming. The modern sulky plow and the two-row cultivator and other labor-saving implements enable a man to care for more acres under Western methods than two or three men could care for under Eastern methods.

A large portion of the Western farmer's wealth has been made through the rapid rise in land values, which in itself has constituted a fair profit upon his investments. Land values have been advancing, and many farmers have become rich through holding their lands. They believe, and I think correctly, that the high price of good agricultural lands will continue.

The Western farmers and agricultural leaders are more enthusiastic over the future possibilities and development of their interests. The magnificent results accomplished by Coburn of Kansas is an excellent example of what one man may accomplish in improving the agricultural conditions of his adopted state. Contrast this man's labor and results with the labors of some of the pessimists who have been connected with Eastern agricultural interests and further comment is unnecessary. Healthy enthusiasm is a great asset in the development of any agricultural section.

Disadvantages of Western Farming

The Western farmer has but few local markets and his products have to be shipped from one to two thousand miles before they are placed upon the market. He cultivates large fields and rarely has an idea of what genuine good cultivation consists.

Every improved method of soil handling has been neglected as long as the soil would produce paying crops, until many of the most fertile sections are fast deteriorating in their productiveness. The decline in the production of wheat and corn in many sections is evidence that the fertility is becoming exhausted.

But little reliance is placed upon manure and chemical plant-foods, and consequently the farmers have little knowledge concerning the methods of soil improvement. A large amount of fertility is annually lost through soil and removing the crops from the farm. On many farms the soil has been washed away in places until the field can no longer be worked with modern agricultural machinery.

The Western farmer and real-estate man is certain to boast of the rapid rise in land values as an indication of prosperity among the farmers, but there are two sides to every question, and this is only the one side. When agricultural lands reach a price of from one hundred to two hundred dollars an acre the fact is just the reverse. The land will yield no more corn or wheat (improved methods of soil handling aside) than when it sold for ten dollars an acre. Deduct the interest and taxes on the capital invested and we will find that the owner is in a worse position than he was when the land sold for ten dollars an acre.

As land values increase, farmers are compelled to adopt other methods of soil management and specialties in place of general farming. At the present time many Western farmers are finding it difficult to compete with the cheap lands of the Eastern states in producing specialties.

Advantages of Eastern Farmers

Eastern farmers have the very best markets at their very doors, and the soil, climate and topography are adapted to the growth and perfection of various highly-organized fruit, market and truck crops.

Every large Eastern city has thousands of people who are willing to pay fancy prices for products of pronounced excellence fresh from the producer, and many farmers are finding it profitable to cater to this class of customers who have the cash and are willing to part with it when they find an article that pleases the palate.

The Eastern farmer who has always lived on a farm that has a clean running brook as a source of water-supply for his live stock finds it difficult to imagine the inconvenience of depending upon the supply of water that is pumped from fifty to one hundred feet by a wind-mill. The farm buildings and the home conveniences are much better and more plentiful in the Eastern states than in the Western states. The Eastern farmers practise better methods of soil management and cultivation. There is less loss of fertility, and the soil and climate is better adapted to the growth of soil-improving crops.

Good agricultural lands are cheaper. The large Eastern cities have been growing rapidly, and this growth has created an increased demand for such market and truck crops as potatoes, beans, cabbage, onions, celery and other crops; for butter, cheese, milk, cream, poultry, mutton and other finished products, and for all kinds of small-fruit and orchard products. This has enabled many Eastern farmers to place their farms upon a paying basis.

Is there any reasonable objection to specialties in a section where favorable peculiarities fit them for the most profitable production? Is there any reasonable objection to Eastern farmers making the most out of what Nature has done for them? If there is, it is going to be difficult for them to see it while the money profit stands prominently before their eyes. With unequaled climate, soil and markets and cheap lands, the Eastern farmers will continue to drift more and more into specialties. The constantly-increasing transportation facilities and the increasing population of the large cities is constantly opening up new possibilities in every line of production.

Eastern farmers have better educational advantages, cheaper fuel, better water, better markets, better trading centers and a climate better adapted to the growth and perfection of all highly-organized truck and market crops and fruit-growing. The man with a limited capital will find larger and more certain profits on a small Eastern farm than upon a similar sized farm in the Western states. No part of the country is better adapted to intensive farming than some of the cheap lands in the Eastern states.

Disadvantages of Eastern Farming

The Eastern farmer is compelled to cultivate smaller fields, and the land is more broken and less adapted to the use of labor-saving farm machinery. Considerable of the soil has been reduced in fertility, until it would require quite an amount of capital and labor to bring it back to its former condition.

Western competition made general farming unprofitable for many years and much of the land has been neglected, for the reason that specialty farming and fruit-growing require fewer acres and better methods of farming. Labor has been higher and scarcer, owing to the large city manufacturing plants taking the best laborers away from the farms.

The unwise policy of the government and the greed of the railroads in developing the Western states too rapidly to meet the needs of the population has been a severe blow to Eastern agriculture, but now that the free lands are exhausted, land values are fast equalizing, and the tide of immigration has turned Eastward.

Eastern farmers have lacked confidence in their business and become discouraged by Western competition, but now that land values have reached a high level in the Western states, there is a revival of interest in the production of general farm crops in all sections of the Eastern states, and the best agricultural thinkers can see great possibilities in the future development of Eastern farming.

Advantages of Southern Farmers

Climate is an important factor in profitable farming, and there is no part of the country where the climate is better adapted to farming than in the Southern states. There is no section where live-stock breeding and feeding will pay larger and more certain profits. With the mild, open winters and the long grazing season the cost of producing a pound of meat (other things being equal) may be reduced to a minimum. A wide variety of soiling crops and proteinaceous forage crops will thrive in the South, and these crops are just beginning to be appreciated as a factor in the economical development of live stock. With cow-peas, soy-beans, corn and alfalfa there is little lacking except energy and skill to make live-stock husbandry a success in the Southern states.

The Southern farmers find it profitable to produce crops for the Northern markets, and by the intelligent use of chemical plant-foods and the growing of soil-improving crops they can maintain soil fertility and make a profit from their farming.

The cost of building is less in the South, and the need of barns and stables is reduced to a minimum. Protection from the wind and rain is the most that is required in a Southern latitude. The soil will respond to good treatment very rapidly, and by intelligent methods of soil handling two crops may be raised on a field the same year. Fruit-growing for the Northern markets, the same as trucking, offers flattering inducements to the man who goes at the problem in an intelligent manner.

The Southern farmers are in close proximity to the best markets, and fast trains are now employed to carry fruit and perishable products to the Northern and Western markets. The demand for all kinds of vegetables and fruit at all seasons has created a market for such products that the Southern farmers should not be slow to supply. Products that were once considered a luxury on Northern tables are now considered a daily necessity. Many sections of the South are excellently located with regard to large streams and seaports, where their crops and products may be shipped at very low rates to the Northern markets. The cost of living is somewhat less in the South.

The soil is excellently adapted to a diversified agriculture and the use of modern machinery. A wide variety of crops may be raised, and it is easy to maintain fertility by the intelligent use of manure, chemical plant-foods and legumes.

Disadvantages of Southern Farming

The greatest need in Southern agriculture is more enthusiasm in the development of the agricultural interests. Farming in the South is not what it should be. The country shows the effects of fifty to one hundred years of plant-food dissipation, and it will require years of intelligent farming to bring the soil back to its former fertility. The growing of cotton and tobacco has ruined the productivity of a large portion of the soil. In many of the naturally fertile sections the humus content of the soil has become exhausted, until the lands have washed so badly that they are worthless for agricultural purposes.

One great disadvantage in the South has been the lack of capital to develop the agricultural resources and the sectional feeling against Northerners; however, these feelings are fast dying out and many Northern farmers are investing in Southern lands. No man should invest in Southern lands unless he has a practical knowledge of the use of commercial fertilizers and sufficient capital to keep himself and family until he can put his farm on a profit-paying basis. A few acres given proper tillage and plant-food will pay good profits if rightly managed.

There are numerous unpleasant features connected with farm life in the Southern states, such as the race question, poor roads, poor schools and other drawbacks that are too well known to need further comment. The educational advantages are not as good as they are in the North and West. There is less capital, and much of that is in the hands of men who are ready to take advantage of the agricultural classes whenever an opportunity presents itself. Lands are cheap, but unless a man can pay for his farm and have a sufficient working capital left, he will soon find himself in the grasp of the land-shark or money-lender, who are doing more to hold Southern agriculture down than all other influences combined.

Ruralisms

The highest type of manhood is developed on the farm.

The man who relies on luck for the main part of his crop will have an easy time harvesting.

The farmer who thinks he knows all there is to learn about farming has struck twelve and stopped.

The pig's digestive apparatus must be developed to its full capacity before the fattening period begins.

There is such a thing as riding a free horse too hard. He is apt to balk and land the rider in the ditch.

The wise farmer does not tell all he knows at the grocery-store, because he is too busy putting his wisdom into every-day practice.

Wm. Underwood.

Around the Farm

Items of Interest and Value to the Progressive Farmer

The Wheat Crop

In many parts of the country the wheat crop has been practically abandoned. This is partly due to the low price of wheat and flour which has prevailed for a number of years, partly to the failure of the wheat crop to produce as well as formerly and partly to other crops being more remunerative.

The high price of wheat and flour which has prevailed for several months has revived an interest in wheat. Many farmers will sow wheat again this fall who have not grown wheat for several years.

The chances are that wheat will succeed better than it did when they last grew it, since many of the injurious insects which were largely responsible for the failure in the past will have had time to die out, and will not bother the crop for a few years at least. When we last grew wheat, before the past two years, the Hessian fly did much damage to the wheat, and also a small sucking insect which covered the wheat heads did much damage. During the past two years my wheat has not been injured from either of these pests and I am quite sure that this is due to there not being any wheat grown on my farm and the surrounding farms for several years.

Past experience has taught us that we can grow fair crops of wheat when grown in a rotation. The rotation is corn, then wheat sown on the corn stubble, and after wheat the land is put to grass and clover for two years, then the sod is turned and put to corn again. The stable manure is applied to the sod the winter before it is turned for corn. When the corn comes off, the stubble is loosened with a harrow for three or four inches, or else it is plowed three or four inches deep with a cultivator, and the wheat drilled in with a wheat-drill. From one hundred and fifty to two hundred pounds of a good grade of acid phosphate is applied to the acre. The phosphate hastens the maturity of the crop and is a great help in making the wheat fill well. I have received practically no benefit from the use of either potash or nitrogen with the phosphate.

Once or twice I have turned the wheat stubble and tried growing wheat two years in succession on the same field, with the result that the second crop was practically a failure.

The wheat crop may not pay quite as well as some other crops, but it fits in a rotation so well that it seems hard to get along without growing it, and the straw comes in so well as an absorbent about the stables. A. J. Legg.

A Farmer's Observations

I know farmers who waste enough feed every year to keep two or three animals in good condition, then grumble and say farming doesn't pay. They let their stock run out nearly all winter. Some don't even have a straw stack for their cattle and hogs—no place but the bare ground to lay on. They must take the rain, snow, mud and zero weather. No pay in that kind of management!

Again, many farmers leave their plows, mowing-machines and other farm implements out the year round. That pays the manufacturer, but not the farmer. Tools wear out faster by being out in all kinds of weather than by constant use. They don't wear out, they simply rust out. I read the other day about a farmer who broke his leg in six places, while coasting down-hill with his children, by running into a cultivator. That cultivator was in the wrong place. It should have been in a smaller shed.

Just for the above reasons many boys and girls leave the farm and go to the city. Their parents never could or would manage things to make the farm pay. Always hard up and grumbling, the children naturally want to leave the farm. They have never been taught to manage the chickens and cows in a way that would be the most profitable, hence they conclude that the city is the best place for them.

I know a man who is a tenant on one hundred and twenty-two acres of fairly good land who can hardly make a living. He is always in debt at the store, always in debt to some one for borrowed money. He borrowed money from A. to pay B. the money he borrowed from him the year before. Four or five dollars taxes not paid for two or three years.

I know another man who rented about one hundred acres at a cash rental of three hundred dollars a year for eight or ten years, then had money enough in the bank to buy a six-thousand-dollar farm of his own. But he and his wife hustled together. There is the whole story. Just like a team of horses. You can't haul a heavy load with a good, true pulling horse and one that is balky. They must work together. The man and wife must not only hustle together, but manage together. They must plan ahead.

It is my observation that we need more educational literature in the home. Most people take a farm paper or two, news and religious papers, but very, very few ever see an educational paper. There is too much indifference and apathy along educational lines.

We have school six months in the year in West Virginia. In 1908-9 there were 96,909 children of school age that were not in school at all. The cost per capita or for each boy and girl based on enumeration was $10.27; 96,909 times $10.27 is $995,255.43. Quite a waste of money and energy. But our schools are getting better. Our school system is being improved every year. We now have agriculture as one of the branches in the course of study. W. T. Smith.

The Manure Crop

I have learned from experience and observation that the old way of allowing the manure to pile up in our barnyards to be hauled just any time we have nothing else to do, and then to be hauled and possibly thrown in piles for a number of weeks to be leached and washed out and away does not pay. It pays the best to haul direct to the field and to scatter nice and even.

By the use of a spreader this can be done far better and more rapidly, as well as at a great saving in the manure, on account of a more even distribution, and it will be a saving of at least one third. Sometimes we wonder how so little plant-food can effect such a wonderful amount of good, quite equal at times to a much heavier application with other methods of applying it. This is caused by the condition of the soil, bacteria in the manure, being more evenly distributed, etc. The bacteria not only act on the manure itself, but seem to have a decomposing effect upon the soil around the manure.

The land being in proper shape for the reception of the manure, it is readily taken up by the plants when it is evenly distributed, and thus the effect is very noticeable. This should cause the moderate application of manure upon as large an area as is consistent, especially if immediate results are wanted.

The sooner the manure can be put on the ground, the better, so as to secure the benefit of the entire period of decomposition directly in contact with the soil. Where best applied must be decided, or rather learned, by the farmer himself. No one man can lay out rules that will apply to all soils and conditions. However, there is no crop grown on the farm that does not amply repay a farmer for the work of scattering out the manure.

The only real trouble that confronts every farmer with the manure question is where to procure enough to supply the demands of the soil, or rather how to produce enough, but that can only be done in this way.

Toil should never cease until we have our fields in prime condition. It is possible to make the fields all better every year, and still make a good profit, but this can only be done when they are properly rotated with the right kinds of crops and manure applied. And a rotation without a considerable amount of clover is practically worthless.

As for myself, I have a special preference for applying manure as a top-dressing on any wheat-field. I apply all I can collect before drilling my wheat, then at any time before the wheat is up a thin dressing can be applied, and also any time in the winter when the ground will permit.

This will not only benefit the wheat, but will also greatly aid in procuring a good even stand of clover.

It is true that the manure waste is one of the greatest wastes upon the farm. The liquid manure is worth three fifths more than the solids, and but a small per cent of farmers are equipped for saving the liquids. This, however, can be greatly remedied by using plenty of bedding as absorbents, both in barn and yards. Do not sell or burn the straw. Save all the corn stover and get it shredded. Keep plenty of stock, using all the straw and refuse for bedding, and buy some if needed, and a victory is sure in the shape of banner crops. But as every farmer cannot buy from his neighbors, we must adopt plans that will suffice for our own farms. Then it behooves us to gather all the free nitrogen, and save it and save all wastes and apply them judiciously to the soil. R. B. Rushing.

Points on Filling Silos

I have long been a believer in the value of the silo, and have two on my place. I think there is no safer investment than a good lot of green corn stored in the silo. It is not so likely to burn as is hay, and will keep for years without deteriorating; in fact, the older it becomes, the better it is for feeding purposes, for it undergoes a ripening process.

The time for filling the silo is near, and I wish to give a few words of caution. One is, do not fill the silo with corn that is too green. There is sometimes a great temptation to do this, as the work on the farm may run in such a way that it would make filling more convenient at one time than another. Sometimes one feels that he can take advantage of changes in the weather to do work that would naturally be done at another time. But by all means wait till the corn is at its best for cutting for silage. The best time is when the corn kernels are out of the milk stage, and are glazed and quite hard. This is my practice, though I find that some farmers put their corn in when the kernels are just a little out of the milk stage. I like the corn at that stage of ripeness at which it will keep out the air. That is the difficult thing about it when it is a little too ripe at cutting-time. It does not pack close and the air gets in and that produces mold. The corn should be cut when the lower leaves are still green, but are beginning to show the effects of the summer's heat.

If I have corn that is a little too ripe, and some that is not so much so, I put in the ripest first, so that it will come at the bottom of the silo. The result is that the enormous pressure above it keeps it packed tight and keeps out the air, while if it were on top much air would work into it for some feet in the middle and for a long distance down the sides.

In the filling of the silo a man can easily lose quite a lot of money. He must plan his work so that the men that are running the silage-cutter will not be standing idle, but will be able to keep things moving. This will have to be regulated according to the distance the corn-field is from the silo, for there will be more lost time if the corn-field is half a mile from the silo than if it is close by. If the hauling is a slow job, then it is better to put the binder in early and let the hauling get a good start of the silage-cutter.

There are many things about the filling of the silo that must be learned by experience. One of these is to set the blower as nearly perpendicular as possible, so that the wind will come from below and push the silage up. If the blower is allowed to slant, the silage will settle on the lower side, and the wind will blow over it without disturbing it.

In order to have the silo properly filled, the silage must settle evenly. The leaves must not be in one place and the coarser parts of the stalks in another. It must be thoroughly mixed, and nothing will do this mixing so well as a man. The silage must also be tramped thoroughly next the sides of the silo, as that is where it is likely to lie so light that it will permit the air to enter.

The top of the silage should be composed of corn that is as green as possible, as this will decay and seal the whole, thus keeping out the air. Too dry silage can be helped somewhat by running water into the top after the silo is filled and tramping the silage hard. The idea is to get a hard, wet surface that will decay, and keep the rest of the silage from decaying.

In localities where there are many silos, they can be filled cheaper than where there are few. The isolated farmer who has a silo has to have more money invested in silage machinery of various kinds than does the farmer in a community where silos are numerous. In such a community the planting of the seed for silage corn can be so timed that the silage crop of one farmer will be suitable for the silo at a time a little later or earlier than that of another farmer. This makes it possible to use the same machinery on more than one farm. Wm. H. Underwood.

Agricultural Sight-Seeing

One of the great aims of our agricultural colleges to-day is to bring their students in touch with practical farming in its many phases as it is carried on in various localities. The Pennsylvania State College is exerting special efforts in this direction. The more advanced students are many of them spending the vacation months on dairy, truck and fruit farms, from New Jersey to Oregon. Field work is assigned as a part of the course, and detailed reports on methods and results are required. Thus two students are making a soil-survey of a large farm, two are studying the orchards of the Far West, one is investigating trucking conditions in the hard-coal region of Pennsylvania and others are engaged in similar activities in those branches of agriculture that are of particular interest to them.

During the latter part of May the juniors and seniors who are specializing in soils and in horticulture spent a week in travel through the East. Professors Shaw and Watts directed the tour. The first day out, Friday, was occupied by a study of the soil types of southeastern Pennsylvania, closing the afternoon with a visit to Dreer's Nurseries at Riverton, New Jersey. Saturday was spent around Moorestown, New Jersey, as guests of the local Grange. This is one of the most progressive and up-to-date communities to be found anywhere. Soil fertility is maintained by the use of leguminous cover crops and chemicals. Intercropping is practised in endless variety, both among vegetables and fruit-trees. Each farmer seems to be an unusually successful specialist along some particular line of production.

Monday found the soils men in Washington, where they visited the Bureau of Soils. Several trips were made to examine soil types in the neighboring counties of Virginia and Maryland. The few days thus spent enabled the students to make the acquaintance of a large number of soil types utterly foreign to the sections with which they were already familiar.

The horticultural students devoted Monday to the vicinity of Kennett Square, Chester County, Pennsylvania. This is the greatest mushroom-growing center in the world.

By four o'clock Tuesday morning the class was ready for a tour of the market of New York City. At the Gausevoort Market, Long Island gardeners dispose of their produce from their wagons. The variety and quantity of salad stuff distributed from this square is nothing short of astounding. Kale, rape, chicory, borecole, endive, beet-tops, celery greens, lettuce and spinach are among them in wagon-loads.

By nine o'clock the party was on Long Island, as guests of the Long Island Railroad Company. Mr. H. B. Fullerton, who is in charge of the company's agricultural development work, together with his wife and his assistant, Mr. L. B. Coleman, guided the students over the island for the next three days. The central part of the island is very sandy, and in its present state unproductive, being covered with a growth of stunted pine and oak. But Mr. Fullerton is maintaining two experiment stations in the barrenest of these barrens and is raising crops with entire success.

The cultivated lands on the eastern end of the island are devoted to potatoes, cauliflower, asparagus and cabbage-seed. The party gained a splendid insight into the methods used in producing these crops. The coast is dotted with cranberry-bogs, one of which was visited at Riverhead. At Orient Mr. L. H. Hallock tills some eighty acres by most intensive methods.

Thursday, the last day of the trip, was spent with President Ralph Peters on his special train. Stops were made at the experiment station at Medford and later at Elmhurst. At the latter point a number of gardeners are producing enormous crops of vegetables from land that is well within the city. They hold it on lease, but yet they find it profitable to use as much as one hundred and twenty-five tons of manure to the acre. The original barren yellow sand has been transformed into a rich, black, humus soil. Results achieved are almost past belief.

After an inspection of one of these gardens, the party returned to Long Island City, bade farewell to the hosts, and started on the homeward trail. Paul Work.

The Lesson of the 1909 Wheat Crop

in this country is: Not enough of the right kind of wheat at the right time to get the right price. The trouble is: wheat-sick lands, lands worn out by continued cropping without fertilizing.

The remedy is: the right amount of the right kind of fertilizer at the right time.

The right time is this Fall; the right amount is 200 to 400 lbs. to the acre; the right kind is 2-8-6.

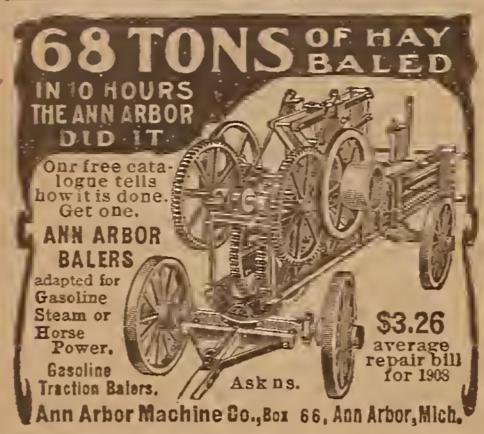
If your commercial fertilizer contains *less* than 6 per cent. of **Potash**, make it right by adding Muriate of **Potash** until it contains 6 per cent. and you'll find that

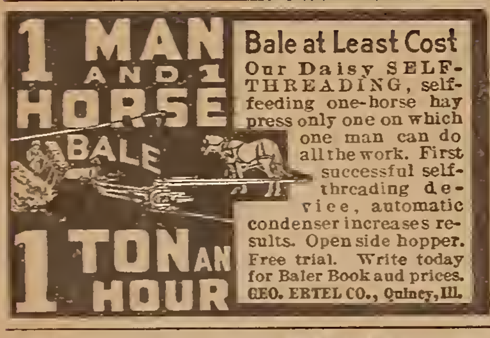
POTASH PAYS

Two lbs. of **Potash** added to each 100 lbs. of fertilizer increases the **Potash** total one per cent.

Send for new Farmers' Note Book—about soil, crops, manures and fertilizers—a practical book compiled by experts. Mailed on request, **free.**

GERMAN KALI WORKS, 93 Nassau St., New York
CHICAGO—Monadnock Block
ATLANTA, GA.—1224 Candler Bldg.





FIX YOUR ROOF

5c Per Square.—We will guarantee to put any old leaky, worn-out, rusty, tin, iron, steel, paper, felt, gravel or shingle roof in perfect condition, and keep it in perfect condition for 5c per square per year.

Roof-Fix The Perfect Roof Preserver, makes old, worn-out roofs new. Satisfaction guaranteed or money refunded. Our free roofing book tells all about it. Write for it today.

The Anderson Manufacturing Co., Dept. 19 Elyria, Ohio

Saw Mills

If you need anything in saw mills or wood working machinery, send for our catalog. Our line is complete. Goods highest quality and prices reasonable. American Saw Mill Mach. Co., 130 Hope St., Hackettstown, N. J. New York Office, 1576 Terminal Building.

FOR SALE Crimson Clover Seed $5.00 to $6.00 bushel. Cow Horn Turnip Seed 40c pound. JOSEPH E. HOLLAND, Milford, Delaware.

Gardening

By T. Greiner

Radishes No Sure Crop

A reader in Oswego, this state, tells me that the same kind of radishes in one place of his garden has given him fine roots with small tops, and in another place only a lot of top with next to no root. A walk is all that separates the two sections, and both got the same cultivation and fertilization. What could have been the reason?

That is no easy question to answer. Radishes, at best, are an elusive and uncertain crop. We sow seed of them often. A patch may look all right, and as seen growing give promise of a good crop. When we begin to pull them, we find most of them wormy or possibly affected by some sort of dry rot which makes them worthless for use or market. Yet another lot planted a few days later proves to be perfectly clean and sound. The trouble is not the plant-food in the soil, although we think that applications of nitrate of soda and acid phosphate in early spring give us some good results. If you can plant on a piece of ground that has recently been in clover sod, the radishes are usually healthy, yet they may be infested with root-maggots. I know of no treatment of either the soil or the seed that is practical and will insure good radishes at small expense.

My way is to sow seed every week or so. One sowing may make a miss; another will make a hit. Don't put reliance on planting in the moon. The moon may be right, and the sign may be right, yet the radishes may be wormy or rot-infected just the same. Evidently the root-maggot is not controlled by the calendar, and cares not for moon changes. Change of the soil may help some. But sow early and often.

For a Soil-Improver

Somebody asks me about sowing Canada field-peas on a vacant garden-spot for the purpose of improving the soil. Any crop is better than none. The plowing and working of the soil alone is of some benefit. Peas are a leguminous crop, and help to bring nitrogen into the soil, and a little humus, too.

By all means plant peas if you have nothing better. But what is the matter with crimson clover, or with vetches, or, further south, with cow-peas? I think I can get a bigger growth of stuff by sowing the winter or hairy vetch, usually with a little rye for support, than by planting anything else, and thus obtain the largest possible supply of vegetable matter and nitrogen. The vetch roots are usually loaded with nitrogen-bearing nodules, and even if we cut the rye and vetches in spring for fodder or hay, we still have the benefit of the nitrogen.

For improving the soil, where the green stuff is not wanted for fodder, I would go over the field in spring with a disk pulverizer and cut and chop the mass thoroughly to pieces, then plow it under. I am for vetches every time.

Look to Your Station for Help

A Kentucky reader says he has a piece of land, broken up in 1908 out of blue-grass sod of over thirty-five years' standing, planted to corn and garden truck, then sown to rye which was turned under last spring for tobacco and garden stuff, the latter being on the same ground the second year.

After battling for some weeks with the striped beetle, he found a new enemy in a little white worm which sucks the melon-stalk under the ground just above the roots, sometimes killing a vine two feet long. It is about the size of a knitting-needle and three fourths of an inch long, soft and watery, and usually has a red or dark head. It is found all over the garden-spot, but has not been noticed in the tobacco ground. Could this pest have been encouraged by the rye that was turned under? What other winter cover crop would be suitable, as this land, a good black limestone loam, somewhat rolling, is to be used for corn and garden stuff next year?

I am not quite sure of the identity of this "worm." It may be the larva of the striped cucumber beetle or of the twelve-spotted cucumber beetle, which in its larval state is also known as the Southern corn-root worm. Of course, there is danger of its infesting the cucumber or corn crops again next year, and the most feasible plan of getting rid of it is strict crop rotation. I would leave the corn out entirely, both in order to guard against this root worm as well as against corn-root aphis, which our friend says is infesting some of his corn now.

If the ground is already well supplied with humus, there would be no need of planting a winter cover crop, of which crimson clover is a good one; and I would prefer to plow the ground as late in the fall as possible, which also has a tendency to destroy many injurious insects liable to infest the soil.

In all local troubles of this kind, however, the suffering soil-tiller should not neglect to call on his own state experiment station for information, and assistance. The station officers are near and ready to help. You can easily send them specimen insects, specimen plants, etc., and your station has better facilities to investigate these troubles near them than anybody else outside the state can have. Don't neglect to put your cases into your own station's hands. If help can be had, it can be found most readily there.

Keep Digging

Dig while it is dry. Dig between wet spells. Dig anyhow, and dig deep enough to go at the root of the weeds. In dry weather we dig to maintain a perfect dust mulch. In wet weather we dig to kill weeds and to break the crust so as to admit air to the soil. Without air, the soil is without life, and plants cannot do their best. Without constant digging at this time, the surface of every rich garden-spot would soon be covered with weeds. Therefore, no better advice could be given than "keep digging!"

Manure for an Old Asparagus-Bed

Our Oswego friend also wants to know what is good to encourage the growth of an old asparagus-patch. The answer is, manure and digging! Anything in the way of plant-food helps.

If we apply commercial manures, such as a combination of nitrate of soda, muriate of potash, acid phosphate, or bone-meal, tankage, dried blood, guano, or a manufactured complete fertilizer, vegetable or potato manure in early spring, we may not get a very material increase of crop that spring, but we will help the plants to make a good top growth and corresponding root growth after the cutting season and up to fall, and be ready to give a larger yield the year following. Also apply manure freely, and dig around the plants as soon as possible after you cease cutting the shoots in June, and you will be sure to increase the next season's yield.

Fruits of the Season

Soon after strawberries and cherries, and along with the blackcaps and red raspberries in their early season, comes the currant. It is a fruit hardly as much appreciated as it deserves. We have had them on the table, more or less, for several weeks. They keep well. We can pick them to-day, and let them stand in baskets for a number of days, using them as we want them, and the last are just as good as the first. Or we can let them hang on the bushes even after they have become dead ripe, especially in a rainless time, and they will get better rather than worse. They do not decay very easily, and they only get sweeter as they hang on longer.

There is room for a few currant-bushes in any garden. They will thrive under neglect, but do better if planted where they can be kept under cultivation with plow and horse-hoe and hand-hoe. Their demands for attention are very moderate, however, and if you once have started a few bushes, they will keep you in fruit (and very wholesome and palatable fruit, besides) for many years to come.

If you have an old bush or two, you will not have to buy new plants unless you want to. They are easily increased by division, by layers or from cuttings. They make wood freely, and the old canes should be cut out or reduced in numbers from time to time, and a few of the outer young canes may be pulled off or cut out near the roots, and used either whole or as cuttings for making new plants. Fall is a good time for making cuttings; spring a good time for setting out layer plants or rooted branches.

For the table, some of the white sorts, like Imperial or White Grape, are desirable on account of their sweetness. For market, only red varieties are wanted, and we have the choice between Fay's Prolific, Cherry and Wilder, perhaps others. The Wilder suits me as well as any.

P & O POTATO DIGGER

Runs as Steady as a Plow

One of the Most Useful of All Farm Implements.

You need the P. & O. Potato Digger not only as a matter of economy, but for results. The potato digging season comes when help is scarce and expensive, at a time when they leave the farm for the winter's work in the towns. Then is when you need labor-saving implements. At such times the P. & O. Potato Digger, on a fair-sized potato patch,

Will Pay for itself In a Single Day.

One man with a team and this Digger will plow up **more potatoes** than a **dozen men with hoes,** and do it better, cleaner and more thoroughly. As this digger plows deep, it goes right **under the hill,** and turns up all the potatoes **without cutting, bruising or loss.**

The **truck** in front is adjustable either way, and holds the digger in line. The **revolving fender** prevents vines from clogging the beam. The **shaker** under the grate causes a continuous vibration that thoroughly sifts the potatoes from the soil, leaving them all exposed on the surface. The **runners** under the shaker carry the digger along evenly and smoothly, and prevents the jerking so common on other diggers, and makes them so hard to control. The P. & O. Potato Digger is the only one made with these runners. And last but not least, it is strong enough to **last a lifetime.**

It is a **low-priced** digger within the reach of every farmer, and you cannot afford to be without one. Now is the time to see about it. Ask your dealer for the **P. & O. Potato Digger,** and insist on getting it.

Write for **Beautifully Illustrated Pamphlet No. 99,** of interest to every farmer, and a **P. & O. Catalog,** which will be **Mailed Free.**

Parlin & Orendorff Co.
CANTON, ILLINOIS.
Largest and Oldest Permanently Established Plow Factory on Earth.

CORN HARVESTER cuts and throws in piles on harvester or windrows. Man and horse cuts and shocks equal with a corn binder. Sold in every state. Price $15. Testimonials and catalogue free, showing harvester at work.

New Process Mfg. Co., Salina, Kansas.

Your harvester received and is O. K., all you claim for it. My Daughters have been working the harvester and call it easy work. According to the old fashion way with the corn Knife, would like the Agency for the Harvester.

Wm. Sommerfeldt, Monroe, Wis.

THE LARGEST AND BEST LINE OF
WELL DRILLING MACHINERY in America. We have been making it for over 20 years. Do not buy until you see our new Illustrated Catalogue No. 15. Send for it now. It is **FREE.**

Austin Manufacturing Co., Chicago

ON FOOD

The Right Foundation of Health

Proper food is the foundation of health. People can eat improper food for a time until there is a sudden collapse of the digestive organs, then all kinds of trouble follows.

The proper way out of the difficulty is to shift to the pure, scientific food, Grape Nuts, for it rebuilds from the foundation up. A New Hampshire woman says:

"Last summer I was suddenly taken with indigestion and severe stomach trouble and could not eat food without great pain, my stomach was so sore I could hardly move about. This kept up until I was so miserable life was not worth living.

"Then a friend finally, after much argument, induced me to quit my former diet and try Grape-Nuts.

"Although I had but little faith I commenced to use it and great was my surprise to find that I could eat it without the usual pain and distress in my stomach.

"So I kept on using Grape-Nuts and soon a marked improvement was shown, for my stomach was performing its regular work in a normal way without pain or distress.

"Very soon the yellow coating disappeared from my tongue, the dull, heavy feeling in my head disappeared and my mind felt light and clear; the languid, tired feeling left, and altogether I felt as if I had been rebuilt. Strength and weight came back rapidly and I went back to my work with renewed ambition.

"Today I am a new woman in mind as well as body and I owe it all to this natural food, Grape-Nuts." "There's a Reason."

Look in pkgs. for the famous little book, "The Road to Wellville."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Fruit-Growing---By Samuel B. Green

Trouble With Plum-Trees

E. G. T., Three Rivers, Michigan—I am not at all surprised that you have not been able to stop the spread of plum-knots this summer by cutting off the knots as they appear. I think the germs of this disease spread in the winter and early spring, and it is from locations which they have taken early in the season that they are now growing. The new knots do not produce spores at this season of the year. I think, however, you will find that the cutting off of the knots in winter and burning them will have a very decided effect upon the spread of the disease. I should also follow the plan of painting the knots with thick Bordeaux mixture, making it so thick that it will stay on like paint.

You say that your plum-trees were loaded with flowers, with every indication of a fair crop, but the flowers have fallen and have not set much fruit. You are surprised at this, and I, too, for it has been the same experience that I have had this year at my own place. In my case I have rather laid it to the lack of suitable conditions at the time the trees were in bloom and to rot which attacked the flowers. The plum-flowers appeared during a long-continued rain, which I think prevented the bees from working on them and successfully carrying on their work of pollination and favored rotting.

My plum-trees have borne good crops, although for the last three years we have only had partial crops. I don't propose to chop them out, but look forward to a good crop in the near future. Of course, there are some varieties of plums which are so uncertain that there is little use of bothering with them, and others that are self-sterile and when grown alone will not produce fruit. I take it, however, this is not the case with yours, but you do not state the varieties you are growing, and hence I have no way of knowing definitely.

Peonies Have Too Much Manure

F. W. B., Evanston, Wyoming—I am sorry to learn of your poor success with peonies. It seems to me from your description that the land which you prepared for your peonies last year ought to be in first-class shape for them this year. The peony is a gross feeder, but it looks from your letter as if you had overdone it. In my garden I put on a heavy coat of well-rotted manure each year, and the results are good.

I do not know of any way of insuring blooms on peonies. There is, however, a great difference in the flowering qualities of different varieties. Some are, very profuse and seem to flower well under almost any conditions, and others are shy about flowering. While Festiva Maxima and some of the other varieties you mention are vigorous, beautiful and often free-flowering, yet in some locations they are not successful. Among the best are such varieties as L'Esperance, Victor Tricolor, Rubra Grandiflora and Boadicea.

I should think the chances are that your soil is rich enough for peonies without any manuring, for the reason that in your dry climate there must have been an accumulation. It would be a good plan to add sand and perhaps a little stable manure to your soil for the purpose of making it more porous, though peonies will stand a rather stiff subsoil.

I take but little care of my peony garden, although I have over nine hundred plants, but keep it well cultivated and give the plants plenty of room, planting them about three and one half by four feet. I give them about the same cultivation as I would corn. Do you think that the flowers of your peonies are killed by frost after they start to form in the spring? I have been told this was occasionally the case, although my own experience does not show much loss in this way.

Grape-Vines, Gooseberries and Currants From Cuttings

Mrs. J. H., Wadsworth, Illinois—The best time to make cuttings of these plants is in autumn, as soon as the leaves are ready to fall. In the case of the currant, the cuttings are generally best made from the fifteenth of September to the first of October. They should be made about eight inches long of the new growth, tied in bundles of one hundred each, with the tops of the plants all one way, and planted out at once, putting the cuttings about two inches apart in rows three feet apart if to be cultivated by a horse, or two feet apart if to be cultivated by hand.

Our American gooseberries may sometimes be grown from cuttings, and when this is done they should be treated in the same way as currants, but made up and planted out perhaps two weeks later. In making up these cuttings it is desirable to take off a little piece of the old wood from which the branches have grown. However, this is not the customary way of growing the gooseberry in the Northern states, but this plant is generally grown by layering the side branches on the ground soon after the growth is about a foot long, say from the first to the middle of June. Treated in this way, the buried portions will send out roots, and in autumn they should be taken out and cut apart and afterward treated the same as currant cuttings.

In the case of grape-vines, the cuttings should be made of new wood soon after the leaves are ready to fall in autumn. They should consist of at least two buds for ordinary use. Some growers, however, prefer to use three buds when they have plenty of wood for this purpose—in the case of short-jointed varieties. They should be buried outdoors in sand or light soil, in a well-drained place, until spring, and then should be planted in warm soil, putting them out soon after the ground is thoroughly warm. I do not believe it a good plan to put out grape-vines until the callus—that is, the new growth on the end of the cane—is well formed, or until some signs of rooting appear. It is customary in some nurseries to bury these bundles of cuttings with the tops up through the winter, because the ground is warm in autumn, and the cuttings callus first at the end which is warmest; then in the spring the cuttings are taken out and reversed, putting them butts up and covering with three or four inches of soil. When they are treated in this way, the butt ends are kept warmest and callus most quickly.

Picking Peaches

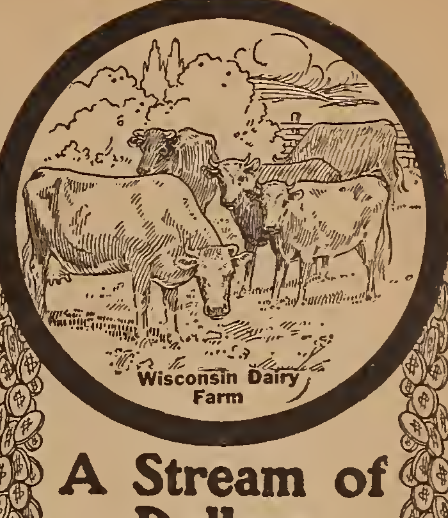
In the case of planting any of these cuttings, they should be put in the ground at an angle of about forty-five degrees, and great pains taken to make the soil perfectly solid around the base of the cuttings. They should be all planted in the ground, with the exception of the topmost bud, which should be just at the surface of the ground. If the soil is solid at the top and loose around the butt of the cuttings, good results are seldom obtained, but if the reverse is true, conditions are good for successful rooting.

Apples Dropping—Two New Varieties

C. B., Olivia, Minnesota—I do not know what makes the apples drop from your trees in July, but at that time of year a large number of apples usually drop off, seemingly for the reason that the trees cannot support all those that have set. This is no objection, providing there is enough left for a crop. I do not know what caused your Duchess to lose its fruit on the south side. There must be a reason for it, but occasionally such things happen, and we are unable to account for them.

As to Evelyn and Peter, the Evelyn is a very excellent apple as grown by the originator, but has not been sufficiently tried to warrant final conclusions in regard to it. It appears to me very promising.

I consider the Peter to be fully as good a bearer as the Wealthy. Mr. Gideon, the originator of both these varieties, told me that the Peter was much the best keeper, but the apples are so nearly alike when ripe that it is practically impossible to identify them. Mr. Gideon also thought that the Peter tree was hardier. It is quite likely that your nurseryman is right in regard to the keeping qualities of Peter, but generally they are so mixed with the Wealthy that it is out of the question to tell them apart.



A Stream of Dollars

Yes, sir—real dollars in a constant stream, from the very minute you buy this land in the heart of Wisconsin. First, there is the timber—logs, cordwood, shingle bolts and bark—that you sell for cash in clearing the land. Then you turn sheep into the underbrush which rapidly disappears and you soon have a wool crop for sale. Meanwhile you plant clover and timothy—this is known as The Land of the Big Red Clover—and you get $10 an acre for your crop in the meadow. Finally you add cows and four of them yield over $200 in rich golden butter besides $150 in beef. So with other crops like sugar beets, tobacco and grain your profits come in a steady stream from the start.

Farms at Low Prices

Half a million acres right in the heart of old Wisconsin—that tells our story. This gigantic tract has been held for years by the lumbermen, but with the timber now mostly stripped from the land it is thrown on the market "dirt cheap." You can own a farm from $6 to $20 an acre by paying one-third down and the balance within ten years. Located in the very midst of the famous dairy region, surrounded by dense population and great markets this land is rising rapidly in value.

Ten Years to Pay

Farmers are pouring into this region from all parts of the country. They come from Canada and Texas after sad experience with unknown land. They bring the energy and push of pioneers and are making a new land of this wonderful tract. You can also reap the profits with them by quick action. One man bought at $15 an acre, and after clearing it, sold for $50 an acre—others do as well, or better.

Write for Free Book

Send for our new book today—it's FREE. Tells about climate, soil, markets, roads, schools, churches, telephones, neighbors, and marvelous crop yields. Write for it quick—say, "Send me the FREE BOOK." Address

American Immigration Co.
Dept. 4
Chippewa Falls, Wis.
(4)

Find a Home in the West or Northwest

No other region will yield such big returns on your investment, nor offer such ideal conditions of climate. And in many states there is still good government land open for settlement.

Homeseekers' Fares

are now in effect to West and Northwest points, via

Union Pacific

"The Safe Road to Travel"

Comfortable tourist sleepers are provided with all the conveniences of the standard Pullman. All trains carry dining cars. Meals and service "Best in the World." Our booklets, "Homes in the West" and "Business Openings and Important Information" will give you comprehensive and accurate information and they are yours for the asking.

Call on or address

E. L. LOMAX, G. P. A.,
Omaha, Neb.

Trinidad Lake Asphalt

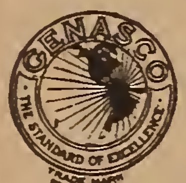
is the greatest weather-resister known. It makes roofing last. We use it to make Genasco—and we own the Lake.

If you want your roof insured against leaks, damages, and repairs get

Genasco Ready Roofing

Mineral and smooth surface. Look for the trade-mark. Insist on the roofing with the thirty-two-million-dollar guarantee. Write for samples and the Good Roof Guide Book.

THE BARBER ASPHALT PAVING COMPANY



Largest producers of asphalt and largest manufacturers of ready roofing in the world.

PHILADELPHIA

New York

San Francisco Chicago

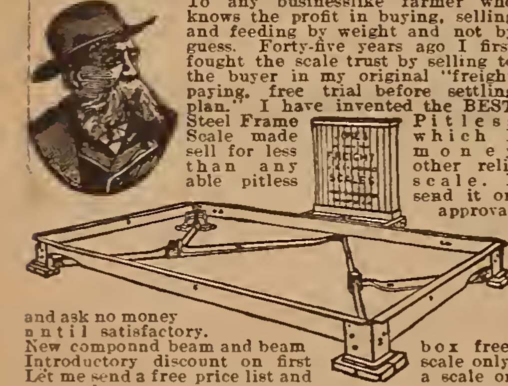
EUREKA Harness Oil

Ever compare the pulling power of a trace, dry, checked, brittle, with that of a trace, soft, pliable and full of "snap"? EUREKA HARNESS OIL will keep a whole harness soft, black, and in best possible condition for years. All that's necessary is an occasional application of the oil.

Ask your dealer for "Eureka" Oil.

STANDARD OIL COMPANY (INCORPORATED)

I Will Send My Scale on Approval



To any businesslike farmer who knows the profit in buying, selling and feeding by weight and not by guess. Forty-five years ago I first fought the scale trust by selling to the buyer in my original "freight paying, free trial before settling plan." I have invented the BEST Steel Frame Pitless Scale made which I sell for less money than any other reliable pitless scale. I send it on approval and ask no money until satisfactory. New compound beam and beam box free. Introductory discount on first scale only. Let me send a free price list and a scale on approval.

"JONES He Pays The Freight"

No. 7 F St., Binghamton, N. Y.

DEATH TO HEAVES

Newton's Heave, Cough & Distemper Cure

Guaranteed or Money Back. $1.00 per can, at dealers, or Express Paid. 18 Yrs' Sale.

THE NEWTON REMEDY CO. Toledo, Ohio.

Poultry-Raising

A Practical Poultry-House

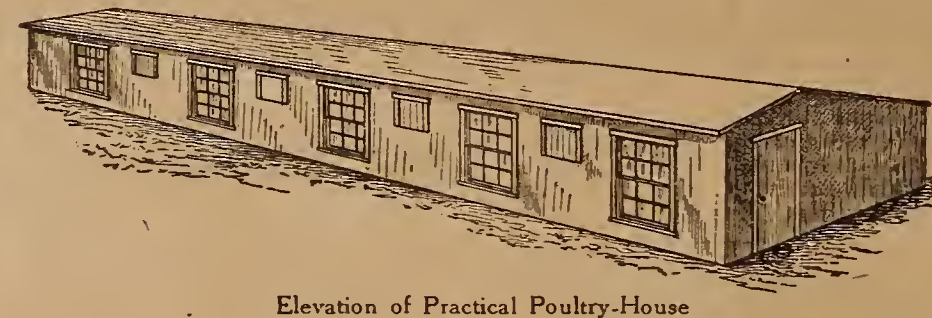
In housing fowls in winter, care should be taken to have your building warm and well ventilated in such a manner as to prevent all direct drafts of air coming in contact with the fowls, and at the same time do away with the moisture and frost collecting upon the ceiling and walls of the house. It is much better to have a cold, well-ventilated house than to have one very warm and poorly ventilated, and your fowls will be much healthier and lay better in the former than in the latter.

In building a house, one should take into consideration the climatic conditions of the locality in which the house is to be built. A well-drained soil should be selected, and avoid building in a hollow where water will collect, if you do not want any trouble. Many are partial to the open-front, scratching-shed style of building, and while they are all right for certain locations, in this locality I have found the house described and illustrated to be preferable.

Ground Plan of Poultry-House

The house is built facing the south, and is fifteen feet wide, fifty feet long, four and one half feet high in back, six feet high in front and seven feet high at the highest point. These dimensions and style of roof make a low house which is warmer than one higher, yet it is plenty high enough to work in.

The frame and plates are made of two-by-fours and the sills and corner posts of four-by-fours. The outside is boarded as tightly as possible with hemlock boards, and a cheap grade of house-siding is used for the siding, with a good grade of tarred paper between the boards and the siding. For the roof, roofing-paper is used, and is put on in strips from the front to the back of the house.



Elevation of Practical Poultry-House

Five double-sash windows occupy about one fourth of the front, and extend nearly the whole height of the front of the building, allowing the sun's rays to shine directly onto the floor of the house. Sun is an excellent tonic for the fowls, and should always be taken into consideration when constructing a poultry-house.

Four holes, two feet square, are cut near the top between the windows. These are covered with muslin, and used for ventilators. These ventilators, and opening the windows on pleasant days, form a perfect method of ventilation, and practically do away with all moisture and frost on the walls and ceiling of the building, and supply an abundance of pure air free from drafts.

The house is divided into five pens, each ten by fifteen feet. The partitions are boarded up for a distance of about two feet, and wire netting is used the rest of the way to the ceiling. The doors between each pen are three feet wide, and are covered with wire netting. The dropping-boards and nests occupy the north side of the building. The dropping-boards are three feet above the floor, are three and one half feet wide, and extend the width of the pen (ten feet). The perches are made of two-by-twos, planed and with the edges rounded. These are six inches from the dropping-boards, and are hinged to the building so they can be raised and fastened when cleaning off the dropping-boards.

Under the dropping-boards are eight nests resting on a platform one foot below the dropping-boards. A hinged door occupies the front of these, from which the eggs are gathered. This arrangement of roosts and nests gives the fowls use of the entire floor-space. The water-fountains and grit-boxes are placed on the partition-boards.

The floor is of concrete, and constructed in the following manner: The space up to the bottom of the sills is filled with crushed stone. On this is spread a thin coat of cement, enough to make a smooth surface. On this is placed a layer of thick tarred paper and over this a layer of cement (three parts sand and one part cement). This makes an ideal floor for a poultry-house. It is wind and rat proof and the tarred paper keeps the moisture out. It is easily constructed, easily cleaned and, above all, will last a lifetime.

The yards are at the rear of the building, and are seventy feet long by ten feet wide, and in these are planted rows of plum-trees. Connected with these yards is another large yard surrounding an orchard. Each pen is given this yard for half a day, which makes an excellent foraging place for the fowls.

A. E. Vandervort.

Duck Notes

Powdered charcoal once in two weeks will help to ward off disease. Coarse sand is also good.

The yard in which ducklings are kept ought to have plenty of short grass. In case this is not possible, cut green food must be furnished. They are fond of lettuce, cabbage, green clover or green corn chopped up fine.

Sometimes brain troubles come to poultry. Often we may suspect even here complications with parasitic enemies. The only salvation in all these cases is to keep clean. Make the quarters just as neat and clean as you can. Use plenty of whitewash, kerosene and carbolic acid. Lime scattered about is good, especially where there is any likelihood that there are parasitic worms in the droppings.

E. L. Vincent.

Elkhart Buggies

have been sold to the consumer

For Thirty-Six Years

May We Send You Our Large Catalogue?

Elkhart Carriage & Harness Mfg. Co.

Elkhart, Indiana

Ladies' Hand-Bag

Seal-Grain Leather

This is one of the neatest and finest bags. It is made in black leather with strap handles and is rich and durable. You can get this hand-bag entirely without cost to you.

We will at once send this hand-bag for only six subscriptions to FARM AND FIRESIDE at 35 cents each. You can do this in an afternoon's visiting. Send the subscriptions to

FARM AND FIRESIDE

Springfield, Ohio

ESTABLISH a Permanent Agency In Your Locality for the most attractive and comfortable men's and women's shoe ever offered the public. KUSHION KOMFORT SHOE CO., 9 F SOUTH ST., BOSTON

PATENTS SECURED OR FEE RETURNED. Free report as to patentability. Illustrated Guide Book, and List of Inventions Wanted, sent free. EVANS WILKENS & CO., WASHINGTON, D. C.

PATENTS that PROTECT

Our 3 books for inventors mailed on receipt of 6 cts. stamps. R. S. & A. B. LACEY, Washington, D. C., Dept. 49, Est. 1869

PATENTS Watson E. Coleman, Washington, D. C. Books free. Highest references. Best results.

TEXAS ORANGE GROVES easily obtained. Co-operative plan. Company does work, gives share crops, enormous profits, permanent income, life insurance. May we send details at once? STIRLING IMPROVEMENT CO. Inc., DULUTH, MINNESOTA

Michigan Lands

SEND for my free 32-page illustrated booklet and map of the Dempsey Lands in Mason and Lake Counties, Michigan; unexcelled for general farming and sheep and cattle raising. Best land at lowest prices in Michigan. Easy terms.

J. E. MERRITT, - Manistee, Mich.

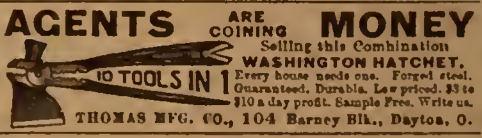
Agents Wanted

AGENTS WANTED Men or Women to sell Consumers. Big Profits. Groceries, Coffees, Teas, Extracts, Perfumes, Soaps, etc. With or without premiums. Write for catalogue A. Bushway Flavoring Extract Co., 951 N. Water St., Decatur, Ill.

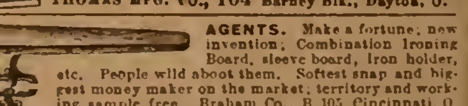
AGENTS NINE IN ONE. $75 monthly. Combination Rolling Pin. Nine articles combined. Lightning Seller. Send for Sample. FORSHEE MFG. CO., Box 205, Dayton, O.

AGENTS PORTRAITS 35c, FRAMES 15c, sheet pictures 1c, stereoscopes 25c, views 1c. 30 days credit. Samples & Catalog Free. Consolidated Portrait Co., 290—81 W. Adams Street, Chicago

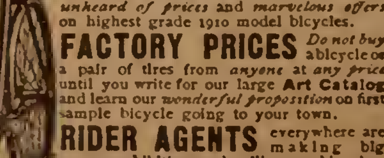
AGENTS ARE COINING **MONEY**



Selling this Combination WASHINGTON HATCHET. Every house needs one. Forged steel. Guaranteed. Durable. Low priced. $3 to $10 a day profit. Sample Free. Write us. THOMAS MFG. CO., 104 Barney Blk., Dayton, O.



AGENTS. Make a fortune; new invention; Combination Ironing Board, sleeve board, iron holder, etc. People wild about them. Softest snap and biggest money maker on the market; territory and working sample free. Braham Co., B 105, Cincinnati, O.



WE SHIP ON APPROVAL

without a cent deposit, prepay the freight and allow 10 DAYS FREE TRIAL.

IT ONLY COSTS one cent to learn our *unheard of prices* and *marvelous offers* on highest grade 1910 model bicycles.

FACTORY PRICES *Do not buy* a bicycle or a pair of tires from *anyone* at *any price* until you write for our large Art Catalog and learn our *wonderful proposition* on first sample bicycle going to your town.

RIDER AGENTS everywhere are making big money exhibiting and selling our bicycles. We Sell cheaper than any other factory.

Tires, Coaster-Brakes, single wheels, parts, repairs and sundries at *half usual prices*. Do Not Wait; write *today* for our *special offer*.

MEAD CYCLE CO., Dept. R-83, CHICAGO

A One-Piece Roof

The same space covered with a single roll of Ruberoid roofing would require at least *600 shingles*.

600 separate pieces of wood, each inclined to warp a different way. 1,800 *exposed edges*—1,800 chances for leaks.

Yet a roof of Ruberoid, whether it requires one roll, or 100, is practically a one-piece roof.

For with each roll comes our exclusive product, Ruberine cement, with which the seams and edges are cemented together—sealed against warping—sealed against the weather.

A Ruberoid roof is heat proof, cold proof, rain proof. It resists acids, gases and fumes.

Ruberoid Is Fire-Resisting

And it is so nearly fireproof that you can throw burning coals on it without danger of setting fire either to the Ruberoid, or to the timbers underneath.

For the service it gives it is the cheapest of all roofings—whether used on home, barn, outbuilding, factory, warehouse, store.

The first large Ruberoid roof ever laid—a foundry roof put on in 1892—is still weather tight, still flexible, after seventeen solid years of service.

Today there are 300 substitutes. They have names which *sound* like Ruberoid. *Before they are laid*, most of these substitutes *look* like Ruberoid.

Beware These Substitutes

For there the resemblance ends. For in Ruberoid, and Ruberoid alone, is used the exclusive processed Ruberoid gum. This wonderful flexible gum is the vital element which no other maker can copy.

Another Ruberoid feature is that it comes in colors—attractive Red, Brown, Green—suitable for the finest home. These colors do not wear off or fade—they are a *part* of the roofing itself.

Before you decide on *any* roofing, for *any* purpose, learn about *all* kinds of roofings.

Simply ask for our free book which tells the results of twenty years of tests with shingles, iron, tin, tar and ready roofings.

It is a gold mine of roofing knowledge, and will be sent free to all who address Dept. 21G The Standard Paint Company, 100 William Street, New York.

RUBEROID

(REGISTERED IN U. S. PATENT OFFICE)

Be sure to look for this registered trademark which is stamped every four feet on the *under* side of all genuine Ruberoid. This is your protection against substitutes which many dealers brazenly sell as Ruberoid. Ruberoid is usually sold by but one dealer in a town. We will tell you the name of your Ruberoid dealer when you send for our free book.

THE STANDARD PAINT COMPANY, Bound Brook, N. J.

New York, Chicago, Kansas City, Boston, Philadelphia, Atlanta, Memphis, Denver, San Francisco, Montreal, London, Paris, Hamburg

Live Stock and Dairy

Profits From Pasture

PASTURE men in northern Illinois have been making money "hand over fist" during the last three months. The rains produced some of the most luxuriant growths of grass that have been seen for some seasons, and grazing has been fine from the time that the blades got their first start in early spring.

A large number of farmers take advantage of such conditions to pasture cattle for a cash consideration or on the shares. A great number of range cattle are brought close to Chicago, and rested in pastures before they are put on the market. The cattle-feeding plants of the railroads within fifty miles of the Union Stock Yards in Chicago, have been increasing their capacity until they are huge affairs. Great tracts of land lying practically idle, though worth over one hundred dollars an acre, are attached to the feed-pens of a railroad plant. In some of these pastures there are fine streams of water and a great abundance of shade.

Cattle-shippers are coming to the big markets with more cattle than formerly. Where once an individual shipper brought in a car-load, he now brings a train-load. There are now trains entering Chicago in which every car between the locomotive and the caboose is owned and cared for by the single passenger in the drovers' quarters of the train. He owns everything that bawls, in a string of from six to fifteen car-loads.

Not long since, a Wisconsin drover, who fattened and finished steers and hogs in South Dakota, came to Chicago with a train-load, and he had left eighty steers on the Dakota farm. When he went back to the rich pastures of the Northwest he took with him a check for $14,500.

It is a common thing for a Northwestern stock-train to come in from the pastures with such big bunches of fat steers, collecting the freight from a single owner.

J. L. GRAFF.

Relation of Live Stock to Fertility

THE relation between the keeping of live stock and the maintenance of fertility is of the closest character. It would not be correct to say that fertility cannot be maintained in the absence of live stock, but it is correct to say that ordinarily on the farm it cannot be profitably maintained in any other way. It is not the fertility alone which live stock bring to land that results in improving it, but the humus also which their presence brings to the soil and the rotation which the keeping of live stock compels wherever it is extensively carried on.

When all the food grown on a farm is fed to live stock kept upon the same, and when the fertilizer made is put back upon the land, it should grow richer rather than poorer. It may be asked, "How can this be, since some fertility taken from the land is sold in the form of meat, milk, wool or bone?" The answer is as follows: The growing of live stock compels the growth of crops to feed. Prominent among these are legumes which are so helpful in growing flesh and in producing milk. Live stock are also fondest of these, and it is well that it is so.

These legumes, clover, alfalfa, peas and vetches, add to the nitrogen in the soil more than they take from it, the addition coming as is generally known from the air, when, therefore, these crops are much grown and fed to stock, and when the manure, solid and liquid, goes back again upon the land, the increase in nitrogen is certain. If, in addition, a part of the food is purchased, the increase in nitrogen is still greater.

But what of the phosphoric acid and potash which cannot be found in the air? When the food is all fed and the manure is put on the soil, the loss in these is slow. If such deep-rooted legumes as clover are grown, they bring up phosphoric acid and potash from the subsoil, a large portion of which eventually goes back again into the surface, or tillable area. If some food is purchased and fed, the amount will be proportionately increased. In this way the supply of phosphoric acid will be more than maintained. Whether it will be sufficiently maintained in the cultivated portion without purchasing some food will depend upon the extent to which deep-rooted plants are grown.

Where stock are grown, there must be pasture. There must also be hay. When the ground is broken where these pastures or hay grew, there is buried in the soil many tons of vegetable matter for every acre of soil. This consists of roots and stubbles. This vegetable matter exercises an important influence on soils. It helps to keep them mechanically right. It makes heavy soils lighter by keeping the particles asunder. It makes light soils lie more compactly by filling the spaces between the particles. It arrests moisture coming up from below or going down from above. It prevents nitrogen from washing out of the soil in the form of nitrates, and when commercial fertilizers are applied it makes their action more certain and immediate. If the vegetable matter thus buried is supplemented by farm manure the benefits resulting will be proportionately increased, and if the manure is applied in the fresh form, the benefit will be greater than if applied in the decomposed form.

Making Good Use of Good Pasture

Live stock compels rotation. It makes necessary the growing of grasses and clovers, and the growing of these puts the land in condition for growing other crops successfully. For instance, corn will yield much better after clover or grass than when these are not grown, and the same is true of many other crops.

Is it wiser then to purchase commercial fertilizers in large quantities, and to apply them in order to maintain fertility or to maintain it through keeping live stock and purchasing food to supplement what is grown? That is a question of conditions. In order to grow certain high-priced crops it may be necessary to purchase commercial fertilizers, but in my judgment the aim should be as far as possible to maintain fertility if it must be purchased by purchasing it in the form of food, rather than of fertilizer.

The close relation between live stock and fertility is shown in another way. Where live stock is not kept at all, save for the purpose of tilling the land, all history has shown that the land becomes impoverished. It has shown further that where a moderate amount of stock is kept, the equilibrium in fertility is increased. It has also shown that where live stock is numerously kept, the fertility of the land increases. Farms in the highest condition as to fertility are invariably found in communities where live stock are abundant.

WM. H. UNDERWOOD.

When the Horse Refuses to Pull

ANY faults, on the side of the horse, are generally the consequence of false treatment, and the best proof of this assertion is the refusal of a horse to pull. This opposition is not founded on the nature of the horse, but only occurs in a certain state of excitement brought on by irrational treatment.

It often happens that a lively horse, hearing the voice of the driver, will jump in the harness, thereby not moving the load, but receiving a jerk on his shoulders which throws him backward, and which at the same time will stop the other horse. The driver generally continues to urge the horses on.

Before the quiet horse begins to pull, the lively one has made another plunge, and is again thrown backward.

The quiet horse not being able to pull the load alone, will also become perplexed and will stand still, not knowing what to do.

If a horse refuses to pull, be kind to him, caress him, allay his excitement by speaking to him and rubbing his neck, and leave the team alone for ten or fifteen minutes. Then urge them again, turning them a little to the right or to the left, so as to get them in motion before they feel the presence of the load behind them. Drive them about twenty steps, and stop again if on a hard pull, before the excited horse stops on his own account. Then caress and start them again.

In correcting such a horse it is a good plan to first hitch him with a quiet horse to an empty wagon, tie the traces of the gentle horse a little shorter, so as to cause him to take the load alone at first starting.

By this means the excitable horse will become accustomed to walking by the side of the other horse. You may then hitch both horses equally long, and drive up some hill, first with the empty wagon, then with a load on, and you will surely get the horse to pull.

R. B. RUSHING.

US CREAM SEPARATOR

The simplest, most durable, most economical of all Cream Separators. Meets every requirement of the most modern dairy methods. Holds World's Record for clean skimming.

THE 1909 MODEL has solid, low frame, enclosed gearing, ball bearings, and is the easiest running separator made. Don't buy a separator without first seeing our FREE Catalogue No. 69.

VERMONT FARM MACHINE CO., Bellows Falls, Vt.
A 16 Distributing Warehouses in U. S. and Canada.

Seldom See

a big knee like this, but your horse may have a bunch or bruise on his Ankle, Hock, Stifle, Knee or Throat.

ABSORBINE

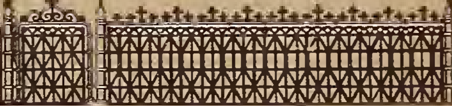
will clean them off without laying the horse up. No blister, no hair gone. $2.00 per bottle deliv'd. Book 8 D free. ABSORBINE, JR., for mankind, $1. Removes Painful Swellings, Enlarged Glands, Goitre, Wens, Bruises, Varicose Veins, Varicosities, Old Sores. Allays Pain. Book free.
W. F. YOUNG, P. D. F., 284 Temple St., Springfield, Mass.

HARVEY BOLSTER SPRINGS

Soon save their cost. Make every wagon a spring wagon, therefore fruit, vegetables, eggs, etc., bring more money. Ask for special proposition.
Harvey Spring Co., 729 17th St., Racine, Wis.

Horse Troubles. I want to tell you of a sure remedy for Heave, Distemper, Wind, Throat, Indigestion, and Stomach troubles. Send no money. Only your name and address on postal card.
G. W. KENAN, Upper Sandusky, Ohio.

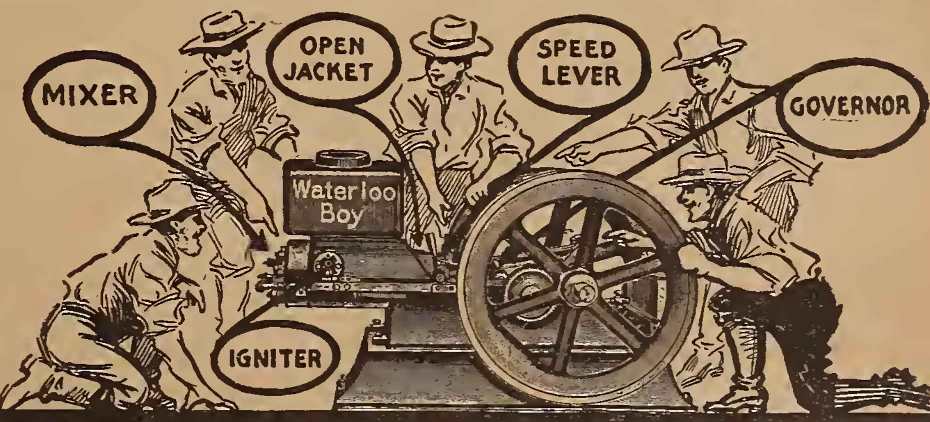
WHEELS, FREIGHT PAID $8.75
for 4 Buggy Wheels, Steel Tires. With Rubber Tires, $15.20. I mfg. wheels ¾ to 4 in. tread. Buggy Tops $5.50, Shafts $2.00. Top Buggies $33; Harness, $5. Learn how to buy direct. Catalogue Free. Repair Wheels, $5.50. Wagon Umbrella FREE. F F BOOB, Cincinnati, O.



Ornamental Iron Fence Cheaper than wood for Lawns, Churches, Cemeteries, Public Grounds. Also Wrought Iron Fence. Catalogue free. Write for Special Offer.
THE WARD FENCE CO., Box 665, Decatur, Ind.

15 DAYS FREE TRIAL

Pays for itself first summer in healthier and fatter stock, saving in feed, saving of labor, etc. One filling supplies 50 hogs 2 days. No valves to clog. Never overflows. Always lets down water as needed. Galvanized steel. Lasts for years. Write today for booklet giving construction, letters from owners and FREE TRIAL OFFER.
GEDGE BROS. Iron Roofing Co. 105 Lee St. Anderson Indiana



17 YEARS ON THE MARKET

5 YEAR GUARANTEE

The Waterloo Boy has all the Good Points that go into any Gasoline Engine

and it doesn't take the up-to-date farmer long to discover them and their value to him. It is the number of practical features embodied in an engine that determines the degree of satisfaction it will give to its owner. All gasoline engines have some good points, or there would be no sale for them and they would soon be taken off the market. Some engines have more good points than others, that's why some engines are better than others.

Waterloo Boy Gasoline Engines

have all the good points that go into any gasoline engine, besides many exclusive, patented features that increase their efficiency and durability; make them marvels of simplicity and wonderfully economical engines to operate. That's why we say the Waterloo Boy is the best engine for farm use.

You can buy a Waterloo Boy for less money than you will be asked for engines containing half of the good points we build into our engines. Besides we will send a Waterloo Boy to any responsible farmer and let him try it for thirty days on his farm doing whatever work he has to do. We will pay the freight both ways and return his money if after a month's use he cannot pick out the good points for himself—if he can't see that it is the one and only engine that will give him complete satisfaction.

Now, when you buy a gasoline engine you had better be sure that the engine you get was made by a concern that makes gasoline engines and nothing else. Our efforts are all directed toward making and keeping the Waterloo Boy the best engine in the world. We have no other interests—no side lines.

Don't you want to try a Waterloo Boy? Don't you want to see how much labor and time it will save you? Remember we are offering you a free trial for 30 days. Better write us today for our catalogue and free trial offer.

Waterloo Gasoline Engine Company
173 W. Third Avenue, Waterloo, Iowa.

YEARLY CAPACITY 15000 ENGINES

30 DAYS FREE TRIAL

Live Stock and Dairy

Profitable Lamb-Growing

I always try to breed my ewes to bring lambs during the months of January and February, or not later than the first of March. About one month before lambing-time I begin feeding a small amount of corn or wheat, and gradually increase their feed until I am feeding each ewe one ear of shelled corn or about the same amount of wheat. When they become accustomed to the corn or wheat I mix the two together; or if wheat is scarce, I mix corn and oats to the same amount. This I find gives the ewes strength to perform their work at lambing-time, and will also produce enough milk to raise the lambs.

My experience is that it is not best to feed the ewes their grain in the barn, except in severe weather, but have the trough in the driest place in the lot near the barn, the troughs about three inches deep and about eight inches wide, with the bottom a little above the ground.

This may easily be done by driving two scantlings into the ground at each end of the trough and nailing a plank crosswise leaving about two inches of the scantling sticking up, to keep the trough from being knocked over. Now drive a stake into the ground at each end of the troughs, leaving about four feet between the ends of the troughs, for the ewes to go back and fourth. Leave the stakes sixteen inches above the trough, and nail a plank ten inches above the trough lengthways and in the center of the trough. This will keep the ewes from getting into the trough or jumping over it, and will thus keep it clean. After feeding, if the weather is rough, turn the troughs until time to feed again, and the ewes will eat their feed much better.

For shelter I have a double shed with a feed-rack in the center for hay or any roughness that I feed. On one side of the rack is a nine-foot shed forty feet long, and on the other side is an eight-foot shed the same length. The rack doesn't reach to the ends of the sheds by six feet, giving the ewes plenty of room to go from one shed to another at either end.

Just back of the sheds I have two ten-by-twelve-foot stalls, and these I use for several purposes. When the ewes are lambing I use them to put ewes in that won't own their lambs; or sometimes a lamb is too weak to start the milk, and I get the ewe into one of these stalls so as not to excite her and the rest of the sheep, and start the milk and get the lamb to find where its supply is expected to come from. After the ewes are about done lambing I have the back stall barred so the lambs can go through, but the ewes can't, and all around this stall are troughs just high enough for the lambs to eat from.

In these I put some bran and shorts, and when they eat it out I put in more, and so on, and after a while a few oats.

I always try to keep the sheds dry, with plenty of litter, such as bright straw or refuse hay for bedding, and also keep it well ventilated.

I have often sold lambs during the last half of April for four dollars and fifty cents a head, which is about what a late lamb will bring at a year old.

I have found that by breeding my ewes to bring lambs early in the winter and caring for them as above suggested they always bring a good profit.

Now is the time to be thinking about breeding them for early lambs.

R. B. Rushing.

Corn and Bacon in the South

A young farmer writes from Georgia that he finds cotton-growing rather hard work for the pay, and he asks if I do not think he can do better growing corn and bacon. I think he can. Southern farmers have always been badly handicapped by having to pay such high prices for their food-supplies. They can produce them just as well as they can be produced in the Northern states if they will try.

Wheat in the North and cotton in the South have always been the cash crops. That is, there has been a certain market for them as soon as they were ready for market. But when the Northern farmer has sold his wheat, and the Southern farmer his cotton, they had nothing else to sell until they produced another crop. The Northern farmer has changed his tactics, and instead of risking a year's work on one crop, he is growing several. He has added dairying and stock-growing, pork-producing and poultry-keeping, and as a consequence he has something to sell every week in the year, and he is prospering. The Southern farmer has stuck to his cotton, and if he tries to grow a paying quantity of it, he has no time to grow anything else, because he must work early and late to make his crop. He sells his cotton in a lump, and buys supplies the rest of the year.

If I lived in the South I would grow very little cotton. I would let the other fellows do that, and I would grow corn and pork mainly, with poultry as a side line, and aim to have a young beef to turn off four to six times in a year. I would give cow-peas a good trial, if no one in the locality had tested them, and if they succeeded well would produce enough to make a lot of good bacon and fatten my beeves. In the South one does not want to make big, fat lard hogs, but good bacon pigs. For doing this there is nothing better than cow-pea pasturage and a little corn.

For corn, bacon pigs, young beef and poultry products there is a constant demand the year round at good, paying prices, and these things can be produced with less hard labor than cotton. And the best of it is, one has something to sell almost all the time and money in his pocket to pay his bills promptly. A good many of the farmers in Kentucky and Tennessee are not growing tobacco exclusively as they formerly did, but are growing more food-supplies. The farmers farther south should follow their example.

Fred Grundy.

Skin Troubles of the Sheep

We ourselves easily mistake several skin troubles for scab, because any irritation of a sheep's skin may cause a little serum to form and dry, which constitutes a scab, but not the "scab." The "scab" was so called ages ago because scabs were the chief symptom of the parasitic disease which we now know to be due to a special parasite, which has its analogue in the mange of the horse, of the ox, the dog, and the itch of man. Each species has its own particular variety of mites, the goat, in so many respects like the sheep, having skin parasites with slight difference from those of the sheep.

Itching may be caused by the louse (Trichocephalus spherocephalus), and these, whether in sheep or goat, have a preference for the head and neck and withers, seldom extending over the whole body. Another louse (Hæmatopinus pedalis) chiefly affects the lower portion of the limbs, and is called for this reason the foot louse. For the destruction of these, the serious business of dipping may not be necessary just in the busy season of the harvest.

Before taking the advice of the rural know-it-all, and bringing oneself under suspicion of scab, it is well to carefully examine the skin by parting the wool where the rubbing is observed. Horned sheep are more troubled with the former variety of louse than the other breeds. A similar cattle louse affects horned beasts, confining itself almost to the region of the poll.

There are special seasons, as our readers will have noticed with regard to insects, when they break bounds and are not restrained by their usual habits. Hence it is that every now and again sheep lice will do a lot of damage. Their reproduction is so rapid and the numbers so great that their teasing keeps the host from getting sleep, and they have even caused the death of sheep by the perpetual annoyance of their presence. It is in such seasons that mistakes are made in declaring scab, when the scab insect really is not present. The too-zealous village gossip is honestly mistaken over these cases. There is no reason why he should be. The louse is big enough to be seen with the naked eye or with the ordinary glasses of persons of indifferent sight.

The Scab Parasite

This must be sought with a magnifier of some power. In taking samples for examination, the farmer should not make a scraping from a bare place, but pull out a little wool where he sees a little break or looseness. The bald place has been exploited, and the enemy has encamped on new ground, where he can be found with very little difficulty. The little pocket magnifiers which men in the cloth trade carry with them will enable one to decide. If broken bodies are found, one may draw the worst conclusion without further search for perfect specimens.

If scab exists there is nothing for it but to submit to the regulations, both in one's own interests and in that of the community; but in the case of lice, if taken in time, and in ordinary seasons, a smear of mercurial ointment over the poll, neck and perhaps top of shoulders will be all that is required. Sheep are not particularly susceptible to mercurial poisoning by salivation, and this remedy has been used for centuries, gaining for itself the special name of "sheep" ointment. Milder, cheaper and not less effectual remedies can be found in paraffin and in carbolic oil, and most of the recognized coal-tar preparations.

Acne has also been mistaken for scab. It is an inflammation of the sebaceous follicles, and coming most frequently after shearing, suspicion is aroused that the instruments used on one scabby sheep have communicated the malady to others. It is not by infectious transference, although the irritation of the machine may cause it. Pustules form of a most peculiarly painful character, although involving the entire thickness of the skin. When several of these unite, or become confluent, as it is called, there is a slight resemblance to the scabs associated with the mange of sheep, which we know as the scab. If let alone they disappear in a few weeks, but squeezing out the matter, and the application of a simple ointment hastens recovery.

Eczema

Eczema is not so likely to deceive sheepmen, because it commonly comes on the nude portions, as under the thighs, but when diffused may be mistaken on account of the scabby matter which collects.

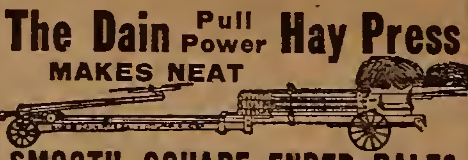
Sore Heads

Besides the parasitic sores about the head and neck, we have to reckon with those caused by fighting and rubbing on banks and against hard bodies. At first the sore may be of the most trifling kind, and in winter need scarcely be heeded, but in the fly season any wound about the sheep's head is the fly's opportunity, and it is quickly blown and filled with maggots. In such situations the shepherd's favorite fly-stone may be used. It kills the wriggling mass of maggots instantly, and leaves behind a more or less lasting disinfectant and detergent. The horned varieties of sheep and cattle in hot countries often die from this trouble, as the maggots get into the horn cores.

The sheepman throughout the year should always have handy a bottle of strong carbolic oil, one to fifteen or twenty, or the less handy, but effective, tar-pot with which to dab any and every sore place until time can be found for a more thorough investigation.

The scalding of the thighs with diarrhea is another skin condition which should receive immediate attention and the application of fly oil or any simple ointment, the chief point being to clean the wool and skin around the anus, where a collection of bowel discharge invites fly, and of itself often forms a scalded mass both painful and dangerous. Bareness in this region is far preferable to the risk of accumulations of fermented dung, and, in the case of the ewe flock, the summer-time may be utilized for accustoming them to the clatting which to a large extent prevents wool-balling in lambs. Clatting is too often done in the bitter cold winter and near lambing-time.

W. R. Gilbert.

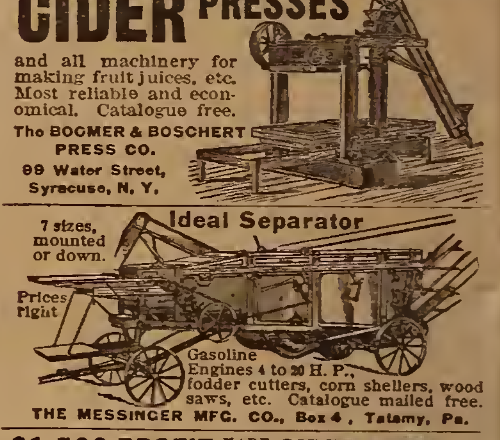


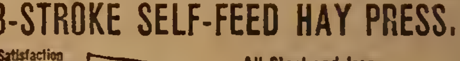
SMOOTH SQUARE-ENDED BALES

Our rocker tucker (nothing like it on any other Press) folds every feed so that Dain made bales pack close in cars. The Pull Power feature saves Time, Work, Money, increases capacity. The Dain Press is simplest, Strongest Hay Press made. No complicated togglejoints to wear and make trouble. No bungle-some Pitman for team to step over. No waste power and rebound like a pile driver. We want you to know why it turns out most perfect bales, is lightest running, fastest baling Press made. Our Free Book proves its superiority—send for it today

DAIN MANUFACTURING COMPANY
860 Vine Street Ottumwa, Iowa

The Baler for speed. Bales 12 to 18 tons a day. Has 40 inch feed hole. Adapted to bank barn work. Stands up to its work—no digging holes for wheels. Self-feed Attachment increases capacity, lessens labor, makes better bales and does not increase draft. Send for catalogue.
Sandwich Mfg. Co., 179 Main St., Sandwich, Ills.





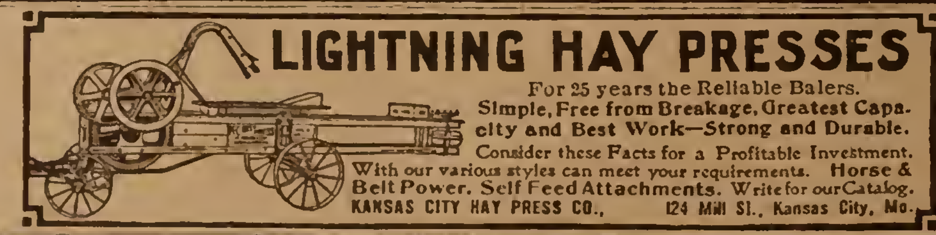
Satisfaction Guaranteed

All Steel and Iron
Two Men can run it.
The Auto-Fedan Hay Press Co.
1507 W. 12th St. K. C. Mo.
Ask for Catalogue No. 7

ADMIRAL 2 MAN PRESS.
3 FEEDS TO THE ROUND — SELF FEEDER — 2 PROFITS IN HAY BALING
BOX 17
ADMIRAL HAY PRESS CO., Kansas City, Mo.

The New Royal Pitless Scale
Sold on 30 days free trial. Our price the lowest. Catalogue and discounts. Address,
ZIMMERMAN STEEL CO., Box 42, Lone Tree, Iowa

ATLAS PORTLAND CEMENT
Makes The Best Concrete
The cement bought by the U.S. Government for the Panama Canal
SEND FOR OUR FREE BOOK "Concrete Construction about the Home and on the Farm." Contains over 100 drawings and illustrations.
THE ATLAS PORTLAND CEMENT CO., Dept. 122 30 Broad Street, N. Y.
Daily output over 40,000 barrels, the largest in the world.



Live Stock and Dairy

Profits in Hog-Raising

The hogs on our farms occupy an important position among the live stock of the country. The meat of the hogs is cured and handled in such convenient forms that it is sold in practically all the markets of the world.

The hogs consume our waste products, our cheap forage and grains, and convert them into a marketable product that sells for a good price, the money from which helps us to buy necessities, pay debts and secure luxuries. Hogs helped us to over five hundred millions of dollars last year. They are worthy of our best efforts as an agent with which to make money.

One of the first essentials in profitable pork production is breeding from stock with strong vital organs. The conformation that indicates a strong vital organism is a short broad face, short neck, broad shoulders and back, wide between the fore legs and a well-developed bony and muscular system. With the square, compact and blocky build, which we have described, there are well developed all the parts of the animal machinery that are necessary to consume food and utilize it to good advantage.

Secondly, the pigs should be started along to growing and developing early in life. It is a waste of time and material to allow pigs to grow along slowly; they are but meat animals, and the faster they are developed, the more cheaply the increase in weight can be made and the better the quality of the meat produced.

By the time pigs are three or four weeks old there should be a shallow trough placed in some convenient place where the sow cannot get to it, and some palatable feed put into it to encourage them to eat. If one will take the pains to scald some wheat middlings, mix in some sweet milk, sweeten it with some molasses, put it in the trough while warm and get the pigs to it, they will smell the molasses, lap at the feed, and begin to eat. After a few days the milk can be sour, and some sifted corn and oat chop mixed in with the middlings. Feed regularly twice a day in a clean trough just about what they can eat up clean at once, and increase the amount as their capacity to eat increases. Keep them growing from start to finish.

Thirdly, use as cheap feed as can be secured. Grass and forage crops are the cheapest feed one can use to mingle with the grains. Pigs running to grass or clover, and fed as we have advised, can make gains for about half the expense of keeping them on grain alone. All the odds and ends of the farm can be utilized with the pigs. The waste fruits from the garden and orchard, table wastes and skim-milk and buttermilk make excellent feeds to add to the grain fed, making it more palatable, and it will be more thoroughly digested, and assimilated than if fed without these feeds as helps and relishes.

Fourthly, a variety of feeds is essential to make increase in weight cheaply. By experience and experiments it has been shown that it costs about twice as much to make gains with corn alone as it does by the use of a variety of feeds. Corn-meal and middlings make an excellent feed, and if the dairy, fruit and vegetable wastes, mentioned above, are used, there is a chance for a good margin of profit in raising pigs on the farm under present prices for grain and pork products. By utilizing a variety of cheap feeds and keeping the pigs constantly growing, the difference between the cost of production and the income for the product can be widened to represent the profit. N. A. Clapp.

Care for the Colts

It pays to be friends with the colts. They are easier to train and handle while young, before they grow large and unruly. There isn't a single colt on our farm but what we already can walk right up to and halter, out in the open pasture.

The colt is learning to lead, and we are now getting it accustomed to buckles and straps by laying the harness on its back for a minute or two at a time.

It is also being introduced to curry-comb and brush. Of course, it doesn't know what to make of them at first, but it soon becomes used to them, and enjoys the smoothing down much quicker than it would if left unhandled till it was a two-year-old.

By this time of year, we usually know how we are going to match up the young horses, and the colt's bushy little mane is being brushed and trained to hang on the proper side of the neck to match the mane of its mate. (The mane of each horse generally hangs on the inside, toward the other horse, leaving the smooth, graceful arch of the neck visible and on the outside of the team.) The feet are also being picked up and handled.

Before the colt is a yearling it will be leading up like an old horse. We will then buckle the harness on, and, after leading it around this way a few times, it may be hitched to a light load of some sort. The breaking has been so gradually done that the little horse scarcely notices when he is carried a step farther in his usefulness. We employ the same gradual methods when breaking the colt to the saddle, and our colts never buck and tear around like others we have seen.

But this careful handling and kindness never will yield full returns unless suitable shelter and feed are furnished for the future work-horse or driver during the winter. We arrange to have a small, snug place for them apart from the larger horses where they may be kept warm and properly attended to, and where they will be sure of not getting kicked or cheated at feeding-time. We do not give the colts corn and hay alone, but prefer to change and mix their feed. Oats, wheat and corn fed in conjunction with some bright, clean hay form an ideal ration for keeping the young horses plump and growing. Good, dry bedding is also very essential, and saves much currying. Of course, all this necessitates a little extra care, labor and expense, but the superior type of horses thereby developed always encourages us to practise the same methods year after year. M. Albertus Coverdell.

A Good Dairy Type

Managing Vicious Bulls

As a rule the wisest way of handling a bull that is inclined to be vicious is to hand him over to the butcher, as an animal of this class is never safe to trust. If he be one that has proven to be an extra good sire, and it is deemed desirable to retain him for service, the safest and simplest means of handling him is to blindfold him. He may be managed by means of ropes and pulleys, giving him room to move out of his stall when required and bringing him back to his place; but it is a cumbersome method.

Blindfolding quietly takes all the conceit out of a blusterer. A broad bandage of double sacking securely fastened over his eyes may serve the purpose ordinarily in the stable. The device may be used to good advantage in handling a nervous or excitable beast.

Mismanagement or lack of thought makes a great deal of trouble in the handling of stock.

Vicious bulls are generally made so by unwise treatment when they are young, giving them too much liberty, or using them cruelly. It is well to use them kindly, but they should be trusted no more than is necessary, for it sometimes happens that a bull that has been quiet, suddenly and unexpectedly becomes vicious and maims a man for life or gores him to death. It is the part of wisdom to handle a bull with a strong staff and a safe connection with his nose-ring, no matter how quiet he may be. Wm. H. Underwood.

PAINT TALKS—No. 9
Making Different Tints

There are many advantages in using paint mixed by hand at the time of painting. The property-owner who has had painting done understands the most important one, namely: the fact that paint thus made to order if made of pure white lead and pure linseed oil, is by far the most durable, because it is made to suit the conditions of each particular job.

Not so many building-owners, however, stop to think how great an additional advantage is afforded them by the fact tbat the most delicate gradation of tint which whim or fancy may dictate can be had in made-to-order white lead paint. The house-owner is not confined to two or three yellows, for instance, but may select from a hnndred delicate gradations, if he wishes. So with the blues, the grays, the pinks, and all the tints.

For interior decoration, especially, this wide range of selection is of inestimable value. If a woman of taste wants a certain shade, something "pretty near" will not do. She can get it *exact* in made-to-order white lead paint.

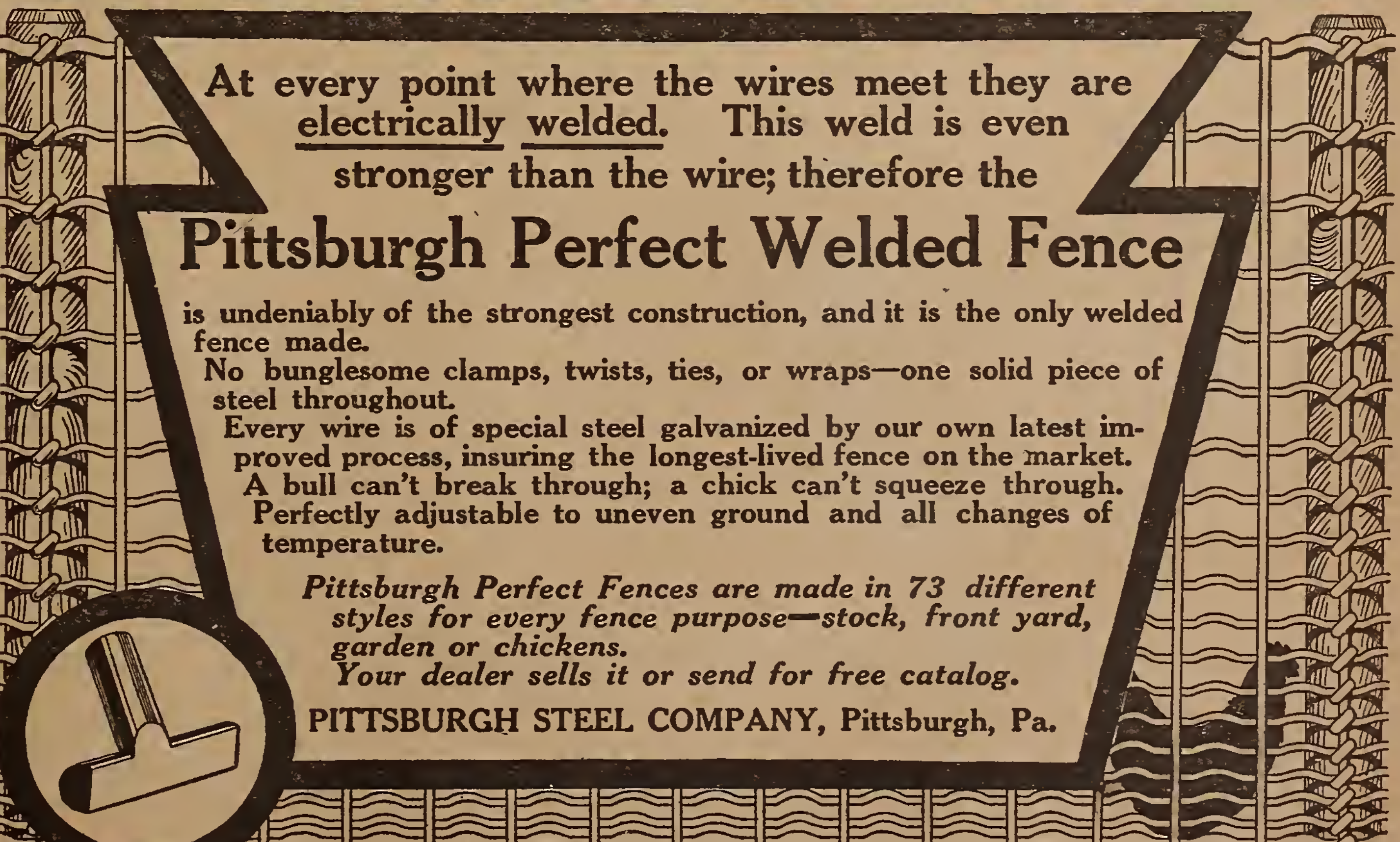
There is more about color schemes in our Painting Outfit 47, together with reasons why white lead bearing the Dutch Boy Painter trade mark gives most for the money in economy and satisfaction.

Bny of your local dealer if possible. If he hasn't it do not accept something else, but write our nearest office.

NATIONAL LEAD COMPANY

An office in each of the following cities:

New York, Boston, Buffalo, Cincinnati, Chicago, Cleveland, St. Lonis, (John T. Lewis & Bros. Company, Philadelphia), (National Lead & Oil Company, Pittsburgh.)



SUBSCRIPTION PRICE

One Year (24 numbers) . . . . 35 cents
Four Years (96 numbers) $1.00
Canadian Subscriptions . { 1 Year, 60 cents; 4 Years, $2.00

Entered at the Post-Office at Springfield, Ohio, as Second-Class Mail Matter.

Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."

The date on the address label shows tbe time to which each suhscriber has paid.

Subscribers receive this paper twice a month, which is twice as often as most otber National farm journals are issued.

Silver, when sent through the mails, should he carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope.

When renewing your suhscription, please say it is a renewal, and if possible send the label from a recent copy. If all our suhscribers will do this a great deal of trouhle will be avoided.

PUBLISHED BY
THE CROWELL PUBLISHING COMPANY
SPRINGFIELD, OHIO
Branch Offices: 11 East 24th Street, New York City.
Tribune Building, Chicago, Ill.

Copyright, 1909, by The Crowell Publishing Company

ABOUT ADVERTISING

Farm and Fireside does not print advertisements generally known as "readers" in its editorial or news columns.

Mention Farm and Fireside when you write to our advertisers, and we guarantee you fair and square treatment.

Of course we do not undertake to adjust petty differences between suhscribers and honest advertisers, but if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

Farm and Fireside is published on the 10th and 25th of each month. Copy for advertisements should he received twenty-five days in advance of publication date. $2.00 per agate line for both editions; $1.00 per agate line for the eastern or western edition singly. Eigbt words to the line, fourteen lines to tbe inch. Widtb of columns 2¼ inches, lengtb of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

Letters regarding advertising should be sent to the New York address.

The Plow as a Rain-Maker

An exchange devotes some space to the disproof of the efficacy of the plow as a rain-maker. It is space well used. Nothing can be more mischievous than the popular belief that the cultivation of the soil will cause more rainfall. Cultivation may hold in the soil the rain which does fall, and thus the soil in a semi-arid region may after years of the right sort of culture become much more moist than it was in its prairie condition; but the increased moisture is in all cases the result either of a temporary increase of rainfall from natural causes or of the conservation of moisture by cultivation. The cultivation of the soil and the growing of crops upon it can have no effect on rainfall—or at least their effect must in the nature of things be so slight that for people to engage in farming in any region, relying on the change from prairie to farms to bring rainfall, is to court disaster.

The real-estate agent is sure that rainfall is greater than it used to be. He is equally sure that the rain belt is right where his lands are situated. "Over beyond that line of hills," he will say, "seems to be a drier region; but on this side of the hills we always have plenty of rain." Over on the other side of the hills the next agent will say the same thing. The dry belt is ever beyond the horizon of the land man.

The man who undertakes farming in regions where rainfall is scanty should remember that the dry years of the past will return. The climate has not changed. He should study dry farming closely, and bear in mind that he will need more land for dry farming than for agriculture in the more humid regions. He should expect to beat the climate and outgeneral it, and not to change it. If he goes into the business with such a determination, and uses his head all the time from the day he begins to look for a location until he has got into the swing of the dry-farming routine, there is no reason why he should not do well. But if he relies on the plow as a rain-maker, rather than on the harrow as a rain-conserver, he may look to leave the new farm feeling as did the former tenant of a Western pioneer shack, who left for the next comer a sign reading: "Forty miles to a railroad. Twenty miles to a post-office. Two hundred feet down to water, and a day's drive on the level. Gone home to live with my wife's folks. God bless our home!"

Dry Farming for East and West

Dry farming may be relied upon where rainfall is scanty. It is a well-tried system of agriculture, and is based on scientific principles and the practice of ages. Mr. Campbell, who is one of the most useful men in America, has systematized some very old practices and has preached them to the despairing farmers of the semi-arid West, until, aided by several seasons of excessive rainfall, those regions have imbibed hope instead of despair, and successful farming seems likely to be extended over thousands of square miles where it would be impossible without the dry-farming system. But he has never preached it as a substitute for rainfall, nor has he ever held out to those countries the deceptive hope that the climate will ever change.

The fates—or, as the ancients called it, "the stars"—have decreed that the lands under the lee of the Rocky Mountains must always be content with scanty rainfall. This does not mean that great populations of happy and successful people may not be sustained there; but it does mean that such populations must succeed in spite of the aridity. In all kinds of farming,

> It is not in our stars, but in ourselves,
> That we are underlings.

In fact, the existence of this vast arid region and the methods rendered necessary by its natural conditions seem likely to prove a blessing to the farmers of all the nation. Dry farming has its lessons for the farmers of the humid regions as well as for those depending on irrigation. If twenty inches of rainfall will mature crops, why should more be used when received through ditches? Or if fifteen inches can be made to do, why use more? Why not use the excess to help out the dried-up acres beyond the present limits of the flow? In brief, the conservation of moisture in the soil has one of its chief uses in extending the irrigable area of the nation by making one gallon of water do the work done under more wasteful methods by two.

And over the entire country, where rainfall is relied upon, the season is an exceptional one in which droughts of more or less severity do not occur. And whenever a drought occurs, the remedy is dry farming, whether the location be in Iowa or Ohio or Colorado. This present season has been one of wide-spread and long-continued droughts in some regions east of the Missouri. Crops have been shortened up in yield—perhaps by just the amount which turns profit into loss—by lack of moisture. And yet there were copious rains early in the season. Dry farming would have held these rains in the ground, and would have assured plentiful crops all over these afflicted fields. Dry farming won't hurt anything in a wet season; and it is salvation in a dry one. Study it. It is worth your while.

Can Man Change Climate?

Whether man can by any of his works affect climate is still a question. All people of middle age remember General Dyrenforth's bombardment of the skies in the nineties, in the belief that the concussion would make rain. The charlatans caught the idea at once, and professional "rain-makers" foraged on droughty communities, losing nothing but their time and their powder if they failed, and cleaning up nice profits if they happened to shoot off their bombs on the eve of a shower. All these things passed away, however. The blind leader of the blind still believes in the plow as a rain-maker, but nobody whose opinion is worth anything agrees with him. Can man do anything to affect rainfall?

When the writer of this was a boy, he read in an already out-of-date book on natural philosophy a chapter meant to show that forests increase rainfall. In after years he was taught a different and, as he supposed, a better doctrine. But more recent investigations still seem to show that forests really do increase rainfall. Rain is caused by the mingling of bodies of air of differing temperatures. Experiments at Nancy, France, seem to prove that the cool air from the forest mingling with the warm air blowing over it causes actual rain which would not otherwise fall. Artificially-planted forests there receive more rain than the same ground used to get; and more rain falls in the forest than outside of it, though the regions used to have similar rainfall. Mr. J. Francis Le Baron, discussing this question recently before the American Society of Civil Engineers, called attention to the tremendous rains which fall from the air of the warm trade winds as soon as they pass from the Caribbean Sea over the dense forests of Nicaragua. If these forests were on mountains, the elevation would account for the downpour, but the hills are low, and the cooling of the air by the forests seems to be the only cause of the rain.

Mr. M. O. Leighton and others have brought forward facts seeming to show that the cutting off of the forests of the lower Appalachians has caused a decrease in rainfall. If cool forests cause rain, hot, bare hillsides would work for dry weather, surely.

Therefore, though the affect on temperature by crop growing and cultivation can have but little effect on rainfall, if any, the cutting off of forests may decrease it, and the planting of forests might increase it. If all the regions east of the Rocky Mountains were forested, more rain might fall there than now. But as a farming proposition, better results and surer profits may be expected from wise and sensible dry farming, with stock-raising. We may as well accept the climate of the plains as we find it, and adjust ourselves to it. We may spoil climates, perhaps, but we cannot improve them much, if at all. It is rather pleasant to think, however, that by cultivation, dry-weather crops and scientific methods we can circumvent Nature herself, and make the desert blossom as the rose. It takes brains and education, but it can be done. If we fail, we ought to blame ourselves for not putting brains and education enough in the mixture.

Back Talk to Lewis

Letters From Readers

Editor of Farm and Fireside:—

I have been a reader of Farm and Fireside for more than twenty years, and have watched the development of the various departments with interest. Your recent addition—Alfred Henry Lewis' page of political talk—I think is destined to be of lasting benefit to all who read it. We farmers need just such straight talk as Mr. Lewis is giving. Some will get mad and say unkind things.

So many are prone to brand as socialistic anything in the way of social reform that is not strictly along lines laid down by precedent. They evidently forget that many existing institutions affecting the farmers' welfare—our state universities and experiment stations, for example—are in the same sense socialistic. And, after all, socialism may not be such a bugaboo as some would have us believe.

Ohio. Nat S. Green.

Editor of Farm and Fireside:—

Your paper is a great help to us as farmers, because it tells us how to farm the right way. It shows us how to raise the most and the best, which is essential to successful farming. And your Alfred Henry Lewis' page is a fine addition to your work. I can't see why any one should object to Mr. Lewis' writings if they are the truth, and I have not seen any one dispute their verity. The question then is in order, Don't the people want the truth? If we are to succeed, we must have the truth, and all the truth. We must study politics and economics as well as how to plant, cultivate and harvest. If we are to remain a great republic, we cannot shirk its responsibilities. We must vote intelligently, and we cannot do that without studying politics and economics. We all know, or should know, that all the laws to benefit the farmer and the worker were passed by the Republicans and Democrats. I can't recall any of the laws just now, but there must be many of them, as we approved of them by voting the ticket again. We also know that they have passed a few laws that are in the interests of a few of the trusts.

Who is to blame? We, the voters, are to be blamed, because we don't vote intelligently and are satisfied to let some one else do our thinking for us. Let a few who have done the most for the party make up a program, and we will vote for it, and hurrah for the party.

How many of you who may read this ever read the platforms of all the parties at an election? If you did not, did you try to vote intelligently? Maybe you voted against your own interests and did not know it.

We cannot get any reforms from either of the old parties so long as we stay within the parties, for every time we vote we approve of them; and every time we protest to our hired man in Washington he ignores it. But there is one protest they cannot ignore. If we elect a few representatives of the minority party to represent us, you will see both the old parties tumble over each other to see which can give us the most reform. Try it and watch the result. You may say it is impossible to elect a minority party representative, but listen, the school board at Lancaster, Ohio, in 1828 refused to permit the school-house to be used for the discussion of the question whether railroads were practical. Replying to the request, the school board said, "You are welcome to use the school-house to debate all proper questions, but such things as railroads and telegraph are impossibilities and rank infidelity. There is nothing in the word of God about them. If God had designed that his intelligent creatures should travel at the frightful speed of fifteen miles an hour by steam, he would have clearly foretold it to his holy prophets. It is a device of Satan to lead immortal souls down to hell." What looks to us now like impossibilities may soon be as simple as to see a train travel at the frightful speed of fifteen miles an hour.

We need food for thought, and Lewis has the goods; let him deliver them. He is a force for good.

Washington. Louis Larsen.

In the Public Eye

What I Saw and Heard and Thought in Washington

By Alfred Henry Lewis

If you don't agree with Mr. Lewis, "talk back" to him, confining your reply to two hundred words. We shall hope to publish some of these replies from time to time.—THE EDITOR.

THE FATUOUS RULE which our "protection" senators from the South were ready to play at an Aldrich invitation reminds me of what happened in Kansas City in the spring of '81. The old Missouri was "bank full, and still a-rising." Trunks, barrels, household gear, wagons, all kinds of valuable bric-à-brac, were brought down from the flood-swept bottoms above and sent racing by on the turbid currents. Along comes an ingenious white man, a local Senator Aldrich. He promptly employed about twenty negroes to pull out in skiffs, and drag those trunks, wagons and other valuables ashore on a promise to give them half of what they got. Our Southern protectionists, whether in House or Senate, should ponder the above parable.

* * *

THE INTERESTING FEATURE was the special selfishness developed. Mr. Aldrich, the wily, had scheduled here and there in his bill little splotches and pinches of "protection" for sundry Southern products, lumber, iron ore, lemons and the like. To be sure, every Southern senator in the room had been telling mankind for years what a robbery "protection" was and is. He had beaten his profound bosom, talked of principle, and told how much more worthy it was to be a doorkeeper in the house of the Lord than dwell in the tents of the ungodly. And yet at this the first smell of the "protection" flesh-pots he was ready to fall away, ready to chuck his job as doorkeeper, and beat the time of sprinter Kettleman in a dash for the ungodly tents.

Pope once wrote that "Every woman is at heart a rake." The Twickenham hunchback would have shot more nearly the truth had he said, "Every man is at heart a hypocrite." How honest are we, as we go up and down the face of Nature with no opportunity of pillage! And yet how eagerly are we willing to accept a share of the swag when some band of freebooters offers to count us in as one of themselves.

* * *

SPEAKING OF TARIFF, Congressman Kahn announced what for some time has been upon the tip of my own thoughts.

Said Mr. Kahn, "It seems to me there ought to be a way of disposing of this ever-recurring tariff question in a more satisfactory manner. Every four years the manufacturers, merchants, exporters and financial interests of this country are on pins and needles, not knowing what the presidential campaign may bring forth in the way of tariff recommendations, suggestions and changes. A man is hardly settled down to business before another campaign starts up again.

"Why can't Congress pass a law fixing a tariff which will be fit to stay on the statute-books of the country for twenty years? This would give the manufacturer and exporter an opportunity to make his calculations and business arrangements without fear of being interrupted by a partizan Congress. As it is now, the manufacturing interests are afraid to go ahead with full energy, because it is never known what Congress may bring forth in the way of tariff legislation.

"I do not believe that a tariff commission along the lines of the Interstate Commerce Commission would improve matters. On the contrary, I think a commission would make things worse. It would keep business interests stirred up all the year round, and would never permit mankind to get down to that state of mind in which one can think clearly and act prudently."

* * *

THERE IS REASON TO THINK that the common conscience is not lively. As encouraging sinners to repentance and right walks, the Treasury maintains a conscience fund. The nameless and unknown who have felonously skinned their Uncle Samuel are invited to send in the money they've stolen and wash their conscience clean of the stain and mildew of their hidden villainies. Names are not required; the mere money will do.

Remembering that thousands are daily pillaged from the government, you might fancy that with such a chance to shake off the burdens of their sins, repentant ones would pour in their remorseful shekels in a perfect cataract. Not so. The Treasury receives about three conscience-smitten letters a week. Also the amounts are small, which suggests the paradox that the bigger the crime, the less likelihood of repentance. The largest roll of conscience money the government ever received was eight thousand dollars, and yet all the world knows that eight thousand dollars wouldn't mean one per cent of some of the robberies which have been successfully pulled off. Wherefore I repeat that the conscience in general is but a torpid faculty, and one difficult to move.

* * *

THE RESTLESS MR. BARTHOLDT has drawn a bill to change Lafayette Square, just across the way from the White House, to "Independence Square." There is but slight chance of its adoption, and the slighter the better. I've no love for these name-changings. Who was that king of France—or Spain—that said something in favor of old friends, old shoes, old wood, old wine? I've forgotten the name of that reminiscent monarch, but I no less share his feelings.

The French, Lafayette in particular, have had little enough of recognition for the share they took in winning our liberties. And even in the park case of Lafayette Square the rightful owner has been crowded to the wall. In the square's present center General Jackson holds flamboyant sway on a horse, while poor Lafayette himself, over in the far southeast corner, has been all but backed into the street. The least we can politely do is not meddle with the name.

Over in New York there was a case of name-changing that might better have been passed up. I do not, though it was wretchedly bad, allude to that nomenclatural shift which translated Long Acre Square into Times Square. I refer to another ignorant occasion, when, at the perfervid instance of the late Mr. Paddy Divver, Chatham Street was changed to Park Row. The learned Mr. Divver based his motion upon the argument that the English were the cradle enemies of America, and Earl Chatham an Englishman. To be sure Mr. Divver himself was one who regarded green as a final color of patriotism, but I have often wondered what his Park Row attitude would have been had he known that that same Earl Chatham over whom he was so scandalized had been so much the revolutionary friend of America that the first unofficial act of the English soldiery after New York was captured was to smash that statesman's statue into what Mr. Divver would have called "smithereens."

* * *

BY THE WAY, now that we are in a royal mood, there is a waif word being blown about among Washington's theatrical managers. It has come to the ears of these magnates that next season, as Mr. Taft and his family enter the theater, it is hoped and expected at the White House that the orchestra will strike up "The Star-Spangled Banner," and the audience stand up until the presidential party has been seated in the "imperial" box.

The managers and the orchestras have agreed to do their parts, and since the audiences are thickly sown with office-holders, no lagging or hanging back is looked for in that quarter.

Just what the legation people will do remains to be seen. Since, however, diplomacy is ever complacent in non-essentials, it is believed they will stand up tamely with the rest.

* * *

NOW AND THEN one of our publicists will be smitten of some sky-born thought. In this elevated connection, I have in mind Representative Sheppard, of Texas. Spreading the wide pinions of his fancy, he soars betimes after this manner:

"Who knows that the time may not come when there will be a universal emperor who will give dinners and banquets such as are not dreamed of at the present time, and which will be given on magnificent yachts sailing on lakes of pure champagne? The prohibition agitation has assumed world-wide proportions, and it shows a healthy condition of moral standards. How long it will continue nobody knows. In a comparatively short time people may be rushing just as strongly in the other direction. That has been the story of the world.

"In the time of the Crusades the Christian people of Europe fought for a century to gain possession of the Holy Land. It was a battle of religious enthusiasm or sentiment. Think how long it would take the Christian people now to get possession of the Holy Land—about twenty minutes. But such a thing is not thought of in these days. The people are not doing things like that for sentiment any more. Money is the ruling thing now.

"A universal empire may result from it all. The world is no larger now than France was a few hundred years ago—no larger than the United States was a hundred years ago. Then it took as long to go from New York to Albany as it does now to cross the continent. Industrial progress—the railroad, the telegraph, the airship, the wireless—is bringing the world closer together. We are becoming smaller. Once there was such a thing as a world emperor. It may happen again."

The above is worth study only as showing the transcendent sort that nowadays comes to Congress. Mr. Sheppard reminds one of the late Mr. Bayard, whom the late Mr. Vest alluded to upon a sun-kissed occasion as "The senator of solar walks and lunar ways."

* * *

SPEAKER CANNON COMPLAINED that it was getting so a House quorum couldn't be kept in the chamber, and legislation in its forward march was at the mercy of any one who felt like making a "no quorum" objection. This wholesale desertion of their House duties by the members Mr. Cannon regarded as little less than a scandal.

It is easily explained, however. The House rules don't leave the member anything to do. The Speaker is the whole show. In brief, there isn't under the present ball-and-chain restrictions any reason for a member remaining in the chamber, with every reason for his going somewhere else. No man, not even a congressman, likes the rôle of stoughton bottle.

* * *

MUCH IS SAID BY PROFESSIONAL PURISTS about the "spoilsman." The spoilsman, according to mugwump authority, is anybody, everybody not covered by civil service. He who is covered by civil service is a patriot; the other fellow is a tax-eater.

And yet, under civil service, as compared with a day when we had the other sort, the work of government is twice as expensive and half as well done. It is true of every nation, this as well as European, that it will collect taxes from the people to the point where revolution begins, and then eat up what's collected in salaries, contracts and graft.

They did that under the "spoils system." They do it now when civil service prevails. The only public difference is that under the spoils system the weasels killed your chickens, while under the civil service they die of the pip.

* * *

LAST CONGRESS THE SENATE, just to be different from the House, tried to make the President's salary, including railroad tickets, $100,000 a year. Not that that $100,000, in case the Senate had succeeded, would have been all a President got. Aside from salary, the President costs American mankind $69,920 for clerk hire, $25,000 for contingent fund, $35,000 for horses, $9,000 for care of grounds, $6,000 for wood and coal, $12,000 for flowers, $2,000 for stationery, $5,100 for gas and electric lights. These figures are for a White House year.

However, cheer up. The heel-groveling hordes of Europe pay much more. The wages of the King of Italy are $2,850,000 a year. Portugal, with but one twentieth of our population, puts her little, futile king on the payroll for $775,000. Even such a measly, no-account monarch as the King of Saxony, who isn't a king at all, but simply thinks he is, gets $72,000. After all, the Senate, in seeking to give Mr. Taft $100,000 a year, was but lagging along in the far rear of the world at large.

No, I don't think Mr. Taft ought to have it. But who am I? Moreover, you can't get around the fact that one of the White House dinners, say the diplomatic dinner, costs roundly $1,200, which said $1,200 comes out of the presidential weasel-skin.

The Saving Touch of Honor

By Richard Maxwell Winans

Illustrated by Harriet A. Newcomb

The surgeons were still busy by the flaring lights in the hospital tents, working with skilled fingers and deft touch, caring for the hurts of those wounded in the afternoon's sharp fighting. The scorching heat of the day left the evening atmosphere sweltering and muggy, and the forms on the little cots moved restlessly with the burning of the fever added to the heat of the night.

In the far corner of the main tent, where those already cared for were placed, a man arose, sat for a moment on the side of the bed, then stood erect, to sink unsteadily upon his knees, then rise again. Cautiously and noiselessly he groped about under the cot for his clothes, and, finding them, began to dress. It was slow work, for the wound in his shoulder burned and stung like red-hot needles.

With faltering steps he gained the outside of the tent and headed south, toward the knoll at the bend of the road where the center of the hardest fighting had been just before dark.

Conlin knew the way, but it was hard going in the mud, crippled as he was and weak from loss of blood. But he knew that out there somewhere lay a man who, he had learned, had not been brought in, and on the chance against hope of finding him alive he accepted the risk of going out alone to search for him.

He hadn't realized while the fight was on what a hell it had been. His mind had been too much a-whirl with its own internal battle to hold a clear conception of things aside. It had been a fight to the last gasp of death, and when at sunset the lines closed and gun-butts smashed down on heads that were cracked like egg-shells, and bolos were parried by bayonets that were in turn driven deep into unprotected bodies, it had turned into a relentless, quarterless, mortal duel.

Ambushed and trapped, the skirmishing volunteers would have had a clean slate at roll-call but for a body of regulars returning along a near-by road to the west, who had come across on the double-quick to their relief. Even then only straight shooting and hard, fast fighting had finally driven back the persistent black men at the stormy close of the day.

Conlin had reached the turn of the road, stumbling over the rough ground, unsteady with weakness and fatigue. It was dark there in the shadow of the trees, and he was a bit uncertain of his location. There had been mighty little chance to make a note of landmarks when the last rushes were made before he got that slash in his shoulder and thump on his head that knocked him out.

Reaching a fallen tree-trunk, he sat down to study his bearings—and to think.

Conlin's mind was turning back to the time when he had loved a dainty little lassie near the old New England homestead. And their love was of the passionate, fervent, marrying kind. But Conlin had been ambitious; he wanted first to make a fortune, more at least than he could ever hope to dig out of the few stony acres that had been his heritage.

The West called to him, and months after he was among the adventurous, hopeful army in the Klondike. But for Conlin the pot of gold at the end of the rainbow did not materialize. Gold he found, but not the limitless store that New England dreams had painted wondrous pictures of. But still he persevered. Molly had put her faith and trust in him, and he would not disappoint her. But even if he should fail to win the fortune, he could yet go back and find in her a treasure of greater value to him than all the yellow wealth of the Klondike. So he dreamed. But dreams do not all come true. Conlin still had much of the cold reality of life to learn.

A year of freezing and starving and digging and saving, and Conlin gave it up. With regret in his heart that he had not been able to make good the full promise to Molly, he packed his outfit and took the trail for home—and Molly.

But Molly! Better to have remained unknowing in that frozen land beyond nowhere than to have come back for this! Molly was gone away! Prince Charming had come upon the lonely little wild flower with his city graces and promises of gaiety and luxury in a world that was very alluring to the simple country girl; and Molly forgot—as women do. Now it was Conlin's turn to forget—if he could.

The needed excitement and change of scene that would give him opportunity to forget came with the chance to enlist for the war. There was no Molly to wet his cheeks with tears when he embarked with his regiment on the transport bound for the far-off Philippines. As he stood looking down upon a group of officers and their parting friend, he suddenly straightened and grew rigid; his heart swelled in his throat and choked him, the cold sweat started, and his nerveless hands gripped hard at the stanchion for support.

Molly was there! She stood leaning against the shoulder of the captain of his own company, and his arm was about her waist and her head lay upon his breast. A new purpose in life opened to him; the vicious, lawless, brutal spirit of revenge. He would hurl back the bolt that had been flung at him. The time would come, out there in the wilds; alone with outposts, skirmishing scattered through the swamps, in some night attack, in the headlong charge; sometime, somewhere, somehow, to strike, unerringly and unseen. Then Molly across seas could wear out her heart and wither to old age with the searing soul-torture of anguish and despair he had known when he learned what it meant to have, to hold and—to lose.

Conlin closed his eyes as he sat there in the night on the fallen tree-trunk, and again he saw and felt and lived over the furious, vicious fighting that had closed the day. The crack of the rifles still snapped in his ears, the thud of gun-stocks, the twist and shift of bayonets, the dull gleam of the bolos, the whites of the black men's eyes showing like phosphorus in the half light, the leaping, squirming, striking, struggling, falling forms about him, the crackling of the underbrush as they swayed and swung among it, the faces smeared with blood, the shouts and cries, the groans of the wounded, the pitiful mutterings of the dying—all came back to him in its uncanny panorama of circumstance and detail.

While they fought at close quarters in the gloom of the approaching storm, each man his own defensive and aggressive force, with gun-butts and bayonets doing greater execution than bullets, nerves tense and muscles weary, Conlin's company captain stood almost shoulder to shoulder with him. He watched the skill and fighting prowess of the man, and he admired his physical stamina and respected his courage; yet he hated him—oh, how he did hate him!

The sometime, the somewhere, the somehow had come! Molly would soon know what it was to bow down beneath the thorn-crowned cross that had broken his life!

Conlin fell back a pace from the heavy brunt of fighting on the forward line. He was not a coward. He was preparing to do the thing he had planned; freeing himself from the gruelling strain at the front, to give better opportunity for an undivided watch of those about him, that he might strike when the chance offered.

Stealthily now, on the defensive, only warding off a blow that reached him where he hung back, partly shielded by the men in advance of him, measuring time, watching, waiting—a tiger ready to spring.

The soldiers were beating them back, every man fighting to his limit, minds and eyes all in the fray; no man gave heed to his brother. Conlin sprang forward, he would deliver his shot at the side, close and sure. He was near enough now to hear his captain's labored breathing as he fought among his men, striking, thrusting, parrying; encouraging his men now and then by a word as well as by his example.

Now was the moment! He was by his side. The long-waited time had come. The barrel of his gun was brought upward close to his breast.

He raised the hammer, finger on the trigger—the last second of suspense was on him. The cold sweat came as on that day they sailed, his face was contorted, his blood ran fire, the veins stood out like whip-cords, the muscles twitched convulsively, drawn taut as cables, his mouth gaped, his tongue was parched and stinging, his breath scorched his lips, splotches of red flared before his eyes. The gun's muzzle was close to the captain's side, under the uplifted, fighting arm, the trigger-finger tightened, a scorching current of tingling electric fire surged and seethed through him — now! — only God would know, and—

Crack!

The glittering bolo that had swung for the captain's unguarded body flew high in the air as the dusky native dropped dead almost at his feet, pierced through the heart by Conlin's quick-aimed shot.

The revulsion had been instantaneous. The spirit of the soldier had asserted itself. The heart of the love-wronged, revengeful man again beat beneath the uniform of the comrade. The imminent, mortal peril of a brother soldier at his side had like a flash given pulsing life to that saving touch of honor which, though it may lie dormant for a time, is woven like a delicate filament into the soul of every man, waiting the occasion to make itself manifest. It had come to Conlin, and when its need was the greatest.

As Conlin lunged forward to parry another blow and to thrust home with his bayonet, a streak of living fire burned his shoulder, and the next instant his head roared with the thunder of an impact from a gun-butt; there was the flash of many colored lights before his eyes, and he sank down, limp and unconscious, among those others for whom the day was done.

It was awesome work there in the deep of the night, whose pall-like hush and silence was disturbed only by the soughing and the moaning of the wind, alone, searching among the dead. There was evidence here and there where the hospital corps had been among them, turning aside the bodies of the dead in their search for the living, as they possibly had had to do for him. Night was heavy in the scrub when the corps arrived, and the search for the wounded was a hurried one.

There had been the chance of overlooking some poor fellow, and that was the chance that Conlin built his hope upon. Where the dead lay thickest, there he expected to find the man who had stood with his men, in the center of the heaviest fighting.

Nor was he disappointed. With face upturned, his body covered with rigid, silent forms, he found him.

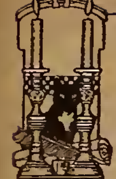
The water from Conlin's full canteen moistened the parched lips and throat, and cooled the fever, while the brandy set the blood tingling through his veins, and put some life into his numbed body.

It was painfully slow getting back to the hospital camp, but foot by foot Conlin worked his way along, and as the dawn broke, his captain lay on a cot, one hand in Conlin's; resting, safe—asleep.

Only Conlin knew, or ever would, of the double battle he had fought that afternoon; what a hell the one within himself had been or how near he came to losing against the tumult of madness that burned in his heart.

But Molly learned in the after days of the unselfish soldier who had risked his life to save her husband, and his name, and then she understood, and she was proud of the loyal, courageous man whose love had once been hers. And, it may be, she was not a little regretful, too, for love does not really ever altogether die in any heart where it has some time lived.

"It was awesome work there in the deep of the night, whose pall-like hush and silence was disturbed only by the soughing and the moaning of the wind, alone, searching among the dead"



Just for Fun

Natural History

The teacher was giving a lesson on the animal kingdom.

"You have named all the domestic animals but one," she said. "It has bristly hair and likes to get into the mud."

"I know," replied little Teddy, making himself very small behind the desk. "It's me!"—F. F. T.

Mathematics Made Easy

Little Doris could not count beyond four. One day, when she was showing me five berries that she had picked, I asked, "How many have you, Doris?"

Her brows puckered a moment, then dimpling with smiles, she answered, "Wait till I eat one—then I'll tell you!"—Abigail Ronne.

The Difference

"Does your mother allow you to have two pieces of pie when you are at home, Willie?" asked his hostess.

"No, ma'am."

"Well, do you think she would like for you to have two pieces here?"

"Oh, she wouldn't care," said Willie confidentially, "this isn't her pie."—Christian Work.

Poor Smith!

A young New York broker of convivial habits fell in with an old school friend who had gone on the road.

"Whenever you're in town come up and bunk with me," he urged his friend as they separated, "no matter what old time it is. If I'm not there just go ahead and make yourself at home. I'll be sure to turn up before daybreak."

Soon after this the salesman arrived in town about midnight, and remembering his friend's invitation, sought out his boarding-house. There was only a dim light flickering in the hall, but he gave the bell a manful pull. Presently he found himself face to face with a landlady of grim and terrible aspect.

"Does Mr. Smith live here?" he faltered.

"He does," snapped the landlady. "You can bring him right in."—Everybody's.

Muriel's Disappointment

Little Muriel flew into the house, flushed and breathless.

"Oh, mother," she cried, "don't scold me for being late to tea, for I've had such a disappointment. A horse fell down and they said that they were going to send for the horse-doctor, so of course I had to stay. And after I'd waited and waited, he came, and oh, mother, what do you think? It wasn't a horse-doctor at all. It was only a man!"—Everybody's.

A Hurry Call

"Shall I tell your fortune, sir?"

"Yes, tell it to hurry up."—Christian Advocate.

At the Ball-Game

Grace—"Who is that man they're all quarreling with?"

Jack—"Why, he's keeping score."

Grace—"Oh! and won't he give it up?"—Bohemian Magazine.

How She Read

While aunty arranged the pantry shelves, her little niece handled the spice-boxes, and called each spice by name. Presently she said, "Aunty, I can read."

"Can you, dear?" answered aunty.

"Yes, aunty," came the reply, "but I don't read like you do. I read by the smell."—The Delineator.

Why He Was Envied

"I tell you," said one man to another, as they emerged from the corridor of a concert-hall. "I envy that fellow who was singing."

"Envy him!" echoed the other. "Well, if I were going to envy a singer I'd select somebody with a better voice. His was about the poorest I ever heard."

"It's not his voice I envy, man," was the reply; "it's his tremendous courage."—London Opinion.

Up-to-Date

Father—"Willie, your conduct of late has been most reprehensible. I cannot imagine where you learn such behavior."

Willie—"Am I to understand, sir, that you entirely discredit the theory of heredity?"

The Versatile Growl

"What's that dog doing, ma?"

"He is eating his dinner, Jimmie."

"What makes him growl that way?"

"He is enjoying his dinner."

"Huh! he's different from pa, isn't he?"—Judge.

Induction

Little Girl (to gentleman visiting her father and mother)—"Were you ever boiled, Mr. Brown?"

Brown (with a start)—"Boiled! What makes you ask such a queer question, child?"

Little Girl—"Oh, because I heard papa say your wife always kept you in hot water!"—The Circle.

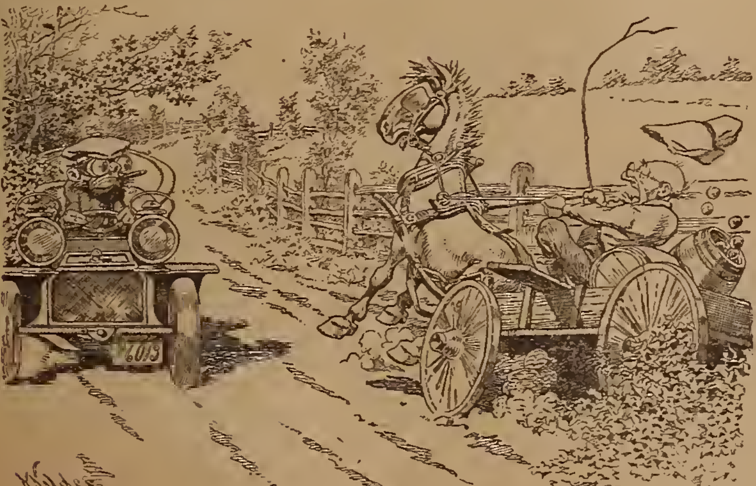
The Catakissin

Little Mary had returned from her first visit to Sunday-school.

"And what lesson are you to study for next Sunday?" her mother asked.

"Nuffin' much," said the four-year-old rather scornfully. "Her just said to learn all about the catakissin, and me knowed that already."—Literary Digest.

A butcher in Euknow, with a tobacco heart, was told by his doctor to give up smoking hams.—Judge.



The Real Cause

The Man in the Wagon—"Hey, there, mister! Jump into the bushes quick. It's you he's afraid of!"

Ready Cooked.

The crisp, brown flakes of

Post Toasties

Come to the breakfast table **right**, and exactly right from the package—no bother; no delay.

They have body too; these Post Toasties are firm enough to give you a delicious substantial mouthful before they melt away. **"The Taste Lingers."**

Sold by Grocers.

Made by POSTUM CEREAL CO., LIMITED.

BATTLE CREEK, MICHIGAN.

All These Post-Cards

Without Cost to You

These are ten beautiful post-cards—"Flower Friends"—with a favorite flower printed in the exact natural colors on a solid gold background.

Each card has a delightful verse showing the "message" of that flower—just what its meaning is.

These flowers have been made by a special photographic process—the most costly way—and are so perfect that it seems as if they could be plucked from the card and that their fragrance was there. **Don't fail to secure a set of the "Flower Friends."**

How to Secure a Set for Yourself

We will send you the "Flower Friends" at once and **Farm and Fireside for three months** if you will send us this coupon, together with ten cents in stamps or silver. This is a great offer, a great farm paper for three months and the "Flower Friends," which would cost 25 cents to 50 cents at any store, at only the cost of your magazine, 10 cents.

If you are a paid-up subscriber **now**, you can have the three months of the Farm and Fireside sent to some friend who would like to have it—or else sent to you for three months more.

Mail This Coupon To-Day

Farm and Fireside, Springfield, Ohio.

Gentlemen:—Please send me at once the ten post-cards, "Flower Friends," and Farm and Fireside for three months, for which I inclose five two-cent stamps (or silver) to pay the cost of postage and mailing.

Do you get Farm and Fireside now? YES — Mark — NO

F. F.—8-10-09

Friends in Canada should send fifteen cents in stamps.

This Atlas

For Our Readers Without Cost

At last FARM AND FIRESIDE has been able to obtain a splendid, comprehensive Atlas of the World, which it now offers to its readers for a limited time, absolutely without cost.

106 Pages,
70 Colored Maps,
Flags of All Nations,
Biographies of Our Presidents.

What You Will Get

By our special arrangements you can obtain the famous Hammond's Handy Atlas of the World without one cent of cost, if you act at once. We have secured for our readers the latest 1909 edition of this great Atlas, which is just off the press, revised up to date. This volume contains 106 pages, 6 by 8 inches in size, and is bound in substantial and attractive red cloth. There are 70 full pages of maps, containing new maps of each state and territory in the United States, and every country in the world. Special maps show the important ship routes, the distances between ports, also the latitude and longitude of every place in the world. The flags of all nations are shown in their real colors, and a gorgeous display they make.

In addition to all the maps showing the location of countries, towns, rivers and mountains, this valuable Atlas and handbook contains a brief accurate biography and the portrait of every president of the United States, including William Howard Taft, who was inaugurated on March 4th. There is a list of all the most important cities of the world, with the population of each, including every city in the United States with a population of 10,000 or more. The book contains a full-page map of the Panama Canal, with a profile map showing just how the canal will be built, together with full description of the canal. An interesting section of the Atlas is a description of each of the great land-reclamation projects of the country. Nearly fifty of these great irrigation undertakings are described. They mean the making fertile of a million and more acres of land in the Western states. A large map shows where each of these irrigation sections is located.

How to Get It

Send us two subscriptions to FARM AND FIRESIDE at 35 cents each, and we will send you the Handy Atlas, free of charge, with postage prepaid by FARM AND FIRESIDE. The subscriptions may be either new or renewal. One of the subscriptions may be your own. If you send two 50-cent subscriptions, they will each get FARM AND FIRESIDE for two years.

FARM AND FIRESIDE
SPRINGFIELD, OHIO

This Offer Will Be Withdrawn. Act at Once

Madison Square Patterns

No. 1317—One-Piece Corset-Cover

Pattern cut for 34, 36, 38, 40 and 42 inch bust measures. Quantity of material required for medium size, or 38 inch bust, one and one half yards of twenty-seven-inch material.

No. 1218—Blouse Suit With Applied Yoke

Pattern cut for 6, 8, 10 and 12 year sizes. Quantity of material required for medium size, or 8 years, five and one fourth yards of twenty-seven-inch material, or four and one fourth yards of thirty-six-inch material, with one half yard of white material and one half yard of velvet for trimming.

At least twice a year, if not more often, something new and more practical than anything ever thought of before is brought out in the line of collar-foundations. The novelty just now is a boned chiffon foundation, lower in front than at the sides and back, and possessing the novelty of having the fasteners attached. The average collar-foundation has to be pinned at the back. In this one the foundation fastens just as any outside collar does. In fact, the fasteners are particularly firm and are so adjusted that they are invisible. The price of this collar-foundation with patent fasteners is but nine cents, and they come in all sizes.

To hold up the collar of your lace or lingerie waist there is something new and most convenient in the way of a collar-set provided with fasteners. The set consists of two pieces of flexible and unbreakable collar boning covered with a white washable material. There are two other pieces to be sewed at the back of the collar. To these two pieces the fasteners are attached, and in closing the collar they fit into each other in the usual patent-fastener way. This is the same fastener that is used at the back of the chiffon collar-foundation. These useful washable collar-supporters cost seven cents a set.

Boned Chiffon Collar-Foundation With the Invisible Fasteners Attached. Also a Set of Washable Collar-Supporters With Fasteners in the Back Pieces.

No. 1310—Tucked Waist With Square Yoke

Pattern cut for 32, 34, 36 and 38 inch bust measures. Quantity of material required for medium size, or 36 inch bust, three yards of twenty-two-inch material, or one and one half yards of thirty-six-inch material, with one and one half yards of tucking for sleeves and yoke.

No. 1311—Skirt With Plaiting in Front Gore

Pattern cut for 22, 24, 26 and 28 inch waist measures. Length of skirt all around, 41 inches. Quantity of material required for medium size, or 26 inch waist, eight and one half yards of twenty-two-inch material, or five and one fourth yards of thirty-six-inch material.

No. 1353—Russian Coat-Suit

Pattern cut for 2, 4 and 6 year sizes.

Madison Square Patterns

If you want to know all there is to know about the best of the coming fall fashions, send in your order for the big, beautifully illustrated Fall Catalogue of Madison Square Patterns. This catalogue will be much bigger and much better than anything we have ever issued before. It will be decidedly worth owning. It will cost ten cents. Send your order to the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City.

How to Get Patterns Without Cost

We will send you two of FARM AND FIRESIDE'S Madison Square Patterns, without cost, if you will send us two subscriptions to FARM AND FIRESIDE. One of the subscriptions may be your own. Either subscription may be for one year at thirty-five cents or for two years at fifty cents. You may choose any two patterns shown on this page or in any other issue of FARM AND FIRESIDE. Send your order to the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City.

Copyright, 1909, by The Crowell Publishing Company

Back View of No. 1317

"Togards" Worn Over the Bare Feet, to Prevent Holes in Your Stockings.

Heel-protectors for stockings are not new, but "togards" are, and you can get a set for nine cents. You wear them right over the toes of your bare feet. They are snug-fitting and elastic and take up but little space. They are not dyed, but come in the natural color and are warranted to prevent holes from coming in the toes of the thinnest stockings.

No. 1269—Dart-Fitted Circular Drawers

Pattern cut for 22, 24, 26, 28 and 30 inch waist measures.

Neck-chains and pendants are very much the fashion this year, and they come at prices quite within the reach of the average girl's purse. An especially dainty one is illustrated on this page. The fine chain is of sterling-silver links and the pendant a heart set with rhinestones. It makes a very dainty accessory to wear with an afternoon or evening gown and costs but ninety-five cents.

NOTE—Miss Gould will be glad to send the addresses of the firms selling the boned chiffon collar-foundation with washable collar-supporters, neck-chain and "togards," provided a stamped and self-addressed envelope is inclosed. Address Miss Gould, care of Farm and Fireside, 11 East 24th Street, New York City.

Dainty Link Neck-Chain to Wear With Summer Gowns. Made of Silver With Heart Set in Tiny Rhinestones.

Miss Gould's Dressmaking Lesson

There are so many different kinds of dressing-sacques these days, and such a variety of materials designed for them, that it will be the woman hard to please who cannot find a morning-sacque just suited to her need as well as to herself.

In making a dressing-sacque, be careful, in selecting the fabric, that it not only is becoming to you, but that it is suited to the design which you are going to use. There are any number of new fabrics this season appropriate for the plain dressing-sacque, and quite as many, if not more, which would lend themselves admirably to the making of a dainty more or less elaborate sacque.

For the plainer dressing-sacque there come silky-looking cotton poplins in the most charming of colors, and dainty designs in madras and some lovely new sateens showing a narrow border which can be used in place of a trimming-band.

The pretty cotton crêpes, plain and embroidered, are effective fabrics for the more elaborate sacques, and so also are all of the lovely silk and cotton materials which come in any number of designs and colors.

The Fitted Dressing-Sacque With Round Collar, No. 1313, is particularly designed for fabrics of some body and weight. It fits the figure well, outlining it gracefully, but is not snug. This sacque would be an excellent one for the amateur to attempt, because there are no tucks or box-plaits or frills that require a more experienced sewer to handle.

The pattern envelope contains seven pieces. The front is lettered V, the under-arm gore W, the back T, the collar L, the upper sleeve K, the under sleeve F and the cuff J. The letters are perforated through the pieces of the pattern, in order to identify them and make it impossible to confuse the pieces.

To Make the Fitted Dressing-Sacque With Round Collar

In beginning the work, smooth the pieces of the pattern out carefully before placing them on the material. Lay the edge of the collar marked by triple crosses (XXX) on a lengthwise fold of the material. Place the other parts of the pattern with the line of large round perforations in each lengthwise of the goods. Be sure to mark the waistline on each piece of the sacque and cut out the notches before removing the pattern pieces from the material. The waistline on the fronts, backs and under-arm gores is designated by square perforations.

Before taking up the darts in front it is well to cut away the material in the dart. Allow three-eighths-of-an-inch seam inside the lines of small round perforations. Then take up the darts, bringing the lines of small round perforations together.

In joining the different parts of the sacque, first bring the corresponding notches together and pin securely. Bring the waistlines together and have the lower edges even. After pinning at these points, use several pins between, and be sure that the edges are even before basting. Take up just the three-eighths-of-an-inch seam allowance except at the shoulder and under-arm seams. One-inch seam is allowed at these two points, as indicated by the lines of small round perforations. In closing these seams, bring these lines of perforations together and baste along the lines. Turn a one-inch hem on each front by notches.

Join the round collar to the neck as notched. Lap the fronts of the sacque, matching the center lines of large round perforations, and fasten invisibly.

Join the upper and under sleeve as notched. Ease the upper sleeve at the elbow between notches. Sometimes the material used for a sleeve of this kind is not soft and will not lie in little folds. Then it is necessary to gather the upper sleeve at the elbow between notches and distribute the fullness, pinning it before basting the seam.

Gather the upper sleeve at the top between double crosses. Arrange the sleeve in the arms-eye, placing the front seam at the notch in the front of sacque. Bring the notch at the top of the sleeve to the shoulder-seam, and pin at these two points. Always hold the sleeve toward you while arranging it in the arms-eye. Pin in the plain part of the sleeve smoothly, then draw up the gathers at the top to fit the remaining space. Distribute the fullness carefully, and pin securely before basting. Finish the cuff and join to the lower edge of the sleeve as notched. The edges of this sacque may be finished with wash ribbon, fancy braid or bands of contrasting material. If preferred, the sacque may be made to button in front instead of closing invisibly.

Pattern No. 1314, Plaited Dressing-Sacque, may be used to make two sacques of such different style that one would never realize the same pattern was used for both models. Illustrations on this page show one sacque belted in and made in almost tailored effect, while the other is an Empire model, slightly low at the neck.

The pattern consists of six pieces. The front is lettered V, the back T, the collar L, the belt X, the sleeve K and the wristband J.

To Make the Belted Sacque

Lay the edges of the collar, back and belt marked by triple crosses (XXX) on a lengthwise fold of the material. Place the front, sleeve and wristband with the line of large round perforations in each lengthwise of the goods. Mark all of the perforations and cut out the notches before removing the pattern pieces.

Join the pieces by corresponding notches. Form the plaits, back and front, by bringing the corresponding lines of triangle perforations together. Baste on these lines, then stitch, and press flat. Join the collar to the neck as notched.

Turn hems on the collar and fronts of sacque by notches. Lap the fronts, matching the center lines of large round perforations, and button. Sew the buttons along the line of large round perforations on the left front. Work the buttonholes on the right front so the front end of each hole comes to the line of perforations.

Arrange the belt around the waist. Attach the belt to the sacque at the back, matching the centers of belt and sacque. Lap the ends of the belt in front, matching the center lines of large round perforations, and button.

Gather the sleeve at upper and lower edges between double crosses. Join the wristband to the lower edge of sleeve as notched. Sew the sleeve in arms-eye as directed for No. 1313.

To Make the Empire Dressing-Sacque

The collar and belt are omitted in this sacque. Cut out the fronts V-shape at the neck on lines of small round perforations.

As this sacque does not lap in front, the hems should be turned by lines of large round perforations.

Stitch the plaits at the back to a square yoke depth. This is indicated in the pattern by the line of small round perforations.

Arrange the ribbon around the sacque along the line of small round perforations, and tie in a bow at the front. This ribbon gives the Empire effect. The sacque hangs in straight plaited folds below the ribbon.

Finish the edges of the sacque with frills as illustrated.

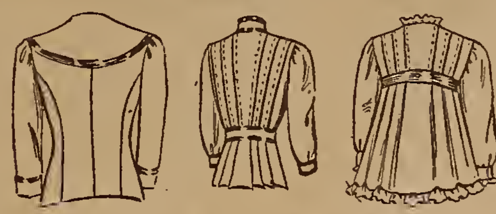
Dressing-sacques for cool days may be made of soft flannelette or German eider-flannel that looks somewhat like eider-down. Trimmings of fancy mercerized braid or bindings of inch-wide wash ribbon are attractively applied on these sacques.

For the more dainty and frilly sacques the Empire effect is most desirable. It is easy to make and is just the sort of a morning-sacque for materials like wool crêpe, albatross and nun's-veiling. These fabrics are light in weight, but soft as silk, and may be trimmed with narrow velvet ribbon, frills of lace or double silk ruchings.

Sometimes the hems are secured with French knots worked in several shades of one color, and possibly a fine scroll or vine of embroidery as an extra touch of trimming for the cuffs.

If the long sleeves are not desired, it is an easy matter to cut seven inches off the lower part of the bishop sleeves, making them elbow-length. Permit them to hang loosely in kimono effect, finishing the edges with bands of ribbon or lace frills.

Dressing-Sacque in Empire Effect Made From Pattern No. 1314



Back Views of Dressing-Sacques

No. 1313—Fitted Dressing-Sacque With Round Collar

Pattern cut for 34, 36, 38, 40 and 42 inch bust measures. Price of pattern, ten cents. Quantity of material required for medium size, or 38 inch bust, four and one fourth yards of twenty-four-inch material, or two and three fourths yards of thirty-six-inch material.

No. 1314—Plaited Dressing-Sacque in Two Styles

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures. Price of pattern, ten cents. Quantity of material required for medium size, or 36 inch bust, four yards of twenty-four-inch material, or three yards of thirty-six-inch material.

Patterns at ten cents each can be procured for the designs illustrated on this page. Every woman who makes her own clothes will be interested in the new Fall Catalogue of Madison Square Patterns, which will be out September 20th.

We will send the catalogue to your address for ten cents in stamps. Send the orders for the patterns and catalogue to the Pattern Department, Farm and Fireside, 11 East 24th Street, New York City.

Miss Gould wishes the readers of Farm and Fireside to know that she will be glad to answer any questions pertaining to dressmaking which may perplex them. She will send by return mail a personal letter if a stamped and self-addressed envelope is inclosed.

Copyright, 1909, by The Crowell Publishing Company

Shop in New York
through our
Mail Order Department

which is thoroughly equipped for the prompt execution of orders, affording you a selection from the most comprehensive stocks in New York, from the most inexpensive to the highest grade, at the lowest possible prices for reliable goods.

We carry at all times the latest productions of the leading foreign and domestic centres in

Women's, Misses',
Boys' and Children's Apparel
Men's Furnishings,
Silks, Dress Goods,
Laces and Trimmings,
Household Linens, Blankets,
Lace Curtains and
Upholstery Fabrics,
Jewelry, Leather Goods,
Silverware, Toilet Articles

Our Illustrated
Fall and Winter
Catalogue No. 117F

will be issued September 1st, and will be Mailed Free upon request. Send your name and address now.

Stern Brothers
28 TO 46 WEST 23d STREET
15 TO 35 WEST 22d STREET
New York

Girls' Watch
Do you want to earn one for yourself?

No. 1591

We will send this watch for eight subscriptions to Farm and Fireside at 35 cents each. You can easily earn it in an afternoon. Send a postal to-day for a complete description of the watch and how to get it quickly. Address

FARM AND FIRESIDE
Dept. 1b, Springfield, Ohio

Satisfaction

You require cotton dress-goods that will wear well and wash without fading.

Simpson-Eddystone Black & White Prints

—the calicoes of well-woven cloth, beautiful designs and absolutely fast color never fail to give solid satisfaction.

If your dealer hasn't Simpson-Eddystone Prints write us his name. We'll help him supply you.

The Eddystone Mfg. Co., Phila., Pa. Established by Wm. Simpson, Sr.

Why the Robin Has a Red Breast

By W. R. Gilbert

Many, many years ago, when the world was young, and men and women lived in caves, and clothed themselves in furs and skins, the animals roamed as they liked through the forests, with no sound of gun to terrify and annoy them.

But things were not always peaceful even then, for though the lion was king of all beasts, there were many lesser kings to quarrel and fight with each other.

One day there was great excitement among the inhabitants of bird land, for the robins had determined to present a petition to their king, the eagle. Yes, in those days our cheerful little robins had a grievance, and I will tell you what it was.

They had no red breasts, and looked just like little common birds.

This grieved the robins very deeply, as the sparrows laughed and hooted at them, saying, "Who are you upstarts, to sneer at us? Why, you have nothing but brown coats, also, and you fancy yourselves beautiful, like the oriole."

Now, though the robins fluffed out their feathers at these insults and fought these spiteful little offenders, their hearts grew sad and heavy and their cheerful songs were heard no longer.

One day, however, the chief of the robins called a meeting, in order to talk over what they should do, and after a long discussion it was decided to present a request to their king, the eagle, telling him of their trouble, and imploring him to deliver them from the taunts of their enemies by making them beautiful, like the orioles.

Six robins were chosen to be the messengers, and proud of their mission, they flew off to the top of a high and rugged cliff, where the king of the birds held his court.

The eagle received them very graciously and promised to listen to their complaints. "Let all your tribe assemble here in three days," he said, "and we will tell you our decision."

So, when the three days were over, the robins, headed by their chief, presented themselves at the royal court, and asked to see their king.

The king immediately commanded them to be brought in, and as he rose, a deep silence fell on the whole court, for every one was anxious to hear the king's decision.

"My people," he said, turning to the robins, "you have come here to-day to receive the answer to your petition, and this is our decree: We cannot make you beautiful, like the oriole, for as the Great Father has created you, so you must remain. But we can grant you one favor: By your own efforts alone can you win a mark of distinction, which shall be bestowed upon all the members of your tribe for ever.

"Go, and return hither in one month from now, and if any amongst you has done one deed worthy of the reward, he shall become king of the robins, and he and all his tribe shall bear the mark of distinction for ever."

Then, dismissing the court, he spread his wings, and flew solemnly away, attended by his councilors.

"So great was the excitement throughout the whole kingdom that all the inhabitants of bird land seemed to be gathered together

Instantly the robins crowded around their chief in the greatest dismay.

"What are we to do? How can we do some heroic action?" they cried.

"Listen, my children!" he answered gravely. "The king has given us a hard task, and maybe we shall fail to fulfil it, but let us do our best, not for the sake of the reward so much as for the honor of the tribe."

At this the robins cheered loudly, and bidding him farewell, flew off in different directions.

The month passed away. Once more the court assembled to witness the return of the robins.

So great was the excitement throughout the whole kingdom, that all the inhabitants of bird land seemed to be gathered together. Even the hawks, robbers though they are, by reason of their cruel and thieving habits, had come to join the assembly.

At last, with great solemnity, the king arrived, and took his place on the throne, amidst tremendous cheering. Silence being at last restored, he commanded that the robins should be brought before him. Very anxious they looked as all eyes were turned upon them, and the deeds that they had thought so proudly of before seemed to fade into insignificance in the presence of that great assembly.

However, at a sign from the king, the first robin stepped forward, and proceeded to relate his adventures.

"Your majesty," he said proudly, "I thought I would do something useful, so I spent my time watching the oriole build his nest, and see, I, too, have learned to make a nest as neat as theirs." And with great pride the robin produced a nest so like the orioles that the whole court exclaimed in admiration.

"It is indeed beautiful," said the king gravely, "but I fear quite useless, for you cannot teach the rest of your tribe to build nests like that!"

And as with a crestfallen air the robin retired, the next presented himself. "I have fought several battles with our enemies the sparrows, your majesty," he said triumphantly, "and each time I have defeated them!"

"Those who fight the most battles are not always those who deserve the highest praise," said the king quietly, dismissing the subdued little warrior.

The third candidate now came forward. "I have not wasted my time, your majesty," he said triumphantly, "for I have learned to sing the song of the nightingale, which is the most beautiful in all bird land."

"That will not help you to govern a kingdom," was the eagle's answer. "Pass on."

At length all the tales but one had been told, and the last robin had not yet arrived. But just as the king was preparing to give judgment, the missing bird alighted at his feet.

But oh, such a sad little object, with his feathers rumpled and all stained with blood. A murmur of pity sounded through the court, but with a look the king commanded silence.

"Tell us the story of your adventures and why you are thus wounded," he said gently.

"Alas, your majesty," the robin answered sadly, "I have done nothing to deserve the reward, for all the month I have been nursing a sparrow who had broken his wing and could not fly. He would have died if I had left him, but this morning, just as I was setting out, a cruel hawk swept down on my sparrow, and though I fought my hardest, I could not save him." And sobbing bitterly, the little robin tried to withdraw, but the king motioned him to come forward.

"My child," he said gravely, "you, and you alone, have won the right to bear the mark, for you willingly gave up the reward in order to help an enemy.

"My people," he continued, turning to the robins, "your brother, by his unselfishness, has won for you that which you desired.

"The blood which now stains his breast shall stain the breasts of all robins for ever, as a mark of the loyalty and devotion of one of your tribe." And leading the bewildered little hero forward, he asked them this question, "Robins, is he worthy to become your king?"

Then a great shout rose up from all the court, and gladly the robins clustered around their little comrade, for they realized that while they had been working solely for their own glorification, he had forgotten himself in helping another.

So that is how the robins obtained their red breasts.

Cousin Sally's Answers to Letters From Her Boys and Girls

Dear Cousin Sally:—I would like very much to have my name in the Post-Card Exchange column. I have written to quite a number of the cousins whose names have appeared in this column, and have received some fine cards. With every good wish, your cousin,

Edgar Wheeler, Age Sixteen,
51 Central Street,
Marlboro, Massachusetts.

Dear Edgar:—I am glad to know that you have been successful in exchanging post-cards with the cousins. Your letter has encouraged me to keep on with the Post-Card Exchange. Cousin Sally.

Dear Cousin Sally:—I am very much interested in our little "corner," and thought I would like to be one of your cousins. I am a little girl eight years old, and I live six miles from an inland town in an old homestead which belonged to my forefathers. My grandfather fought in the Civil War in 1863. About a mile and a half from our home there is an old meeting-house made of stone and brick, erected on the ground given by William Penn to the Friends. The brick came from England in 1700 and the building is still in good repair. It was used in the Revolutionary War for a hospital. Adjoining it there is a graveyard where the Revolutionary soldiers were buried and where my ancestors were also buried. Lovingly,

Margaret Louise McDowell,
Nottingham, Pennsylvania.

Dear Margaret:—Welcome to our little "corner," dear. Of course you can be one of my cousins, and enter into all our good times together. I was very much interested in all you told me about your homestead and the old meeting-house. It must seem strange to you at times to think that the very ground surrounding your home is the ground on which our countrymen fought for their liberty. You should feel very proud to live in so historical a place. I know an old soldier who fought in the battle of Gettysburg, and I never tire of listening to the thrilling stories he tells of those hard times, when son and father left their home to fight for their beloved country. America has much to be proud of, hasn't she?

Write to me again, soon, dear, for I am interested in everything that you have to tell me. Be sure and enter some of our contests. Affectionately,

Cousin Sally.

Dear Cousin Sally:—I like our little "corner" very much. I have been sick over two years with spinal trouble, and have not been able to go to school. I am getting better, but it seems so slow. I live in town and I think Lodi is a very beautiful place. I have a pet cat and a canary bird. I am very fond of pets. I am getting a collection of post-cards. I love to look them over. Please put my name in the Post-Card Exchange. I am fourteen years old. Our box number is 305. Lovingly,

Linna Nead,
Lodi, Ohio.

Dear Linna:—I am more sorry, dear, than I can tell you, that you have been sick for such a long time. I wish there was something I could do to make you well again. I am sure the boys and girls will be glad to exchange post-cards with you, and I hope you get some pretty ones. Won't you take part in our monthly contests, dear? This would give you a great deal of amusement, I know, and since you are unable to go to school you would have the time. Write to me soon again and let me know how you are getting along. If I were a fairy, instead of just Cousin Sally, I'd wave my magic wand and make you all well and strong again.

With fondest wishes and my love, affectionately, Cousin Sally.

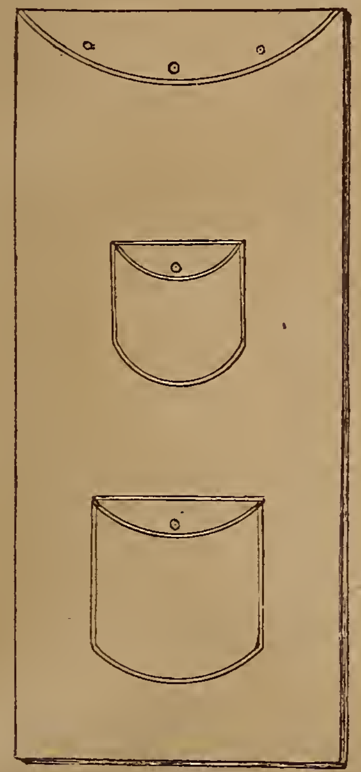
Prize-Winners in July 10th Contest

Lucy Bouril, age eleven, Kewaunee, Wisconsin. Marshall M. Brice, age ten, Wedgefield, South Carolina. Frederick Bernard, age ten, Dayton, Ohio. Vivian Green, age thirteen, Farmington, Illinois. James B. Shields, age fifteen, Durham, North Carolina. Gladys Pool, age fourteen, Bellefontaine, Ohio.

The Household

Small Ironing-Board

How often, when washing out bits of lace, fancy collars or pressing fancy work, one has sighed over the troubles of hauling out the heavy regulation ironing-board. And generally it is just as much trouble to devise some sort of a substitute. The little ironing-board shown in the accompanying illustration is just the thing to have when such occasions arise. It will prove a boon to the woman who does a great deal of embroidery, and to the girl who is going away to college and who often needs an



Handy Ironing-Board for Small Pieces

ironing-board to press out some crushed finery. It should also prove indispensable to the woman who often has a light ironing to do after her regular ironing for the week has been finished.

For the foundation a piece of smooth pine board about two and one half feet long and twelve inches wide is required. Face it with felt—half a yard of double-width felt will be enough. Then make one or two white slips to cover it. These should be of heavy white muslin, and may be buttoned on at one end. A cover of some dark material should be provided to keep the white muslin slip clean, and if the board is for a gift, it may be as handsome as you choose—holland bound with red or blue braid or butcher's linen in some dark shade being selected. On the outside of this cover, which closes with a flap, buttoned down at one end, pockets are placed for the accommodation of the iron-holder, a stick of wax, or for the stand, which may be made of asbestos, like many of the mats sold for protecting polished tables from hot dishes. A dainty finishing touch may be given to the pockets by embroidering on them the owner's initial. A ribbon or tape hanger may be attached, for hanging up the board when not in use.

Steamed Brown Bread

One cupful of corn-meal, one cupful of rye flour and the same quantity of whole-wheat flour, one teaspoonful of soda dissolved in two tablespoonfuls of hot water and added to one cupful of New Orleans molasses, one teaspoonful of salt and two cupfuls of sour milk. Mix thoroughly, and turn into a well-greased tin pail with a tight cover, and steam for four hours. If made in smaller tin cans it will not need to be steamed more than three hours.

Hints by the Way

An excellent way to brush down dusty walls is to take a roll of cotton batting and fasten a thick pad of it on the end of a stick. With this go over all the wall surface, burning the cotton as it becomes soiled and renewing the pad. This method is economical.

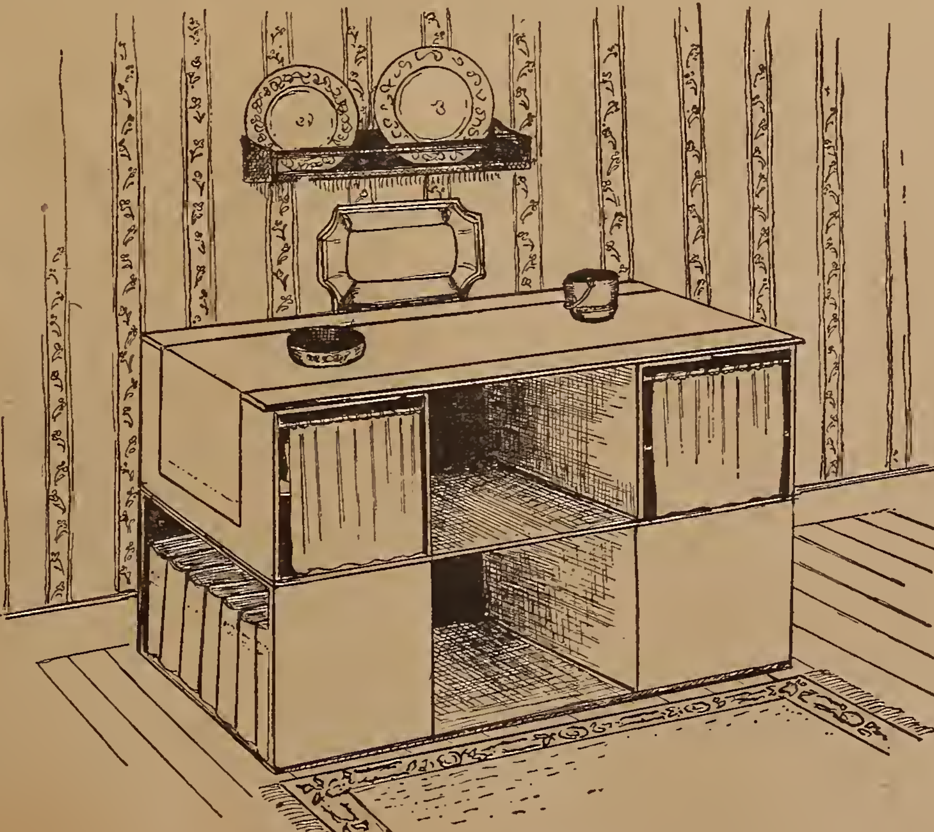
Whalebone bent by wear can be straightened again by holding it before the fire. When it begins to bend from the heat, flatten and straighten it carefully with the hand. It will wear as good as new, and by this process can be used over and over again.

Never wash the inside of tea or coffee pots with soap-suds. If granite or agate ware is used, and becomes badly discolored, nearly fill the pot with cold water, add one tablespoonful of borax, and heat gradually until the water reaches the boiling-point. Rinse with hot water, wipe, and keep on the back of the range until perfectly dry.

Box Sideboard

The convenience of having a sideboard or side-table is appreciated by every housewife, but sideboards sold by furniture-dealers are generally so expensive that the young couple beginning housekeeping, unless well endowed with means, dispenses with one until circumstances are more propitious. A glance at the illustration given below will show how a very neat and convenient substitute may be fashioned of four boxes and two smooth boards. Two boxes stand on the floor with the open side turned outward. One of the boards is then laid over the boxes. It is best to secure the firmness of the structure by putting in a few small nails. However, screws are better, because they may be taken out and the boxes used for packing when the sideboard is no longer needed. One end should be taken out of each of the other two boxes and the sides firmly nailed into place. Then put them on top of the first tier of boxes with the open part to the front, and add the other board to the top. The sideboard is now practically completed. It is a good plan to have small blocks to place under the corners of the sideboard, to raise it from the floor. This affords a solid foundation for the insertion of casters. The rest of the work consists of putting in rods on which to run the small curtains, and staining and adding a coat of shellac varnish as a finish. Any kind of smooth, well-built boxes may be used for this sideboard. If there is lettering upon their sides, it can be removed by applying concentrated lye, and all roughness on them may be taken off with sand-paper. If the man of the house knows anything about carpentry, he can easily construct this simple but useful box sideboard.

With a neat white cover on it, it is amazing how well this box sideboard will look. A simple plate-rack placed above the sideboard will give it an effective touch.



Attractive Sideboard Made of Packing-Boxes. It May Be Used as a Sideboard or Serving-Table

How to Stew Meat

Stewing has been described as the most economical method of cooking ever invented. No great heat is required, and practically no attention is needed, and by this process we are enabled to make use of pieces of meat which, while very nutritious when carefully dressed, would otherwise be too tough for food.

The meat is put in the stew-pan with a very little cold water (not enough to cover it), and then gradually heated. Remember, stews must never boil. When the meat is half done, vegetables may be put in.

To Get Rid of Moths

If moths have got into closets or boxes, despite all precautions, heroic measures must be resorted to to get rid of them. If the closet is papered, the paper should all be torn off, and the walls, shelves, woodwork and the inside of the door thoroughly scrubbed with a strong disinfectant soap. Then paint over the whole of the closet or box with a very strong infusion made from the coarsest and strongest tobacco, being careful to get it into every crack. Let it dry thoroughly, then sprinkle well with spirit of camphor. This is said to clear away all moths and their larvæ.

Hint on Omelet-Making

It is not every woman who makes a success of even the plainest omelet. When one fears failure, try this way: To the beaten yolks of six eggs add the stiffly-whipped whites of three, season with salt and pepper, and add one cupful of milk in which has been smoothly stirred one tablespoonful of flour. Pour the mixture into a well-buttered pan, and set the pan in a hot oven. When the omelet begins to thicken, pour over the remaining whites of the eggs whipped to a froth, and allow to brown slightly without permitting the top to harden. Serve immediately.

Wear Gloves When Dusting

Almost every woman finds it necessary to do a certain amount of dusting in her home. In all large cities and most small manufacturing towns a surface of dust and soot collects on everything in the room. No matter how large your duster may be, this soot will settle around your nails and in your knuckles, and it is a difficult thing to remove it. Avoid this by wearing gloves when you dust. Have your husband or brother save his old gloves for you to use, or, better still, buy a pair of cheap chamois gloves several sizes too large for you, and call them your "dusting-gloves." They may be washed once a week, and that is a point in their favor.

Macaroni Peppers

Cut the tops from green peppers, remove the seeds and core, and let stand for ten minutes in boiling water removed from the fire. Chop cooked macaroni into small pieces, and mix with a thin cream sauce. Drain the peppers, then fill with the macaroni, adding to each a generous spoonful of grated cheese. Bake in a granite dish with very little water until the peppers are tender. If covered they will not be dry when cooked. Serve as an entrée with a tomato sauce made from fresh or canned tomatoes. These are just the thing to serve with boiled or baked fish.

Peach Souffle

Peel and stone three ripe, mellow peaches, and mash fine. Add two tablespoonfuls of sugar and the well-beaten yolks of two eggs, then stir in lightly the whites beaten stiff. Turn into a pudding-dish, and bake in a quick oven. Serve as soon as done.

A DELICIOUS DRINK

Baker's Cocoa

made by a scientific blending of the best tropical fruit. It is a perfect food, highly nourishing and easily digested.

52 HIGHEST AWARDS

Walter Baker & Co. Ltd.

Established 1780 Dorchester, Mass.

Want to be strong?

Eat more Quaker Oats. Eat it for breakfast every day. This advice is coming from all sides as a result of recent experiments on foods to determine which are the best for strength and endurance. It has been proved that eaters of Quaker Oats and such cereals are far superior in strength and endurance to those who rely upon the usual diet of heavy, greasy foods.

When all is said and done on the cereal food question, the fact remains that for economy and for results in health and strength, Quaker Oats stands first of all. It is the most popular food in the world among the foods sold in packages.

All grocers carry Quaker Oats. It sells at 10c for the regular size package, 25c for the large size family package and 30c for the family package containing a fine piece of china.

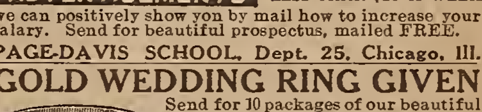
PROFITABLE EMPLOYMENT

Wanted in every locality an intelligent man or woman to represent us. Our guaranteed income plan insures substantial remuneration to the right party. Careful training. Permanent business. Good opportunity for promotion. Address

THE CROWELL PUBLISHING COMPANY
Department of Agents Springfield, Ohio

LOVELY POST CARDS GIVEN

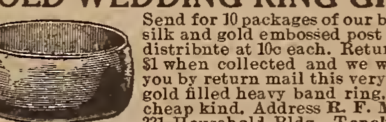
Three choicest artistic Sonvenir Post Cards, beautiful colors, absolutely without cost, if yon send stamp for postage. W. H. GATES, 182 W. 8th St., Topeka, Kansas.



IF YOU ARE EARNING LESS THAN $25 A WEEK we can positively show yon by mail how to increase your salary. Send for beautiful prospectus, mailed FREE.

PAGE-DAVIS SCHOOL, Dept. 25, Chicago, Ill.

GOLD WEDDING RING GIVEN



Send for 10 packages of our beautiful silk and gold embossed post cards to distribnte at 10c each. Return us the $1 when collected and we will send you by return mail this very fine 14K gold filled heavy band ring, not the cheap kind. Address R. F. MOSER, 331 Household Bldg., Topeka, Kan.

GENUINE BARGAINS IN HIGH-GRADE UPRIGHT Pianos. Slightly used instruments: 12 Steinways from $350 up; 6 Webers from $250 np; 9 Krakauers from $250 up; 7 Knabes from $250 up; 3 Chickerings from $250 up; also ordinary second-hand Uprights $75 up; also 10 very fine Parlor Grand pianos at about half. Write for full particulars. Cash or easy monthly payments. Lyon & Healy, 62 Adams St., Chicago. We ship everywhere on approval.

I make all sorts of clear glass for all sorts of uses; each the best glass for its particular purpose.

For my Pearl Glass lamp-chimneys — that bear my name, Macbeth—I make the best glass ever put into a lamp-chimney.

These chimneys are clear as crystal, and they won't break from heat; proper shapes and lengths, and they fit.

I'll send you, free, my lamp-chimney book, to tell you the right chimney for any burner. Address

MACBETH, Pittsburgh.

Life's Ups and Downs

If life were a uniform level broken by no vicissitudes and no disasters, with no strange and baffling problems alternating with its seasons of tranquillity and success, it would be perhaps less trying than it generally is, but also much less interesting. Nothing is more tedious than monotony. Nothing wears on the nerves like a stirless calm. The wildest gusts and storms are more acceptable to the mariner than the inaction which is compulsory when the wind moves not.

I once met an old, old lady, who said that her whole life had been as placid as a summer sea. At long intervals some member of her family had died, but as she had no children, the most intimate and deep of afflictions had been spared her, and her husband still survived. Strange to say, I did not feel that she was to be envied. Without pain in this world's economy there is little reaching forward to the heights of joy; without suffering there is seldom intensity of thankfulness; without birth-throws there is little apparent growth in the spiritual realm. Life all a plain road, no hills to climb, no obstacles to surmount, no vicissitudes to endure, is not so desirable, on the whole, as life which has its struggles, its sorrows and its losses, preliminary as they come to the final realization of its triumphs, its consolations and its everlasting gains.

The time for sturdy resistance to the difficulties and temptations of the day is usually the period of youth, when one is facing the future as well as realizing the present, and when the past does not loom large in one's view. The past of youth is very short; the future looks interminable and the immediate present is strenuous. Middle age often carries burdens which youth has brought to it, carries them with a steadfast courage and a serene cheer impossible to youth; and old age is, or should be, the season of tranquillity, the season of resting on the oars and waiting for the end.

In retrospective hours we sometimes perceive that we made mistakes in our bygone reckonings. We might have avoided some snares and pitfalls had we not rushed along at a breakneck pace. We might have been less impulsive and made wiser calculations and taken precautions against disaster. But what is the use of grieving unduly over what is past retrieval? Better far to be "Up and doing with a heart for any Fate." The past is gone, but the present is ours.

Thoughtful Bible-reading is a great help over hard places. There are so many parallel cases to our own in the wonderful narratives of the Scriptures. So many bits of counsel adapted to our needs, let that need be what it may. So many songs in the night. So often a feast of manna for the famished, or a fountain of water springing up to quench the thirst of the wayfarer. I wish we who read oftener memorized the clear words of truth, and that children were induced to lay them up as a part of their mental wealth. For in the ups and downs of mortal life, God's word is an unfailing cordial, a ceaseless inspiration, and a constant promise of His presence by night and by day.—From "The Joyful Life," by Margaret E. Sangster.

Religious News Items

There are in the United States nine Japanese Shintoist temples and forty-nine Chinese Buddhist temples.

The Presbyterian church carries on work for colored people at one hundred and fourteen different points in the South.

Thirty-four and six tenths per cent of the world's population of 1,544,510,000 are classified as Christians; eleven and four tenths per cent as Mohammedans. That is, 534,940,000 are Christians and 175,290,000 are Mohammedans.

A prominent missionary in China says that there are in that empire thirty or forty thousand schools aiming at Western education. The Chinese are overwhelmingly in favor of reform. Every Chinese newspaper advocates reform. The young men are committed to reform, and such young women as are in public or private schools in the empire are looking eagerly for some improvement in the condition of their sex.

"The vast empire is in motion, very slow, to be sure, but she moves, and she will surely grind to powder any group of rulers who stand in front and attempt to push back."

What is the Good of It?

"Which of you, by being anxious, can add one cubit unto his stature?" Here is the next argument. Sit down and fret for a year, and see how much bigger you are. You may well perhaps be something smaller—certainly shriveled in soul, if not in body—but you will be no bigger. Put the finger of one hand on the finger of the other, and carry it down to your elbow—that is a cubit. Can you add that to your stature by your fretting and your care?

How quickly should we cease from worry if we did not think within ourselves, What good is it? Can you undo anything by fretting? Can you change it? Can you lessen it? If minding will not mend it, then better not to mind.

Some time ago I was talking with a friend of mine whom I had met on the train. I inquired after his wife's health.

"Well," said he in reply, "my wife is well, always well, and always very well, and what is better still, she is always happy. I used to think that she had not the same sensitive nature that I have. When anything occurs to annoy me I am utterly upset. I cannot eat my breakfast; I cannot do my business; I am really ill. But the other day I found out the secret of my wife's complacency. Something had gone wrong which very much worried me. In the course of the morning I went into the house, and found her cheerily going on with her work, actually singing as she bent over it; I felt quite annoyed.

"'Really, my dear,' I said, 'you don't seem at all put out by what has happened to-day.'

"'Oh, no,' she said, 'I am not.'

"'Well,' I said rather angrily, 'then I think you ought to be.'

"'No, no, you must not say that. Look here. Years ago I made up my mind that when anything went wrong I would ask myself honestly and earnestly, "Can I do any good by thinking about it? Am I to blame in any way? If so, do not let me spare myself. Can I do anything to put a better face upon it?" If, after looking at it honestly all around, I found I could do no good, I made up my mind that I would give up thinking about it.'"

"Thank you," said I to my friend. "That is the philosophy of the highest life—'Whatsoever things are lovely, think on these things.'"

We ask often how much a man possesses. That is not the question. The question is how much possesses him.

Some time ago I was at the house of a gentleman in Yorkshire, who said to me, "I used to be a most irritable man. When anything went wrong I fussed and fumed, was miserable myself, and made all about me miserable. My religious influence was worse than undone. I suffered in health and I suffered in my business. But one day I pulled myself up, and said, 'Look here! You are a fool!'"

Whilst we are forbidden to call our brother a fool, it is well to hurl the epithet at ourselves if we deserve it.

"'You are a fool,' I said to myself. 'If your religion does not cure your temper, what has it done for you?' I made up my mind that I would bring all the strength of my will and all the grace of God that I could get to bear upon this besetment. Now I do not want to boast, but I thank God that it is a very long time since I found myself fretted or worried. I cannot tell you the difference it makes, not only to myself in the happiness of my own life, but in the happiness of those about me."—From "Christ's Cure for Care," by Mark Guy Pearse.

Right is Right!

You cannot see the distant heaven. You cannot hear the songs of angels. You cannot even say assuredly that you know the love of God. But you do know that to be brave and true and pure is better than to be cowardly and false and foul. You do know that there are men and women all about you suffering, some of them dying, for sympathy. You do know that, whether God loves you or not, right is right! Oh, how these great, simple assurances come out when the higher lights of the loftier experiences grow dark! I will not say, I dare not say, that God lets the heavenly light be darkened in order that these earthly duties may appear. I only say that when the cloud stretches itself across the heavens, then, underneath the cloud and shut out from the sunshine, the imprisoned soul still finds for itself a rich life of duty, a life of self-control, a life of charity, a life of growth.—Phillips Brooks.

The Elastic Stitch of the Singer

Many a woman who prides herself on knowing how to sew well—on being a good seamstress—doesn't know *just where* her Singer *is different from other sewing machines.*

A stitch produced on a cheap machine is *tight*—unyielding—it has no *elasticity* whatever. *The seam may look good,* but if a strain is put on a garment sewed on one of these machines, the seam remains rigid.

It is the only part that does not give.

The consequence? It will pucker, or it will break, or it *will cut entirely through the cloth.*

The Singer Sewing Machine sews always with an *easy, even* thread, not tighter *than the texture of the cloth.*

Its tension is *perfect* and *permanent,* because the Singer is mechanically perfect.

Let us Send You a Singer To Try—Free of Cost

There is only one way to come to know the Singer—in your own home, at your leisure, on real work. You can get a Singer for *Free Trial.* If you decide to keep it—terms will be made to suit *you.* If you decide against it, it will be taken back at our expense. If this seems fair to you, write for our booklet, "A Wireless Message from the Singer Tower." From it pick out the kind of machine you'd like to own. We'll see that you have a chance to get acquainted.

Address
SINGER SEWING MACHINE COMPANY
Room No. 1130 Singer Building, New York

God's Answer

Let us not forget the emphasis and miss the comfort of the words "know how" in the verse: "If ye then, being evil, know how to give good gifts unto your children." Are the honest, earnest prayers of God's children always heard? Always. Are they always answered? Not always. If a hungry child asks for a scorpion, will his father give him a scorpion? Not if he knows how to give his children good things to eat. If he is asked for a stone, for "that which is not bread," by a child driven by hunger, but deceived by appearances, will he mistake the child's inner need and real meaning?

Because our heavenly Father knows how to give good gifts, we may ask with perfect confidence for what we want. He will give what is best. We often know how to ask more intelligently the next time because of the answer we get. The promise is kept, and we have learned something new about God's purposes and resources.—Maltbie Davenport Babcock.

Helps Along the Way

Such as are thy habitual thoughts, such will also be the character of thy mind; for the soul is dyed by the thoughts.—Marcus Aurelius.

Labor is discovered to be the grand conqueror, enriching and building up nations more surely than the proudest battles.—William Ellery Channing.

Art little? Do thy little well, and for thy comfort know,
Great men can do their greatest work no better than just so.
—Goethe.

STICK TO IT
Until Coffee Hits You Hard

It is about as well to advise people to stick to coffee until they get hit hard enough, so that they will never forget their experience, although it is rather unpleasant to have to look back to a half dozen years of invalidism, money and opportunity thrown away, which is really the terrible price paid for the weakest kind of a "mess of pottage."

A woman writes and her letter is condensed to give the facts in a short space:

"I was a coffee slave and stuck to it like a toper to his 'cups,' notwithstanding I had headaches every day, and frequently severe attacks of sick headaches, then I used more coffee to relieve the headaches, and this was well enough until the coffee effect wore off, then I would have sick spells.

"Finally my digestion was ruined, severe attacks of rheumatism began to appear, and ultimately the whole nervous system began to break down and I was fast becoming a wreck.

"After a time I was induced to quit coffee and take up Postum. This was half a year ago. The result has been most satisfactory.

"The rheumatism is gone entirely, blood is pure, nerves practically well and steady, digestion almost perfect, never have any more sick headaches and am gaining steadily in weight and strength."

"There's a Reason."

Read "The Road to Wellville," in pkgs.

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

RECEIVED
U. S. Department of Agriculture.

WESTERN EDITION

ESTABLISHED 1877
The Illustrated Farm and Family Journal

24 NUMBERS 35 CENTS

Vol. XXXII. No. 23 | Springfield, Ohio, September 10, 1909 | Terms { 1 Year, 24 Numbers, 35 Cents; 4 Years, 96 Numbers, $1.00 }

An Agricultural College Poultry Plant

What Michigan is Doing to Advance the Poultry Interests of the State

Through the three years and a half of existence the Michigan Agricultural College poultry plant has grown to be one of the finest in the United States, and is now one of the important departments at the college. This would have been a strange statement a few years ago, when the universal opinion was that poultry did not amount to much and that anyone could raise chickens. This summer it is one of the prettiest sights at the college. There are about three thousand White Leghorns of all sizes running about in the alfalfa and other green forage, besides the numerous other breeds that are kept.

Dean R. S. Shaw, who was, at the time of the starting of the poultry plant, head of the animal husbandry department at the college, had much to do with the work of planning the poultry work which was then put under his department, but later made a department in itself. The credit, however, for most everything that has been done belongs to Professor James G. Halpin, a graduate of the poultry department of Cornell, who had had a year's experience in building the foundation of the department at the Rhode Island college. Under his guidance and plans have been erected an incubator-house, instruction long house, experimental long house, three colony laying-houses, thirteen brooder-houses and a feed-house.

The site of the poultry plant is one of the best, and is far superior to that occupied by any of the other college poultry plants. It is on a sand knoll with the south half sloping to the south. This is an ideal, natural site as the ground is sandy clay and the land will not sour easily. The west half is seeded to alfalfa and the remainder to mixed grasses.

At present there are about three thousand fowls on the grounds. There are about a thousand hens and about two thousand chicks. The chicks were hatched by incubators and by hens. By far the greatest number were hatched by incubators.

Many of the visitors at the plant are surprised to find only a few breeds represented, but it is not a museum, and there can be only a certain number of the breeds used for teaching and demonstration, and experimental purposes. The breeds that are kept are typical of the greater number of varieties. They are the Light Brahmas, Brown and White Leghorns, Buff Cochins, Barred and White Plymouth Rocks, White and Partridge Wyandottes. The White Leghorns are in predominance as the breed is considered the best breed for egg production and that is the object in keeping them. Besides the chickens there are kept a few Pekin and Indian Runner ducks.

The main object of the poultry plant is instruction by practical methods. There is gathered here all of the breeds, houses, incubators, trap-nests, feeds, etc., that any man would ever desire or need to learn the poultry business.

There are at present three chief courses offered in poultry at the college extending over a period of one year. The fall term is devoted to poultry-house construction, including the drawing of plans, specifications, estimates, location, drainage, ventilation and heating, and to market poultry, including caponizing, fattening, killing, dressing and marketing. The equipment for this work is ideal as there are many kinds of poultry-houses on the grounds and actual plans are drawn and in some instances houses are constructed. Caponizing, fattening, and marketing are performed by the students with the assistance of the instructor.

In the winter term the course consists in the care and feeding of a pen of fowls for egg production and the keeping of all records, and in the study of breeds and breeding, including the origin, history and mating of the more popular varieties. This is one of the most valuable experiences that the poultryman can obtain as there is none of the experience that he has to take out of books. It is all practical knowledge that he will have to put into practice.

A General View of the Poultry Plant Showing the Colony Houses in the Foreground and the Incubator-House and Instruction Long House in the Background

A Breeding-Pen of Pure-Bred Barred Rocks

The third or spring term work is the incubation and brooding of chicks, the prevention of diseases, care and management of turkeys, ducks, geese, pigeons and pheasants. Each student is required to run an incubator for at least two months and brood the chicks that he hatches.

The energies of the department have so far been mostly applied to the building and the getting started, but there has been some work done along experimental lines which will probably be published in the near future. In the future more attention will be given to the experimental work and the results given to the farmers as soon as possible.

Poultry work in this state is beginning to take on larger proportions than it did a few years ago. There is even more interest shown in the poultry shows held in the winter. On the institute trains that are run through the state the poultry exhibit is one of the most popular. In short, the department has proved to be a great success and should provide an incentive to other states to go into the work.

The poultry business should, in my opinion, be carried on as a side line on every farm. If a man has one hundred and sixty acres and can give part of his time to the poultry business there is money in it. When you live on a farm that you own or that you have leased you can raise all of your feed, which means much to you. You can raise corn, wheat, buckwheat, oats, sunflower-seed, beets, cabbage, and nearly everything except the grit and animal food, and much of that can be obtained in the summer on the free range.

When the feed can be raised on the farm there is a good profit in the feeding, but where there has to be a good portion of the feed bought, the proposition is a different one. Where the feed is raised on the farm it does not have to be hauled to the station to be sold until it is in the concentrated form of chickens.

It is folly to think that a large farm, or a small one for that matter, should exist without poultry. Indeed, it is almost a necessity. I know that the proposition is a good one if it is worked by the right persons.

Edwy B. Reid.

The New Tariff Law

What the Payne-Aldrich Measure Means—By Judson C. Welliver

THE tariff act of 1909, which will be known in the lore and literature of tariff as the Payne-Aldrich act, was signed by President Taft at 5:06 P.M. August 6th. It became effective at midnight so that its first operations were on a Friday. There had been anxious effort to avoid its inauguration on hangman's day, but without anybody thinking of the effect, it was arranged to make it effective with the beginning of Friday.

The Test of the Laws

The proof of the pudding is in the eating thereof. The proof of every tariff law is in the commercial and industrial conditions which prevail while it is in force; particularly in those which immediately succeed its passage. This will be peculiarly the case with the Payne-Aldrich measure. No tariff measure has ever received a just appraisement, because the tariff inevitably is charged with more than its due of blame for any unfortunate developments which may ensue upon its enactment, and credited with more than its just share of responsibility for betterment of business conditions. Therefore whatever political party is responsible for a tariff law gambles on the futures of the nation. If good times follow the tariff is vindicated; if bad times, it is condemned. And this, no matter how manifestly other than tariff conditions may be chargeable with the real responsibility.

Fortunate Time for Revision

The Republican party appears to have selected a most fortunate time to revise. From the day of Mr. Taft's election on a platform promising revision, business showed steady improvement. Almost simultaneously with the opening, on March 15th last, of the special tariff session of congress, the improvement became more marked and manifest than ever before. In the midst of the congressional turmoil over the schedules, wheat rose to such a price that a dollar a bushel would have looked cheap. The other cereals, meats, and almost everything the farmer produces also rose in price. Everybody knew the tariff had nothing to do with this; but everybody likewise knows that it is useless to try to stem a present and sweeping tide of prosperity with forebodings of disaster to come later. The new tariff is greeted with the shrieking whistles of reopened factories calling the hands to work; with the proclamation by Secretary of Agriculture Wilson that the year's crop is now certain, and will, in the aggregate, break all records for both yield and value; with cheerful forebodings by railroad managers of more car famines in the autumn; with a booming stock-market, a cry for help which cannot be had in the harvest-fields of the West, and the echoings of the horn of plenty throughout the land. What moots it that the cost of living mounts higher and higher? The answer is that wages are rising again and that everybody is, or soon will be, busy again. No tariff bill ever became law under auspices more portentous of vindication than these.

Yet it must be set down that there is much of experimentation in this measure; wide departure from what has been esteemed fundamentals, heretofore, in republican tariff policy. No tariff bill since the first frank inauguration of the protective policy has involved such significant and sweeping reorganization of fiscal conditions.

Maximum and Minimum Plans

The maximum and minimum plan of handling tariff relations with foreign countries, has been for the first time writ into this law. It is the long-delayed fruition of the movement for reciprocity, to which Blaine and McKinley devoted themselves. In establishing this policy, the United States says to foreign nations, in substance:

"So long as you do not discriminate, in your customs laws, against products of the United States; so long as you accept the output of our farms, mines and factories on the same terms you extend to other nations; so long you may enjoy the benefits of our general or minimum tariff in selling to us. But whenever you discriminate, by whatever indirection, against us, then we will impose upon your products, at our ports, our maximum duties, twenty-five per cent higher, ad valorem, than these rates of our minimum schedules."

Advocates of the old-fashioned theory of reciprocity by treaty urge that this substitutes a threat for an invitation; that it is retaliation rather than reciprocity. But the truth is that twenty years of the campaign for reciprocity have made plain that it cannot be had. The maximum and minimum plan is the substitute. Whether it is better than reciprocity, it is at least attainable. There is no question that it represents a long step in the right direction. Maximum and minimum tariffs are now become the world's rule. To cope with those of other countries we must have our own. For the first time, we are now equipped with as good weapons as our opponents in the war for trade advantages.

The primary advantage from the maximum and minimum will undoubtedly accrue to the farmer, because the farmer has most suffered, in seeking a foreign market, by the discriminations of other countries against us. A wider and freer and fairer market for our flour, grain, meats, etc., will be sought and doubtless will presently be secured. This is the one point at which direct benefit is promised to the farmer. In general, the farmer's chief benefits from the protective tariff have been indirect. So long as he produces more grain and meat and cotton than this country can consume, protection is for him of small advantage, limited to a narrow area along the borders of the country. It has always been the most difficult part of protection's argument, to convince the farmer that his indirect benefit, of an assured and expanding American market for his products, at good prices, was of sufficient value to compensate him for losing the privilege of buying at the lower prices which free trade with the world would present to him.

Revolt in the Mid-West

How thoroughly the farmer won, is attested by the fact that he was for a generation the most devoted supporter of the protective theory. Only in the last few years has there been ominous sign of revolt in the agricultural states; of questioning whether the quid is really equivalent to the quo. That is why the tariff-revision demand originated and gathered at last its irresistible force in the mid-Western agricultural states. It is what sent Cummins to the Senate, and gave him, when after a long struggle he reached it with his new tariff ideas, the prompt and vigorous support of a half-score of other senators from agricultural states. The truth is that the farmer is the most devout and open-minded tariff student of this day. He is questioning things. No less a protectionist than ever, he wonders whether the manufacturing interests of the East have not after all enjoyed indefensible excesses of protection, inspiring to effort at monopoly and extortionate prices. He has come to the point where he demands demonstration that his indirect benefit is as large as the direct advantage of the manufacturer from whom he must buy.

That is the present-day status of the tariff. Add to this the fact that a vast class of people with approximately fixed incomes, the wage and salary earning elements, have increasing uncertainties whether their share in the distribution of indirect advantages is adequate, and you have a condensed statement of the hypothetical question which the tariff critics of the nation are asking of the schedules. The answer which experience shall give to these queries will direct the final verdict on the Payne-Aldrich act.

New Provisions in Tariff Law

Under former administration of customs law, duties which were imposed in the form of a fixed percentage of the valuation, related to the valuation in the country of production. This led to many frauds, through undervaluations abroad. The new law provides that where it seems desirable, the valuation of like articles in the wholesale market of this country may be considered in determining the valuation against which the duty shall be levied. The general effect of this will be a more honest administration of the duties—and an increase in them, whose extent is variously estimated, but certain to be considerable. Likewise the new law contains provision for a new federal court; a Court of Customs Appeals, with exclusive and final jurisdiction of appeals from the ruling of the customs administrators. Heretofore appeal has lain to the United States circuit court. It is an open secret that advocates of the new plan believed it would tighten up the administration and in the aggregate increase the collection at the custom houses, which means that it will raise the duties. How far, experience, once more, alone can tell.

Revision Downward or Upward?

There has been sharp disagreement whether the new act is revision downward or upward. The extreme views are not far apart, and neither presents much change from the averages of Dingley rates. There have been reductions and there have been increases, vastly more of the former than of the latter. But in many cases the reductions are rather apparent than effective. This is true for example of most of the reductions in the iron and steel duties. An illustration will make the point clear, as to the metal and many other schedules.

"Steel ingots, cogged ingots, blooms and slabs, die blocks or blanks, billets and bars, mill shafting, hammer molds, dry sand, loam or iron-molded castings, and steel in forms and shapes not specifically provided for" are subjected to varying duties, according to their value. Those valued at thirteen to sixteen cents a pound were dutiable under the Dingley act at two and eight tenths cents a pound. That duty was manifestly practically prohibitive, because there is a vast product of these, yet the importation was only $38,173 in a year. A duty thus prohibitive could be considerably lowered and still remain prohibitive; so it was reduced from two and eight tenths cents to two and seven tenth cents. That gives the form and name of reduction, but absolutely denies its substance. There is no more chance of English or of Belgian articles coming in, under this insignificant importation, and, by competition, keeping the Steel Trust's prices within reason, than there was before.

But now take the very next item in the list; the same goods, but of higher class, valued at thirty-two to forty cents a pound. There was real and significant importation of these, aggregating $1,202,672 in a year. The Dingley duty was four and seven tenths cents a pound. The Payne-Aldrich bill raises this to seven cents, which will serve to shut out those importations, and end that possibility of competition.

Now, in the paragraph (No. 131 of the bill as passed) which contains these two items, there are in all eighteen enumerations of these iron and steel products at different duties. On sixteen of them the duties are reduced. On the one just cited they are greatly increased. On one other a specific rate is changed to an ad valorem. In all the changes downward there is not one which will increase the opportunity for the foreigner to get into our market. The one upward change renders absolutely prohibitive a duty which heretofore has permitted considerable importation. In a statistical analysis prepared to show that the bill revises downward, that paragraph would be a shining demonstration of downward tendency; but in actual operation, it will be as prohibitive as ever in application to seventeen items, while as to the eighteenth, formerly not prohibitive, it is made prohibitive.

If a duty of twenty-five per cent is enough to be prohibitive; and if under the old law a duty of one hundred per cent was charged: then how much good will it do to reduce to fifty per cent? Manifestly, none at all. And this is about the way with most reductions in the iron and steel schedule.

Next to the railroads, the farmers are the greatest users of iron and steel. They are vastly the greatest individual users; in wire, machinery, implements, etc., they use a vast tonnage.

Agricultural implements—plows, harrows, harvesters, reapers, drills, planters, mowers, rakes, cultivators, threshing-machines, and cotton-gins—were taxed at twenty per cent under the old law. The total annual importations were less than $24,000, indicating that the duty was prohibitive. Under the new law these are reduced to fifteen per cent, with a proviso that when imported from any country, province, dependency or colony which imposes no duty on like articles coming from the United States, they shall be free. This looks like a great concession to the farmer. But is it? The great manufacturers of agricultural machinery in this country need no protection. They sell vast quantities abroad. In Russia they found that, because the United States imposed a duty on agricultural implements, the Russian government, under its countervailing or retaliatory duty system, imposed a like duty on articles from the United States. The British makers of this machinery were getting control of the Russian market because Britain imposing no duty of this kind, Russia let British machinery in free. The American makers, because their machinery was better, succeeded in building up a fine business in Russia despite the handicap of a twenty per cent duty as against Britain's free admission. But they could do vastly better if they had free admission. Russia, it was believed, would let them in free if we removed our duty. So, for the benefit of the manufacturers—chief of them the harvester trust—the duty was adjusted in the manner indicated. It looks like a concession to the farmer; it is primarily a concession to the manufacturer, who already sells his products abroad more cheaply than here.

Only experience will demonstrate, as to certain reductions in the steel schedules, such as nails, wire, barbed wire, etc., whether they are sufficient to affect importations or prices. Some substantial reductions in many steel articles were made by the house bill and in the Senate, but to a large extent these concessions were undone in the conference, which raised many rates back to near or quite Dingley levels.

There was one item on which the old duty was plainly not prohibitive. That was structural steel, of which in some recent years importations have been many millions. The Dingley duty was ten dollars a ton; the new duty is forty-five per cent, which figures out sixteen dollars a ton, and will be utterly prohibitive. It is another fine illustration of the policy of raising rates under which any substantial importations were possible.

Revision in the Interest of Manufacturers

On the basis of a great many instances such as these here cited, critics of the new law—republican and democratic alike—have charged that it does not give substance of revision downward as to necessaries of life; that by dint of concealed changes in definition and phraseology, it raises many of them; that the tendency of the new administrative regulations will be entirely toward higher duties; and that, in short, this has been a revision in the interest of the manufacturers when a revision in the interest of the consumer was promised, at least by implication. A careful following of the debates and a considerable study of the measure and testimony, compels confession that the charge is on the whole well founded.

The Lumber Schedule

The changes in the lumber schedule are generally downward, on their face at least. The sort of dimension lumber which makes sills of large buildings is apparently reduced, but in fact, through a clever change in phraseology, it is raised. Shingles of white pine are raised from thirty to fifty cents a thousand; all other shingles remain, as formerly, at thirty cents. Rough boards are reduced from one dollar to fifty cents; but none of these, practically, are or can be imported; the reduction in weight due to planing reduces the freight so much that it is cheaper to plane them and pay a higher duty, than to leave them undressed and get the lower duty. It is no secret that not one man in ten in Congress seriously believed the reduction from two dollars to one dollar and twenty-five cents on boards finished on two sides, and the corresponding reductions on lumber otherwise finished, would have appreciable effect on lumber prices.

Cotton and Woolen Schedules

Analysis of the bill as a whole is impossible in the space permitted. There was more of protest against attempted increases in the cotton-goods schedule, and against retaining the ancient exorbitant duties in the woolen-cloth schedules, than against anything else in the entire progress of the legislation. The increases in cotton were for the most part prevented; but reductions were impossible. President Taft had become so convinced of the necessity for sharp reductions in these duties, that he has assured public men he will at once have detailed study of these schedules made by experts, and will at an early date demand radical downward revision if, as he expects, he finds it should be made.

Free Raw Material Policy

There is one aspect in this legislation which is of sharp interest to the agri-

[CONTINUED ON PAGE 3]

Around the Farm

Items of Interest and Value to the Progressive Farmer

Fall Wheat Sowing

When preparing to sow wheat in the fall, one must bear in mind that it is just as essential to secure a good seed-bed, as it is when preparing to put out any other crop.

The depth of fall plowing should vary from two to four inches, according to the texture of the soil, amount of moisture it contains, and the height of weeds or stubble. Every vestage of growth must be turned under and covered well. This will retain the moisture, and when decayed, forms an excellent fertilizer near the roots of the wheat.

It is advisable to follow the plow with the drag or harrow after each day's work, for, if the dirt is turned up moist and fresh, the heat has access to a greater amount of surface when the ground is left rough. Or, if the soil is already somewhat dry, the need of leveling the surface is still greater, in order that sufficient moisture may be retained to sprout the seed. Indeed, if the ground is left just as it is turned up till seeding, it is often so dry, hard and cloudy that all the machinery in Christendom would fail to pulverize it and make a loose, moist seed-bed. A harrowing after each rain is also very beneficial, as it destroys any weeds that may have sprung up since plowing, and also maintains the dust mulch so desirable in all seeding.

At seeding time, harrow the soil thoroughly to a depth of two inches, just after a rain. It is then ready for the drill. Here, as in plowing, one must be guided by soil conditions. If the soil is moist and loose, one inch will be deep enough to plant the seed. It will then sprout and come up quickly, insuring a hardy growth—one that will withstand the effects of severe weather later on. If the seed is sown deep, germination is slower, the plant does not reach such a sturdy growth, and the rigors of winter will be more liable to dwarf, or even destroy the tender plant. Another important item in connection with fall-wheat sowing is the selection of seed. Don't sow imported seed, as it never brings the satisfactory results obtained by sowing native seed. Get the very best seed obtainable. One of the most unwise investments any farmer ever makes, is buying inferior seed—no matter whether large or small grain. To insure a pure and perfect stand, cleanse all seed with the fanning-mill, which removes dirt, weed seeds, and small or ill-shaped grains of wheat. In fact, one must keep constantly in mind the vast importance of procuring high grade seed, and then providing a seed-bed that will aid in propagating a suitable stand of wheat, healthy and vigorous.

On average soil sow about a bushel and a peck to the acre. If the ground is somewhat poor, sow less; if its fertility is above the average, increase the amount of seed to the acre according to the strength of the soil. We might add that if the ground chosen for a wheat-field is found lacking in phosphorus, potash and nitrogen, plenty of good manure should be spread over the field previous to plowing under. Or, if more convenient, some reliable commercial fertilizer may be used. M. A. Coverdell.

A Suggestion

If ever there is a time that a farmer in my section can let up, ease off on his work, it comes the last days of July or the first days of August. We, locally, call this easing off of work, "the August lull."

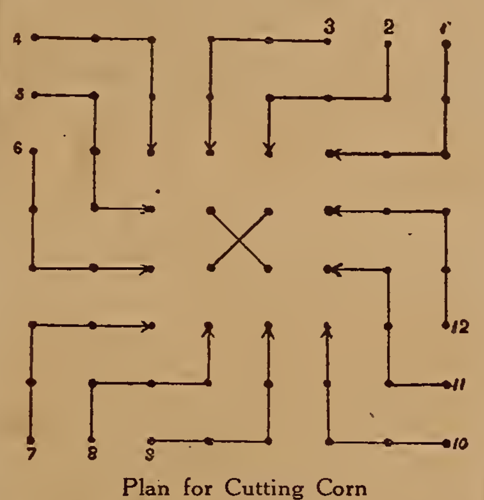
Not until this good year have we enjoyed this period of a few days when there was no work pushing. We have been reading the Farm and Fireside very closely and possibly we have learned from it how to lay out our work so we could catch up. But a few days doing nothing but resting, while we did the chores, made us restless, so we decided to overhaul all our farm machinery and give it a coat of paint.

This meant work, but being accustomed to it, we never seemed to mind it. After all was done and we sat down, the two boys and the scribe, casting our eyes over the farm tools and machinery, all looking spick and span dressed out in a clean coat of paint, it surely did look good. And let me say, no farmer that farms can afford to buy the necessary tools and machinery (necessary to successfully farm under present conditions) and wear these tools out, without painting them each year. Farm machinery made of steel will rust out if left unpainted almost as soon as it will wear out.

We find ourselves asking this question over and over. How could we get along without our blacksmith shop? We have only a small one to be sure but how often does this little shop with its tools costing, several years ago, not over fifty dollars, come in and save us time and dollars. O. P. R. Fox.

Handy Way to Cut and Shock Corn

The accompanying illustration shows the best way that I have ever tried to cut and shock corn by hand. There are handy ways to do all things and there are other ways that are not so handy. Cutting corn is no exception to this rule. However, very few men take into consideration that there are handy ways of cutting corn.



Plan for Cutting Corn

There is a great difference of opinion as to the size of the shock to put up. I have seen some men put sixteen hills square in a shock, with the result that they were so large that if there was any damp weather a great amount of feed would be lost, because there was so much in a bulk.

The accompanying illustration shows what I think the most convenient size for a shock of corn. If the corn is good, the shock will stand up well, and is not so large that it will spoil.

With eight hills square, there will be one hundred and twenty-four stalks of corn provided there are two stalks to each hill, and that is enough to have it keep well.

First, make the shock in the center of the eight-hill square, by tying the tops of four hills together. Then go to the corner of the eight hills as shown at figure 1. Cut that hill, and follow the line to the end. You will have five hills in your hand when you reach the shock, a nice handful.

Lay that bunch against the shock, and then go to figure 2 and continue in like manner. By just a little study of this plan you will see that there will just be five hills in each bunch, and there will just be twelve bunches. And when the last bunch is finished you will be very near where you commenced. At first thought it may not seem like worth trying, but I will say that once the habit is found it is much more convenient than just cutting anywhere that it can be reached. R. B. Rushing.

A Fruit Dryer for the Home

The old way of drying apples, peaches and other fruit in the sun, is not always desirable on account of the worms and bugs getting into the dried product, and also from the fact that much loss results from the uncertainty of the weather. Then the fruit is of better quality when dried in the evaporator. A few dollars outlay and a little time spent in the dull season, when other farm work is not pressing, will be all that is necessary to construct an evaporator that is equal in all the essentials to one that would cost many times that amount.

One corner of some outbuilding properly arranged with the heating stove to furnish the heat and you have the beginning already. I suggest building the evaporator in the corner of the building, from the fact that you would then have two sides already built, but it would be more accessible if constructed in the center of the room. It should be made of matched lumber, and is simply a closet extending from the floor to the roof with ventilator at the top opening out through the roof, and holes at the bottom to allow a free circulation of the air.

A very convenient size is four feet square with a small door near the floor to permit access to the stove, and another door three feet or more from the floor, which is the full width of the evaporator, and reaches to the ceiling with hinges at the bottom, so that it may be let down onto some support and so form a shelf when open. The lower part of the closet will probably need to be jacketed with sheet-iron to prevent the stove setting fire to the woodwork.

The stovepipe should be arranged in the form of a spiral so as to throw off as much heat as possible, and this may be accomplished by using common elbows and a few short joints of pipe. Set the first elbow on the stove opening, and turn the next one horizontally, making at least one circuit of the compartment within a foot of the top of the stove, completing an approximate circle about three feet in diameter. Then the pipe may be carried outside through a convenient opening and run up, either on the inside of the main building or outside so it runs above the roof, and high enough to insure a good draft.

Only one set of trays may be used in this evaporator, and these will be held in place by cleats, nailed to the inside at such intervals as will allow the trays to slide one above the other, and should extend from just above the coil of pipe to the ceiling. The trays when filled with fruit are put in and removed through the large upper door, and are so constructed that they fill the space entirely, being four feet square.

The trays should be made so that they can be used either side up. Eight pieces of lumber one and one fourth inches square and four feet long, with a piece of half-inch mesh galvanized wire netting four feet square are the materials used for one tray. The netting stretched and nailed between the two pieces makes a good reversible tray four feet square and one and one fourth inches deep. You will want as many of these as you have space for.

In the process of drying the fruit should be spread evenly and not too thick, and

A Home-Made Fruit Dryer

the trays put in place. The ones next the heat will be ready to remove first, and as fast as one is removed another should be added at the top, moving each tray down one space, allowing the drying to be finished near the fire. It is best to operate it this way, as the lower tiers of fruit will be drier on account of being near the fire, and also because the steam from the lower trays tends to prevent thorough drying of the upper trays. Managed in this way by continually adding fruit as it is removed, an evaporator of this size heated by a common wood or coal-stove, will dry its full capacity in five or six hours, or in the course of a day of ten or twelve hours, each tray used will be filled and dried twice. Four feet of space between the heater and the ceiling will accommodate about a dozen trays, and there will usually be even more space than that.

When removed from the dryer the fruit should not have quite so dry an appearance as when dried in the sun, but in order to know when it is ready to remove it may be squeezed into a ball, and if it falls apart easily without appearing to adhere it is dry enough. Some will be dry while other pieces are not so dry, but the fruit should be heaped on the floor of a dry room well ventilated, and where flies cannot come in. It is allowed to remain here several days and shoveled over every day so that it may become uniform, the drier pieces absorbing moisture from those less favored.

It does not improve the quality of the fruit to bleach it, yet where evaporated apples are offered for sale they will sell better if light in color. We find that a common tight box will answer the purpose of a bleacher. The trays of fruit are set in the box on supports so the fumes may pass through them, and the sulphur is burned below in any iron vessel. The best way to accomplish this is to get a shovelful of live coals in an old kettle and set under the fruit, then add a few sticks of brimstone, cover the box so as to confine the fumes, and allow it to so remain half an hour. Half a pound of sulphur will bleach a hundred pounds of apples; no other fruit requires bleaching.

As to the amount of wood required to dry a ton of fruit in my evaporator, I should say about a cord of wood or a ton of coal is used, surely not more than that, but from the fact that we use a small quantity at a time, I have never made a careful estimate of fuel required. H. F. Grinstead.

The New Tariff Law

[concluded from page 2]

cultural population. This is the initiation of a policy looking to free raw materials. This means, if it ever becomes a fixed and uniform policy in tariff making, the taking away of most of the protection the farming communities have enjoyed. The first step is the removal of the duty on hides. The leather and shoemakers, harness and saddlery manufacturers, etc., agreed to important reductions in the protection on their goods, provided hides should be made free. True, there was an insincere effort to dodge the reductions on leather products after the reduction on hides had been secured; but it failed, and the President forced the reductions all around. Hides constituted one of the items on which protection was a real benefit to the farmer, because there are great imports of hides. Duties on wheat, corn, oats, hay, potatoes and the like mean little or nothing, because we don't need to import; we have a surplus to sell. A duty on hides did mean something—and it is removed.

Logically, removal of the duty on wool would come next. The same reasoning would sustain it; we do not raise nearly enough wool to supply the country's demand, and the tariff which protects it forces higher prices. If the logical course shall in future be followed, with an effort to remove the wool duty, it will bring the agricultural population to a sharp realization that almost the only direct and indubitable benefit they have in the tariff, is to be lost; that thereafter they will have to depend entirely on the indirect benefits; and that it will then be for them to decide whether the indirect benefits are sufficient to warrant their continued fealty to the system as it has so long been administered.

Whether the revision just concluded will shelve the tariff for a series of years, only developments of the future can show. The Dingley law was in force a few days over twelve years. Signs and portents of this moment strongly suggest that the Payne-Aldrich measure will not be effective nearly so long without overhauling. Much depends on whether the provision in the new law for tariff experts to investigate trade and tariff conditions, shall prove more effective than it seems to have been intended. President Taft is determined to make the most of it, and believes that while it looks now to tariff commission advocates like a sow's ear, he may be able to develop it into a good imitation of a silk purse. As to which, power to his elbow.

Saves You Money

Fire-Proof. Easy to Put On

A steel shingle roof costs half as much as best cnt wood shingles, and about the same as high-grade 3-ply prepared roofing. Bnt it wears four times as long as wood shingles and six times as long as composition roofing.

Edwards "REO" Steel Shingles

are stamped in sheets of finest Bessemer steel, 5 to 10 feet long, covering width 24 inches, either painted or galvanized. Can be laid with hammer and nails. No soldering. No tarring. A boy can do it.

$10,000 Guarantee Bond Against Lightning. We will refnnd amount paid for our steel shingles if yonr roof is damaged by lightning. Cheapest kind of fire insurance

Buy at Factory Prices. We are largest makers of iron and steel roofing and pay the freight on all Steel Shingles: Plain, Corrugated, V. Crimp Roofing; Imitation Brick Siding, etc. Sond size of roof and we will qnote our lowest factory prices delivered, and mail free catalog No. 49. Write today.

THE EDWARDS MANUFACTURING CO.
909-929 Look Street, CINCINNATI, OHIO

Elkhart Buggies
have been sold to the consumer
For Thirty-Six Years
May We Send You Our Large Catalogue?
Elkhart Carriage & Harness Mfg. Co.
Elkhart, Indiana

ESTABLISH a Permanent Agency In Your Locality for the most attractive and comfortable men's and women's shoe ever offered the public. KUSHION KOMFORT SHOE CO., 9 F SOUTH ST., BOSTON

It is to your advantage to mention Farm and Fireside in writing to advertisers. Farm and Fireside folks get the very best attention.

The Farmer and the Farmer Boy

By Fred Grundy

A Fossil or a Live Wire—Which?

Not long ago a man said to me: "I turned the half century mark today, and I guess I've done my do so far as this world is concerned. I have missed the mark I aimed at—missed it a long, long way, and I've given up the fight. I see nothing before me now except to prepare for the future. I am in debt, but have decided to pass that down to the boys. They can work it out and probably reach the goal I aimed at and missed."

I told him plainly that I thought he was made of mighty poor stuff. A man who stops when he reaches his half century mark, thinking he has done his share of a life's work, is lacking in all the essentials that make up a real live man and he should be sent to the rock pile. I know a man seventy-six years old who is managing a large farm with all the skill that open eyes and an active brain have given him. He is a first-class farmer and has made lots of money, but that does not deter him from taking an active part in his favorite pursuit. To be sure he is a little stiff, and somewhat wrinkled, but he keeps himself as neat as a pin, and laughs and cuts up like a young beau. He says that the man who thinks he ought to sit down and rust away like an old nail is short of common sense. He intends to keep going and enjoy life as long as possible.

On an adjoining farm is another man only sixty years old who sits on his porch most of the summer, and by the stove most of the winter, with long, unkempt gray hair and beard, and the whine of old age in his voice as he complains of his various aches and pains, most of which are imaginary; and drawls out tales of other days when he was a strong young man, "able to waller anybody of his size, an' to dance all night an' pitch hay all day with the best of 'em." He imagines he is a wreck, but he's only a fossil. The one thing that every man should strive to avoid is becoming an old, knocking fossil, dropping into slovenly habits, and imagining he is aged—an old, old man whose remaining days are few and full of trouble and pain, and whining accordingly.

To avoid becoming a fossil one must keep in touch with the living world, with all that is new, all that is being done for the betterment of mankind. This is easy in this age of cheap high-class magazines and newspapers. One who is practically laid aside by the infirmities of age, or the result of exposure in former days, can keep himself better informed of the progress of the world in any particular line, or in many lines, than busy people; and thus make himself almost an encyclopedia of interesting information, instead of a reminiscence. People who work like to know what is going on to-day, and the man that knows is more interesting than a newspaper because he can tell it at the table during a meal, but the average person does not like to be bored by repetitions of tales of bygone days. The old man who keeps himself interesting and pleasant is always liked by young and busy people, but the fossil is a bore they avoid as much as possible. As I said, every man should especially avoid becoming a slovenly, whining fossil.

College and Common School Training

I was not a little amused a short time ago when a young fellow who is attending a nobby sort of a college came home. I knew him before he went, a wide-awake, hustling little chap with brown face and hands, and a ringing whoop and shrill whistle that would wake the echoes near and far. He was a genuine farmer lad, strong and active, a live one with a hoe or a base-ball bat. I heard he had spent the previous vacation with an athletic city chum, who obtained permission from his parents to take him home with him to "wipe up some tennis players in our burg who think they are quite a piece."

Well, he returned with a college suit of clothes hung on him. Trousers rolled up at the bottom, great floppy cuffs on his wrists, a high collar with a flaming tie around it, a little cap stuck on the back of his head and a long tuft of mane hanging across his forehead, and a general air that was a sight. He had a sort of a vacant, supercilious stare and a languid, loblolly way of flopping himself about; while his conversation was almost wholly about "athletics." His father said: "Well, I've spoiled a rattling good little farmer to make a silly fop. From this time on I shall fight against colleges. I may have sent him to the wrong one, but any college that will change such a boy as I sent to such a one as came back is a detriment, is a fool mill!"

If he returns to that college he will have to work his way through, for his father will pay no more toward his finishing. He will get over his foolishness after a while, I think, and probably make a good farmer. But it is plain that his parents will have to be very careful with him for a time or he will leave them, and likely as not become a tramp. Evidently the father sent him to the wrong college, but I have seen lots like him. They appear to have gotten their training from the worthless sons of wealthy parents.

For several years I have been taking a good deal of interest in the "course of study" in our common schools, and I long ago decided that it stands in need of a vigorous pruning by some sensible, practical mind. It is a combination of good sense, theory and tommyrot. Almost one half the child's time is wasted on matters it never will have any use for; while the practical, useful things of life are totally ignored. Practical things are too plebian for the professors who live in the upper atmosphere of theory, hence they are ignored. Many teachers are sensible of the fact that children generally are not learning the things they most need, but they cannot remedy matters. The "course of study" has been prepared for them by toplofty professors and theorists and they must stick to it.

In a few localities, the practical teachers have broken away from the idea that a child must cram its brain with theoretical stuff to the total exclusion of the things most needed, and they are giving them lessons in matters of everyday life. This leaven will slowly spread over the country until we have practical schools instead of theory mills. School officers should remember that there are thousands of children that never can attend any other than the district school, and only a few terms in that, hence they should see to it that the children learn the things they will most need in life—the most practical things. Those who are able to attend higher schools can there obtain the ornamental part of an education, for the greater part of it is ornamental. Many farmers I know have sent their boys to an agricultural college as soon as they came out of the district school to learn something practical, and I never have heard one regret doing so.

Boys With Proper Training

A farmer in Iowa asks me to advise him in the matter of trading a little farm worth three thousand dollars for a quarter section of land, not quite as fertile, worth nine thousand dollars. The trade will leave him in debt six thousand dollars.

In a matter of this sort one can give little advice that is of real value. All one can do is to offer a few suggestions. He has two boys about large enough to run plows, and four other children coming along, and he thinks he should have more land to employ his family and enable him to leave them more property at the end of his life.

Many years ago I was working for a solid, practical old farmer, and a neighbor came to the field to ask him for advice in just such a matter as this. His boys were growing up and he wanted something for them. After he had asked his questions the old man said: "You stay right where you are. You are out of debt, have a nice little place, stay on it and take care of yourself, the boys will look out for themselves at the proper time. If you get this big farm more than likely the boys will not like the task of working off that debt, and will leave you and take up some occupation. Don't kill yourself for the boys."

The man ignored this sound advice and made the trade. He worked hard to get rid of the debt, but two bad seasons in succession set him back badly. He managed to rid the place of about a third of the debt when his two eldest sons left him. After struggling along two years more he passed away. His widow sold the farm and moved to town. One of the boys that left the farm is a traveling man and the other a bridge foreman on a railroad. The remaining boy is a clerk in a store, two of the girls are teaching school and the youngest is at home with her mother. I was informed by the mother that none of the boys would live on a farm if it were given them. The entire family now say that the greatest mistake the father made was in trading his little farm for the large one and a big debt.

If my querist can reach a conclusion after reading the above, I think it will be to stay where he is. Many a farmer has bought land and extended his operations for the sake of boys, who left the farm as soon as they were able to obtain employment they fancied. Bring the boys up right, to value time and money at its true worth, and they will take care of themselves.

The Value of Advertising

I would suggest to those manufacturers who have been sending me catalogues and leaflets describing their brooders, that they advertise them in Farm and Fireside. If they are as efficient as they claim they are Farm and Fireside readers will buy lots of them. The same suggestion will apply to those who have farms to sell, or who wish to buy small or large farms. Farm and Fireside has a large circulation among land owners and tenants. Some of the former would like to part with different sized tracts, and some of the latter want land and would much rather deal direct with the owners than with any agent, and a small ad does not cost one tenth what an agent charges for simply bringing a buyer and seller together.

An eleven-acre hop ranch near Salem, Oregon, is to be converted into a Spitzenberg apple orchard. A hill of hops every thirty-five feet will be removed and an apple-tree planted. When the trees begin to bear, the hop roots will be removed. *

Paint Talks No. 10—Advantages of Fall Painting

The fall of the year offers several advantages as a painting time. First, and most important, surfaces are almost sure to be dry; there is no frost or inner moisture to work out after the paint is applied. There are no flies or gnats about to stick in the paint and mar the finished surface; there is less dust. Paint applied in the fall means protection against the penetrating winter storms; it means less likelihood of finding rotted joints and opened fissures in the spring.

Pure White Lead and Linseed Oil (tinted as desired) give a reliable winter coat to a building—an armor against the hardest attacks of the weather. White Lead and Linseed Oil paint does not crack open and scale off. It stays on until gradually worn off—leaving an excellent surface for repainting.

The Dutch Boy Painter Trade-Mark is Your Guarantee

Buy of your local dealer if possible. If he hasn't it—do not accept something else—write our nearest office.

Read about our Houseowner's Painting Outfit

NATIONAL LEAD COMPANY

An office in each of the following cities:

New York Boston Buffalo Cincinnati Chicago Cleveland St. Louis (John T. Lewis & Bros. Company, Philadelphia) (National Lead & Oil Co., Pittsburgh)

Painting Outfit Free

We have prepared a little package of things bearing on the subject of painting which we call House-owners' Painting Outfit No. 47. It includes:

1—Book of color schemes (state whether you wish *interior* or *exterior* schemes).
2—Specifications for all kinds of painting.
3—Instrument for detecting adulteration in paint material, with directions for using it.

Free on request to any reader who asks for House-owners' Painting Outfit No. 47.

The Right Oil For Hand Separator Bearings

Whether you get the proper per cent of cream from your milk depends, not so much upon the separator, as upon the oil you use *on* the separator. Poor, gummy oil retards motion and wastes good cream in the skim milk pail.

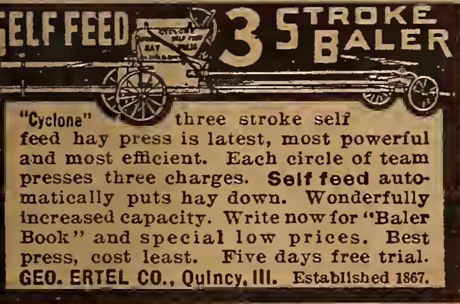
STANDARD Hand Separator Oil

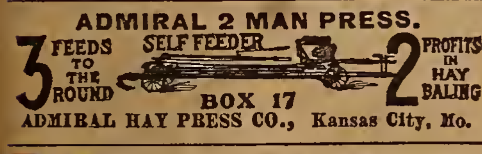
lubricates close fitting cream separator bearings perfectly, for any length of time, without gumming them.

It runs a separator with the least effort and reduces wear to an imperceptible quantity. Standard Hand Separator Oil is the best economy for separator users.

Ask your dealer for it.

STANDARD OIL COMPANY
(Incorporated)





PATENTS Watson E. Coleman, Washington, D. C. Books free. Highest references. Best results.

PATENTS that PROTECT
Our 3 books for inventors mailed on receipt of 6 cts. stamps. R. S. & A. B. LACEY, Washington, D. C., Dept. 49, Est. 1869

PATENTS SECURED OR FEE RETURNED.
Free report as to patentability. Illustrated Guide Book, and List of Inventions Wanted, sent free. EVANS WILKENS & CO., WASHINGTON, D. C.

In the Field
Discussions on Timely Questions

Harvesting Soy-Beans

In harvesting soy-beans the method to be employed depends on the use that is to be made of the plant, whether grazed by live stock, cut for hay, for seed, for soiling or for silage. When grazed by sheep or cattle, it is simply a matter of turning in the animals. But cattle waste much of the crop, hence, if grazed down by this class of stock, the animals must be removed when they have satisfied their needs. Sheep and hogs may be given access to the crop at will when the season for grazing has arrived. Of course, with hogs, that season is not until the crop is practically mature.

Various kinds of machinery can be used in harvesting the crop, as for instance, cutting with the field mower, self-rake reaper, the binder, the corn-harvester and the bean-harvester. Which of these machines will answer best depends largely upon the way in which the crop is grown, and the exact use that is to be made of it. The mower is best suited to harvesting a crop sown broadcast and to be cut for hay. The binder is best adapted to harvesting the silo crop or the seed crop, but can only be used satisfactorily in harvesting tall growing varieties. The self-rake reaper can best be used in cutting the crop for hay, for seed, for soiling, or for silage. The bean-harvester will gather small varieties and is exceptionally well adapted to harvesting the crop for seed. The corn-harvester can best be used when the beans are grown in the line of the row with corn for silage, but may also be used in harvesting tall growing varieties grown in rows without admixture.

At the season of early bloom the cutting of the crop for soiling may begin, and be continued until it reaches maturity. The crop is at its best for soiling when the pods are forming. For silage it can be harvested any time from full bloom to early maturity; but cutting toward the latter stage is preferable, since more grain is then furnished and the greater woodiness of the stems is less objectionable when fed as silage than when fed as soiling food. For hay, the crop should be cut when in full bloom or probably a little later, but assuredly before the leaves begin to fall.

In my experience in growing soy-beans I find that they are not very easily cured for hay. If the plants are very much exposed to the sun after being cut, many of the leaves will be lost and the stems do not readily lose their moisture. Much handling in the curing is also attended with a heavy loss of leaves. My aim in harvesting the crop is to cut when free from dew, to rake when sufficiently wilted, and to put up in small cocks narrow and high until cured. In these I find that it is necessary to let the plants remain for several days. The crop is not nearly so easily damaged by rain as cow-peas. The average yield of cured hay is about two tons to the acre. However, on very rich soil I have produced two and one half tons to the acre.

As the stalks yield up their moisture very slowly, I find that there must be no haste in storing or the mass will heat and spoil. This, however, may be prevented by storing the bean hay and some kind of cereal straw in alternate layers. The palatability of the straw will also be improved. The hay has high feeding value when properly cured.

In threshing soy-beans the flail may be used for a small crop, but a large crop requires the use of a bean-thresher or grain-separator. The bean-thresher does the work well, but is slow. The grain-separator when used calls for a readjustment of the concaves and of the teeth of the cylinder to prevent breaking the crop. The beans will heat and spoil if put in deep bins.

Wm. H. Underwood.

The Waste Places on the Farm

I was greatly impressed, on a recent trip through the country, with one thought: Farmers are drifting more and more to concentration of effort in crop and stock production, and neglecting, to a marked degree, the profitable use of their "spare time" and the many waste places on their farms.

Systematic intensification of effort is commendable, but the main thought in my mind concerns those corners, angles and out-of-the-way places that grow up to nothing but harmful weeds and produce trouble and expense instead of profit to the owners of the land. I take it for granted that the greater part of the readers of this journal keep the weeds on their farms under subjugation—this has become one of the "keystones" of modern farming—and has, indeed, become the handmaid of agricultural success and prosperity.

There are, however, a good many excellent farmers who permit more or less valuable ground to "rest" unclaimed and unused. This, in this day of warm competitive progress, is wrong. By a slight change in fence arrangements many corners might be added to field operations. By cleaning away brush and other obstructions much hilly land may be redeemed, and lately, by the use of tile or stone drains, much valuable land can be brought to producing something that is a profit to its owner.

Fruit and nut trees have their intrinsic value, and may often be planted in out-of-the-way places to a great advantage. Rough and stony or barren lands might well be put into some variety of quick-growing forest-tree, one suitable to the locality. The price of lumber has attained a point that demands attention. The supply does not meet the demand. The profit an acre from good marketable lumber is such to-day that it compares favorably with grain-growing, figuring cost, labor and period of growth. Much of this labor may be done during a farmer's spare time, and we know of few farms that could not be made of materially more value by the systematic adoption of this plan.

A. E. Vandervort.

Jingles for Farmers

"Doing" is a faithful fellow
  Who labors every day,
And earns his daily living
  In a safe and honest way.
He's trusted and respected
  Wherever he is known;
In manhood he is greater
  Than a king upon his throne.

"I'm Going To" is a fellow
  No farmer wants around;
At the village store or tavern
  He is sure to be found.
He's very good at bragging
  And talks of future strife;
But he'll never be a worker
  Nor make his mark in life,

M. L. Piper.

Fence Philosophy

Good fences are paying investments. They put a tidy, business touch to the farm. The man with good, substantial fences never loses any time chasing stock which broke out. He never has to pay out any hard-earned cash for his stock damaging his neighbor's crops; nor does he incur the ill will of his neighbor by such raids.

If you have bad fences, they require repairing, or at least your attention, every week, or every time the stock break out, which is liable to be every day. And at the end of the year you still have the bad fences.

If your fences are good, inspecting the lines twice a year, in the fall and spring, will be sufficient, unless something out of the ordinary occurs to damage them. A slack or loosened wire tightened and stapled, an occasional new post put in, and your fence is almost as "good as new" from one year to the other.

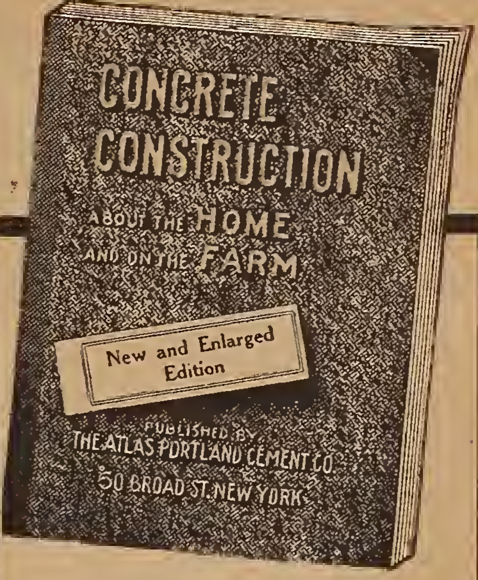
On this one item of repairing alone one can readily see the enormous saving in time by maintaining good fences.

Besides this and all of the commendable qualities enumerated, stock are not continually breaking through good fences, destroying crops, getting foundered on green corn, and perhaps some of the choicest of the herd dying from the effects of founder.

We do not favor the use of barb-wire except in extreme cases. A substantial woven-wire fence thirty inches to thirty-six inches high, with two or three double-strand, smooth, twisted wires above, makes an ideal fence, one that stock will not attempt to pass through. Or, if they do, it is usually caused by circumstances under which they would raid a fence of any description—barbed or smooth.

All things considered, a woven-wire fence around the whole farm is many more times economical in the long run than any other kind, since it will last practically a lifetime, thus saving all damages and repairing incident to maintaining poor or common fences. Add to these the attractiveness good fences lend to the farm, together with the genuine satisfaction the farmer derives from their possession, and we have a combination of rare effects hard to duplicate around the farm.

M. Albertus Coverdell.



Our NEW And Enlarged CEMENT BOOK Free to Every Farmer

This new, enlarged, and completely illustrated book, just issued in a new edition by The Atlas Portland Cement Company, tells how you can use concrete to the best advantage in all your construction work; how you can save money, yet have better, safer and more permanent buildings.

"Concrete Construction About the Home and On the Farm"

is now used as an instruction book in many of the leading Agricultural Colleges. It contains hundreds of pictures (actual photographs) of buildings that farmers and others have built without the aid of skilled labor. It is an improvement over all previous issues, as it describes and illustrates all the new ways of using concrete.

ATLAS Portland Cement

Makes the Best Concrete

As it never varies in color, fineness, hardness, or strength, and is made from the genuine raw materials.

The U. S. Government ordered 4,500,000 barrels of ATLAS for the Panama Canal. You get the same cement the Government gets, as there is only one quality of ATLAS manufactured—the best that can be made and the same for everybody.

Send for the book now, and get the benefit of many new ideas for this year's building work.

Ask your dealer for ATLAS. If he cannot supply you write to

The ATLAS Portland CEMENT Co.
Dept. 122 30 Broad St., New York

Daily output over 40,000 barrels—the largest in the world.

NONE JUST AS GOOD

WINCHESTER

Repeating Shotguns

ENDORSED by the U. S. Ordnance Board. The choice of over 450,000 Sportsmen. Used by Charles G. Spencer, who led all other trap shooters in 1908 with the unprecedented record of 96.77% for 11,175 targets; and by five out of the first eight men for the year. Winchester Shotguns are safe, sure, strong and simple; they are

THE REPEATERS THAT OUTSHOOT ALL OTHERS.

LIGHTNING HAY PRESSES

For 25 years the Reliable Balers. Simple, Free from Breakage, Greatest Capacity and Best Work—Strong and Durable. Consider these Facts for a Profitable Investment. With our various styles can meet your requirements. Horse & Belt Power. Self Feed Attachments. Write for our Catalog. KANSAS CITY HAY PRESS CO., 124 Mill St., Kansas City, Mo.

Trinidad Lake Asphalt

—the time-tested weather-resister used on streets and roofs for over a quarter of a century—is the stuff that makes

Genasco Ready Roofing

Genasco is the stuff that makes your roof proof against leaks and repairs. There is no mystery about what it is made of. You know Trinidad Lake Asphalt—and you know it makes roofing that lasts.

Write for samples and the Good Roof Guide Book. Mineral and smooth surface. Ask your dealer for Genasco. Insist on the roofing with the hemisphere trade-mark, and the thirty-two-million-dollar guarantee in every roll.

THE BARBER ASPHALT PAVING COMPANY

Largest producers of asphalt and largest manufacturers of ready roofing in the world.

PHILADELPHIA

New York San Francisco Chicago

Wisconsin Farms "Dirt Cheap"

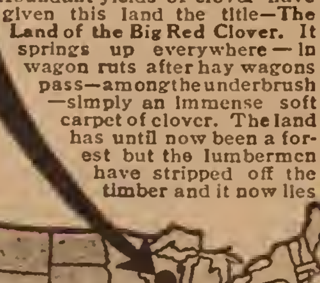
500,000 Acres Thrown on the Market Right in the Heart of Wisconsin

Buy Now At Low Prices and Reap Big Profits

Thousands of farmers are rushing to this mighty tract of virgin land. They are bringing families and friends—and the faster they come the quicker rise the prices of the land. Here is the tremendous opportunity for YOU—to own your own farm at a low cost and sell in a few years at a big profit. For half a million acres will not long remain idle in the heart of a dense population and surronnded by such great markets.

Clover at $10 an Acre

Abundant yields of clover have given this land the title—The Land of the Big Red Clover. It springs up everywhere—in wagon ruts after hay wagons pass—among the underbrush—simply an immense soft carpet of clover. The land has until now been a forest but the lumbermen have stripped off the timber and it now lies—fertile and virgin—waiting for the plow. Grains of all kinds flourish wonderfully but clover and timothy bring $10 an acre right in the meadow.



$350 From Four Cows

Wisconsin's dairy products lead the world. Clover with pure spring water and moderate climate make this section ideal for dairying. The rich golden butter and thick cream from here command a premium in the market. Four cows yield nsually more than $200 a year in butter and $150 in beef. With snch cheap and abundant feed you can figure the profits easily.

Land Values Increasing

Pioneers who bought land in this region have made fortnnes, for $100 to $150 an acre is the selling price of farms near here. Bnt this tract has been held all these years by the lnmbermen, who have made their profits in the timber. Now it is thrown on the market at from $6 to $20 an acre, payable one-third down and the balance in ten years. Illustrating the rapid increase, a man recently bought some $15 an acre land, and after clearing and cultivating it he sold it for $50 an acre—better than many pioneer's profits.

Ten Years to Pay For Land

If yon now own a farm of high priced land yon can sell it and own a many times larger farm at these low prices. Yoor high priced—$100 an acre—land has been partly worn out by farming. Our low priced land—$6 to $20 an acre, payable one-third down—has had no crop. Sell 20 acres of yonr old land at $2,000 and own 400 acres of this new land by paying $5 an acre down on the $15 land. Why waste time on an old farm when you can have a larger new one that is increasing rapidly in value, for just the same amoont of money.

Write for Free Booklet

Send for our new book with maps showing exact location. Description of soil, climate, crops of sugar beets, tobacco and timber that often pays for the land. Write for this wonderful book at once—get yonr copy today. It's FREE. Address

AMERICAN IMMIGRATION CO.
Dept. 4 Chippewa Falls, Wis.

Gardening

By T. Greiner

Cabbage Enemies

A lady reader in Ohio writes that her cabbages are being destroyed, some by maggots, and others by clubroot. She would like to be told of a remedy for both troubles.

In these cases, an ounce of prevention is worth a pound of cure. Every garden book and every treatise on cabbage growing that I know of, has warned against the practice of planting cabbages in succession on the same land. Whenever cabbage plants or cauliflower, or turnip-plants are started in, or set into new soil (meaning soil on which none of these crops have been grown for some time), there will be no danger to them from clubroot, and slightly lessened danger from maggot attacks.

The maggot is the larva of a fly which in its general appearance resembles somewhat the common house-fly. This fly will appear in the spring, in the vicinity of the old cabbage patches, and the further we get away from these infested spots, the smaller is the risk of worm attacks on the cabbages in the new patch. However, in our old gardens that are heavily manured annually, and in which almost every nook and corner has been planted, at various times, with members of the cabbage family, these plants are but little liable to be affected with clubroot, while we can find a reasonably sure preventive of the maggot in the tarred-felt collars so often spoken of in these columns as well as in all modern treatises on cabbage culture. If such a collar is closely fitted around the stem of the plant, and kept clear of soil accummulation or washes on top, the maggot has no chance to get to the stem where it is soft enough so that it could bite its way into it.

Frequent spraying with lime-sulphur wash (commercial) diluted one to ten or fifteen, or kerosene emulsion, or possibly Bordeaux mixture and arsenate of lead, in either case so freely that the liquid will run down along the stem of the plant, will kill the young maggot when it first begins to tunnel into the stem, and the free application of tobacco dust around the stem of the plant has also seemed to be a partial preventive. Heavy applications of lime are known as a preventive of clubroot.

The Weeds

In a time as dry as this it is comparatively easy to kill weeds. Stir the soil by any means that it suits you with, horse-hoe or hand-hoe, and the weeds are done for. It is the small weeds, and their numbers, that bother us in a wet season. In a dry time we are troubled more with the big ones, such as ragweed, redroot, pigweed, coarse grasses, etc., and they usually root deep. It is not difficult, however, to get rid of them. Pull them up as you go over your patches—tomatoes, sweet corn, peas, beans, potatoes, roots, etc., and you can soon have these crops clean and in good shape. Don't let these weeds ripen and shed their seeds; to give you a lot more trouble next year.

Then there is purslane, the weed of all weeds that thrives in hot dry weather, and is hard to kill by any of our ordinary means of killing weeds. If you pull it up and leave it on the ground, it may wilt in the hot sunshine, but revive again during the night, and a good dew is all the moisture it needs to get a new root hold in the soil. But this same purslane makes good greens, both for man and beast. You can cook it like spinach. It is rich in protein, too. You can gather it by the basket. The individual plants, when left undisturbed for a few weeks in rich garden soil, grow large, and fleshy, and it may not require many of them, in number, to fill a half-bushel or bushel basket. Pigs like them. Poultry confined in yards will devour quantities of them, with great benefit to themselves and to the owner. Or if you have a surplus of purslane above what pigs and poultry will consume, just try a few basketfuls for the cow, or the calf, and see the stuff disappear.

Purslane, as also pigweed and chickweed, and many other weeds, besides old lettuce-plants, cabbage wastes, old pea-vines, etc., are worth to you a good deal more in the interior of any of these farm animals, than when being left standing among growing garden crops, or even left on the ground. You can't get rid of purslane unless you carry it out of the garden. Even if you have no stock to make use of the weeds, the clean appearance compensates for the trouble of pulling them.

POTASH

Clover takes nitrogen from the air and deposits it in the soil to make good wheat. But it must set early, be deep rooted and thrifty in order to do this. **Potash** is required. Supply it to *your* clover this Fall, when you seed your wheat or rye.

Potash Pays

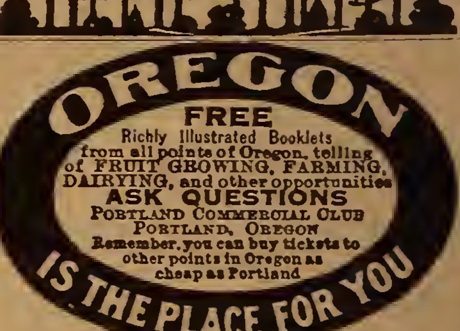
Potash sets the crop early and well and enables the clover to gather nitrogen from the air.

Add **Potash** to your wheat fertilizer to make it 2-8-6. Every two pounds of Muriate of **Potash** added to each 100 pounds of fertilizer increases the **Potash** by one per cent.

Send for new Farmers' Note Book—about soil, crops, manures and fertilizers—a practical book compiled by experts. Mailed on request. Free.

GERMAN KALI WORKS,
93 Nassau Street, New York

Chicago—Monadnock Block
Atlanta, Ga.—1224 Candler Bldg.



THE LARGEST AND BEST LINE OF

WELL DRILLING MACHINERY

in America. We have been making it for over 20 years. Do not buy until you see our new Illustrated Catalogue No. 15. Send for it now. It is FREE.

Austin Manufacturing Co., Chicago

CORN

HARVESTER cuts and throws in piles on harvester or windrows. Man and horse cuts and shocks equal with a corn binder. Sold in every state. Price $15. Testimonials and catalogue free, showing harvester at work.

New Process Mfg. Co., Salina, Kansas.

Dear Sirs:—I would like to get prices of your Corn Harvester in shipments of Five, Ten or Fifteen lot as I have one of your Corn harvesters and want another but my neighbor saw it work and all are well pleased with it.

Melvin T. Anderson, Roanoke, Ind. R. No. 3.

WELL DRILLING Machines

Over 70 sizes and styles, for drilling either deep or shallow wells in any kind of soil or rock. Monnted on wheels or on sills. With engines or horse powers. Strong, simple and durable. Any mechanic can operate them easily. Send for catalog.

WILLIAMS BROS., Ithaca, N. Y.

Saw Mills

If yon need anything in saw mills or wood working machinery, send for our catalog. Our line is complete. Goods highest qoality and prices reasonable. American Saw Mill Mach. Co., 130 Hope St., Hackettstown, N. J. New York Office, 1576 Terminal Building.

Maryland Best in the Union

THRIFTY FARMERS are invited to settle in the state of Maryland, where they will find a delightful and healthful climate, first-class markets for their products and plenty of land at reasonable prices. Maps and descriptive pamphlets will be sent free npon application to State Board of Immigration, Baltimore, Md.

TEXAS ORANGE GROVES easily obtained. Co-operative plan. Company does work, gives share crops, enormous profits, permnnent income, life insurance. May we send details at once? STIRLING IMPROVEMENT CO. Inc., DULUTH, MINNESOTA

CRATES Ventilated Bushel Crates for sale by J. H. MURPHY, Burgoon, Ohio. Send for free Booklet and Prices.

FOR SALE Crimson Clover Seed $5.00 to $6.00 bushel. Cow Horn Turnip Seed 40c pound. JOSEPH E. HOLLAND, Milford, Delaware.

The New Royal Pitless Scale

Sold on 30 days free trial. Our price the lowest. Catalogue and discounts. Address.

ZIMMERMAN STEEL CO., Box 42, Lone Tree, Iowa

Fruit-Growing

By Samuel B. Green

Black-Knot

W. O. L., Westmoreland, New York—The specimen twig you inclose has its swollen condition as the result of the growth of a fungus in the tissues of the wood, causing it to take on this abnormal form. It is not plum-pocket, as you think. This disease is common throughout New York and perhaps wherever the plum is grown in this country. It is present to more or less extent in our native woods. It is commonly seen on the wild choke-cherry, on which at times these swellings are more conspicuous than the foliage.

The remedies for this disease are to cut off the diseased branches so far as may be practicable, and burn them. After this is done, the remaining knots should be painted with thick Bordeaux mixture. For this purpose it is made of four pounds of lime, four pounds of commercial sulphate of copper and twenty-five gallons of water. All the knots should be painted. This will not cause them to disappear, but will prevent their distributing spores. The best time to do this is in autumn after the leaves have fallen, and the painting should be done very thoroughly, repeating several times if necessary until they have a thick coat of this wash on them.

Budding Roses

W. H. B., Medicine Hat, Alta, Canada—The best time to bud roses as you would other plants, is as soon as the buds are well matured, and at a time when the bark will slip easily from the old wood. As to the best method of doing this, there is so much detail in regard to it that it would be out of the question to cover it within the limits of a reply of this nature, and I would suggest, therefore, that you get a little book, entitled "Amateur Fruit-Growing," published by the Webb Publishing Company, St. Paul, Minnesota, that discusses in a very complete way, among other things, the budding of plants in general.

Spraying Plums and Apples

S. R. S., Crystal Lake, Wisconsin—I to not think there is anything you can do now in midsummer that will prevent the spotting of your plums to which you refer, as the disease is too far advanced. I think what you refer to is the work of a fungus, but cannot tell definitely without seeing specimens.

As for the apples, I am inclined to think that the best spray to use on your trees at this time would be Bordeaux mixture to which Paris green has been added, according to the usual formula. However, if it is not convenient to use Bordeaux mixture, I think that plain Paris green and lime will probably give fairly good results.

Dark-Colored Cider Vinegar

A. M. G., Chillicothe, Ohio—You state that you have a barrel of cider vinegar that turns dark soon after it is drawn off, and that it was put into an empty whisky-barrel that had been charred. I do not think there is any objection to having cider vinegar dark-colored, and it often varies in color as well as in strength. The color is probably due to the presence of some organic matter, and I do not think there is any danger of its being harmful in the least.

Charring on the whisky-barrel would not hurt it at all, and it was probably the best kind of barrel you could have obtained for holding your cider. The charcoal which had formed inside the barrel would have a tendency to absorb the gases and to clear rather than darken the cider, and is not at all soluble in liquids. I do not think it at all dangerous to use it just as it is, and think it better to do so than to add foreign substances to it.

Bag-Worm

J. A. W., Stendal, Indiana—The insect cocoon which you sent, and which is covered with small pieces of red cedar leaves, stuck on so as to quite effectually disguise it. is that of the common bag-worm, which is very troublesome through the Southern states, and occasionally as far north as Indiana and Ohio.

The eggs of this insect are laid on the foliage the preceding year, and the young soon hatch out and provide themselves with bags for protection. These are carried about with them and enlarged as the insect grows. The insect attaches the bag by means of a silken thread to twigs. Late in summer the larva becomes full grown and wanders about, and finally attaches its cocoon to some convenient place. The opening is then closed, and the caterpillars go through their changes. The female never emerges from the bag, but lays its eggs within, and finally dies. The eggs develop, and in time fill up the bag.

The best way of destroying this pest is by picking off the bags in winter, and if this is thoroughly done, no caterpillars will appear on the leaves the next year, since in this way all the eggs are removed. This insect is especially injurious to red cedar and arbor-vitæ. but also attacks various shade and fruit trees. The usual arsenical remedies may be used in case this insect becomes very abundant.

Angleworms Spoiling the Soil

J. E., Johnstown, North Dakota—You state that your ground is full of angleworms and that they injure your plants. As a matter of fact, angleworms do not attack growing plants, but sometimes, when very numerous, they may so compact the soil as to injure some of our more delicate plants. A complaint like yours is extremely unusual.

I think if the angleworms are exceedingly numerous in your soil that it might be well to apply a light coat of lime, say at the rate of about sixty bushels to the acre. This material is very objectionable to angleworms and will soon drive them away.

An interesting fact in connection with angleworms is that Darwin and others have agreed that they formed most of the tillable soil of our cultivated lands, and in this way have been extremely helpful.

Success in Fruit Business

C. N. T., Harrisonburg, Virginia—I cannot tell whether you would make a success or not of the small fruit business. There are many chances for the inexperienced to fail in this line. On the other hand, those who are skillful and will help out the small fruit business by keeping hens and a few cows, so as to have plenty of work the year around, can generally make things go pretty easily.

In my particular case, I would rather have a little small fruit business of my own, so as to be my own boss, than to work for my father-in-law, unless he was of the most exceptional kind.

Success in life is largely a personal matter; anyway, the personal factor is the most important one, and your temperament and ability to do and to manage should be very important factors in determining any change.

Where you are now you have one hundred and eighty dollars a year, and I take it, the living for yourself and wife. You are sure of your pay and have little to worry over. Under such conditions, you will not develop very rapidly, and unless you reach out and risk something, you won't amount to very much. Remember, however, I do not recommend you to go into the small fruit business, since you know nothing about it, and it is quite possible that some other line of work would be better adapted to you than this, but the men who seem to make life worth while are those who are willing and do risk something somewhere.

Budding on Sand-Cherry Stock

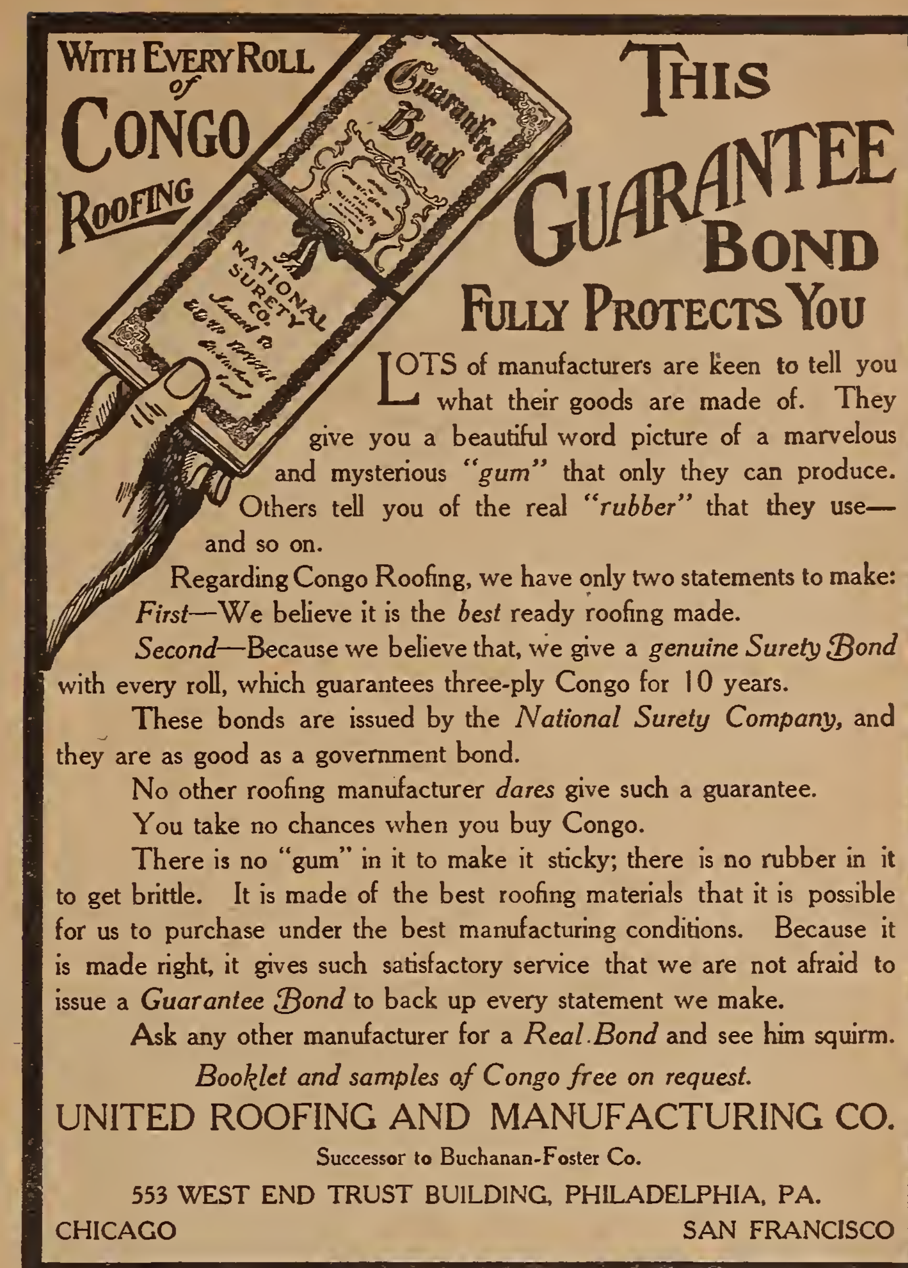
J. T., Seattle, Washington—In regard to the budding of Prunus besseyi, I generally bud this stock in July, but possibly in your climate it should be done a little earlier. It is a fairly good stock to work, and I think the best time to use it is about the time the buds begin to form in the axils of the lower leaves.

Neither the sweet nor the sour cherry is a success upon this sand-cherry (Prunus besseyi). This stock is more like a plum than a cherry, and most of the plums do well on it, although it dwarfs the larger-growing varieties. The Americana plum does very well on this stock.

In regard to the Americana plum, I do not think it will dwarf plums of the domestic type to any great extent. In order to dwarf these plums, I should prefer to use the sand-cherry. I am very familiar with this plant, and have grown large quantities of it for many years.

Plum-Knot on Damsons

D. D. A., Glasgow, Kentucky—The specimen of diseased limb from your damson tree is injured by what is known as "black-knot." This is a very troublesome disease and is discussed elsewhere in this issue.



Wear RUTHSTEIN'S STEEL SHOES!

The Shoe Success of the Century!

Worn With Wonderful Satisfaction by Workers Everywhere!

Wear "STEELS!" Don't Torture Your Feet in Hard, Warped, Twisted, Leaky Leather-Soled Shoes or Injure Your Health Wearing Rubber Boots

FREE

Send for Book, "The Sole of Steel," or order a pair of shoes on the blank below.

Three years ago Steel Shoes were unknown. Today they are worn by thousands. Their fame is growing at a truly marvelous rate. The durability of Steel Shoes is astounding! Their comfort, economy and foot protection is almost beyond belief. That's why farmers everywhere are throwing away leather-soled shoes and rubber boots and wearing the new Steel Shoes.

1 Pair of Steel Shoes Will Outwear 3 to 6 Pairs of All-Leather Shoes

There is more good wear in one pair of Steel Shoes than in three to six pairs of leather-soled shoes or boots. And one pair of "Steels" will outwear at least three pairs of rubber boots. This means a saving in shoe bills of from $5 to $10 a year.

How Steel Shoes Are Made

Waterproof and Wearproof

Here is the way Steel Shoes are made: The soles and an inch above the soles are stamped out of a special, light, thin **rust-resisting steel. One piece of steel from toe to heel!** The soles are protected from wear by Adjustable Steel Rivets, which give a firm footing. Rivets can easily be replaced when partly worn off. Fifty extra rivets cost only 30 cents, and will keep your shoes in good repair for at least two years. No other repairs are ever necessary.

The uppers are made of the very best quality of soft, pliable, waterproof leather, riveted to the steel and reinforced where wear is greatest. The rigid steel soles prevent the shoes from warping and twisting out of shape.

Steel Shoes have thick, springy, Hair Cushion Insoles, which add to ease of walking—absorb perspiration and odors. Insoles easily removed, cleaned and dried each night.

Pat. Dec. 4, 1906. Others Pending.

No Corns!

No Bunions! No Callouses! No Blisters! No Aching or Tired Feet! No Stiffness!

Sizes, 5 to 12—6 inches, 9 inches, 12 inches and 16 inches High

Steel Shoes, 6 inches high, $2.50 a pair, are better than best all-leather $3.50 shoes.
Steel Shoes, 6 inches high, extra fine grade of leather, $3.00 a pair, excel any $4.50 all-leather shoes.
Steel Shoes, 9 inches high, $3.50 a pair, are better than best all-leather $5.00 shoes.
Steel Shoes, 9 inches high, **extra grade** of leather, $4.00 a pair, are better than the best all-leather $5.50 shoes.
Steel Shoes, 12 inches high, $5.00 a pair, are better than best all-leather $6.00 shoes.
Steel Shoes, 16 inches high, $6.00 a pair, are better than the best all-leather shoes regardless of cost.

No Colds!

No Rheumatism! No Pneumonia! No Cold, Wet or Damp Feet! No Doctors' Bills or Medicines!

ORDER TODAY! We ship Steel Shoes anywhere, guaranteeing to refund money promptly if not found as represented when you see them.

No Repairs!

No Halfsoling! No Patching! No New Heels! **IF** You Wear Steel Shoes

For general field work, we strongly recommend our 6-inch high Steel Shoes at $3.00 per pair, or the 9-inch at $4.00 a pair. For all classes of use requiring high cut shoes, our 12 or 16 inch high Steel Shoes are absolutely indispensable.

State size shoe you wear.

Fill out and mail the Coupon, together with remittance. Do it TODAY.

Order Blank for Steel Shoes

Steel Shoe Co., Dept. 119, Racine, Wis.

Gentlemen:

I enclose ________ for $________

in payment for ________ pair *Steel Shoes.*

Size ________

Name ________

Town ________ State ________

County ________ R. F. D. ________

Dealer's Name ________

Steel Shoe Co., Dept. 119, Racine, Wis.

Canadian Branch, TORONTO, CAN.

MINERAL SURFACE—NEEDS NO PAINTING

AMATITE roofs need no painting. The owner need never look at them; they take care of themselves. They are "no-trouble" roofs. They present to the weather a *real mineral surface* against which storm and wind and snow are absolutely powerless. This surface does not require constant painting like the smooth surfaced or so-called "rubber" roofings. The mineral surface is far better than paint.

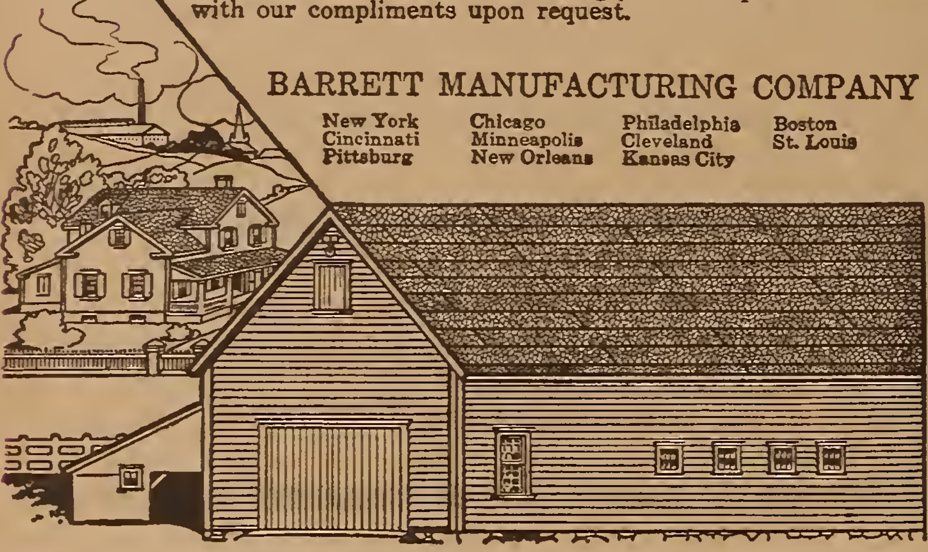
Of course before Amatite came, the "smooth surfaced" roofings were the best kind to buy. Now that Amatite has been invented and thoroughly tested by years of use, painting a roof is wasteful and unnecessary. The cost of painting a "rubber" roofing from year to year will soon cost more than the roof itself. That is why everybody who knows about roofing is buying Amatite nowadays. *It needs no painting.*

Amatite is easy to lay. Anyone can do the work. Large headed nails and liquid cement come free with every roll.

We shall take pleasure in sending you a sample of Amatite with our compliments upon request.

BARRETT MANUFACTURING COMPANY

New York, Cincinnati, Pittsburg, Chicago, Minneapolis, New Orleans, Philadelphia, Cleveland, Kansas City, Boston, St. Louis



Preserving Eggs

HAVING tested several methods of preserving eggs for use when eggs are scarce I give some of the recipes tried and the results of the experiments.

Water-Glass

Water-glass is a silicate of sodium or a silicate of potassium which can be procured at a drug-store at from seventy-five cents to one dollar a gallon, but commercial water-glass is not so pure and can be bought for about fifty cents a gallon. This grade is used for preserving eggs. Water-glass is a thick liquid, looking like molasses, and when mixed with water for preserving eggs is not injurious to the hands while packing the eggs in it.

The eggs are packed in earthen jars or barrels, as wooden vessels are liable to transmit the odor of the wood to the eggs. The containers should be thoroughly scalded and rinsed before placing the eggs in them. The water-glass mixture is made by dissolving one part of water-glass to nine parts of water so as to have a one-tenth solution. Pack the eggs (small end down) in the jar, and pour the solution over them until about two inches above the last layer of eggs. Seal the jar tightly, and keep in a cool, dark place until they are wanted for use.

In preserving eggs only the very freshest ones should be used. If you cannot get enough to fill the jar at one gathering, do not keep them until you have enough, as eggs will soon get stale in hot weather. It is better to put in each day's gathering, pouring some of the solution over them each time. Dirty eggs should not be used for packing, nor should washed ones be used, as the washing injures their keeping by removing the natural protective coating on the outside of the shell.

When the eggs are wanted they should be taken from the jar and rinsed with slightly warmed water, which washes off the solution and prevents the glass glaze that will form upon the eggs if the solution is allowed to dry. Some report a slight taste of the water-glass to the eggs preserved by this method, but I find this hardly noticeable. The flavor is but slightly impaired, while the eggs in other respects are all right for cooking and eating purposes. The only objection to this method is that the eggs when taken out have a sediment attached to them, which, however, is easily removed by rinsing.

Other Methods

A lime solution is made by using two pounds of lime and one pint of salt to four gallons of water. The same method was carried out in packing and selecting the eggs as with the water-glass solution. Eggs preserved in the lime solution were found not to be so good in flavor, yet they kept very satisfactorily.

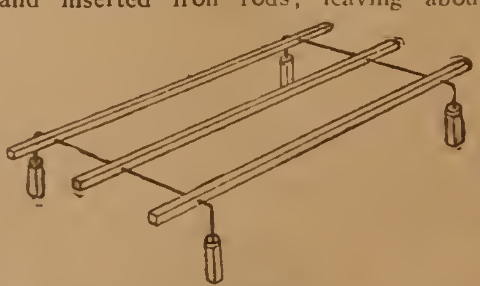
In the trial with salt the eggs were placed on end in an earthen jar with alternate layers of salt. Eggs preserved this way were dried out somewhat and some of them spoiled, while their flavor was more or less affected.

As a result of these trials I have concluded that the water-glass method is the best, for the appearance and the flavor of the eggs packed in this way can hardly be detected from absolutely fresh eggs. A. E. VANDERVORT.

Lice-Proof Roosts

HAVING been in the chicken business for more than eighteen years, I have been troubled a great deal with the little red mites; and have had to keep up a good, hard fight every summer to keep the upper hand of them.

I now have a roost which I built one year ago and it has been a success with me. It is built out of two-by-two inch stuff, the same as any ordinary roost; but the legs are cut two inches shorter than they should be. They are also out of two-by-two inch lumber. The upper end is hollowed out about one half inch deep. I bored holes in the roost proper and inserted iron rods; leaving about two inches of the rods extending. The roost is then placed with rods resting in the hollows in the legs.



Practical Roosts

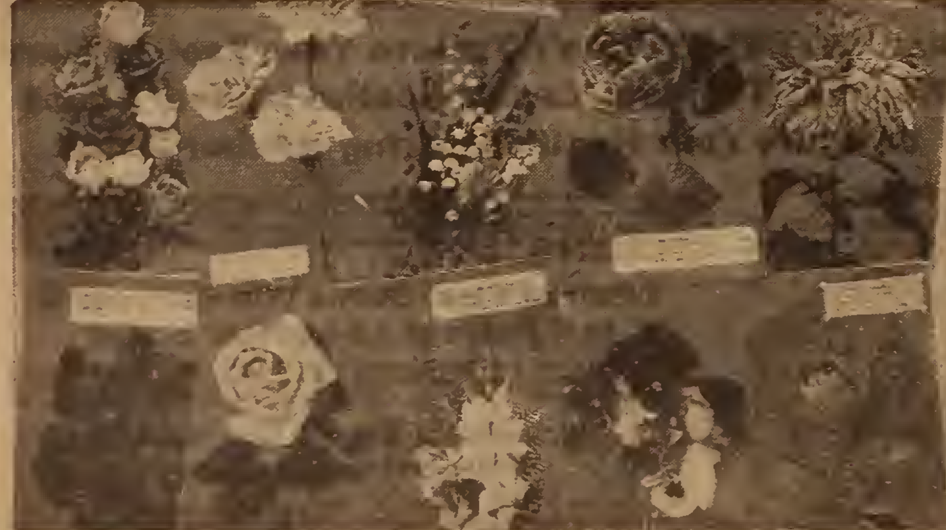
The hollow in top of the leg I fill with any old grease and coal-oil mixed. The grease will stay in the hollow a long time. The roost must be kept away from the wall far enough so when the chickens are on it that they do not touch the sides of the hen-house. L. F. KLINKERMAN.

Flower Flirtation

The Newest Post-Cards for Our Friends

These ten beautiful post-cards—Flower Friends—are the finest we could buy. Each card has a favorite flower in the exact natural colors on a solid gilt background.

With each flower there is a delightful verse telling what that particular flower means; for instance, the Pansy means "I am thinking of you."



Each flower has its special message. Send a postal to a friend and wear the same flower the next time, and see if he or she remembers its meaning.

These flowers have been made by a special photographic process—the most costly way—and are so perfect that it seems as if they could be plucked from the card and that their fragrance was there. If we could only show these cards to you, we know that you would be anxious to have a set. Don't fail to get a set at once.

How to Secure a Set for Yourself

We will send you "Flower Friends" at once and FARM AND FIRESIDE for three months, if you will send us this coupon together with ten cents in stamps or silver. This is a wonderful offer—the greatest farm paper in the country for three months and ten "Flower Friend" post-cards at the small cost of five two-cent stamps.

If you are a paid-up subscriber now, you can have the three months of FARM AND FIRESIDE sent to some friend, who will be helped by its valuable information, or you can have your own subscription sent three months longer.

FARM AND FIRESIDE, SPRINGFIELD, OHIO

Tear off here

FARM AND FIRESIDE, Springfield, Ohio.

GENTLEMEN:—Please send me at once the ten post-cards, "Flower Friends" and FARM AND FIRESIDE for three months, for which I inclose five two-cent stamps (or silver) to pay the cost of postage and mailing.

Do you get FARM AND FIRESIDE now? YES——Mark——NO

My Name is......

My Address is......

FF-9-10-09 Friends in Canada should send fifteen cents in stamps.

ROOFING

You've got the price, now get the SAMPLE that we postpay to you, FREE.

WE WANT to give you the benefit of our low, factory wholesale prices on No. 1 guaranteed Breese Bros. Roofing. Look at these prices, which include all freights paid. Now, if we could show you the high quality of "Breese Bros. Rubber Roofing" you farmers—not one of you—would ever buy any other kind.

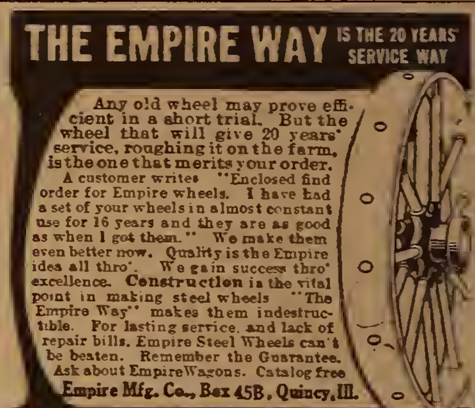
Let us send you generous free samples of this 1, 2 and 3-ply roofing so that you can see the high-grade, long-fibre-wool felt, saturated in hottest asphalt, that forms the body of "Breese Bros." Roofing; and tell you all about our water-proof, fire-resisting process that enables us to place almost an unlimited guarantee on our roofing.

Order direct from price-list below, or give name and get free samples, prices and fullest facts regarding the most durable roofing ever made.

BREESE BROS. CO., Roofing Dept. 24, Cincinnati, O.

Prices (Freight paid on 100 pounds or more to points east of west line of Minn., Iowa and Mo., and north of the south line of Tenn. We pay that far if you live beyond):

35-lb. Roll—108 Square Feet—1-ply......$1.35
45- " " " " 2- "...... 1.85
55- " " " " 3- "...... 2.25



Profitable Employment

Wanted in every locality an intelligent man or woman to represent us. Our guaranteed income plan insures substantial remuneration to the right party. Careful training. Permanent business. Good opportunity for promotion. Address

THE CROWELL PUBLISHING COMPANY
Department of Agents Springfield, Ohio

THE STEWART IRON WORKS CO.
1721 Covington Street Cincinnati, Ohio

ORNAMENTAL FENCE 25 Designs, All Steel. Handsome, cheaper than wood, more durable. Special prices to churches and cemeteries. Don't buy a fence until you get our free catalog. Kokomo Fence Machine Co. 427 North St., Kokomo, Ind.

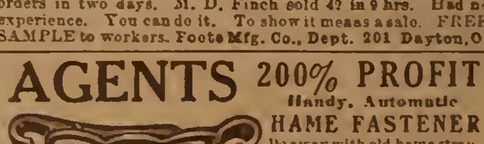
FEED MILLS AND COB GRINDERS that will save you money. Direct from manufacturer to user. Nine sizes. Send for Catalogue. SLATER & MARSDEN, Beloit, Wis.

25 Sheets of Writing Paper and 25 Envelopes printed with your name & address for 25c Norwalk Stat'y. Supply, Box 156, Norwalk, Ct.

Agents Wanted

Farmers "Ever-Ready" Tool Kit does it. Agents going wild over results. M. Snyder made $46 in 9 hrs. Joseph Pine took 65 orders in two days. M. D. Finch sold 42 in 9 hrs. Had no experience. You can do it. To show it means a sale. FREE SAMPLE to workers. Foote Mfg. Co., Dept. 201 Dayton, O.

AGENTS 200% PROFIT Handy, Automatic HAME FASTENER



Do away with old hame strap. Horse owners and teamsters wild about them. Fasten instantly with gloves on. Outwear the harness. Money back if not satisfactory. Write today for confidential terms to agents F. Thomas Mfg. Co., 746 Wayne St., Dayton, Ohio

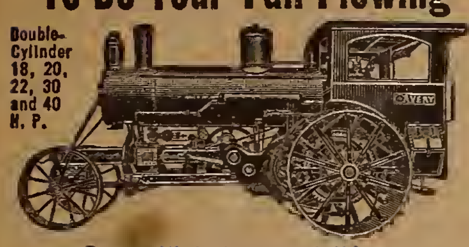
AGENTS. New invention; never before sold in your territory; horse owners wild about them; automatic hame fastener sells at sight; coin money; e for territory; free sample to workers; write at once. Automatic Fastener Co., G695, Cincinnati, Ohio

AGENTS. Make a fortune; new invention; Combination Ironing Board, sleeve board, iron holder etc. People wild about them. Softest snap and biggest money maker on the market; territory and working sample free Braham Co., B 121, Cincinnati, O

AGENTS WANTED Men or Women to sell Consumers. Big Profits. Groceries Coffees, Teas, Extracts, Perfumes, Soaps, etc. With or without premiums. Write for catalogue A. Bushway Flavoring Extract Co., 951 N. Water St., Decatur, Ill

AGENTS PORTRAITS 35c, FRAMES 15c, sheet pictures 1c, stereoscopes 25c views 1c. 30 days credit. Samples & Catalog Free. Consolidated Portrait Co., 290—81 W. Adams Street, Chicago

GET AN AVERY
To Do Your Fall Plowing



Because it's Undermounted, it has:
Increased Durability. No pulling strains on boiler.
More Power. Straight line pull from cylinders to load.
Greater Convenience. Screw-shaft guide, etc.
Can be used with the Avery Steam Plow Attachment or any make of moldboard or disc plow. **Also for Threshing, Sewing, Grading, Hauling and similar work.** Ask for Catalog and Special Plowing Circular.

AVERY CO. 532 Iowa Street, Peoria, Ill. Makers of Plowing, Threshing, and Corn-Growing Machinery.

This is a Real Automobile on High Wheels

We ask experts to read our catalog and take our cars apart to discover how we could improve them. And we ask you to send us your name and read our catalog to understand why we have spent so much time and money to make the Schacht the highest standard high-wheel automobile in the world. You should not risk buying any car of this type before investigating the differences in money-worth values. Write us for the book.

THE INVINCIBLE SCHACHT

Schacht Mfg. Co., 2730 Spring Grove Ave., Cincinnati, O.

SANDWICH SELF FEED

HAY PRESS

The Baler for speed. Bales 12 to 18 tons a day. Has 40 inch feed hole. Adapted to bank barn work. Stands up to its work—no digging holes for wheels. **Self-feed Attachment** increases capacity, lessens labor, makes better bales and does not increase draft. Send for catalogue.
Sandwich Mfg. Co., 179 Main St., Sandwich, Ills.

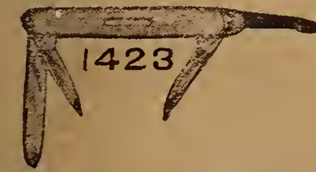
Self-Feed 3-Stroke Eli Baling Press

Latest addition to the great "Eli" family. Three strokes with automatic self-feed makes the gang hustle. Built on lines that make horse presses really valuable. Greatest leverage when pressure is hardest. Low Step over, Full Circle, Block Signals, etc. A little giant in strength. We've always led as hay-press builders—18 different styles, horse and belt powers. All in one catalog and it's free. Write for it.
Collins Plow Co., 1110 Hampshire St., Quincy, Ill.

DEATH TO HEAVES
Newton's Heave, Cough & Distemper Cure
Guaranteed or Money Back. $1.00 per can, at dealers, or Express Paid. 18 Yrs' Sale. THE NEWTON REMEDY CO. Toledo, Ohio.

Pearl Handle Penknife

This is a handsome Penknife. It has a beautiful pearl handle and four of the finest quality steel blades. It is a perfect beauty. Sent postpaid for 3 yearly subscriptions to Farm and Fireside, at 35 cents each.



Send the Subscriptions to
FARM AND FIRESIDE,
SPRINGFIELD, OHIO

In Fly Time

A Pennsylvania reader asks what kind of solution to use for keeping the tormenting flies off his cattle. Flies are a big nuisance at this time, and the nearer we come to fall, the bigger this nuisance becomes, and the more persistent the fly tormentors become in their attacks. It often happens that a particularly impudent fly will buzz around a fellow's head, and drive him to distraction, making him strike frantically with both arms around his head, fighting "just one little fly" like a wild Indian. Then think of hundreds of flies buzzing and biting and sucking a poor, almost defenseless, critter! No wonder there is a material falling off in the flow of milk at this time. What is to be done?

Doctor Smead, New York state's well-known veterinary surgeon, says: "The fly killers or repellers, advertised in the agricultural papers, are somewhat more effective than home-made ones; but that the latter will do the business if properly applied." That simple home-made mixtures will do very well, I have learned during years of practical experience. One of the ingredients in the regular commercial fly-killers is fish-oil. This is cheap, of most disagreeable odor, and smeary. It is recommended by almost every expert in this line, especially for the purpose of adding lasting qualities to the effectiveness of the mixture as a fly repeller. It is not expected to kill. To this are added oil of tar, crude carbolic acid, and possibly crude petroleum or kerosene.

I do not use fish-oil, because, although cheap, it is hard to get in small quantities. Inland druggists and supply stores do not handle it. Oil of tar is very good and can be had at wholesale druggists for about seventy-five cents or a dollar a gallon. Crude carbolic acid is also good and cheap and obtainable at any drug store. When I have crude petroleum on hand, I use some of that. But oil of tar and carbolic acid, and even crude petroleum when applied in a mere misty spray, do not usually kill flies, but only repel them for a time, and I find that even this time is short.

I have never yet found a mixture or substance that will keep flies off cattle sprayed with it, for even a whole day. What I aim to do, however, is to kill as many of the flies as possible, and I can do that with clear kerosene (coal-oil) about as easily as with anything else. I do put some oil of tar and crude carbolic acid and crude petroleum into the kerosene to be used for spraying farm animals. But if I did not have these materials on hand or within easy reach, I would not hesitate to use the clear kerosene, and to use it freely in sufficient quantities to kill the flies that are often found in swarms covering flanks, hips and the base of the horns of cattle. What you want is a good sprayer that, when the nozzle is held within two or three feet of the flies on an animal, will cover them with oil sufficiently to kill the flies in short order.

Just try the following mode of treatment for say one week, and note the difference: Load up your sprayer with kerosene, or any mixture in which kerosene is the principal ingredient. Go from cow to cow, holding the nozzle at proper distance and spray as long as you can see flies on the sides or base of the horns of the animal. You will see the flies drop to the ground, one after another. Do this in the morning; again at noon, and once more at night; day after day—and in a very few days you will see the flies greatly reduced in numbers. This is better than relying simply on fly repellers. Driving flies away from one cow, or one herd, does not stop them from breeding. Persistency in killing will soon give immunity, and relief and comfort, to the milker as well as to the milked.

Mosquitoes are also troublesome at times, both to man and beast. I have seen horses pasturing in the orchard fairly covered with mosquitoes, and after running my hand along the neck, sides and back of the horses, have seen its hide almost red with its own blood squeezed out of the mashed mosquitoes. Just now I had this one point brought vividly to my notice, namely, how carefully we must guard against stagnant water if we wish to keep even moderately comfortable when outdoors in mosquito time. We have a barrel on wheels which is usually kept filled, for use in supplying drinking water to poultry, or in watering plants, etc. This barrel had been freshly filled a few days ago; but when I examined it to-day, it was already alive with wigglers. I quickly put a little kerosene on top. This kills the wigglers. But on most premises you will find crocks, old pails, tubs, etc., standing or lying around, and they may be partially filled with water ever since the last rain. All these make ideal breeding places for mosquitoes. Empty the water out, or put some kerosene on top.

T. Greiner.

The Coming Universal Use of DE LAVAL CREAM SEPARATORS

The same economical considerations which have already brought about the practically universal use of creamery and factory sizes of DE LAVAL Cream Separators are absolutely certain to accomplish the same result in the use of farm and dairy sizes of such machines within the next five years. This is no mere advertising claim but the simple statement of a conclusion based on the logic of facts as positive as to outcome as the solution of a mathematical problem.

The same considerations of greater capacity; closer separation, particularly under hard conditions; better quality of cream and butter; more economical operation, and greater durability are bound to ultimately accomplish the same result in the use of small as of large sizes of cream separators.

But naturally it requires longer and is vastly more of an undertaking to educate the 2,500,000 present and prospective American users of farm sizes of separators as to the importance of separator differences than the 12,000 users of creamery separators. Naturally it is more difficult to make a user appreciate a difference of $50.– a year in results than a difference of $1,500.–, even though the difference of $50.– may relatively mean more to the user than the difference of $1,500.–.

Again, the users of factory or creamery sizes of separators have so much better sources of information. The use of the separator is a business with them. The results are known from day to day and year to year, and what one user accomplishes is readily comparable with the results of another. On the other hand, the great majority of users of farm and dairy sizes of separators know little of separators and cannot easily determine whether their results are as good as they should be or might be better under other circumstances. But the problem is bound to finally work out in the same way.

The DE LAVAL factory separator was invented 31 years ago and commenced to come into creamery use 28 years ago. Within a few years the original patents began to expire. 15 years ago there were a dozen makes of power cream separators on the market. Today the use of DE LAVAL factory machines exceeds 98% and is almost literally universal. It has been so for five years. No effort is longer made to sell any other make of power separator.

The DE LAVAL hand separator was invented 23 years ago and commenced to come into farm use about 20 years ago. As the earlier patents expired there were more than 30 makes of such machines on the market five years ago. Today there are less than a dozen and not more than five which have a sale worth counting at all. Each year the number decreases and their sales become fewer and more difficult.

What is true in America in this way is true in even greater degree elsewhere throughout the world. In many countries the sale of DE LAVAL machines is now almost universal. Dollars-and-cents differences in product mean more there than to American farmers. The sale of cheap "mail order" separators has not been attempted elsewhere, and would-be competing manufacturers and dealers have never been so unscrupulous in making the unjustified "claims" that so many American buyers have accepted as facts.

It makes an AVERAGE DIFFERENCE OF FIFTY DOLLARS A YEAR whether the farm user of a separator uses the DE LAVAL or some other kind. It will make that difference this year and go on making it until a DE LAVAL is used. A DE LAVAL catalogue helps to explain this and is to be had for the asking, as well as an Improved DE LAVAL machine for practical demonstration of it to any intending separator buyer.

THE DE LAVAL SEPARATOR CO.

42 E. Madison Street, CHICAGO
1213 & 1215 Filbert St., PHILADELPHIA
Drumm & Sacramento Sts., SAN FRANCISCO

General Offices: 165 BROADWAY, NEW YORK

173-177 William Street, MONTREAL
14 & 16 Princess Street, WINNIPEG
107 First Street, PORTLAND, OREG.

Dare You Throw Burning Coals On *Your* Roof?

Burning coals thrown on a roof of Ruberoid harmlessly sputter away—and die out.

They do not set fire to the Ruberoid. They do not set fire to the timbers underneath.

Yet a roof of Ruberoid is more than mere protection against fire.

It is protection against the cold of winter. Being a perfect non-conductor of heat, it keeps the warmth of the house *in*.

It is protection against the heat of summer. It keeps the building cool by keeping the sun's heat *out*.

Seventeen Years of Test

And it is more. It is wind proof, rain proof, snow proof. It resists acids, gases and fumes. Because of its great flexibility, it is proof against contraction, expansion and the twisting strains which every roof must bear.

A roof of Ruberoid is practically a one-piece roof.

For with every roll comes the Ruberine cement with which you seal the seams and edges—seal them against the weather and against leaks. You will find many roofings which look like Ruberoid—but none which wear like Ruberoid.

For the first buildings ever roofed with Ruberoid—more than seventeen years ago—are still waterproof and weathertight.

These buildings are the oldest roofed with *any* ready roofing. Ruberoid was by several years the first.

And of more than 300 substitute roofings on sale today, not one can employ the vital element which makes Ruberoid roofing what it is.

This vital element is Ruberoid gum—made by our own exclusive process.

It is this wonderful Ruberoid gum which gives Ruberoid roofing the life and flexibility to withstand seventeen years of wear where other roofings fray out in a few summers.

These substitute roofings are made to resemble only the uncolored Ruberoid.

Ruberoid can also be had in colors. It comes in attractive Red, Brown and Green—suitable for the finest home.

The color is not painted on. It is a part of the roofing. It does not wear off or fade.

Get This Free Book

Before deciding on *any* roofing for *any* purpose, get our free book which tells what we have learned in twenty years of tests about *all* kinds of roofing. This book is frank, fair and impartial. It tells all about shingles, tin, tar, iron and ready roofings.

To get this book, address Dept. 21H The Standard Paint Company, 100 William Street, New York.

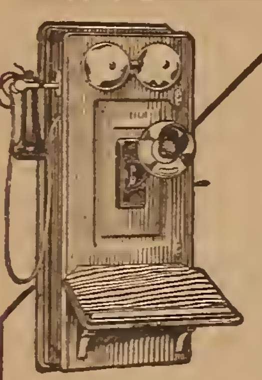
RUBEROID

(TRADEMARK REGISTERED)

Be sure to look for this registered trademark which is stamped every four feet on the *under* side of all genuine Ruberoid. This is your protection against substitutes which many dealers brazenly sell as Ruberoid. Ruberoid is usually sold by but one dealer in a town. We will tell you the name of your Ruberoid dealer when you send for our free book.

THE STANDARD PAINT COMPANY, Bound Brook, N. J.

New York, Chicago, Kansas City, Boston, Philadelphia, Atlanta, Memphis, Denver, San Francisco, Montreal, London, Paris, Hamburg



Reliable Telephones

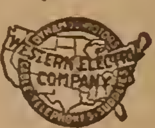
Use the same judgment in buying a telephone as you would in purchasing a cream separator or a team of horses. Buy only that telephone which you are sure you can depend upon. In other words buy only

Western-Electric Rural Telephones

They are absolutely reliable—they can be depended upon for the best of service day or night—good weather or bad—in emergencies or for ordinary business.

Western Electric Rural Telephones are of the same high quality as the 4,000,000 "Bell" telephones in daily use, and are made by the same manufacturers. This means the most reliable and economical service possible.

We have an interesting Bulletin, No. 50, telling all you want to know about rural telephone lines. Write your name and address on this advertisement—mail it to our nearest house and we will send you a copy free.



WESTERN ELECTRIC COMPANY

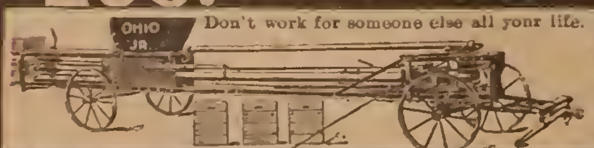
New York, Boston, Philadelphia, Pittsburg, Atlanta, Chicago, Cincinnati, Indianapolis, Minneapolis.

Write Our Nearest House

St. Louis, Denver, Kansas City, Dallas, Omaha, San Francisco, Seattle, Los Angeles, Salt Lake City

Northern Electric and Manufacturing Co., Ltd., Montreal and Winnipeg.

$200. PER MONTH AND YOUR OWN BOSS



Don't work for someone else all your life. Start out for yourself. Here is a low priced Hay Press that will earn you $200.00 per month. Made all steel, will last a life-time; strong, convenient, up-to-date and fully guaranteed.

Write for full information. Souvenir Balers Hand Book mailed FREE.

Ohio Cultivator Co., 19th St., Bellevue, O.

It is to your advantage to mention Farm and Fireside in writing to advertisers. Farm and Fireside folks get the very best attention.

The Man, His Cow and Her Care

The business of dairying has undergone a wonderful change during the past ten years. It has followed the trend of every other industry toward concentration and specialization until the mechanical side of the business is rapidly shifting from the farm to the cheese factory, creamery, condensary, powdered milk plants and to the city milk and cream trades. The great problem of improving the dairy farmer's condition seems to have narrowed down to the great question of the man, his cow and her care. In order to make a more permanent success of the dairy business a man needs to possess a full understanding and knowledge of the cow and her care.

Successful dairying requires a study of the breeds and their adaption to the farm and branch of dairying that is being followed, a study of animal form and its relation to economical production, a study of dairy traits and temperament, a study of the utility of breeding along family lines and of inbreeding to intensify and make permanent desirable dairy qualities, a study of the kinds of foods best adapted to the economical production of milk and how to proportion them so that they will maintain a suitable flow of milk and promote the health and vitality of the cows that are being fed.

With the demand for dairy products rapidly increasing, with the numerous breeds of special-purpose dairy cattle selling for reasonable prices, with scientific men on all sides giving dairymen the benefit of their practice and demonstrations, and with the very best of literature at their command, it seems almost incredible that there should be so much unprofitable dairying.

High-Producing Cows

The first essential to dairy improvement is to secure cows that have the ability to convert feed into milk at a profit. This may mean the reduction of the size of the herd, but the average profits from the herd will be greatly increased. Improvement must be brought about by eliminating the unprofitable cows and the least profitable ones. Buying cows never built up a high-producing dairy herd, and for that reason true dairy improvement involves the grading up of the herd not only by selection but by breeding. There is no question but that animals which have been bred for generation after generation for dairy purposes, excel those of mixed breeding as economical producers in the dairy. We are very fortunate that we have such excellent breeds of dairy cattle as the Ayrshires, Jerseys, Guernseys, Holsteins and Brown Swiss, that have come to us as a heritage—the fruits of the labors of our forefathers—the development of which has required many a lifetime of hard work and study. At present, with plenty of bulls from these excellent breeds of dairy cattle, we can by selection and breeding grade up a herd of excellent producers from common or grade cows in a comparatively short time.

There has been much confusion among dairymen brought about by the continual reiteration that it is not the special breeds of dairy cattle, but the dual-purpose cattle that dairymen need, so that beef shall be a product as conspicuous as milk. However, these sayings come from men who are not versed in dairying, or from those who are very particularly interested in selling some of their beef-bred bulls to the dairymen. There is not one instance on record where the profits of a special-purpose dairy herd have been increased by the use of a beef-bred bull, and it is time that dairymen found out that the dual-purpose cow is a snare and a delusion. A breed never existed that has proven itself highly profitable both for the dairy and for beef.

The curse of the dairy business whereby the average production of dairies has been so low, has been due largely to the fact that dairymen have made use of any and all cows for dairy purposes, regardless of their special adaptability; together with improper feeding, poor barns and uncomfortable stanchions.

Feeding High-Producing Cows

It matters little how well we select and breed the cows in the dairy unless we introduce the most economical methods of feeding. The modern dairy cow is a hard-working machine, and unless she is properly fed and kept in good condition, she is not capable of doing her best work. I feel certain that every dairyman who is familiar with the term balanced ration will agree with me that the cows' food should be fairly well balanced to produce the best results.

Allowing that it is necessary to feed the cow a palatable and well-balanced ration, the great question is to secure such a ration in the most economical manner. I believe, that almost without exception, a ration of home-grown foods

THE

Economy Chief Cream Separator

Cream separator agents charge twice too much—they ask $65.00 for the size that we sell for $28.80—their machines are not as good as our Economy Chief—won't last as long nor skim as close.

JOS. C. GRABER, Pretty Prairie, Kans., R. 2, knows about this—ask him. He writes us saying: "Please quit sending me advertisements and testimonials of your Economy Chief Cream Separator, because it makes me feel bad to think of the mistake I made in buying a machine for $65.00 when I could have bought a better machine (Economy) for $28.80."

J. A. MONROE, Morrowville, Kans., R. 1, the well known breeder of Short Horns and Poland China, says: "Three cheers for the Economy and long life to Sears, Roebuck & Co." He says he thinks there are ten times as many Economy Chiefs in his neighborhood as all other makes put together.

A. E. HOOVER, Gaylord, Kans., R. 1, writes us a letter saying: "Anyone wanting a separator is foolish to pay $60.00 to $100.00 when they can get a great deal better one for 50 per cent less." He used a $100.00 machine and afterward bought five Economy Chiefs, so he knows "what's what."

This is the kind of letters that every mail brings us from actual users of the Economy Chief.

It's good-by, Mr. Agent, when the Economy comes into the neighborhood—he has to quit. No farmer who has seen and used the new Economy Chief will pay agents' prices.

We sell on trial only. You get your money back any time in sixty days if you want to return the separator; **but you won't want to.**

Write us today and say: "Send me your Dairy Guide No. 476T." It tells you all about separators and shows up these big price, big profit fellows in great shape. It's free. Be sure to write for it whether you intend to buy a separator now or not.

Sears, Roebuck & Co., Chicago

LAMENESS from a Bone Spavin, Ring Bone, Splint, Curb, Side Bone or similar trouble can be stopped with

ABSORBINE

Full directions in pamphlet with each bottle. $2.00 a bottle at dealers or delivered. Horse Book 9 D free.

ABSORBINE, JR., for mankind, $1 a bottle, removes Painful Swellings, Enlarged Glands, Goitre, Wens, Bruises, Varicose Veins, Varicosities, Old Sores, Allays Pain. W. F. YOUNG, P. D. F., 284 Temple St., Springfield, Mass.

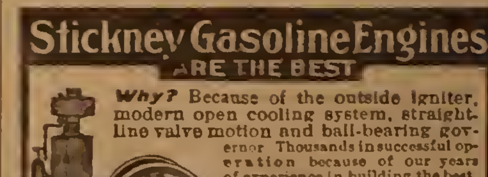
FIX YOUR ROOF

5c Per Square.—We will guarantee to put any old leaky, worn-out, rusty, tin, iron, steel, paper, felt, gravel or shingle roof in perfect condition, and keep it in perfect condition for 5c per square per year.

Roof-Fix The Perfect Roof Preserver, makes old, worn-out roofs new. Satisfaction guaranteed or money refunded. Our free roofing book tells all about it. Write for it today.

The Anderson Manufacturing Co., Dept. 19 Elyria, Ohio

Stickney Gasoline Engines ARE THE BEST



Why? Because of the outside igniter, modern open cooling system, straight-line valve motion and ball-bearing governor. Thousands in successful operation because of our years of experience in building the best. Seven sizes: 1½ to 16 H. P.

Send for our Free Catalog and our Catechism telling fifty-seven reasons why ***Stickney Engines are the Best.***

Agents everywhere sell them.

Charles A. Stickney Company

MAIN OFFICE & FACTORY ST. PAUL, MINN.

15 DAYS FREE TRIAL

Pays for itself first summer in healthier and fatter stock, saving in feed, saving of labor, etc. One filling supplies 50 hogs 2 days. No valves to clog. Never overflows. Always lets down water as needed. Galvanized steel. Lasts for years. **Write today for booklet giving construction, letters from owners and FREE TRIAL OFFER.**

GEDGE BROS.
Iron Roofing Co.
105 Lee St.
Anderson
Indiana

Live Stock and Dairy

will prove the most economical and efficient and best adapted to promote the health and vigor of the cows. In most all cases I believe it will prove more profitable to widen the cow's ration and utilize a larger proportion of the home-grown starchy foods, thus encouraging the growing of clover, alfalfa and other kinds of proteinaceous forage crops.

Succulence and palatability form a large share of the value of coarse fodders; and we have only to point to pasture grass, roots and corn ensilage, to prove the fact.

Clover does not differ materially from pasture grass in the proportions of its constituents, but an animal fed on clover hay alone will soon become tired of it and not eat enough to produce the best results; while root crops and ensilage added to the ration will be eaten in maximum quantities and with great relish for long periods. They have good effect upon the health of the animals and produce good results at the pail. Not that we should study balanced rations less, but that we should devote more time to combining home-grown foods so as to get the most value out of them. Corn and clover should form the basis of our rations, and these may be supplemented with such grain foods as may be raised on the farm, and some purchased nitrogenous foods as may be required to make the rations reasonably well balanced.

In feeding for production many dairymen seem to lose sight of the fact that producing a good vigorous calf is a matter of production as well as the giving of a large amount of milk. We are feeding not only for present results, but for the development of the calf that is to some day take the place of its dam in the herd. Cows that are carrying calves should be fed a ration rich in bone and muscle making elements and succulent foods should never be lacking. With clover hay, ensilage for succulence, and what grain foods are grown on the farm, supplemented with a limited amount of purchased concentrates, we have a line of dairy foods unexcelled for maintaining the health and vigor of our cattle.

Stabling the Dairy Cow

The matter of providing comfortable and sanitary stables for dairy cattle is a matter that is rapidly approaching a science. Years ago, cow stables were perfectly ventilated with half-inch cracks between the boards, but these stables proved too cold for winter milk production and the farmers began to build their stables tight, making them so with matched lumber and not allowing the cows to go outside during the cold weather. Some even went to the extreme of warming the drinking water for the cows in the stable.

The result of these close, warm stables was vitiated air, lack of exercise, debility and tuberculosis. Next, dairymen were advised to allow a certain number of cubic feet of air space when building their stables, and many of these stables proved too cold for winter milk and too damp for the health of the cattle. Now the stable question seems narrowed down to a practical system of ventilation and many of the most practical dairymen are putting in such systems.

Suitable feed, pure water, good air, proper exercise and rational care are all very essential. The great question is for us to draw a line between the essentials and the non-essentials, for there is such a thing as being too nice. Water in front of each cow is a nice thing, but if it is used as an excuse for not turning her out every day it is a question whether it is a nice thing or not.

How to keep the cows clean is another question, and for most dairymen, I believe that a swing stanchion will prove the best and most economical form of tie-up. The floor planks upon which the cow stands should be the right length so that all droppings will fall into the gutters behind the cows. By keeping the cows free from all stains and manure much subsequent labor will be saved.

W. Milton Kelly.

Galloway Bull
Note the Compact Form and Rugged Appearance

Up-to-Date Horse Talk

Good, trusty horses are so readily obtained, that you cannot afford to waste time and patience with a balky horse, nor expose yourself to the danger of handling kicky or vicious animals.

It pays to keep at least one horse about the place that any member of the family can drive and manage with perfect ease and safety.

Try an open bridle on the skittish horse. It is quite likely the things he cannot see with a blind bridle on that cause him to shy and keep on the lookout for something to scare at.

Whipping and jerking a horse every time he scares, is a plan that will insure him to grow more excitable and unmanageable. Try gentle words and kind treatment when the nervous horse becomes unstrung.

M. A. Coverdell.

The Passing of the Milk Factories

has been caused by

The Universal Adoption of Cream Gathering

The Vermont Farm Machine Company are the pioneers in the cream gathering system. This cannot be successfully denied.

The farm or dairy sizes of the **United States Cream Separators** made such headway that the proprietors of milk factories, against their will, had to change. **The farmers demanded it.**

Not **10 per cent** of the whole milk factories of nine years ago are running today, as such. They have either closed up or changed to cream gathering, the more ecomomical plan. Our "would-be-competitors", who are always "claiming the earth", cannot deny this fact.

These "would-be-competitors", had been supporting the whole milk scheme and fighting the progressive cream gathering system. When they saw that their efforts were futile—that the change was bound to come—they tried to save what they could out of the wreck.

If you have read their big blustering advertisements containing testimonials from creamerymen, you have noticed that nearly all admit they changed from whole milk and took agency for farm separators of this particular "would-be-competitor", because of the **large commission allowed to the creamery on the sale of their Separators.** The creamerymen made more money out of them than they did on the cream. Some went so far as to refuse to take cream from any separator which they do not sell and get the commission on.

This worked for a time, but the farmers were **too intelligent to be bulldozed** in this way. They insisted on having the BEST separator. All these creameries tacitly admit that they had to give up their exclusive agencies and take cream from the United States Separators.

Several events forced them to it. Their pet separator was beaten in the greatest International skimming test ever held, in endurance tests running over thirty days.

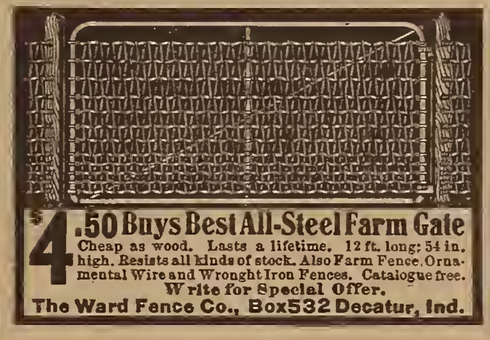
The **United States Separator** also **beat this pet separator** in the county where its factory is located; and in that county, for ten years the United States has averaged more than **three separators** to every one of this "would-be-competitor's".

Figuring on the same basis as our "would-be-competitors" figure their profits, it puts **seventy-five dollars a year into the farmer's pocket** if he uses a United States Separator instead of this "would-be-competitor's" separator.

A United States Separator catalogue, which can be had for the asking, explains all these things fully.

VERMONT FARM MACHINE COMPANY,

Bellows Falls, Vermont



Pork and Profit

If you are feeding hogs for profit, aim to keep them growing every minute of every day, from the time they're "farrowed." This is not an impossibility—on the contrary it's easy to do. It is simply a matter of keeping the hog's **digestive apparatus in a normal healthy condition**, and appetite keen and sharp, so that the hog will **steadily** receive and put to use a large food ration. This is **"The Dr. Hess Idea"** of feeding and from successful experiments along this line has come

DR HESS STOCK FOOD (A TONIC)

—an animal tonic which every feeder needs to make his work successful. It contains elements which medical authorities have always recommended as beneficial to the stomach and the digestive function. It regulates the bowels and expels poisonous matter from the system enabeling the animal to resist the poisonous germs of disease. Sold on a written guarantee and fed twice a day in small doses.

100 lbs. $5.00; 25 lb. pail $1.60. Except in Canada and Extreme West and South. Smaller quantities at a slight advance. **DR. HESS & CLARK, Ashland, Ohio.**

Also Manufacturers of Dr. Hess Pan-a-cea and Instant Louse Killer. Free from the 1st to the 10th of each month—Dr. Hess (M. D., D. V. S.) will prescribe for your ailing animals. His 96-page Veterinary Book free for the asking. Send 2c stamp and mention this paper.

DR. HESS POULTRY PAN-A-CE-A Something to make the hens lay better. To help young chicks to mature earlier and old fowls to fat quicker. In no sense a food, but a tonic preparation to put in food. Dr. Hess Poultry Pan-a-ce-a is the present day foundation of all successful poultry culture. It acts directly on the hen's digestive apparatus; quickens appetite; increases assimilation and makes good health and large production second nature to the fowl. It cures Gapes, Cholera, Roup, etc, A penny's worth feeds 30 hens one day. Sold on a written guarantee.

1½ lbs. 25c.; mail or express 40c.; 5 lbs. 60c.; 12 lbs. $1.25; 25 lb. pail $2.50.

Except in Canada and Extreme West and South.
Send 2c for Dr. Hess 48-page Poultry Book, free.

INSTANT LOUSE KILLER KILLS LICE

SUBSCRIPTION PRICE

One Year (24 numbers) . . . . 35 cents
Four Years (96 numbers) $1.00
Canadian Subscriptions . { 1 Year, 60 cents / 4 Years, $2.00

Entered at the Post-Office at Springfield, Ohio, as Second-Class Mail Matter.

Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."

The date on the address label shows the time to which each subscriber has paid.

Subscribers receive this paper twice a month, which is twice as often as most other National farm journals are issued.

Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope.

When renewing your subscription, please say it is a renewal, and if possible send the label from a recent copy. If all our subscribers will do this a great deal of trouble will be avoided.

PUBLISHED BY
THE CROWELL PUBLISHING COMPANY
SPRINGFIELD, OHIO
Branch Offices: 11 East 24th Street, New York City.
Tribune Building, Chicago, Ill.

Copyright, 1909, by The Crowell Publishing Company

ABOUT ADVERTISING

FARM AND FIRESIDE does not print advertisements generally known as "readers" in its editorial or news columns.

Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment.

Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published on the 10th and 25th of each month. Copy for advertisements should be received twenty-five days in advance of publication date. $2.00 per agate line for both editions; $1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2¼ inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

Letters regarding advertising should be sent to the New York address.

Destroying the Soil

MR. BOLTON HALL is doing a good work in directing the attention of the congested cities to the land as a source of relief from the worst ills from which they suffer. His books, "Three Acres and Liberty," "A Little Land and a Living" and, his latest, "The Garden Yard," are well worth while for those who need to have restored their faith in the land. They are full of information, too, of a helpful sort for all sorts of farmers, but especially for those interested in intensive farming.

In "The Garden Yard," however, Mr. Hall allows his optimism to carry him into statements regarding the indestructibility of the soil which may do harm. In the ordinary meaning of the language he employs, they are mischievously erroneous.

Mr. Hall seems to think that the soil cannot be ruined. "Man can neither make nor destroy the land," says he. "Nature has wisely locked up in the soil itself the secret of fertility, so that one generation of men cannot really rob the next." Speaking of the New England abandoned farms, he observes, "The real truth is that the soil has not been robbed of its fertility by the fathers." In his chapter on re-soiling he says, "We cannot re-soil this earth or any part of it. The soil is there for keeps. All we can do is to put back into the soil some of the vegetable matter of which we have robbed it; and this is really what we have in mind when we speak of re-soiling."

In the light of the last sentence one might almost suspect this author of quibbling; but from this his perfect candor must secure him acquittal. In one sense we cannot add to or subtract from the soil; for every particle of vegetable food that is taken from it remains on earth. But for this race of ours, and especially for this generation, the soil available for the use of man not only can be, but yearly is, depleted, and over large areas actually destroyed.

Speaking of the washing off of hillsides after the destruction of forests, the late Professor Shaler stated that an area of a hundred square miles of the Appalachian highlands south of Pennsylvania is eroded to permanent uselessness every year. Dr. Bailey Willis has brought from North China descriptions and pictures of great areas of hills once densely forested, the very soil of which has been washed away, and the erosion of which is resisted by an elaborate system of terraces. Wherever in the United States what were once fertile bottom-lands are now found covered with sterile gravels washed from the fields, a condition of actual and permanent loss of soil is shown. The old alluvial earth is buried under worthless gravel, and the upland is washed bare of soil.

To the enlightened mind the sight of a muddied brook or a roily river is tragic. In a fully enlightened state of society the man who allows the surface water to flow from his land muddy will be a criminal. The humus in the soil has required thousands of years of Nature's patient work to make. Once gone, it will take thousands of years to restore it. To allow it to be washed off, and in large measure buried, lodged in the beds of streams to spoil them, and otherwise lost to this geological age, is an unpardonable sin.

Even the matter of keeping up the fertility of soils actually conserved and kept in place by the best farming is not a solved problem by any means. Of the essential plant-foods, nitrogen and phosphorus have given the most trouble to the minds concerned with the lasting of the soil. Only a few years ago science was calculating as to the time when the nitrogen would all be used up and when the race would have to starve. Since then this fear has been allayed by the discovery of the power of leguminous plants to take nitrogen from the air by means of the bacteria in their roots; and means have been found to make nitrates from the atmosphere by electricity. The nitrogen waste may be permanently supplied, therefore.

But there seems no way to meet the steady impoverishment of cultivated soils through the exhaustion of the phosphorus content of the soil. To be sure, we may apply phosphates; but where are the phosphates to be found? Phosphorus is an element, like iron or gold, and we cannot make it. There seems no reason to think we ever can. If the time ever comes when we can make it, we shall probably be able to make food directly, and shall not need crops. So far as is known, there remain unmined in the United States only 121,000,000 tons of high-grade phosphate rock—the only important source of phosphates with which, to quote Mr. Hall, "We can put back into the soil some of the vegetable matter (plant-food) of which we have robbed it." Half of these rocks are in South Carolina, Tennessee and Florida. The South Carolina beds are nearly exhausted, Florida's are half gone and the Tennessee beds will last eleven years at the present rate. The Arkansas rock and that of the Laurentian deposits of Canada are low grade and unavailable. There are large deposits in the public lands of the West; but the point is that we know of no such thing as inexhaustible beds of phosphate rock, and like the coal and gas when it is used up it is gone. When the beds are exhausted, the earth must wait until more rocks are to be lifted up into view by the changes in level of the ocean beds, or otherwise. And this is a matter of millions of years. For us and our descendants phosphorus is in danger of becoming scarce. Analyses by three of the Middle West experiment stations show that in fifty-four years of cropping, the average of soils, such as those farmed by the readers of this, have lost phosphoric acid at the rate of twenty pounds an acre every year, and now have only two thirds as much of this essential plant-food as they had originally. All of which proves that perpetual motion has not yet been discovered, that you cannot trust to luck to put back into the land what you take out, that the real farmer should be a miser of the soil and its fertility, and that we cannot do worse than to follow the advice of those who say that this generation cannot rob the earth of its soil. We have already robbed it shamelessly. The thing that will disgrace us as a race, if anything does, is that we found this continent inconceivably rich and skinned it, and destroyed its fertility.

To be sure, there are people—so-called scientists—who believe that means will be found to grow crops from pure sand by methods yet to be discovered. These, however, are blind guides with exclusive franchises to show people into the Fool's Paradise. Until the art of getting something for nothing is perfected so as to be practicable for us all, the farmer must regard it as his really great life-work to avoid that very destruction of the soil which Mr. Hall pronounces impossible. It is as fatally easy as drifting over Niagara—and as thoroughly to be dreaded.

Back Talk to Lewis

Letters From Readers

EDITOR OF FARM AND FIRESIDE:—

I hope you will not discontinue the writings of Alfred Henry Lewis, even though some of your readers are not pleased with what he says. Mr. Lewis' long association with our public men places him in a position to know the truth concerning their efforts to secure legislation demanded by the plain people. Mr. Lewis is one among a few men (fortunately the number is increasing) who have the courage to make revelations which have an unpleasant sound to those of strong partizan views, but which are not denied, for the accusers have the proof. The crying need of our country is statesmen who will try to carry out the pledges made to their constituents. Every intelligent man knows of the indifference of our legislators toward what the farmer and laborer want. The farmer must wake up. He must study politics. He must lay aside partizanship and unite with his neighbor in a common cause. Call it socialism if you wish. No reform measures have been enacted except through an independent action of the masses. The average farmer gives too little attention to what is going on in Washington or in his state capital. A little time devoted to investigation on his part will open his eyes and cause him to act accordingly. The best medium through which to reach the farmer is the farm paper. I believe every farm paper should have a non-partizan politics department, where the farmer can get "the truth, the whole truth, and nothing but the truth," for "the truth shall make us free."

Ohio. C. W. BAILEY.

EDITOR OF FARM AND FIRESIDE:—

Lewis is all right, and evidently has no string tied to him. Let him "hit 'em agin." Pray that the farmers will vote according to the light Lewis is shedding in dark places.

Maryland. C. E. DAVIS.

EDITOR OF FARM AND FIRESIDE:—

I like to read the FARM AND FIRESIDE, and would not like to miss the talk of Mr. Alfred Henry Lewis. As a general thing we can nearly always find most of the questions which he writes about discussed (or suppressed) in our party papers, shaded according to the party interests, but it does me good to get acquainted now and then with the opinion fearlessly expressed by independent men.

California. GEORGE NESTEL.

EDITOR OF FARM AND FIRESIDE:—

Mr. Lewis seems to think that the farmer should be interested in politics. Now in York state the farmer is simply out of politics, for the reason that he must be a millionaire or agree to support or protect their interests. After careful figuring we find that sixty-eight per cent of the farmers own their own farms and we see no reason why the farmer with a controlling interest in all the necessities of life should not have money. That is what the trusts are after. Just figure how many hours or days the farmers will have to sit down to make James A. Patten's five million dollars look foolish.

New York. C. E. BOWLES.

EDITOR OF FARM AND FIRESIDE:—

Let Mr. Lewis go ahead. The common people are being tied up politically so fast that unless they get busy they will come to want. The business men are all organized now and set the prices they pay, also the prices we have to pay. They elect a walking delegate, who notifies each morning, then if one offers you two cents a pound and you are not satisfied, he can safely say, "Do better if you can." Mr. Patten made three million dollars on May wheat, and now with the new crop in the market, bread has raised in price. 'Tis true the people get busy one day in the year and that is primary day. Then let them follow up their advantage and elect men to make laws to suit the majority.

Washington. B. B. PENNYPACKER.

EDITOR OF FARM AND FIRESIDE:—

Much of the time for thirty-five years we have welcomed your paper, and it has been a source of enjoyment and profit. We think its value is enhanced since Alfred Henry Lewis has become a contributor. I enjoy his articles immensely and they are the first I read when the paper reaches me. It is past comprehension why any one can object to the knowledge conveyed therein. You know the old adage: "There are none so ignorant as those who 'won't' know." It is high time that the people understand the political situation, and send honest men that have the courage to fight for the rights of their constituents to make their laws and work for their interests in Congress. All honor to Lewis for having the courage to express his views, and to yourselves for publishing them.

Michigan. ANNIE H. AVERY.

EDITOR OF FARM AND FIRESIDE:—

I certainly take great interest in reading Mr. Lewis' political page and also the Back Talk. He is certainly doing a great work, and may you continue his writings as long as it is possible to obtain them. His article in the August 10th issue on the Japanese question certainly strikes the vital point. I happen to live where I can see these things occurring every day, and it is growing worse daily. The Japs are in every line of business and also underselling in every line of business. The time is not far distant when the white man will be compelled to get out and surrender entirely to the Japs if something isn't done soon to prevent them from coming here. Go where you will at the present time, from California to British Columbia, you can hardly turn around unless you bump elbows with Japs.

Washington. GEORGE NEWLAND.

In the Public Eye

What I Saw and Heard and Thought in Washington

By Alfred Henry Lewis

If you don't agree with Mr. Lewis, "talk back" to him, confining your reply to two hundred words. We shall hope to publish some of these replies from time to time.—THE EDITOR.

TARIFF has this in common with air and water, that whether we will or no, it is commodity wherein every last one of us is bound to be interested. Also, in these completed days, it pleases me to recall what members of the Ways and Means said to me six months ago, and compare it with what has really happened in the way of a law.

Those of the Ways and Means went about with especial airs of wisdom and deep importance. They knew, as was said above, that the work they were doing, so far as it gained final potentiality, was calculated to affect us all, and it told on them in an augmentation of dignity, making them feel like a bevy of Atlases with the world on their backs.

Once I was in the little country village of Richfield, Ohio. There was a dance scheduled for the evening, the festivities to come off in Liberty Hall. I was casually presented to an imposing individual, a Mr. Goldwood, in the afternoon of that day. I could see that Mr. Goldwood regarded himself as the hinge upon which all things local swung.

Making conversation, I asked—in a cowed way, because of his personal grandeur—if he was going to the dance that night. The look he gave me in return was a picture of tolerant patronage, with a profound top-dressing of scorn.

"Going to the dance!" he repeated, "well I don't reckon there'll be much dancing till I get there."

Later I learned that Mr. Goldwood was the fiddler.

This was years ago. I know now, however, that Mr. Goldwood felt just like a member of the Ways and Means while the tariff bill was preparing.

Confidentially, and in private corners and cubby-holes, the members of the inflated Ways and Means told you things. They did not do this for your good, any more than a turkey-gobbler spreads his tail and struts for your good. They did it because they liked it. It served to expand the chest and stretch the muscles of their greatness.

What did these self-complacent tax-mongers tell one? They declared that tariff revision—which the common mind construed to mean tariff reduction—was certain. Getting down to tacks, they said that it had been settled among the Republican members, who were the real bill-makers—the Democrats, led by the Hon. Champ Clark, being no more than just lookers-on in the Vienna of tariff—to free-list wood-pulp, coal, wood, hides, shoes and lumber; that for a time steel had been slated for the free list, but in the end a compromise was deemed the thing and the steel schedule would be dropped from a protective forty-five points to twenty-three. They called attention to the fact that, whereas the Dingley law arranged an average tariff of forty-two per cent, the Payne measure in constructive hand would notch the tariff average down to twenty-five per cent.

Our cubby-corner Atlases of the Ways and Means called proud attention to the maximum-minimum feature of their wonderful bill. It means an open gap of about twenty per cent, in which the schedules might be shoved up or down in the instance of any particular nation, Germany for example. If a nation favored us with her tariff, we would pull the underpinning from beneath our own to match its forbearing generosity. Should the other fellow take a selfish view and put up his tariff, we, for our side, would give the tariff jack-screw an extra twist or two, on the old mosaic principle of an eye for an eye and a tooth for a tooth.

This game of up-or-down in tariff is, by the way, off the same bolt of cloth as was that other old tariff game of reciprocity, played twenty years ago. Reciprocity was good to look upon in the abstract, but in practice proved to be a whitened sepulcher full of all sorts of protected corruption and tariff decay.

Further discussing their bill, our turkey-gobblers of the Ways and Means, tail-spreading and strutting as aforesaid, confess—this not without fear and a tentative manner of reluctance—that they had it in mind to put a tax of five cents a pound on coffee, ten cents on tea, and asked what you thought yourself.

I, speaking my own mind freely, told them it would be more likely to raise a howl than to make a hit.

They were inclined to admit the propriety of my apprehension, but explained that they doubted if it could be helped. The country was spending more than it took in. We were making financial sternway at the rate of ten million dollars a month. The expense bills of government, already mounting above a round billion a year, would be higher still the coming year. Some said as high as one billion three hundred million dollars, some said more.

Slyly digging at Mr. Roosevelt, they laid this awful expense growth at his White House door. He was a good Executive. Privately, too, in the sense personal, he was prudent in a money way. Publicly considered, however, they could not call him a Russell Sage. It all came to this: We have got to get the money, not only that deficit of a monthly ten million dollars, but also whatever was to be subtracted from the revenues by virtue of those revisionary cuts in wood, coal, steel, lumber and the like. Wherefore they had fixed their worn and tired eyes on tea and coffee. They could see nothing for it but to pile up a tax of five cents on the one, ten on the other.

As a method of escape, I suggested fifty cents a barrel more on beer. They looked their horror. A brewer, considered politically, was no laughing matter and his wrath was to be feared.

Still, let it all go; it's of no present consequence. Only it pleases me to compare what sadly is in the way of tariff with what was so confidently threatened by Mr. Payne and his followers in the days as it were of their youth.

* * *

LEAVING TARIFF, I would now and then take up with those patriots the question of the House rules. Would they strike a blow for their own liberty? That was the question. And if it wasn't convenient to strike the blow in the special session, would they strike it in the regular session next December? Representatives Townsend of Michigan, Cooper of Wisconsin, Gardner of Massachusetts, Hayes of California, Foster of Vermont, and other House hostiles were feebly ghost-dancing, and making hesitating and reluctant war medicine, against the gavel despotism of Speaker Cannon. What they desired was freedom of House motion, liberty of debate. What they aimed at was the destruction of the rules, videlicet the shackles which made House slaves of them.

Would those others with whom I conversed help these patriots and join them in that servile rebellion? As affairs stood a House member was nobody, nothing, a marionette to speak by the Speaker's voice, act disjointedly by the Speaker's suggestion and only when the Speaker pulled the string. The rules made of the members just so many congressional stoughten bottles, and no self-respecting members should care to be a stoughten bottle, however beautifully trust-labeled and tightly trust-corked.

To be elected to the House under present suppressive, repressive rule conditions, was like having permission to go shooting over some particular preserve, but with the clause explicitly attached that you were not to kill anything.

All these things I was wont to lay before my House friends in the hope of exciting rebellion. It was like trying to set fire to cork. They were afraid of the trusts and their frown. They would admit that those brave ones, hungering for House liberty, were in the right. Their cause, which was the cause of slaves sighing for freedom, was just. And yet they themselves were afraid to join the revolt. None of them was of the true Bunker Hill breed.

No, nothing real or valuable in the way of loosening the rule bonds which bind the House will arise from what our William Tells of legislation were engaged upon. And I'll tell you why. It isn't Mr. Cannon who is the enemy. If he were all there was behind those iron-bound rules, the House would go over him like a land-slide. It is the big "interests," the big black robber trusts of beef and bank and oil and sugar and coal and railroad, and all those other money vultures which for forty years have—beak and claw—been tearing at the liver, that is to say at the pockets, of a Promethean public bound hand and foot and helpless to the tariff rock.

These trusts already have Speaker Cannon. He is theirs by dint of natural sympathy. He is of them, for them, by them. He is a millionaire of banks and railroads. He serves them as he serves his own, and grows richer and ever richer by what vulture methods make them rich. Yes, the big, black robber trusts have Mr. Cannon. And, through the rules as they are, by having Mr. Cannon they have the House.

The majority of our representatives, Democrats as well as Republicans, are one and all afraid of those same trusts. There is not a single John Hampton, or a "King" Pym, or an Oliver Cromwell in their half-hearted midst. Not one resembles even the least of those barons who dragged King John to Runnymede, and made him "sign." December will come around. They will meet with Mr. Cannon. They will beg, they will wheedle, they will whiningly complain. Not one of them will fight. Not one will defy. Not one has the stark manhood, when Mr. Cannon refuses to surrender, to nail his glove to the Cannon gate and to give him and the robber trusts behind him battle.

* * *

THE COMPLAINED-OF RULES were constructed almost a score of years ago, in the day of Speaker Reed. He had some partial excuse for their construction. His party owned but a slim, uncertain House majority of seven. Also, the Democrats, being the opposition, were as so many mutineers—the opposition always plays that rôle—trying in every way of unfair violence to take the House ship from him. They obstructed, they "broke quorums," they refused to answer to their names or stand up and be counted. Mr. Reed was driven to invent these rules, just as a ship captain is driven to put mutineers in irons to save his vessel. The mutineers were too nearly the strength of the captain's own party among the crew to leave them roaming the decks at large.

That argument of a small, untrustworthy majority has never existed since the day of Reed. Both Democrats and Republicans have each had the House since then. But each held it by a round majority which made successful filibustering and obstruction impossible. The reason having ceased, on a maxim well known to the law, those Reed rules—all handcuff, gag and leg-lock—should have ceased. And so they would, had it not been for those same old robber trusts.

Observing how they worked in a Reedian hour, the trusts knew them at once to be the very jimmy, brace and center-bit they needed in their robberies of the public. Therefore, they, the trusts, have ever since maintained them. Also, they will maintain them now, untouched, unbroken, unamended, to any loosening degree.

Some such would-be captain as Mr. Gardner of Massachusetts, spurred by a vanity which he mistakes for principle, and feeling safe behind his own millions, will next December announce himself the House Moses. He will confer with Pharaoh Cannon. He will declare that he and his fellow mud-mixers and off-bearers in the House yards will no longer make bricks without straw. That, however, will be the end of it. There will come no Red Sea business. Mr. Gardner and his complaining fellow serfs will go back to their tasks. They will continue at their groaning trade of making bricks for the trusts, contenting themselves the while with what straw Mr. Cannon, under the rules as they are, sees fit to allow them.

Certainly these rules work for trust advantage. In the days of the Wilson measure the Ways and Means Committee reported their tariff bill into the House with the sugar schedule—arranged to suit the Havemeyers. The House by amendment swept the trust schedule from the saddle, and sent the bill to the Senate with sugar on the free list. The Senate put the trust schedule back in the saddle. The Conference Committees between House and Senate agreed to leave it there. When the House conferees came back to the House with the bill to receive final House instructions, four fifths of the House were rampantly ready to again free-list sugar.

Did they do it?

No. Speaker Crisp, General Catchings and ex-Speaker Reed, as the Rules Committee, reported a rule, and compelled its adoption, that only two things could be done with the Conference Committee's report. The tariff bill must be accepted as a whole, or rejected as a whole. There could be no particular amendment addressed to sugar or anything else.

Thus the Sugar Trust got its schedule.

"When she was the sweetest, prettiest, loveliest girl in the country around"

From the Home Town Paper

By John C. Spoth

Author of "A Knight in Homespun," Etc.

Illustrated by Laura E. Foster

"It was the Weekly Democrat from his home town"

How it all came about is a mystery to this day to many persons. How it came about, I say, will ever remain a mystery to some persons, for they have long since been laid away. "But how did what come about?" you ask. Well, you see, it was like this:

Amos Bame, a wealthy man, had far more than he and his wife would ever need if they lived to be a hundred years apiece. He was a close-fisted, mean, penurious, crusty old fellow—isn't that enough? There wasn't a bit of love in his heart for anything that anybody ever knew of, excepting, perhaps, that way down in one corner of his adamantine heart there was a warm spot for the little church in the New Hampshire village, in which he had worshiped when his lust for money had not gained ascendency over the little spark of humanity that was flickering for life. As a boy in short home-made trousers, he had attended that church with his parents; then as a young man, and even now, occasionally, probably from some sharp twinge of conscience, he would run up over Sunday to sit again in the pew and gaze about the little church from which his father and mother had been carried to their everlasting rest in the churchyard by its side.

However that may be, the fact remained that Amos Bame was never known to have given a penny to any charitable institution, or to any needy individual in this great city in which he had accumulated the fortune that he was known to possess.

Christmases came and went, the ill-paid employees—and there were many of them—grew old in his service, bringing into the world and rearing large families, but never a one of them could say that he had ever received more than a "merry Christmas to you" from the man for whom he toiled, and even this was rare, for upon the approach of that festal season Mr. Bame invariably found occasion to be called out of town, or was confined to his home for a period that extended exactly to the day after Christmas.

None of the employees ever approached him for an advance in salary. It would go hard with them, they well knew, for their worthy master would consider that an infraction of his right to judge their worth or else a reflection upon his judgment. So they toiled on, content with the miserable stipend he weekly doled out to them, eking out a bare existence, the most of them, and putting their children to the daily grind when barely out of their teens.

One there was among them, "Bill" Frazer by name, whose lot was harder than any of the others. Ill fortune seemed to have singled him out. Sickness and death had impoverished him so that time and again his numerous family was in want of the bare necessaries of life, lacking food and nourishment, but with an ever-present and constantly-increasing doctor's bill confronting him. How in the world that man ever managed to battle and buffet against the stormy seas of life that he encountered was a mystery to many.

But at last there came a day when poor "Bill" almost gave way under the burden. How well I remember that day. How well I remember his thin, wan, ashen face as he came in our midst and told us that his wife was dying and that he had spent the last of his wages for her comfort. How well I remember how we got together enough to send him home with the wherewithal to keep her in comfort for a while longer. God knows it would have been more, but it was all we could give, even to the last penny of some of us.

For two days "Bill" remained away. We knew what that meant, for Amos Bame allowed no man pay for the time he was absent, and "Bill" would not have stayed away unless, well, we knew. Then he came back to work. His usually cheerful smile was gone, the eyes that always sparkled with hope were tear-dimmed, the springy, buoyant gait was halting, the cheery voice was silent. We asked him not why, we knew. He hung his overcoat up and worked and sobbed, and worked and sobbed. How he ever continued on to the end of the day's work was the wonder of all.

When the day's work was done we were glad to get away from the pitiful, heartrending, agonizing sobbing. "Bill" Frazer did not go with us. He held back until we had all gone out, and then, choking down his grief, he entered the office of Mr. Amos Bame, who, seated in a comfortable chair, was adding up rows upon rows of figures on the credit side of the ledger in front of him.

He looked up in astonishment at the invasion of one of his hirelings into his sacred presence. He turned about and brusquely asked:

"Well, Frazer, what do you want? How is it you haven't been working the last few days? Drinking?"

"Bill" started as if a knife had been thrust into his heart. He sank into a chair, dropped his hat upon the floor, and gasped.

"Drinking? Why, Mr. Bame, I never touched a drop of liquor in my life, and God forbid that I should begin now. No, Mr. Bame, I was away because—because my wife died. We buried her yesterday, sir, and I came here to see if you couldn't give me a little more than I am getting so that I can pay her funeral bill and put just a little stone over her grave, and—"

Mr. Bame wheeled about in his chair, confronted "Bill," and angrily interrupted!

"Frazer, this is a business house. We do not allow sentiment to mix with business. Whatever has befallen you is of no concern to the house of Bame & Company. This is purely your own affair. And as for asking for more wages, that I consider a piece of impertinence, sir, a downright piece of impertinence."

Frazer said not another word. He turned sadly toward the door and went out. Well, what occurred after he went out was the occasion of the mystery of how it all really happened and the explanation was this:

After the door had closed behind "Bill" Mr. Bame sat a moment in anger and meditation.

Then Providence did something. Not much—just a newspaper in a wrapper dropped from the top of the desk to where the ledger was lying. But somehow the man's eyes were kind of glued on that paper for awhile and then he tore off the wrapper and unfolded it. It was "The Weekly Democrat" from his home town, the town where he was born, bred and raised. He glanced carelessly over the front page and then unfolded it and ran his eyes down the "local news" column. The first item that seemed to attract his attention was the announcement of the death of Squire Bush. Remember Squire Bush? Why, certainly! Hadn't his father called upon the Squire once when he was in need of money to save his home from being foreclosed, and hadn't the good Squire borrowed the money himself to loan it to his father? Yes, he did. And now the good Squire was dead. Well, well! Mr. Bame could not help thinking that in his prosperity he had never inquired if he could help the Squire any. Yet he might have done so, for the article stated that he had died penniless.

Mr. Bame fidgeted about in his chair ruminating. Then another item caught his eye, "Old Granny Harris was taken to the poorhouse yesterday." Old Granny Harris! The same Granny Harris who had made the best of soup and brought it around to his mother's house when he was low with scarlet fever and defied all the warnings that she'd "ketch it"—and nursed and pulled him through, his mother being to ill herself to do anything for him. He remembered now, that he had heard the last time he paid a visit to the home town that she was being cared for by some neighbors who had little themselves, but he had concerned himself no further. A something gnawed around his heart after he had finished reading the item. He leaned back in his chair, staring up at the ceiling. Gradually his eyes dropped back to the paper, running over some items about persons who were strangers to him, and then alighting upon another concerning one of the "old-timers."

In this case it was Deacon Bacon that the "local news" took in hand. It just started in to tell of how the good Deacon had always lived up to the principle that it was better to give than to receive, went on to say he was always and forever going among the poor down near the "Hollow," where the factory workers lived, how he kept spending his money upon them, alleviating their sufferings and wants, leaving himself penniless but firm in the belief that the Lord would provide; then it wound up almost abruptly with the sentence: "Brethren, Deacon Bacon has been laid low with paralysis and the Lord calls upon you to provide for one who has always provided for the Lord's sake."

Of course he knew Deacon Bacon. It was the Deacon who had paid his brother's fine of a hundred dollars down at the County Court when he was charged with and found guilty of a crime—just at a time, too, when Mr. Bame's father couldn't raise that amount to save his soul. Well, it seemed hard that such a good man should have to appeal to charity, but that was the way of the world.

Then came the straw. The man who would not permit sentiment to mingle with business started as his eyes rested upon an item tucked away in the corner of the paper. It was just an ordinary item, in ordinary brevier, headed "Give Them More Pay." But as Mr. Bame read and reread it the type seemed to become long primer, and then small pica, then pica, and kept on growing until it appeared to him to be great, big poster wood type. And this was the way it read:

"It seems almost criminal, the low wages paid by the wool mill. As a specimen of the hardship brought about by the poor pay we mention the case of Widow Johnson, with her five small children, working and slaving a whole week for that company for six dollars. All the officers of the company are well-to-do and live in fine houses, and it is a shame that they should expect a woman to care for such a family on such a miserable pittance. Give the employees more pay, we say to you officers, and make of the children good, honest citizens of this town instead of forcing them to become otherwise through your injustice. Give them more pay!"

Now, I don't suppose for a moment that the general tone of this item would have affected Mr. Bame one bit. But there was a name there that did. Widow Johnson. Why, when he got to the end of the item he tilted back in his chair and sat there, just twirling his thumbs and thinking. He was thinking of the Widow Johnson when she was a young girl; when she was the sweetest, prettiest, loveliest girl the country around; when he loved her with that boyish love that was deep, pure and sincere; when he proposed to her; when he told her he would marry her when he became a rich man; when he wrote to her afterward that he thought it would be best to break off the engagement because she was poor and he could marry a woman who had money and could help him to extend his business ventures; when she had replied that she loved him dearly and would not stand in the way of his becoming a rich man, and released him from his engagement. Then those twirling thumbs, revolving round like the cycle of Time carried him through many years, carried him through to the time that the broken-hearted girl had almost died from grief, on and through the time that she had out of the goodness of her great, good heart married Walter Johnson, because he was sickly and lonely and had none to care for him. Oh, how he had loved that girl. Often and often had he wished that he could take back those years and content himself with what he possessed and that girl as his wife.

"Sitting in his home by the motherless children, his head between his hands and tears flowing"

A long, long while did Mr. Bame sit in his chair, twirling his thumbs, thinking of the past and again reading that plain simple tale of the corporation's greed and its effect upon one whom he had—and still, I am sure—loved. It was quite nine o'clock when he arose, folded the paper, put it carefully in his coat pocket, and stepped into the outer office. Sharply turning the crank of an instrument on the wall, he paced impatiently up and down, awaiting the appearance of the summoned messenger, and upon the arrival of that person he dispatched him post haste with a message to "Bill" Frazer, commanding him to come to the office at once.

Mighty astonished was "Bill" Frazer, sitting in his home by the motherless children, his head between his hands and the tears flowing, to receive a visitor at that time of night and a uniformed messenger, at that. And more astonished still was he when he read the message summoning him to the presence of Mr. Bame at once. What could have happened? Undoubtedly Mr. Bame had been so incensed at his impertinence that he wished to discharge him. Yes, that must be the reason. It was with a still heavier and sadder heart that "Bill" hastily proceeded to the office.

[CONTINUED ON PAGE 15]

Betraying Our Love

UNLOVE seems most likely to vent itself upon those whom we love most. And they are the very ones whom unlove hurts most. In the home, where we first learn what love is, and where our loving relationships are more precious than any others in life, we are most likely to give way to the unrestrained, unloving impulses of impatience, anger, criticism, denunciation, contempt—all the unworthiest, most cutting and destructive forces of our nature. We do not do this when "company" is present; we wear our "company manners" then. But when the guests—for whom we may care little—are gone, and we are alone with members of the home circle only—for whom we care most—then it is that the "company manners" of polish and courtesy and gentleness often disappear, too, and an unlove that we would be ashamed to have outsiders see, has full sway. Why this is so, it is hard to explain. Probably we presume confidently upon the very love that we abuse, knowing that it will overlook and forgive and forget. But wounds made too often sometimes go too deep for entire healing. Why not offer the best we have, instead of the worst, to those whom we love the most? —The Sunday-School Times.

Religious News Items

Seventeen religious denominations in this country are federated in a great twentieth-century movement in the interest of home missions.

Hon. Yaro Ando, president of the National Temperance Society of Japan, leader of the temperance forces of that country, is a powerful lay preacher of the Methodist church. He was for many years connected with the consular service, and was converted in Honolulu in 1888.

From the Home Town Paper

[CONCLUDED FROM PAGE 14]

When he arrived there he went direct to the private office of his employer. Without asking him to be seated, Mr. Bame began.

"See here, Frazer, I sent for you because I think it was the greatest piece of impertinence to ask for more wages, when you know that one of the strictest rules of this house is to govern its own affairs. What right had you to dare to violate any such rule."

Frazer kind of gasped and trembled and muttered:

"If you please, Mr. Bame, I wouldn't have asked you only for the sake of the children and—of—her—and a little tombstone—"

"Yes, yes, yes, that's all well enough," fairly roared Mr. Bame, "but you well know the rules of this house. And you violated those rules, sir, and you must know what to expect. I sent for you, to let you know that I am going to—"

"Oh, please Mr. Bame, not just now—for God's sake, not just now," cried "Bill," extending his hands in pitiful entreaty.

"—Am going to," proceeded Mr. Bame, "make you a present of two hundred and fifty dollars. It is against the rules of the house, sir, to increase a man's wages at his own request, but I guess that will cover it for a year. Mind you, this not an increase, but it will go on your account every year. Here is your check."

"Bill" Frazer looked at Mr. Bame, then at the check, and then fell senseless to the floor. When he came to he was riding home in a cab with the night watchman. Two weeks later, when he went to the cemetery to give orders for the little tombstone, he dropped upon his knees and called upon the Almighty and the spirit of the dead to watch over Mr. Amos Bame, for there stood a solid granite monument, properly inscribed and bearing in addition these words:

"The true love of a poor man's wife is better than all the world's riches." Mr. Amos Bame did not give any of the other men an increase in salary, but they all received checks for amounts that covered any infraction of the rules of the house, and a more contented and happier lot of workmen it is hard to find, you may rest assured.

And, let me tell you, "The Weekly Democrat" had some things to say later about a "certain former resident who did not wish to have his name known"—things that were full of gratitude, of thankfulness, of prayers that his years might be many and mellow.

What Does the Future Hold for You?

ARE you dissatisfied with to-day's success? It is the harvest from yesterday's sowing. Do you dream of a golden morrow? You will reap what you are sowing to-day. We get out of life just what we put into it. The world has for us just what we have for it. It is a mirror which reflects the faces we make. If we smile and are glad, it reflects a cheerful, sunny face. If we are sour, irritable, mean and contemptible, it still shows us a true copy of ourselves. The world is a whispering-gallery which returns the echo of our own voices. What we say of others is said of us. We shall find nothing in the world which we do not first find in ourselves.

Nature takes on our moods; she laughs with those who laugh and weeps with those who weep. If we rejoice and are glad, the very birds sing more sweetly, the woods and streams murmur our song. But if we are sad and sorrowful a sudden gloom falls upon Nature's face; the sun shines, but not in our hearts; the birds sing, but not to us. The music of the spheres is pitched in a minor key.

If I trust, I am trusted; if I suspect, I am suspected; if I love, I am loved; if I hate, I am despised. Every man is a magnet and attracts to himself kindred spirits and principles until he is surrounded by a world all his own, good or bad like himself; so all the bodily organs and functions are tied together in closest sympathy. If one laughs, all rejoice; if one suffers, all the others suffer with it.

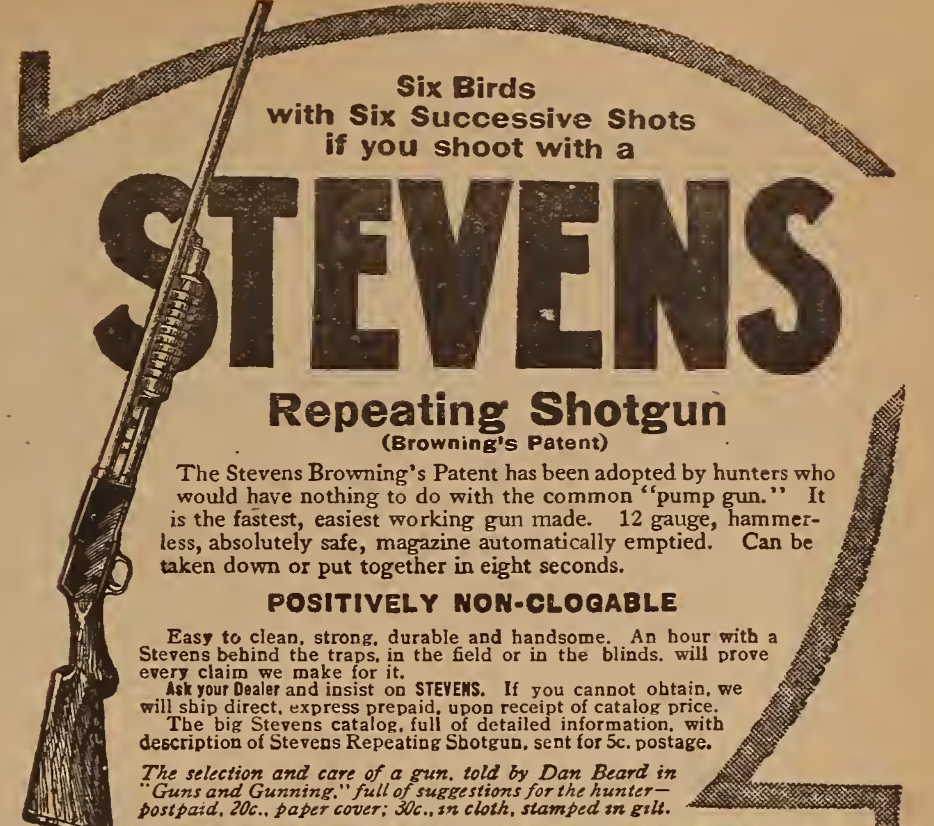
The future will be just what we make it. Our purpose will give it its character. One's resolution is one's prophecy. There is no bright hope, no bright outlook for the man who has no great inspiration. A man is just what his resolution is. Tell us his purpose and there is the interpretation of him, of his manhood. There, too, is the revelation of his destiny. Leave all your discouraging pessimism behind. Do not prophesy evil, but good. Have the purpose within you to bring along better times, and better times will come. Men who hope large things are public benefactors. Men of hope to the front.

If we would get the most out of life, we must learn not merely to look, but to see. As we may look without seeing and listen without hearing, so we may work without accomplishing anything. Michelangelo was once commanded by his prince to mold a beautiful statue of snow—an illustrious example of the fact that it is not necessary to be idle in order to throw away time. That statue, though instinct with ideal beauty stamped upon it by an immortal hand, melted, and every trace of the sculptor's greatness was washed away. Oh, what precious hours we have all wasted, writing in oblivion's book! Wasted? Worse than wasted, for the knowledge that we were working uselessly tended to beget a habit of aimless and careless work. Who has not worked for annihilation, painting in colors that fade, carving in stone that crumbles? Who has not built upon the sand and written upon the water?

What we are to be really, we are now potentially. As the future oak lies folded in the acorn, so in the present lies our future. Our success will be but a natural tree, developed from the seeds of our sowing; the fragrance of its blossoms and the richness of its fruitage will depend upon the nourishment absorbed from our past and present.—By Orison Swett Marden, in "Pushing to the Front."

Don't Wait Until To-Morrow

OH, MY dear friends, you who are letting miserable misunderstandings run on from year to year, meaning to clear them up some day; you who are keeping wretched quarrels alive because you cannot quite make up your mind that now is the day to sacrifice your pride and kill them; you who are passing men sullenly upon the street, not speaking to them out of some silly spite, and yet knowing that it would fill you with shame and remorse if you heard that one of those men were dead to-morrow morning; you who are letting your neighbor starve, till you hear that he is dying of starvation, or letting your friend's heart ache for a word of appreciation or sympathy, which you mean to give some day—if you only could know and see and feel, all of a sudden, that "the time is short," how it would break the spell! How you would go instantly and do the thing which you might never have another chance to do.—Phillips Brooks.



GET PRICES on the MONARCH

America's Standard Range!

It Will Save You Money

Made in sizes and styles to suit every taste and requirement—with reservoir as illustrated or at left end—with waterfront for connecting to pressure boiler or without any water heating attachment. Malleable Top and Steel Body are both polished and *never require stove blacking.*

Don't throw away money by buying a range manufactured with cheapness the only object. A MONARCH is the best investment an economical person can make. It is the height of perfection in operation and appearance, but It Actually Pays For Itself because it is built RIGHT inside as well as outside, to last a life time.

Monarch MALLEABLE The "Stay Satisfactory" Range

Sent Free! Our illustrated book, "The Range Problem." It gives full details and will enable you to figure out *exactly* how you *save money* by purchasing a MONARCH Range.

LASTING CONSTRUCTION

Malleable Iron is the first essential to lasting construction in a range. MONARCH ranges have *every* seam reinforced with Malleable castings. The body and oven plates are hand riveted to them, making a solid joint that stays tight a life time. A range built in any other manner wastes fuel, time and patience. It pays to be *sure* about materials and construction in buying.

TRIPLE WALLS

Don't buy any range with single thickness metal walls. By the MONARCH special building process we make a *triple* wall to every flue. There's steel—asbestos—and steel riveted together at *every* point exposed to the flame and heat. MONARCH triple walls cannot burn through—rust through or become damaged by the creosote in the flues.

Malleable Iron Range Company 717 Lake Street, Beaver Dam, Wis.

The Old "DUTCH OVEN" Come Back to Life!

This IMPERIAL Steel Range, with STONE OVEN BOTTOM, Odor Hood and other Remarkable Improvements, Excels even the Old Dutch Ovens in Baking Qualities, and is a Marvel of Convenience.

Grandest COOKER, BAKER and FUEL SAVER Ever Invented

The out-door "Dutch Ovens" made Colonial housewives famous as bakers and cooks. But becanse of their terrible inconvenience these ovens were superseded by stoves and ranges. Baking as done in those good old days later became "a lost art" because the "all-metal" ovens were wrong in principle. We have practically added a "Dutch Oven" to a Modern Steel Range—the finest, handsomest and handiest range on earth. Thonsands sold! Demand growing amazingly! Honsewives delighted! Their sncceess surprises even themselves! Bread, pastry, etc., looks better, tastes better, is better! People everywhere admit we have solved the baking problem. This range, with all its improvements, fully protected by U. S. and Foreign patents. Infringers, beware! We sell direct from our big factory, at factory prices. 30 Days' Absolntely Free Trial! Easy payments! Freight paid by us! Get the Great Free Imperial Catalog and Special Offer at once. Free Book! Free Trial!! Easy Terms!!! Special Price!!! Write!!!

THE IMPERIAL STEEL RANGE COMPANY, 168 State Street, CLEVELAND, OHIO

Prizes for the Young Folks

DO you want guns, fountain-pens, watches, pen-knives, sleds, skates, books, or something else.

You could easily get some of your neighbors and friends to take FARM AND FIRESIDE for a year, at 35 cents each. Write to me and I will send you my list of good things that you can earn in an afternoon's work. Six subscribers would get you a fine watch. Some of the big things take more but you can get a great deal for only two, three or four subscriptions.

ADDRESS

THE GIFT MAN, FARM AND FIRESIDE, Springfield, Ohio

Here's Something New From Kalamazoo

You can save enough real money in getting a Kalamazoo, to buy most of your fuel—pay your taxes, buy a dress or suit of clothes or materially increase your bank balance. You get the best made—the most economical—the most satisfactory stove or range to be had anywhere at any price. With an actual cash saving of from $5 to $40 on your purchase. Hundreds of thousands of satisfied users have told us this is true.

We make it easy for any responsible person to own a Kalamazoo. We are the *manufacturers.* You get lowest factory prices, 360-days' approval test, and our convenient terms. Take your choice—

Cash or Credit

Write for Catalog No. 183 and special terms. It gives you all the necessary information about buying and using a good stove or range. Compare our prices and quality with others, prove for yourself what you save in buying a Kalamazoo for cash or on time. *Freight prepaid. Safe delivery guaranteed.*

Kalamazoo Stove Co., Mfrs.
Kalamazoo, Mich.

This Oven Thermometer saves fuel and makes baking easy.

"A Kalamazoo Direct to You"
TRADE MARK REGISTERED

Jig-Saw Puzzles
Without Cost to You

THIS Jig-Saw Puzzle is the famous painting entitled "A Penny Saved is a Penny Earned." It is cut into odd-shaped pieces, and one never grows tired putting it together.

Every One Gets Them

Everywhere throughout the country, they are having Jig-Saw Puzzles, and every one is fascinated, trying to get the puzzle done first. If you actually had this puzzle to try, you would not be satisfied until you had one for your own.

"A Penny Saved is a Penny Earned"

This illustration shows a picture very nearly finished. The hardest part is to get started on it.

It Will Amuse the Whole Family

You will hardly be able to wait for your turn to put the puzzle together. The whole family will want to work at it at the same time. There will be a scramble from the dinner table to see who will get the Jig-Saw first.

How to Get the Jig-Saw Puzzle

We will send you this intensely interesting Jig-Saw Puzzle without cost, and FARM AND FIRESIDE for three months, if you will send us five two-cent stamps, together with your name and address on the coupon below. This is surely an extra fine chance to get the **leading farm and family paper** of the country for three months and this great Jig-Saw Puzzle at the small cost of only five two-cent stamps.

For Yourself or a Friend

You can have your own subscription sent **three months longer** if you are a subscriber now, or **you can have Farm and Fireside sent to some friend who can make use of its valuable information and enjoy its pleasant stories.** Tear off this coupon now while you are interested, and attend to it at once.

Very truly yours,

FARM AND FIRESIDE, Springfield, O.

FARM AND FIRESIDE, Springfield, Ohio

Gentlemen.—Please send me at once the Jig-Saw Puzzle and FARM AND FIRESIDE for three months, for which I inclose five two-cent stamps to prepay the cost of postage.

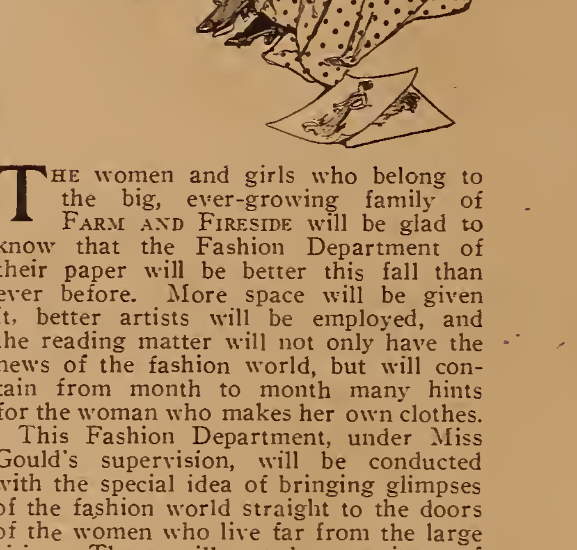
My Name is..................................

My Address is..................................

....

Friends in Canada should include five cents extra postage. F. & F. 9-10-09.

FASHIONABLE



THE women and girls who belong to the big, ever-growing family of FARM AND FIRESIDE will be glad to know that the Fashion Department of their paper will be better this fall than ever before. More space will be given it, better artists will be employed, and the reading matter will not only have the news of the fashion world, but will contain from month to month many hints for the woman who makes her own clothes.

This Fashion Department, under Miss Gould's supervision, will be conducted with the special idea of bringing glimpses of the fashion world straight to the doors of the women who live far from the large cities. There will not be one item of dress that Miss Gould will not write about. She will give you suggestions for making your own clothes, keep you informed as to the new styles, and then, too, she will tell you all about the latest dress-accessories, which nowadays are just as important to the well-dressed woman as the cut of a new gown or the latest-style sleeve.

No. 1362—Moyen Age Costume
Pattern cut for 34, 36, 38 and 40 inch bust measures

Back View of No. 1362

Moyen Age Fashions

NOWADAYS it seems that fashions not only change with the regular seasons, but with the in-between seasons as well. We have now jumped from the very high waist to the very long waist, and the big novelty feature at the present moment is the exaggerated long waistline. Short-waisted effects and the Directoire outlines are disappearing. Gowns in the Moyen Age style are being recommended by the arbiters of fashion, and it is these gowns particularly that show the extreme extended waistline.

The upper, or body, portion of the costume, here illustrated, outlines the figure and is made to extend thirteen inches below the waistline, producing a long close-fitting yoke, to which the plaited skirt is attached. It should be fitted to the figure perfectly.

No. 552—House Gown
Pattern cut for 32, 34, 36 and 38 inch bust measures

No. 639—Circular Evening Cape
Pattern cut for 32, 36 and 40 inch bust measures—small, medium and large

MADISON SQUARE STYLE BOOK

Are you accustomed to see the style book of the Madison Square Patterns? If you are, of course you realize its value to you in making your own clothes. The new style book, better and bigger and more attractive in every way, will be ready September 20th. Be sure to send your order for it. Inclose ten cents in stamps, and address your letter to the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City.

This style book will make you familiar with all that is newest in the fall and winter fashions. It will tell you all about clothes for the little folks as well as the grown-ups. It costs a few cents more than the one we last issued, but it is well worth it.

Here is our latest liberal offer: We will give any two Madison Square Patterns for sending two yearly subscriptions to FARM AND FIRESIDE at the regular price of thirty-five cents each. Your own subscription may be one of the two. When ordering, write your name and address distinctly. We will send FARM AND FIRESIDE one year, new or renewal, and any one pattern for only forty cents.

No. 1385—Coat With Shaped Skirt Portion
Pattern cut for 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, three and one half yards of thirty-six-inch material, or two and one fourth yards of fifty-four-inch material, with five eighths of a yard of contrasting material for trimming

Copyright, 1909, by The

FALL CLOTHES

No. 1383—Draped Skirt With Plaiting
Pattern cut for 22, 24, 26 and 28 inch waist measures

No. 1382—Full Waist With Bolero
Pattern cut for 32, 34, 36 and 38 inch bust measures

The Modish Draped Skirt

THE fall skirts are to be fuller, pronouncedly fuller. The scant hard-to-walk-in, impossible-to-sit-in skirt has no place among the new fashions. Plaited skirts have returned. Skirts with tunic draperies will be much worn, and yet the drapery will in no way conceal the outline of the figure. Long lines continue to be the vogue, and the slender hip is still the fashion.

The draped skirt is conspicuous in dresses for afternoon and evening wear. The drapery may be in the form of a rather scant overskirt or it may effect the outline of the pannier. Many skirts show sash draperies.

THE most pronounced change in the fashions for autumn and the coming winter will be seen in the position of the waistline. The short-waist effect is decidedly out, and the new long waist seen in the Moyen Age styles is most conspicuous in the new gowns. Many modifications of it are introduced, which are practical and smart-looking. We have Moyen Age one-piece dresses, with the long cuirass-like waist fitting close to the figure from the chin to the hip. We have trimmings introduced to give the elongated-waist effect, and we have many new skirts made with a hip yoke which carries out the same long-waisted idea.

The new tailored suits and the one-piece dresses are daring to show the curves of the figure Though the early autumn tailored coats are not actually tight-fitting, yet the new tendency is toward revealing, rather than concealing, the figure. The loose fit seen in the spring models, has entirely gone, though the slender hip is still with us.

Coats of the tailor-made suits are strictly tailored and extremely mannish in effect They show none of the elaborate trimming of last year, none of the conspicuous button-trimmed pocket-flaps, nor big Directoire revers. Instead, they have a plain notched collar and an inconspicuous cuff. Many are made single-breasted, fastening with rather large, but inconspicuous buttons, or they fasten invisibly with a fly.

Sleeves are beginning to show marked changes. In coats they are long and plain. For gowns they will continue long, but here there is no end to their variety. Some are masses of tucks, finished with fanciful cuffs. Others show a decided fullness below the elbow, this fullness generally being introduced in the form of a puff. Many of the very latest sleeves show the upper part extremely close-fitting, sometimes in the form of a cap, while the lower part will display one puff or two.

In colors for fall, dark tones will prevail. They will be rich and beautiful, but deep in color. Rivaling one another for supremacy in fashionable favor will be the many tints of purple, brown and green. The browns are more prominent than for many years past. Rich seal brown is not only a novelty color for the coming autumn and winter, but it is a good staple, dependable shade. Greens are regarded as specially high style, and grays are still liked. The very dark blues, navy and Prussian, are seen in the new fabrics. Black will also be extremely fashionable. All-black gowns made of broadcloth, voile and such soft silky materials as cashmire-de-soie will be worn. Regarding the new materials for every-day wear, there is a strong tendency toward rough fabrics.

No. 1386—Three-Piece Skirt With Novel Trimming-Band
Pattern cut for 24, 26, 28 and 30 inch waist measures. Length of skirt all around, 41 inches. Quantity of material required for medium size, or 26 inch waist, five and one fourth yards of thirty-six-inch material, or four yards of fifty-four-inch material. The feature of this three-piece skirt is the applied trimming-band which carries out the same line as the coat

No. 1379—Girl's Dress Buttoned in Front
Pattern cut for 6, 8, 10 and 12 year sizes. Quantity of material required for medium size, or 8 years, four and one half yards of twenty-four-inch material, or three yards of thirty-six-inch material

MADISON SQUARE PATTERNS

For every design illustrated on this page we will furnish a pattern for ten cents. The Madison Square Patterns are very simple to use. Full descriptions and directions come with the pattern, as to the number of yards of material required and how to cut, fit and put the garment together. The pattern envelope shows a picture of the garment. All of the pieces of the pattern are lettered, so that even if the collar in the pattern should look like the cuff, there is no possible way of mistaking one for the other. for each bears its own letter identifying it.

Send orders to the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City. When ordering, be sure to comply with the following directions: For ladies' waists, give bust measure in inches; for skirt, give waist measure in inches; for misses and children, give age. Be sure to mention the number of the pattern you desire. Satisfaction guaranteed.

A distinctive feature of the Madison Square Patterns is the originality of their designs. They are always up to the moment in style and yet they are never extreme.

Crowell Publishing Company

Shop in New York through our Mail Order Department

which is thoroughly equipped for the prompt execution of orders, affording you a selection from the most comprehensive stocks in New York, from the most inexpensive to the highest grade, at the lowest possible prices for reliable goods.

We carry at all times the latest productions of the leading foreign and domestic centres in

Women's, Misses',
Boys' and Children's Apparel,
Men's Furnishings,
Silks, Dress Goods,
Laces and Trimmings,
Household Linens, Blankets,
Lace Curtains and
Upholstery Fabrics,
Jewelry, Leather Goods,
Silverware, Toilet Articles

Our Illustrated Fall and Winter Catalogue No. 117F

new ready, and will be Mailed Free upon request. Send your name and address.

Stern Brothers
28 TO 46 WEST 23d STREET
15 TO 35 WEST 22d STREET
New York

SENSE ABOUT FOOD

Facts About Food Worth Knowing

It is a serious question sometimes to know just what to eat when a person's stomach is out of order and most foods cause trouble.

Grape-Nuts food can be taken at any time with the certainty that it will digest. Actual experience of people is valuable to anyone interested in foods.

A Terre Haute woman writes: "I had suffered with indigestion for about four years, ever since an attack of typhoid fever, and at times could eat nothing but the very lightest food, and then suffer such agony with my stomach I would wish I never had to eat anything.

"I was urged to try Grape-Nuts and since using it I do not have to starve myself any more, but I can eat it at any time and feel nourished and satisfied, dyspepsia is a thing of the past, and I am now strong and well.

"My husband also had an experience with Grape-Nuts. He was very weak and sickly in the spring. Could not attend to his work. He was put under the doctor's care but medicine did not seem to do him any good until he began to leave off ordinary food and use Grape-Nuts. It was positively surprising to see the change in him. He grew better right off, and naturally he has none but words of praise for Grape-Nuts.

"Our boy thinks he cannot eat a meal without Grape-Nuts, and he learns so fast at school that his teacher and other scholars comment on it. I am satisfied that it is because of the great nourishing elements in Grape-Nuts."

"There's a Reason."

It contains the phosphate of potash from wheat and barley which combines with albumen to make the gray matter to daily refill the brain and nerve centres.

It is a pity that people do not know what to feed their children. There are many mothers who give their youngsters almost any kind of food and when they become sick begin to pour the medicine down them. The real way is to stick to proper food and be healthy and get along without medicine and expense.

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

YOUNG FOLKS' DEPARTMENT

Conducted by Cousin Sally

The Doll That Was Sacrificed

By Lily Sihler-Bowerfind

Susanna's dearest friend, Emily, had given her a silver three-cent piece as a birthday gift, and the two with two other girls had a long conference planning what to buy. After much deliberation and discussion Susanna decided on a little scalloped cake of maple sugar, which, when divided by four, did not give indigestion to any of the girls.

The parsonage, where Susanna lived, was a rambling, white frame house, with a brick walk. On the left of the parsonage stood the low frame church, for all the world like a white goose squatting on its nest, the spire looking like the goose's neck. To the children of the neighborhood Saturday was always a day of interest as far as the church was concerned, for on that day Charlie Ilert, the old sexton, swept and dusted it. Charlie was an old bachelor of sixty-five or thereabout, bow-legged and so crabbed that the boys were afraid of him. Yes; every Saturday Charlie would sweep the church, and with the greatest unconcern fling the dust out of the side windows. The children eyed these windows like young pirates, for sometimes a penny or a picture would be thrown out. Even pins were considered good booty, and a black-headed one was a pearl of great price.

On this particular Saturday Charlie swept earlier than usual, and Susanna happened to be the only one on the spot. As soon as the cloud of dust had blown away, Susanna ran to the pile. Her practised eye saw at a glance whether the dust heap were only dust or a treasure trove. Like a hawk she swooped upon a dirty-looking something. It was a paper dollar. Immediately there rose before her inner eye a vision. In the window of Mrs. Kratzler's shop was a doll—a doll with real hair, blonde curls, not smooth, cold china hair like her Judith's. And the pinkest cheeks and reddest lips. Oh, yes, she would go and buy that doll. Not waiting to consult any one, she rushed to the shop. There the vision of delight still hung, in all its smiling loveliness, wearing on its breast the sign "One Dollar." To look and to enter was but the work of a moment.

"Will you show me the doll in the window, please, the one with the light curls?"

"Why, child," said Mrs. Kratzler, "where did you get so much money? Oh, I remember, yesterday was your birthday. It is always nice to have money given, then you can buy what you like."

Susanna gave a start and then tried to look unconcerned. What business of Mrs. Kratzler's was it where the money came from so long as she got her pay? She took the precious bundle in her arms and thoughtfully left the store. It was wonderful to own a doll like this, but ought it be hers? "Don't you know," she said to herself, "last Sunday was mission day, and you heard father say how many heathen still wandered in darkness and how much money was needed to show them the way to heaven, and on Wednesday there was a collection taken up for them. Oh, dear, I wish they knew enough to go to heaven of their own 'cord, then missionaries would not have to show the way like sign-posts. Oh, how unhappy I am. Maybe I've helped to keep a little heathen out of heaven. I don't dare to show this doll to mother, Hannah or anybody. I don't know what to do with it."

Yet she loved having it, too. How beautiful it was. As a last resource she took it into the barn and hid it in a corner of the loft. But the loveliness of the day was gone, and the taste of ashes instead of honey was in her mouth.

"Dear me," she thought, "if lightning should strike the barn to-night, I know whose fault it is. I'm a great sinner."

She ate little dinner, and in the afternoon sewed so industriously at her much-hated quilt patches that her mother grew alarmed and thought Susanna must be sick.

"Susanna, child," (she never said dear) "don't you feel well? You have never sat still so long before. You don't act natural. Come, you have sewed long enough. Take Judith and go out to play."

"Judith!" that one word brought back her anguish afresh. The new doll was so much more lovely than Judith, but the money that had bought her was missionary money.

In the night Susanna wakened and remembered the doll hidden in the barn. She longed to tell some one what she had done. She dared not tell her father, for he was so old and stern and would not understand; nor her mother, who was much younger, but did not have time to really get acquainted with her children, as too much parish work was put upon her willing shoulders. What should she do?

Just at this time there was a convention of ministers of their church, and they had guests, among them Pastor Koren, who often took her on his knee, and told her about his far-away home and dear little daughter Helga. She would go to Pastor Koren.

In the morning, when she had dressed, her kind friend was already walking up and down in the grape-arbor. She timidly wished him "Good-morning."

He saw the misery in her face, and took her on his knee.

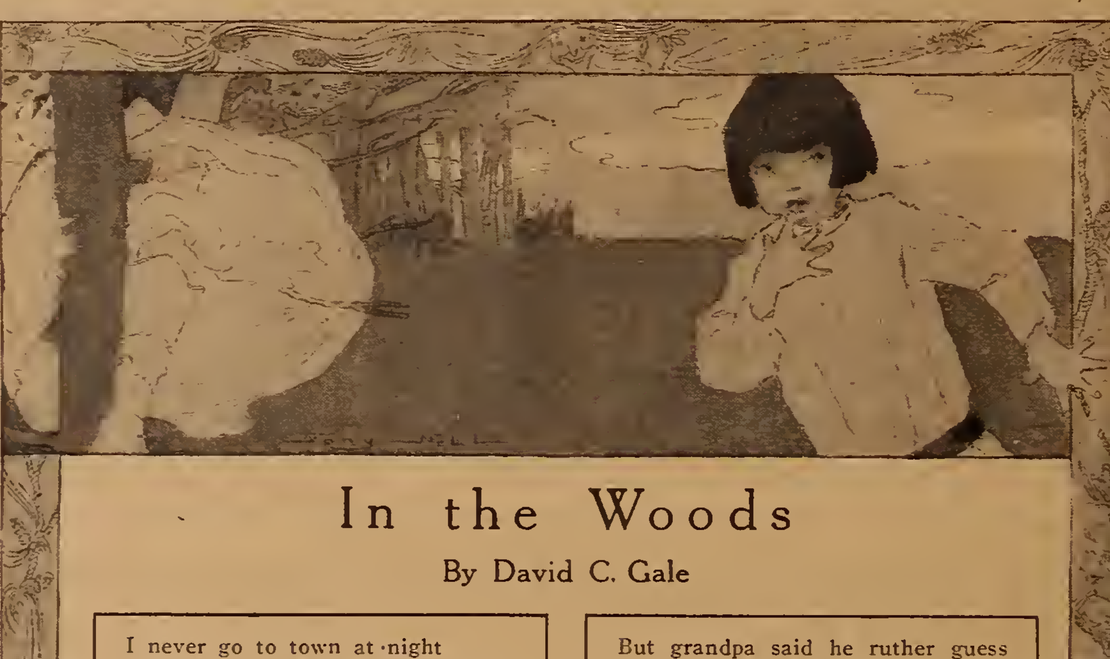
"What troubles you, Susannchen?" he said. "Have you broken your doll?"

And then all her little story came out.

She bravely told it to the end, then she hid her head on his kind breast and he quietly stroked her hair. When the first storm of her grief passed he said, "Dear little girl, we big and little folks are all very much alike. We want something so much that we do not stop to count the cost. We all have some one whom we keep out of heaven. It has been a lesson to me, too. And now get the doll, and we will go to your father."

With her little hand tucked into his brave strong hand she was not afraid. Together they went to her father's study, where Susanna repeated her story. Her father said that undoubtedly the money had been intended for the missionaries, and that she must now make amends by giving the precious doll to be sent in the large box they were now getting ready to send to Africa.

Such a look of relief and gladness overspread Susanna's face that Pastor Koren could not refrain from taking her up in his arms. She hugged him tight, and whispered in his ear, "I love you a heartful, a houseful, no—a whole worldful."



In the Woods

By David C. Gale

I never go to town at night
Unless I take along
Some one to scare the bears away,
An' keep my courage strong.
For in the woods below our house,
A hidin' in the trees,
Are all the things you read about,
The things that grandpa sees.

But grandpa said he ruther guess
They're most afraid to try
To tackle boys the size o' me,
That's over three feet high.
Besides, it makes a difference
The kind o' boy they get.
He says he never saw 'em chase
A decent youngster yet.

There's animals, an' gobleuns,
An' spooks, an' robbers, too,
An' if they once get hold of you,
No knowin' what they'll do.
An' they can see you in the night
As well as if 'twas day,
So they'll be sure to catch you if
You try to run away.

The funny thing about it is
The way they disappear
As soon as ever night is gone,
An' all the shadows clear.
I've be'n there more'n a hundred times
To look behind the trees.
I'd like to see 'em when it's light—
The things that grandpa sees.

Cousin Sally Visits the Busy Bees

Dear Boys and Girls:—

Every time I come to prepare our page, I stop and say to myself, "Now, I wonder if the boys and girls would like to have me write a long letter, or would they be pleased if I gave up all the space to their letters." And so I have compromised, as you no doubt have noticed, running your letters in one issue and my letter in the next.

But this time I am going to write a rather long letter, for I have a great deal to tell you. In the first place, I know that since school has started you will be very busy, but I do not want you to forget about Cousin Sally and our little corner. Keep up with the work that the boys and girls are doing; enter our contests. They will help you to greater things in the future, even though you may not think so now. Our department is going to be better this year than it ever has been before; our stories will be better and more entertaining, and we shall offer more prizes and better ones.

What I want especially to tell you girls, is about a goldenrod party that I went to the other day. Of course it was given by very young girls, but as I am greatly interested in them I was only too glad to go and enter in their fun. The girls have a club called "The Busy Bees" and since it was the club's first anniversary, they celebrated it by giving a goldenrod party. Goldenrod, you know, is our national flower. The girls are so enthusiastic about their club, and whenever they think up a new scheme of any kind they always come clamoring to me for advice and suggestions. But this time they would not take me into their confidence; they wanted to surprise me. The party was held at the home of the president, Marjorie Pierce. I wish you could have seen the cozy little dining-room. It certainly was a pretty sight. Everywhere there was goldenrod. goldenrod in a large vase in the center of the table, long ropes of it suspended from the chandelier to the corners of the table, pictures decorated with goldenrod, even the little name-cards were shaped like sprays of goldenrod and tinted with yellow water-color paints. The girls had great fun at club meetings making these cards and decorating them. Then there were autumn leaves banked in front of the mantelpiece. The room simply glowed with goldenrod, and the effect was most charming. The girls attended to the supper themselves. One of them made the sandwiches, another the salads, another the cake, and so on; every one had her share in the work and fun. The table looked very attractive with its orange tissue-paper doilies, for the cake and sandwich plates, and the yellow frosting on the layer-cakes carried out the color-scheme beautifully. The lemonade had slices of lemon in each little cup and a spray of goldenrod was run through each handle. While gathering the autumn leaves, two of the girls found about four empty birds' nests which had fallen from the trees to the ground. These were filled with tiny yellow candy eggs on a frill of yellow paper, and you have no idea what a pretty touch they gave to the table. It was a real autumn party, and I am sure you would have enjoyed it. The girls didn't spend much money, they had enough in the treasury to pay for everything.

If you know enough boys and girls, why don't you get up a club of some kind? The "Busy Bees" meet once a week and the dues are five cents, but you could make them as low as one cent a week if you wanted to. The girls get so much fun out of it. They sew doll clothes and baby dresses to give to poor mothers, and about twice a year they dress a lot of dolls for the sick children in the hospitals.

If any of you give a goldenrod party be sure and tell me all about it.

With much love.

Affectionately,
Cousin Sally.

Monthly Prize Contest

Cousin Sally wants every boy and girl, little people, too, to write and tell her what they would do with one hundred dollars if they had it. Head the article "What I Would Do With a Hundred Dollars" and tell it in your own words as simply and well as you know how.

I am sure there are many, many things you have often longed to do if you only had the money. Well, just imagine that you have the money and write to Cousin Sally and tell her what you are going to do with it.

Do not make your composition longer than three hundred words. Write in ink, on one side of the paper only. Give your name, age and address.

For the ten best compositions, we will give the following prizes: Books, paints, beads, doll toilet sets, paper dolls, kites, pocket-knives and many other beautiful prizes.

The contest closes September 20th. Address Cousin Sally, care of Farm and Fireside, 11 East 24th Street, New York City.

Answers to Garden Puzzle in August 10th Issue

1, Harrow; 2, radish; 3, seeds; 4, hoe; 5, pansy; 6, spade; 7, sprayer; 8, rake; 9, land; 10, rhubarb; 11, roses; 12, corn; 13, melons, and 14, pinks.

State-Room One Thirty-Seven

By Frank K. M. Rehn, Jr.

Illustrated by Harriet A. Newcomb

"RICHARD!" said Mrs. Lanier from behind the coffee-urn, "have you obtained a Jersey license yet?"

"I have," rumbled the head of the house from behind the morning paper. "Queer dick of a state, Jersey. You must have an automobile license, but no marriage license is necessary. Why, thinking of taking a spin?"

"No. Madge wishes to go over to see Gladys and Henry off. They sail this morning."

"That so! Well, it's a fine morning to be starting on a honeymoon. Almost wish I was!" This with a mischievous glance around the corner of the paper at his daughter.

The only response was the muffled clinking of silver against china. Mr. Lanier folded his paper and gave his undivided attention to his last cup of coffee.

"Was that young Boles in the left-hand box at the theater last night, Madge?" he asked.

His daughter, assidiously engaged in buttering a piece of toast, vouchsafed an indifferent "yes."

"Hum! I thought so. Rather pretty girl he was with. I should think you'd be jealous!"

The color flamed in Madge's cheeks. "Don't be silly, father!" she snapped, and rising abruptly, left the room.

Mrs. Lanier looked over disapprovingly at her husband.

"You mustn't tease her about Teddy Boles, Dick. Something has happened between them—I don't know what—but I saw tears in her eyes just now."

"I'm sorry, dear! And I'm more than sorry to hear there's anything wrong between those two. I've seen a good deal of that young chap lately, and I like him. Well, I must be off! Tell Madge I'll send the car here at ten-thirty sharp."

A little after that hour Madge Lanier, accompanied by a large bunch of American Beauties, rolled onto a Christopher Street ferry-boat. All the way across the river the little waves danced joyously and the flags on the great liners flapped happily, and over everything flooded the glorious sunlight. But all this joy only served to awaken more poignantly the lonesomeness in her heart.

When one has lost a lover and is about to say good-by to a best friend, one is apt to feel rather stranded; but to have to see that lover the very next night flirting outrageously in a box at the theater, and to know that the best friend, glorying in the love of a newly-found husband, is considering this coming parting as one of the supremely happy moments of her life— The tears filled Madge's big gray eyes. She seemed irrevocably cut off from all the joy of living.

"Why couldn't Ted have left things as they were!" she thought — meaning "have worshiped from afar!"—"then undoubtedly he would have been seated there beside her, and the sun and the river and the flags would have sung their song of joy to hearts perfectly attuned. And Gladys—" But here Madge's loyal little heart began to feel ashamed of its jealousy of her friend's happiness.

As the car lumbered off the ferry-boat and passed rapidly along the stream of people that stretched in a baggage and flower laden line from ferry to dock, the rush and joy of it all stirred her thoughts from their gloomy channel. How she would love to be going herself!

"Oh, Madge!" called a familiar voice, and a hand waved to her from the crowd. She turned and bowed smilingly to the owner.

Forcing her way through the mob on the pier, she at last mounted the gang-plank and gained the promenade-deck, flushed and breathless and clutching the great bunch of roses to her breast. Then began a flurried search for Gladys and Henry.

She was a good hour ahead of time, but already the deck was crowded and she did not wish to waste a moment of her precious time. The smell of the ship was in her nostrils and she thrilled and longed to be going.

Where on earth were Gladys and Henry! She searched everywhere, but in vain. Loneliness began to clutch at her heart-strings.

As she passed some men she heard one say, "American beauty, all right!"

"Jove, I should say so!" exclaimed a companion. "What loads of brides there are this trip!"

Why couldn't she be going? And then a lot more "whys" occurred to her. Her arms began to ache from the weight of the flowers. At least she could get rid of them.

"Steward!" she demanded of the room-steward, "what number is Mr. and Mrs. Henly's state-room?"

"Number one thirty-seven, madam."

"Thank you!" She walked rapidly along the main passageway, glancing at the numbers on the first doors of the cross halls. 151, 145, 139—it must be down here! "Oh, yes, here it is!" she murmured, as she stepped across the threshold, the door having been left open. Her eye fell on the new hand luggage piled on the berth. "Why, they must be on board!" she thought to herself. Suddenly, from behind her, came a half-smothered exclamation. She had just time to turn, before an astonished young man dashed in and caught her to him with a cry of joy that was strangely mixed up with a sob.

"Teddy!" she gasped, and her arms flew about his neck and she openly and triumphantly wept upon his shoulder.

"Madge! Madge!" he murmured over and over. "I knew you couldn't mean what you said the other evening, and suddenly realizing what a fool I was to run away, instead of staying and fighting for you, I tore down here to get my things off the steamer—"

"Your things!" cried Madge. "Why—why, this is Gladys' and Henry's room!"

"No, dear, it's mine."

"Why, the steward told me theirs was one thirty-seven!"

"Did he, dear! Well, maybe it is, but this is one thirty-five—" He stopped, and Madge saw his eyes light with the light of a great surprise. "By Jove!" he said, glancing at his watch, "we've just time! We can get married and make this boat yet!"

"You foolish boy—"

"Foolish nothing! I mean it, dear—only hurry!" His voice was tense with excitement.

"But—but how can I?"

"They've a shop on board with everything, and we'll buy it out!" he ran on breathlessly.

"But—but—a license," gasped Madge, and she blushed adorably as she said it.

For an instant Ted's face fell; then he almost shouted:

"But we're in Jersey, girlie! We don't need any! Thank God for Jersey! Come on—time and the North German Lloyd wait for no man, not even a man and wife! What's this?" He stooped and picked up the crushed and forgotten bunch of roses.

"Oh, my poor roses!" laughed Madge.

He crushed them to his lips, then handed them to her. "Come on, dear; you'll be the bride who bought her own bouquet!"

"Isn't it romantic," replied Gladys with a coquettish nod of her pretty head. "Do you know, Ted, I felt desperate this morning. Every one looked happy but me. I thought you didn't care any longer, for—for daddy said he saw you at the theater last night with a pretty girl. But you do care, don't you, Ted?"

"Yes, yes, Gladys, dear, but we must hurry or we'll never make this boat. We will wait and talk things over when we are out on the briny deep." And he kissed her once more as they hurried out.

At a few minutes past twelve a message was handed to Mr. Lanier in his private office down town. He opened it leisurely, and read:

DEAR DADDLES:—

You said this was a fine morning to be starting on a honeymoon, and, as usual, you are right. Ted and I were married at 11:35 this A.M. in Hoboken, and have sailed with Gladys and Henry.

Lovingly,
MADGE.

Great furrows gloomed ominously in Mr. Lanier's brow. Then he strode to the window and looked far down the Bay, to where a steamer was just making her way through the Narrows. The furrows faded, and a very tender smile overspread his face. His lips moved, and the words "God bless you—and Ted!" came from them. Then the smile broadened and he shook his clenched fist at the Jersey shore.

"I've got you to thank for this!" he said, and he might have said more, but his telephone was ringing wildly, and he knew it was Mrs. Lanier at the other end.

- Harriet A. Newcomb -

"An astonished young man dashed in and caught her to him"

A DELICIOUS DRINK

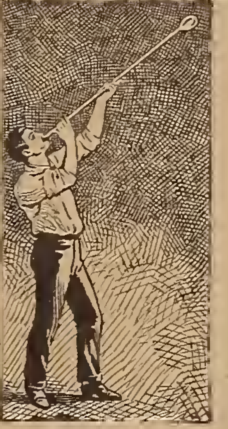
Baker's Cocoa

made by a scientific blending of the best tropical fruit. It is a perfect food, highly nourishing and easily digested.

52 HIGHEST AWARDS

Walter Baker & Co. Ltd.

Established 1780 Dorchester, Mass.



"Turn on the light." My name, Macbeth, on my lamp-chimneys means that I am willing to be judged by them. They're the best lamp-chimneys made and they do not break from heat.

They are sold by the best grocers.

My book insures your getting the right chimney for your lamp. And it gives general suggestions about the care of lamps. It is free. Send name and address to

MACBETH, Pittsburgh.

MAGIC FIRE BRICKS

Save Your Stove, Your Money, Your Time and Your Patience, Because They

FIT ANY STOVE

Magic Fire Bricks are the newest and most practical fire brick on the market today because they are plastic and you can press them into any shape. This means that you can take any Magic Fire Brick and fit it to your stove, no matter what kind or style of stove you have. They HARDEN QUICKLY in the FIRE.

Each brick is 7 x 6 x 1⅛. Corrugated Paper on face keeps them in shape and burns off in fire. Over 30,000 stoves in Chicago lined with them. Their superiority is well established.

Ordinary Linings

Make you wait. They never fit. You break them trying to fit them. You always pay double price, and your stove may burn out while you wait.

Don't put up with these inconveniences any longer. There is no necessity for it. Order a set of Magic Fire Bricks today, direct from us and we guarantee them to fit your stove. Money refunded if they do not fit. Send $1.00 for package of four bricks. They cost less and last longer.

MAGIC STOVE LINING COMPANY
1169 to 1199 35th St. Chicago, Ill.

MOTHERS, PROTECT YOUR LITTLE ONES AT NIGHT

by using Dr. Denton Sleeping Garments for boys and girls under ten years old. Cover body, feet and hands. Soft and warm. Special, Knit, Health Fabric, mixed cotton and wool. Indispensable if bed rooms are cold. If your dealer does not handle them we will supply you. Prices 50c. to $1.10. Write for booklet. Dr. Denton Sleeping Garment Mills, 805 Summit Street, Centreville, Michigan.

They mend all leaks in all utensils—tin brass, copper, graniteware, hot water bags etc. No solder, cement or rivet. Any one can use them; fit any surface; two million in use. Send for sample pkg. 10c. Complete pkg. assorted sizes, 25c postpaid. Agents wanted. Collette Mfg. Co., Box 148 Amsterdam, N. Y.

LEARN TO WRITE ADVERTISEMENTS IF YOU ARE EARNING LESS THAN $25 A WEEK

we can positively show you by mail how to increase your salary. Send for beautiful prospectus, mailed FREE.

PAGE-DAVIS SCHOOL, Dept. 25, Chicago, Ill.

Agents: $103.50 per month selling these wonderful Scissors. V. C. Giebner, Columbus, O., sold 22 pairs in 3 hours, made $13; you can do it, we show how. FREE OUTFITS. Thomas Mfg. Co. 1546 Wayne St. Dayton, Ohio

THIS DOES IT ALL — SELF SHARPENING — CUTS TO THE END

PARKER'S HAIR BALSAM

Cleanses and beautifies the hair. Promotes a luxuriant growth. Never Fails to Restore Gray Hair to its Youthful Color. Cures scalp diseases & hair falling. 50c. and $1.00 at Druggists.

The Housewife's Club

This department is just for housewives. It is their own "corner" where they may tell each other the way they manage their household affairs, how they cook, how they make their work easier and life happier. We want every one who has originated any labor-saving device or convenience to write to the "Housewife's Club," so that our other readers may be benefited by their experiences. We would also be glad to receive recipes that have been tried and proved. For all contributions available we will pay twenty-five cents. Contributions must be written in ink, on one side of the paper, and must contain not more than two hundred and fifty words. We would suggest that contributors retain copies of their manuscripts, as no contributions will be returned.

Address THE HOUSEWIFE'S CLUB, care of Farm and Fireside, Springfield, Ohio.

Corn-Cakes Without Milk

Scald one quart of corn-meal in hot water and then add five heaping tablespoonfuls of flour, one tablespoonful of salt and one heaping teaspoonful of soda which has been scalded in hot water. Bake as usual.

Mrs. W. H. R., Maryland.

A Bright Light

Once a month empty the oil from the lamps; wash inside, rinse and drain. Put the burner in strong suds and let it boil for half an hour, then wash well. Boil the wicks in vinegar, drain dry. Fill the lamps with clean oil and you will have a clear, bright light. I use the oil taken from the lamps to kindle the fire.

Mrs. W. S. P., Iowa.

Little Household Hints

If the fringe on the edge of a fine doily or square is brushed with a small nail brush it will keep in much better condition than it does when combed.

Always boil your clothes-line about fifteen minutes before using it the first time. It should be put down in cold water and slowly brought to a boil. Stretch the rope to dry in the sunshine, then it will not twist.

Never try to remove machine oil stains by putting hot water on them. The grease may set and never come out. If a wash material is stained use cold water and soap immediately. If the fabric is silk or wool apply French chalk or pipe clay. Put the powder on quite thick. Have blotting paper underneath and over the spot and permit the powder to remain on the spot several hours.

Imitation Maple Syrup

Take five or six clean red corn-cobs. Cover them with water and boil one hour. Strain the water and if there should be more than one pint, boil until reduced to that quantity. Then add one pound of brown sugar and cook until the syrup is as thick as desired. This syrup can scarcely be detected from the genuine maple syrup and is splendid for buckwheat cakes. Mrs. A. L. R., Delaware.

To Make Glossy Icing

To give the icing on a chocolate cake the desirable glossy appearance take one teaspoonful of grated chocolate, two of granulated sugar and one of boiling water, mix well and spread lightly over the chocolate icing before it is cold with a knife dipped in cold water.

E. C. H., Wisconsin.

OUR NATIONAL DISEASE

Caused by Coffee

Physicians know that drugs will not correct the evils caused by coffee and that the only remedy is to stop drinking it.

An Arkansas doctor says:

"I have been a coffee drinker for 50 years and have often thought that I could not do without it, but after many years of suffering with our national malady, dyspepsia, I attributed it to the drinking of coffee, and after some thought, determined to use Postum for my morning drink.

"I had the Postum made carefully according to directions on the pkg. and found it just suited my taste.

"At first I used it only for breakfast, but I found myself getting so much better, that I had it at all meals, and I am pleased to say that it has entirely relieved me of indigestion. I gained 19 pounds in 4 months and my general health is greatly improved.

"I must tell you of a young lady in Illinois. She had been in ill health for many years, the vital forces low, with but little pain. I wrote her of the good that Postum did me and advised her to try it.

"At the end of the year, she wrote me that Postum had entirely cured her, and that she had gained 40 pounds in weight and felt like herself again."

Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Cheese Straws

Two cupfuls of cheese picked fine, and two of flour; two tablespoonfuls of butter, a pinch of cayenne pepper, a pinch of salt, a little water. Roll thin and bake in a medium hot oven.

Mrs. B., Indiana.

Jam Cake

One cupful of sugar, three fourths of a cupful of butter, one cupful of jam, two cupfuls of flour, three eggs, three tablespoonfuls of sour milk, one teaspoonful of soda, one teaspoonful each of cinnamon, spice and nutmeg. Bake in layers and ice. M. L. R., Missouri.

Hints for Wash-Day

If you live where you can allow your clothes-line to be in the weather all the time let your clothes-pins stay there too and they will always be on hand. It is a wonderful saving in all work if all tools can be in the place where they will be used, and not have to be "assembled" each time. Make for the clothes-pins a bag of table oil-cloth and make it exactly in the shape of an envelope with a generous over-flap. Hang to the line by the two upper corners. The flap acts as a roof and keeps the pins in good condition.

"Ajam," Pennsylvania.

Cream Cheese

Skim a pan of milk which is only slightly sour and setting the cream in a cool place, put the milk in the oven to curd. As soon as the whey forms around the curd, and before the curd really hardens, pour into a coarse bag of linen and allow the whey to drip until the curd is quite separated; then mash it and salt slightly. Mix the cream through the mass and place in cup forms. It will turn out quite solid and, if the milk is not more than twenty-four hours old, will have all the flavor of the famous Swiss cream cheese. L. M. S., Illinois.

To Clean Smoked Wall-Paper

Make a stiff dough, as for bread, with yeast foam and water, omitting salt and shortening. Let rise very light. Take small pieces and rub the walls well and you will be surprised at the results.

Mrs. J. R., Wisconsin.

Baking-Powder

I would like to give the readers of the Housewife's Club my recipe for making baking-powder.

Two pounds of cream of tartar, one pound of bi-carbonate of soda, one half pound of flour or corn-starch (flour is preferable). Mix well together six times. In using do not heap the spoons.

Mrs. T. B., New York.

Questions Asked and Answered

We shall be very glad to have our readers answer any of the questions asked, also to hear from any one desiring information on household matters. There is no payment for contributions made to this column.

Mrs. J. D., of Michigan, would like to have a recipe for making white taffy candy.

Mrs. J., of Tennessee, would like some of our readers to answer the following questions: Where can chili pepper be obtained? Where can California root-beer seed be bought?

Chili Sauce

For E. H. L., New York

Twelve large, ripe tomatoes, one large onion, four red peppers; chop all together until fine. Two cupfuls of sugar, one tablespoonful of salt, one tablespoonful of vinegar, and one tablespoonful each of ground allspice and cloves. Boil until quite thick; bottle and seal.

Mrs. N. S., Missouri.

Roll Jelly Cake

For New Subscriber

Two eggs beaten with one cupful of sugar. Add one fourth of a cupful of milk, a pinch of salt, and flavor to taste, one heaping teaspoonful of baking powder sifted in one and one fourth cupfuls of flour. Bake in quick oven. Spread, and roll up at once. The cake will not break when rolled.

A Subscriber, Pennsylvania.

Made by Kodak Workmen

The New No. 3A BROWNIE

A new Camera from the Kodak factory. The pictures are post card size (3¼ x 5½).

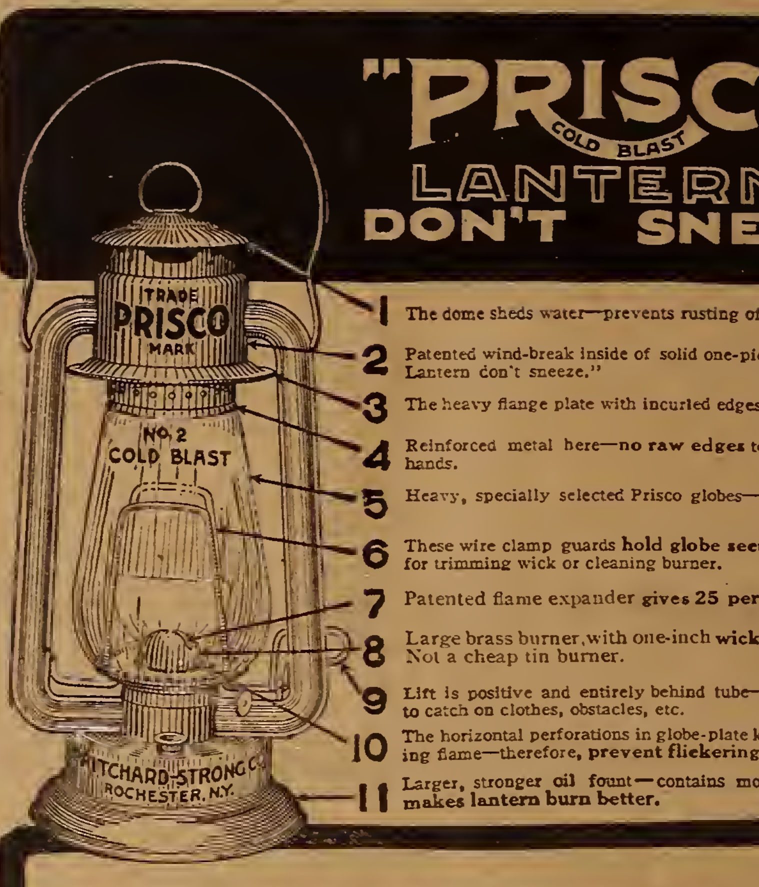
Built on the Kodak plan. Uses Kodak, daylight loading, cartridge films. Has automatic focusing lock, F. P. K. automatic shutter, with pneumatic release, two tripod sockets, and reversible finder. Carefully made and well finished.

Price, with Single Meniscus Achromatic Lens, $10.00
Do., with Rapid Rectilinear Lens, ... 12.00

EASTMAN KODAK COMPANY,

"The Book of the Brownies," free at your dealers or by mail.

382 State Street, ROCHESTER, N. Y.



200 Operations Make Prisco Lanterns Perfect

Do you know, we even clean the globes and put the wick in place in Prisco Lanterns? We tell you that to show how thorough we are in everything we do.

A Prisco goes through at least 200 operations—each one carefully inspected so that every lantern leaves the factory in good working order. When you get a Prisco in your hands all you need do is pour in the oil and apply the match, and you will have a brighter, better light than ever before.

Look at the above diagram carefully, and you'll see some Prisco advantages—notice the straight, broad flame for instance—our patent flame expander does that and it gives you 25% more light than the ordinary kind. Then there's the patented wind-break—it puts the air where it does most good—no flickering or sputtering when you carry a Prisco. All rough edges are turned over making a smooth-wired edge, which not only strengthens every part of the lantern, but also prevents any chance of cutting your hands.

There are a lot of other good things about a Prisco that make it the lantern you ought to use, but we can't tell them all here, so we want you to write for our Book

"LIGHTING THE FARM" FREE FOR THE COUPON

It's a book that has some things in it about lanterns you probably never thought of before, besides some others you most likely know, but never realized how important they were. It's a book of real lantern information that you'll be glad to have next stormy night. Fill the coupon and we'll send you your copy prepaid.

THE PRITCHARD-STRONG CO.

6 Circle Street, Rochester, New York

PRITCHARD-STRONG CO., 6 Circle Street, Rochester, N. Y.

Gentlemen:—Please send me a free copy of your book "LIGHTING THE FARM."

Name ______________________

Address ______________________

Dealer ______________________

Address ______________________

EASTERN EDITION

ESTABLISHED 1877
The Illustrated Farm and Family Journal

24 NUMBERS 35 CENTS

LIBRARY
RECEIVED
SEP 2 1909
U. S. Department of Agriculture

Vol. XXXII. No. 24 Springfield, Ohio, September 25, 1909 Terms { 1 Year, 24 Numbers, 35 Cents / 4 Years, 96 Numbers, $1.00 }

Science and the Farmer

The Agricultural College and the Experiment Station Coöperate With the Practical Farmer—By W. Milton Kelly

Science as it applies to farming is, I believe, nothing but organized common sense applied to the methods employed in operating the farm in the most efficient and economical manner. The disposition of a large class of unprogressive farmers to refuse to accept the demonstrated truth of the value of better methods, better ideas and a higher conception of their calling has tended to retard the advancement of science among the agricultural classes.

Years ago, the work of the scientist was performed in a laboratory where he traced out new facts from the filmy threads of increasing theories. Under such conditions it is not to be wondered that many of the discoveries of science were so vague and intangible as to be of little practical value to the farmer. So long as the work of the scientist and the farmer were so far apart, they made but little progress toward the results which the latter-day scientists have achieved by rolling up their sleeves and working with the farmer and making a close study of his conditions and problems.

Since the establishment of agricultural colleges and experiment stations, the scientists are in close touch with those they are serving. Science and practice are tending toward a common end. The actual field-tests are taking the place of laboratory work. Thus the science of agriculture is becoming a powerful factor in the farming of today.

The mission of the agricultural college and the experiment farm is to interpret the investigations of the scientists and diffuse the knowledge that has been obtained from books and the minds of bookish scientists among the farmers. Science can be of little practical value to a farmer until it is released from the laboratory and set to work in the fields and among his herds and flocks. Our modern agricultural-college instructors and experiment-station conductors appreciate the necessity of coöperation with the farmers, and they have enlisted the efforts of many practical farmers in conducting experiments along the lines suggested by them. This has been of great assistance in removing the indifference and antipathy which have existed for years between the agricultural scientist and the farmer. As a result of this friendly coöperation, all thinking farmers look upon the scientist as a friend who is willing to lend his aid to help him in working out many of the intricate problems connected with his business.

Alfalfa-Hay Produced on an Agricultural-College Farm

The agricultural-college instructor and the experiment-station conductor must gain and retain that confidence of the practical farmers, if they remain on terms of professional intimacy. It has required a long time for scientists to discover that they can be of little benefit to mankind without stepping down from their exhalted spheres and taking hold of everyday commercial problems.

We have reached a period in our agricultural development when we must recognize the scientist as our friend and lend him our aid. The various experiment stations have for years been publishing bulletins, the results of carefully conducted experiments; and it is my purpose to explain how these bulletins have benefited the many practical farmers who have read them and put into practice on their own farms the various practices recommended by these bulletins.

Various experiment stations have carefully investigated the best methods of saving and applying manures. The foods have been analyzed and the manurial elements accurately determined, the animals have been weighed at the beginning of the experiment, the value of the products noted, the excrement carefully saved, both liquids and solids, and the value of the two elements determined by analysis. All of these facts have been carefully noted, that there might be no question as to the accuracy of the work when completed. All these reports show that the liquids are sixty per cent of all the excrement. Further experiments show that the liquids are directly available for plant-food, while the solids can only become available through Nature's slow process of breaking down the tissues and in time reducing them to a liquid condition, the only form in which a plant can take its food. These investigations required a large outlay of time and money and were made under the direct supervision of men who were practical and scientific and who worked hard and diligently to build up and establish facts, rather than to build upon theory.

Investigations as to the individuality of the cows that are now in our dairies reveal many wonderful and startling facts. Volumes of matter have been published, columns of facts and figures have been furnished during the past few years, tending to show the necessity and practical value of ascertaining the merits of each individual cow in the dairy, not alone as to her merits for producing milk and other products, but as to her power of digesting and assimilating the foods provided. Still, the average dairymen have ignored these teachings, so that today one third of the dairy products of the country is the product of cows that are being kept at an expense greater than the gross income. The scientist has showed very plainly how to find out which cows are the best producers, and if we should investigate the practices which are followed by the best dairymen we would find that they have accepted the teachings of the scientists and believe in the Babcock test to determine the amount of butter-fat each cow is producing, in the modern cream-separator, in sanitary ventilation, in the home growing of more protein, in the feeding of balanced rations, in the use of clean and sanitary utensils and in the harvesting of their forage and fodder crops at a time when they contain the largest amount of digestible food elements.

Investigations to determine the relative value of various kinds of commercial fertilizers and chemical plant-foods are annually saving the farmers millions of dollars, yet how very few farmers seem to realize the value of these bulletins in protecting their interests from the impositions of fraudulent fertilizer-dealers. Science tells us how much available plant-food these fertilizers contain and it compels the manufacturers to keep their goods up to the guaranteed analysis. Science tells the farmer how to use these fertilizers so that he will derive the greatest benefit from their use, it tells him which kinds are needed for certain crops and certain soils. In order to derive the most benefit from these scientific investigations the farmer must conduct practical field-tests on his own farm to find out the elements of fertility most needed to increase crop production on his farm. As soon as farmers begin to conduct field-tests on their own fields they begin to derive benefits from the work that is being done at the agricultural colleges and experiment farms.

Investigations to determine the value of various feed-stuffs and different grain foods when fed alone and in combination with other foods have been of great value to intelligent feeders of live stock. Science has told the farmer how to buy these foods and feed them in combination with other foods so that they would properly nourish the animals according to the functions they were calculated to perform. Science protects the farmer against the impositions of the millers and feed-dealers who adulterate their products. It compels these dealers and millers to keep the quality of their goods up to the guaranteed analysis. Can the farmer who is feeding live stock afford to ignore the teachings of science and conduct his business blindly?

No man unaided by science can tell what elements of fertility are contained in manures and fertilizers or what elements of nutrition are contained in the various kinds of food that he is feeding to his animals. He cannot determine accurately which animals are turning their food to profit or which are eating up the profits made by the more profitable ones. Who, unaided by science, can decide whether the soil does or does not contain the elements requisite for the

[CONCLUDED ON PAGE 2]

Around the Farm

Items of Interest and Value to the Progressive Farmer

How to Improve the Farm Wood-Lot

The woodland pasture with flock or herd grazing among the trees or resting beneath them in the cool shade, its park-like beauty, appeals to us as an ideal summer home for the farmer's stock. And so it is. The grass will not be so plentiful or of so good a quality under the trees, but the comfort of the animals goes a long way to make up for this inferior growth.

While the open pasture wood-lot may have its place on the grazing farm, it is not the place to grow timber. The first lesson we must learn—and if not learned, all else will be useless—is that the stock must be kept out of the growing timber. I do not believe that the wood-lot that is well set with grass, with scattering trees, will restock itself if this is done, at least not in a satisfactory or paying manner. But where there are enough trees, so that the soil is covered with a mulch of leaves, the proposition is an easy one.

When unmolested, a fine stand of young trees at once takes possession of all the open spaces. If the wood-lot has been pastured previously, the new growth will be of approximately the same age, and this method of starting an even growth has some advantages. Where pasturing has not been followed, there will be trees of all ages and sizes, and this we believe to be the ideal condition for very best results.

However, a very serious drawback to this easy and apparently satisfactory way of allowing a wood-lot to reseed and care for itself without money and without price to its owner is found in the kind of trees that remain as parent trees for the new growth. In my own county our forest growth was very varied in its character, with quite a range of varieties. Now, it is frequently the case that all the more valuable varieties have been cut and used. As different kinds of timber came to bring a good price in the market, it was disposed of. The black walnut went first, followed by cherry, ash, oak, hickory and, finally, elm, until on many farms maple and beach are the only remaining trees.

We could hardly expect, if this piece of woodland was fenced up, to have the right kind of growth come on, and yet Nature will help greatly even in such cases, for if the neighboring wood-lots have valuable trees, you will be benefited by seed blown or carried from them. If then you have in your wood-lot the right kind of parent trees, you are fortunate, but even in this case the hand of man can greatly aid Nature in bringing about best results.

In most wood-lots there are to be found trees that are almost worthless, such as ironwood, blue beech, etc. If these are all cut out or deadened before allowing the reseeding to take place, a great improvement in the character of the new growth will be seen. In a neighboring wood-lot that has been pastured very little in the last ten years, two large ironwood trees have seeded an acre or more with a thick stand of absolutely worthless trees, while outside their influence the growth is hickory, walnut and maple. This worthless growth could have been prevented with a very few minutes' work in deadening the parent trees.

Many men have told me that they could not afford to lose the woods pasture, but I know that twenty acres of woods pasture is not nearly so valuable as ten acres of cleared land and ten acres of protected wood-lot. Then, if you cannot afford to do without the pasture, put a fence through and grow beef or mutton on one half and timber on the other, and there will be more profit on both.

Horatio Markley.

Cutting Corn

As corn-cutting is a long, tedious, unpleasant job, it behooves the farmer to take advantage of every condition that will help to eliminate the time, labor and unpleasantness connected with it. Several months previous to the time when corn becomes ripe is none too early to begin making preparations for this event.

The only machine we use is the two-row sled harvester. However, when the weather conditions have been such that corn falls over and becomes tangled, we dispense with the sled, increase our labor force, and resort to the corn-knife. In either case, before we commence cutting, all articles to be used are inspected, and knives, sled-runners, sleeves, etc., are provided for and put in condition ready for use. Binders and shockers should be inspected in good time so that if worn or broken portions need replacing there will be sufficient time to procure the repairs.

When corn-gallows are to be used as a means of supporting the shock, it is advisable to commence tying them quite a while before corn is ready to cut, as being tied will not interfere with the growth of the corn to any great extent, but will aid in preventing the gallows from going down, and to tie gallows after corn has gone down is a very difficult task.

Some machine to serve in the capacity of a corn-harvester is becoming year by year more of a necessity to the equipment of the farmer who grows corn to any great extent. This great demand for a practical corn-harvester is due largely to the difficulty of procuring farm labor. Upon the minds of the farmers contemplating the purchase of such a machine, the question as to which one on the market is the most practical is very prominent.

We have given the matter considerable thought and investigation. Each year we harvest from thirty to fifty acres of corn. We use a two-row sled cutter, except at times when the corn is down too bad. We cut our shocks twelve hills square. Before bringing the sled into use, we usually heart out a field by going through and cutting the four middle corn-rows of each shock row. By this method considerable time will elapse between the setting up of the heart and the remainder of the shock, which greatly aids in curing the fodder. We heart out by hand, though it may be done with a sled cutter by merely lifting the inside knife at each shock so as not to cut the gallows hills. When we start to fill out, we usually put two men on the sled and have one tie shocks. We believe that when corn stands straight this is the most economical way (everything considered) of cutting it.

Both binders and shockers are used near us and from the testimony of those who use them and our own observation we find that the practicability of these machines varies with conditions. We have two neighbors who disposed of binders and procured shockers and, when asked which of the two machines they preferred, both hesitated to favor either machine. One great objection to both machines is that they break off a great many ears. With the binder most of the ears fall directly upon the ground, while with the shocker the majority fall upon the platform from which they must frequently be removed. In either case the ears should be gathered up, and unless the farmer has hogs or other stock through which he can profitably dispose of them, he may lose much of this corn. The binder is much faster than the shocker, providing there is sufficient help to do the shocking, while on the other hand, the shocker, though much slower, requires but one man to do both cutting and shocking. Twine contributes very largely to the cost of corn cut with a binder. A shocker has a tendency to entangle the stalks as the shock is being built, which makes it quite difficult to tear the shock apart at husking or feeding time. We find some who object to the shocker because of the fact that unless a field is trimmed up just right, it will be impossible to keep the shocks of equal size and drop them in straight rows. Also the shocks made by a shocker have a greater tendency to go down, if allowed to stand long, than those cut otherwise.

A thorough inquiry concerning the cost and amount of time required in cutting and shocking corn by the various methods has been conducted by the United States Department of Agriculture. The average cost per acre (original cost of machines, interest on investment, repairs, etc., considered) was found to be as follows: By hand, one dollar and fifty cents; with sled, one dollar and eighteen cents; with binder, one dollar and fifty cents; with a shocker, one dollar and six cents. The average amount cut per day by the different methods was as follows: By hand, one man, 1.47 acres; with a sled, two men and a horse, 4.67 acres; with a binder, driver and three horses, 7.73 acres (one man after a binder can shock an average of 3.31 acres per day); with a shocker, one man and three horses, 4.7 acres.

From these figures it will be seen that the shocker is the cheapest and the binder the fastest way of cutting corn. The cost of cutting with a binder and by hand are equal. The conditions bearing on the practicalness of the different machines are so many and varied that one farmer may prefer one, his neighbor another. It seems, however, that the binder has the preference with the heavy corn-growers, who desire the fastest means possible of harvesting their corn.

P. C. Grose.

Menaces to Farm Health

If farmers and their wives would exercise a reasonable amount of care and prudence, health on the farm need not be far from the ideal. Yet it seems so easy to encourage conditions which are a menace to health that many dangerous actions grow to be nothing more nor less than careless habits.

People are only thoughtless about these matters. Once get them to understand that the little things which promote ill health all combine to menace the very life of the entire household, and they are quick to improve conditions.

The unsuspecting housewife one day throws a dead chick just over the yard fence, where it is allowed to lay and decompose. Perhaps the very next day she flings two dead chicks over into one corner of the garden, and they likewise are never again thought of, except when the scent of their decaying bodies grows strongest. Yet their baleful influence, small though it is, goes toward making the air impure and aiding in the development of ever-present disease germs.

You see many a farm-house with a pig-pen addition, so it will be handy to slop the pig, of course. And you invariably find good health at a premium around such premises, too. It's the same way with most hen-houses, and they are so filthy and foul-smelling that people dodge by them to avoid the sickening odor emanating from these dirty pest-houses. The dodging past them will prevent the stench from overpowering us, but we cannot evade breathing a certain per cent of it just as long as we allow these muck-holes to remain on the farm.

Many a farm-house maintains a veritable disease-germ breeding-place right under the floor, in the shape of a damp, sometimes flooded, cellar; or it may be an old cave adjacent to the house. Very frequently we find these caves have been allowed to fall in and stand half full of water, which is sure to throw off an impure vapor. Either of these cases is bad enough, but the hole directly under the floor and so confined, sending up its dangerous, unhealthful gases for those above to inhale, is the subtle enemy that most frequently strikes down some member of the family before the inmates of the house take warning. Foul or unclean cisterns come under the same class as the above; but of course are more dangerous where the impure water is used for drinking purposes.

There is scarcely a farm in the country where one can not find an obstructed drain-ditch near the house, and small pools of stagnant water around both the house and barnyards. All these, while not particularly offensive to the smell, are extremely unhealthful, serving as attractions for swarms of mosquitoes, and furnishing them ideal breeding-places, as such shallow pools of water are the very spots they seek for laying eggs and hatching out their larvæ. These blood-sucking pests are not only annoying and torturing, but scientists know them to be carriers of disease germs, especially of malaria in temperate and Northern climates, and of yellow fever in the hot climate of the South. Water which is allowed to stand in a rain-barrel or other unused vessel also contributes to unsanitary conditions—more, perhaps, than one would think.

The swill-barrel is another common and dangerous menace to health on the farm. Everything imaginable in the line of old scraps of spoiled meat, molded bread, decaying fruits and vegetables is thoughtlessly tossed into the swill-barrel simply because it is handy. Fermentation quickly takes place, and numberless dangerous microbes are developed. These are exactly what combine to throw off that nauseating odor; and, while we get a full whiff of it only now and then, it wields a great influence in developing unsanitary surroundings, which may terminate in deadly diseases. Then, too, the barrel seldom has a cover. This attracts the flies, and myriads of them swarm about this filth-hole, many of them perhaps carrying typhoid or other fatal disease germs, and some of the flies themselves getting into the barrel, adding their own filthy carcasses to the foul mass.

Isn't it about time to call a halt and institute reforms along sanitary lines? Clean out, and keep clean, poultry-houses, pig-pens, drain-ditches and cellars. Old caves or cellars which cannot be renovated thoroughly and fitted out for use should be filled up even with or above the surface of the ground.

Let's inaugurate a wholesale war against unsanitary conditions on the farm, by example as well as precept, till our neighbor and our neighbor's neighbor are constrained to join the ranks, thus emulating a noble cause, one so fraught with wonderful possibilities for the future sanitation and happiness of a farming humanity!

M. Albertus Coverdell.

Science and the Farmer

[continued from page 1]

perfect development of wheat or apples, clover or cabbage? Who can tell, except as he blindly infers from results, what kinds of manure and fertilizers are adapted to certain soils and crops?

Botany is a science that should be understood by all practical farmers. I do not mean that every farmer should be highly educated in botany, but rather have a knowledge of the practical application of the principles of botany as applied to the various plants that grow upon his farm. It will teach him how many of our most valued fruits and vegetables were originated from plants that were deemed worthless. It teaches about the nature, growth and development of molds, mildews, rusts, smut, etc., showing that these are nothing but a collection of minute plants of a low order, which reproduce themselves very rapidly by their seed-like spores.

Zoölogy is intimately connected with agriculture. It teaches the habits and describes the form and the function of the various organs of animal bodies, pointing out the best methods of treatment both in health and disease. Supplemented by chemistry, it forms the basis of all knowledge relative to the rearing and feeding of animals. A knowledge of the anatomy of our domestic animals is the basis of veterinary science, and no man can dispute the value of a knowledge of veterinary science to a farmer. Animal physiology teaches us that it is cheaper to supply our animals with good shelter than with costly food to maintain the heat of their bodies.

A correct knowledge of entomology is a valuable asset to the man who is growing fruit, for the loss of fruit from insects amounts to millions of dollars annually, and were it not for science it would be but a few years before we would be driven from the fruit business entirely. Science has discovered how to combat nearly every kind of insect that has threatened to destroy the fruit interests, and I think I am safe in saying that fruit-growers have a higher appreciation of the value of agricultural science than any other class of men.

A correct knowledge of physics is also indispensable to the farmer of to-day. He needs to be thoroughly acquainted with the principles of mechanics, and with the properties and forces of air, water, light and electricity. The cultivation of the soil involves a constant use of power, and the time is fast coming when mechanical power will replace the power from the muscles of man and beast.

The great problem of exchange and distribution, as explained by political economy, should be studied by the farmer. Other branches of science might be enumerated that would prove of great benefit to the farmers. Let us disabuse our minds of the idea that there is any conflict between the principles of science and their application upon the farm. All agricultural progress is the joint work of theory and practice. Science and art, theory and practice, have ever been and must continue in the fullest harmony. Any farmer who will enter some of the simple recesses of science in any of the departments of agriculture, with the determination of succeeding, will find so much that is new and wonderful that a desire for knowledge will lead him into larger chambers, where the broad light of research and study will reveal many hidden mysteries of Nature and fully explain the necessity of a scientific interpretation of Nature's laws.

Around the Farm

Items of Interest and Value to the Progressive Farmer

Timely Items for September

Now is the proper time to put the roads in shape for winter. Work should be done long enough before freezing weather sets in for them to become packed and hard with usage. Dirt roads are apt to be bad enough in winter at best, and care should be had to have them at their highest state of improvement when winter opens. There is always a great deal of hauling to be done through the cold weather in taking the stuff to market, and good roads are necessary to do this at the proper times, when the markets are the best, and in the most economical way. Many a farmer loses more in the winter-time because the roads are in such condition that he cannot get his stuff to the market when the prices are the best, or because he cannot haul as good loads as he otherwise might, to put in good shape a good many miles of road, if the work were done at the proper time. If your road commissioner has not taken this matter in hand, better see him and talk it up.

There is no better time than this month to have cement work done on the farm premises. It will have time to thoroughly set and harden before freezing weather comes. I wonder that the farmers do not make more use of this valuable material. Almost any one with ordinary intelligence and skill can mix and lay concrete with the directions that may be had from the dealer. A little ordinary skill in the use of tools is all that is needed. Last fall a friend of mine put in a foundation of concrete for a large basement barn. He did not employ a high-priced workman, but he and his hired man did the work. The gravel was procured from a "pocket" on his own land, and his only item of expense was for the cement. Plenty of farms are supplied with gravel and stone that could be utilized in this way.

The farm implements should be in shelter. Sometimes in the rush of work in the busy season they are forgotten and left standing in the fields. In such a case a gentle reminder is needed, which this is. Great loss is needlessly sustained by many farmers because of the poor care taken of their machinery.

If the farmers would go back to the good old-fashioned way of putting up their own pork and cured meats they would render themselves independent of the Meat Trust, and secure their own meat and lard at about one half the prices they have to pay at the butcher-shops. Besides, how much sweeter and more wholesome are the home-cured meats, and what housewife would put up with packing-house lard when she could get the home-rendered article? Now is a good time to look around amongst the bunch of pigs, and select the pick of the flock for the home smoke-house.

Figure on modernizing the farm-house before winter comes on. The time has come when the city house-owner who has not provided his house with furnace heat, water works, bath-room and gas, finds himself without a tenant. The city dweller refuses to pay rent for a house that is not furnished with modern conveniences. Recent inventions have made the city conveniences available to rural residents, and that, too, at comparatively small cost. Heating plants may now be had that can be run in moderately cold weather with corn-cobs and other waste products of the farm, supplying all the heat necessary. Only on the stiff, cold days is the stronger fuel needed, thus making the heating plant a matter of economy. The bath-room, with running water in the house, and the lighting plant may no longer be considered luxuries, but necessities, which every well-to-do farmer should feel that he must have in his home. In this day of such great agricultural prosperity, the farmer would very much better spend a few hundred dollars in making his home comfortable and up to date than to invest his surplus in uncertain stocks which the Eastern financiers are trying to get him interested in.

M. G. Rambo.

Our Public Schools

We should have as much interest in the school our children attend as we have in our own private affairs, or we cannot keep the schools what they should be.

Whom should we place on our board of education? The best educated man or woman in the community. What should we demand of them? Firstly, uprightness and morality. I love to see a strong character, ready to fight effectively for the right and stand by his convictions.

What should the board of education require of the teacher? A high-class certificate alone? Can't you think of some other requirements?

Shouldn't they have high ideals and shouldn't we have people on our school board who are able to judge the applicants' ability? Shouldn't we eliminate politics and petty grievances and ballot for the man, and then stand by him for the betterment of the school?

I have in mind a little village, where for years the school, to say the least, has not come up to the standard. In recent years they secured a most excellent school board. Out of the five, three hold diplomas from different colleges, and all but one are ex-teachers. These good citizens, in their far-sightedness, with the best interest of the school at heart, have caused certain changes to be made, whereby they may add another room and teacher, making this a good second-grade school. Now the community is divided, petitions are being circulated by people who have not studied the question, and signed by people who do not take time to read the statement they are signing. What are they doing? Ignorance and prejudice are working against these men of judgment and good common sense, who are wisely planning for betterment of conditions. These unthinking people are causing immeasurable disaster for the hard-working, intelligent men.

Ignorance is the great foe to advancement, and nowhere do we meet it oftener than in school work. The secret of future civilization lies in the heart of the boy and the girl of to-day. How this boy and girl are educated will determine whether the world grows better or worse. The condition of our public schools holds the key to the situation. Can't we better them? Let us demand that the standard of our public schools be raised.

The parents show too little interest. Not three per cent of the parents visit the school. Yet they are fluent in their criticism of the teacher. Let's seek coöperation between teacher and parent. Isn't there something radically wrong with the present system, especially the high school? Doesn't it turn out graduates who are unfit for the ordinary business of life? Too many of our boys are afraid of soiling their hands. Too many of our girls cannot cook an ordinary dinner. Shouldn't the school teach these boys and girls the dignity of manual labor—that the humble, homely duties are the highest and noblest achievements if done with a manly or womanly spirit?

What is education? It used to consist of the three R's. The twentieth century has substituted the three H's. The heart, the head and the hand.

Shouldn't the true aim of education be such that the young person, who has to be self-supporting when he leaves school, will have a practical knowledge which he may turn to account?

The higher cultural studies are desirable, but in this strenuous, workaday world they are extravagant luxuries if the bread-winning subjects which are so essential to equip one for the battle of life are neglected and forgotten. Let us work for, vote for and stand by a higher standard for our public schools.

Cora A. Thompson.

Mushroom-Growing

The mushroom is a fungous plant. It grows beneath the surface of the soil and stores up material to form the fruiting body, which it sends up into the air to scatter the minute spores. It is this fruiting body that is esteemed so highly as a table delicacy and which is so profitably grown in a few localities. But the production of mushrooms is one of the most uncertain of agricultural industries. A successful grower declares that he understands mushrooms no better to-day than he did fifteen years ago. Yet progress has been made and failures are less frequent than in former years.

Kennett Square, in the southeastern corner of Pennsylvania, is the greatest center of mushroom production in the United States, if not in the world. Some of the producers grow their crops almost entirely in special houses. Some utilize the space beneath greenhouse benches. A rapidly-increasing class is abandoning dairying as a method of keeping up fertility on the farm to grow mushrooms from city manure, afterward applying it to the fields. In all cases the methods are essentially the same.

Horse-manure is brought from Philadelphia by car-loads at a cost of from one dollar and ninety cents to two dollars and ten cents a ton. It is packed in piles and turned several times to secure thorough fermentation. When the temperature has fallen to about ninety degrees, the manure is placed in beds and thoroughly compacted in a layer seven to nine inches deep. The temperature again rises and falls. When seventy to eighty degrees is reached, the bed is spawned. Throughout the process, the moisture content has been carefully watched, experience being almost the only guide in the matter.

Spawn is merely a medium in which the fungus has been well established. Drying stops growth, but it begins again when proper conditions of moisture and temperature are furnished.

Imported spawn is gathered from wild patches in England and France and varies considerably in type and vitality. Of recent years American firms have undertaken the manufacture of spawn from pure cultures, some by means of the plant itself, others by germinating the spores. Bricks composed of manure and soil are placed in stacks. Between each layer, or in a slit in each brick, is placed a little of the plant, selected from a successful bed. Favorable growing conditions are maintained until the mycelium, as the vegetative part of the plant is called, has permeated the bricks. They are then dried and marketed. Such spawn is produced under control and is generally reliable both as to variety and vigor.

After the bed is ready, the bricks are broken into small pieces and placed about an inch below the surface of the manure, using twelve to sixteen bricks to a hundred square feet of bed. Two weeks later, a layer of soil, an inch to an inch and a half thick, is placed over the bed and results are awaited. Water is applied, but care is taken never to soak the soil.

Caps may appear in four weeks, perhaps not for twelve. Six weeks is the usual time. There is almost as much variation in the duration of production, three months being about an average. Beds are prepared in succession to insure a constant supply, except in the summer, when the weather is too warm for good results.

Pickings are made every day or two according to production. The caps are gathered just before they open. They are sorted into three grades and are marketed in four-pound grape-baskets. The darker or cream colored are preferred. Prices range from fifteen cents to two dollars a pound. At the time of a visit to the Kennett Square section last May, they were bringing fifty to sixty cents, which is not far from the average. At present, quotations are higher.

The outcome of a mushroom-bed seems to be utterly beyond prediction. Two beds may be prepared on the same day, with manure from the same pile, using the same spawn. One will be a failure, with less than half a pound to the square foot, while the other may yield a "bumper" crop of two or two and a half pounds. And no one can tell why.

Special houses are built for the production of this crop. They are usually of wood, with double walls insulated for heat and cold. Those of Mr. J. B. Swayne, who cultivates nearly four acres of beds, are sixteen by one hundred feet. The beds are in tiers, with two feet of clear space between. Five tiers are usually used, being supported with pipe posts. The passages are only sixteen or twenty inches wide. Manure is conveniently handled on little cars running on portable T iron tracks, which may be placed at any height. Ventilators are located at the ridge.

As a business, mushroom-growing is profitable. One is not wise to begin on too large a scale, but almost any one may develop the skill and knowledge necessary to succeed. Experience seems to be the only teacher. In connection with general or truck farming the business is especially attractive. The spent manure has lost but little, and fertility is thus well maintained.

Paul Work.

An Apricot-Orchard in Southern California

PAINT TALKS No. 11

Paint Implements Before Putting Them Away

The most important time to repaint farm implements is before they are put away for the winter. A good tool in good order is the mark of a good workman.

If a carpenter came to your place to build or repair and he had rusty saws and dull hatchets, what would you think of him as a mechanic? Rusty plows, implements with loose bolts, etc., do not speak well for the owner.

Before putting away farm implements in the fall have them thoroughly cleaned and well painted. Cover the polished metal parts, such as plow mould boards, with an unsalted grease or oil. This prevents wasteful depreciation, lengthens the life of the implement and saves money for the owner.

Pure White Lead and Linseed Oil (tinted as desired) is the proper paint for farm implements. It alone has the required tenacity, elasticity, and body to withstand the hard wear to which such implements are subjected. It does not crack, scale, or scuff off, but forms a tough impervious coat thoroughly amalgamated with the surface.

The advance proof of purity in white lead, the key that locks the barn *beforehand*, is the Dutch Boy Painter trademark.

Buy of your local dealer if possible. If he hasn't it do not accept something else, but write our nearest office.

Houseowner's Painting Outfit No. 47 contains much useful information, color schemes, etc. Free on request.

NATIONAL LEAD COMPANY

An office in each of the following cities:

New York Boston Buffalo Cincinnati Chicago Cleveland St. Louis
Philadelphia (John T. Lewis & Bros. Company) Pittsburgh (National Lead & Oil Company)

GOOD PATENTS *START FACTORIES*
We secure and promote patents. Represent 15 manufacturing firms looking for improvements. SUES & CO., Patent Attorneys, 212 D Street, Washington, D. C. No advance fee. Advice free.

PATENTS that PROTECT
Our 3 books for inventors mailed on receipt of 6 cts. stamps. R. S. & A. B. LACEY, Washington, D. C., Dept. 49, Est. 1869

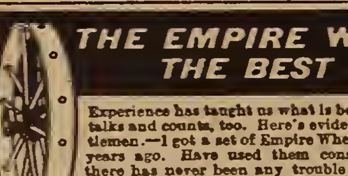
PATENTS SECURED OR FEE RETURNED.
Free report as to patentability. Illustrated Guide Book, and List of Inventions Wanted, sent free.
EVANS WILKENS & CO., WASHINGTON, D. C.

PATENTS Watson E. Coleman, Washington, D. C. Books free. Highest references. Best results.

TELL ME YOUR **ROOF TROUBLES**

Let me tell you, FREE, how to cure your roof troubles **for keeps.** ROOF-FIX cures roof troubles in your felt, gravel, shingle, steel, tin or iron roofs. The longest-lived roof-dressing made—for sound roofs. Get my new free book about roofs and roofing. Write to

ANDERSON, "The Roof-Fix Man"
Dept. 19 **Elyria, Ohio**



THE EMPIRE WAY—THE BEST WAY

Experience has taught us what is best. Quality talks and counts, too. Here's evidence: "Gentlemen.—I got a set of Empire Wheels about 18 years ago. Have used them constantly and there has never been any trouble since I got them." We make them even better now. Write for catalog. EMPIRE MFG. CO., Box 450, QUINCY, ILL.

If you will write to-day for a free sample of Amatite, the end of your roofing troubles is in sight. It is the one roofing that *needs no painting* after it is once laid on the roof.

If you would sit down and figure out exactly how much it cost to paint a smooth surfaced roofing during its life, you would find that the cost of this paint is *more* than the roofing itself.

Amatite, on the other hand, has a real mineral surface, and we sell the goods on the broad statement that it *needs no painting of any kind.*

The man who puts Amatite on his buildings is insured against leaks and trouble for many years to come.

Send name and address for a sample and booklet, which will prove conclusively how much better Amatite is than the old-fashioned "rubber roofings" which require constant painting and care to keep them tight.

BARRETT MANUFACTURING CO.

New York Chicago Philadelphia
Boston St. Louis Cleveland
Pittsburg Cincinnati Kansas City
Minneapolis New Orleans London Eng.

With the Up-to-Date Farmers

Good Managers

A few days ago I was sitting in the shade with a number of young farmers—these latter-day fellows who are well informed and understand their business pretty well. We were having a general chat about crops, conditions, prospects, work to be done, etc. One asked another if he had gotten out his manure yet. He said: "I noticed that you had a big lot of it in the two lots, and I was wondering where you intended to put it." In reply the young man said he had gotten out about a hundred loads, but the weather was too hot to be digging about in those lots, except early in the morning and late in the evening. He said he would get the rest of it out as soon as the weather became cooler, and that he was spreading it on oats stubble where he would plant corn next year. Another young farmer said he had gotten all his lots cleaned up some time ago. He said it was pretty hot work for him and his man, but they stuck to it until they finished. The other one said: "Well, you fellows can dig and moil in the hot sun and broiling heat if you want to, but I won't. I value my health and future welfare too highly to jeopardize them by hauling out manure when the temperature is ninety-six in the shade. Father used to pay no attention to the weather, but just went ahead with the hottest work in the hottest weather, and the coldest work in the coldest weather, and he passed away when he should have been in his prime. Exposure to extreme weather killed him. I don't believe in it. There is enough pleasant, or bearable, weather in both summer and winter for me to do my work in, and then is when I do it. In harvest and haying a fellow has to keep moving to get in his crops, but if it happens to be extremely hot we take a full two hours' nooning, sometimes three, and I think I am about as well off as most of the fellows that rush ahead regardless of the weather. I know I have not been sick a day since I adopted the rules I follow."

Another young farmer said: "I believe in making machinery do most of my work. I have a two-row corn-cultivator, and I tell you I can run through my corn at a rate that surprises even myself. I use one team in the forenoon and the other in the afternoon, and I make the dirt fly. I bought a four-horse harvester and had my eighty acres of wheat in shock while the neighbors were getting fairly started. Then when the heavy rain we had in the middle of harvest made the ground so soft that brother Tom could not cut his wheat with his old binder, I went in and swiped it down for him before he could get his breath. The new truck in front that carries the pole and front part of the machine enabled me to go right along where he mired and stuck. I don't like driving my horses to town. I'm satisfied that injures them more during the working season than a day's hard work, because a fellow naturally likes to skip along, and he does not know how fast he is going. In hauling a load he goes about like plowing, and they can stand that all right. I am going to get me a runabout automobile to do my running to town. I can put the horses in the pasture and let them fill up and rest up, and after supper cut to town for what I want, and get back before dark." Most of the boys laughed heartily at this, and one asked what he would do with his gasser when the roads were muddy. "Let it rest, of course," he replied. I notice you never go to town in your surrey when the roads are muddy, because you know you would spoil its fine appearance. I can go in my gasser when you can go in that, and in less than a fourth of the time. And if the weather is hot I'll not be afraid of overheating it and having it sick the next day." A great shout greeted this sally, and the boys had a bushel of fun over it.

Improved Methods Make Work Lighter

These young farmers are all doing well. Some are tenants and some own the land they till. Their crops this year are good. They are working hard when they work, but I learned from their talk that most of them are not exposing themselves to extreme heat in summer nor rigorous cold in winter like their fathers and grandfathers did. They believe in machinery of the most improved type, and are taking care of it. One of them, who is a tenant, cleared a little over seventeen hundred dollars last year. One of them was going to thresh the following day, so I decided to stop and see the boys at work. The machine pulled in before sunrise, and not long after came the men with their wagons, most of them of the low-down type. The machine was a self-feeder with automatic grain-weigher, and all the straw and chaff was blown out through the great pipe twenty feet high. The grain was run direct into the wagons, and as fast as they were filled they started to town. One wagon hauled grain to the granary in the barn. When they went at the oats three wagons hauled the grain to the granary. The pitchers on the wagons threw the sheaves into the great feeder, where the bands were cut, the sheaves shaken up and shot into the machine at a rate that would make an old-time thresherman's hair stand up. In six hours they cleaned out six hundred and fourteen bushels of wheat and seven hundred and twelve bushels of oats. The threshermen, four of them, stayed to dinner, and also two of the neighbors. The boys worked like Turks that forenoon, and again in the afternoon at a neighbor's, whose crop was out of the straw by half-past five. The threshermen took supper there and steamed away. In the "good old days of yore" we used to whack away with a regiment of men and horses three or four days on a thirteen-hundred-bushel job, and many a time I have come to the home of the farmer for whom I worked so covered with dust as to be unrecognizable. At such times I would take a grain-sack for a towel and a bucket of water and go behind the barn and take a bath. Most of the men would wash their hands and face and go to bed, as they were too tired to take a bath. Is it any wonder most of them went before they were sixty years old?

Looking Into the Future

Talk about the advance agriculture has made in the past comparatively few years; it is simply amazing. What the future holds in store for the farmer only the future will show, but I feel satisfied that development along economic lines will be quite as rapid as in the past few years, and the next fifty years will see a marvelous improvement. Agriculture has been a little slow, but it is going now, and has been for a few years, and it will soon be among the most advanced sciences. It is plain that it is rapidly becoming one of the most desirable occupations for man. The farmer now rides where he formerly walked. He accomplishes things in a day that formerly occupied him a week. I do not think he will farm more land, but he will farm it quicker and better, and have much more leisure. He will be able to do things so rapidly that he will be able in most cases to select the most favorable times for doing them. This will mean better farming and larger yield and a higher quality of product. It is a fact that horses have sent many a farmer into bankruptcy. I have seen many a farmer obliged to feed twenty to thirty horses, and as many as twenty men for

a week to get his wheat and oats threshed. They consumed nearly the value of his small grain crop. That is ended. He had ten or more men in his harvest-field, and they demanded big wages and the very best his larder afforded. That is ended. He trudged thousands of miles every year plowing, harrowing and cultivating his land. He does not need to now. Many a farmer has told me that the hardest work he did was growing and harvesting food for his horses. There will be an end to that in the near future. He will have less to support and can devote more land to growing crops he can market. Judging from the great improvement in agricultural methods of the past few years there is a great future in store for the farmer. He will no longer be a clodhopper, or a bumpkin, but one of the foremost among men. He will right the many wrongs that have been heaped upon him by traders and politicians and great combinations of capital, and will do it in a way that will work no hardship to legitimate business. He will be conservative, but he will take what is rightfully coming to him, and make others be satisfied with a fair profit on actual values. He is already shaking off the political shackles that have bound him to parties that have exploited him for all he was worth, and when he finally steps forth a free man he will be a giant. The farmer has everything that is best before him, and in due time he will take the position he is entitled to, and honor it. FRED GRUNDY.

Two Important Fertilizers

BASIC slag and sulphate of ammonia, two very important fertilizers, seem to have been boycotted in this country by fertilizing companies and dealers, and less is known of them by the public than of any two fertilizers that can be named. Immense quantities of these are now used in Europe, where the comparative value of basic slag and acid phosphate and of sulphate of ammonia and nitrate of soda have been practically demonstrated. It is time the farming public had more general as well as technical information as to the intrinsic value of basic slag and sulphate of ammonia as compared with the so-called special or complete fertilizers for grass and root crops which are now so generally offered for sale.

The numerous inquiries regarding basic slag, which is also known as Thomas phosphate, induced Prof. Wm. P. Brooks, director of the Massachusetts Experiment Station at Amherst, to issue Bulletin No. 127, in which the following information is given:

"The process of removing the phosphorus from the ore consists in adding to the so-called converter containing the milled ore a definite amount of burned lime, which, after a powerful reaction, is found to be united with the phosphorus, and swims on the molten surface in the form of slag. The molten slag as it flows from the converter is treated with hot quartz sand, with the result that the available phosphoric acid is increased from ten to thirty per cent. The principal constituents of basic slag, which is placed on the market in the form of a very finely pulverized substance of a dark brown color, are phosphoric acid, lime, iron oxides and silicic acid."

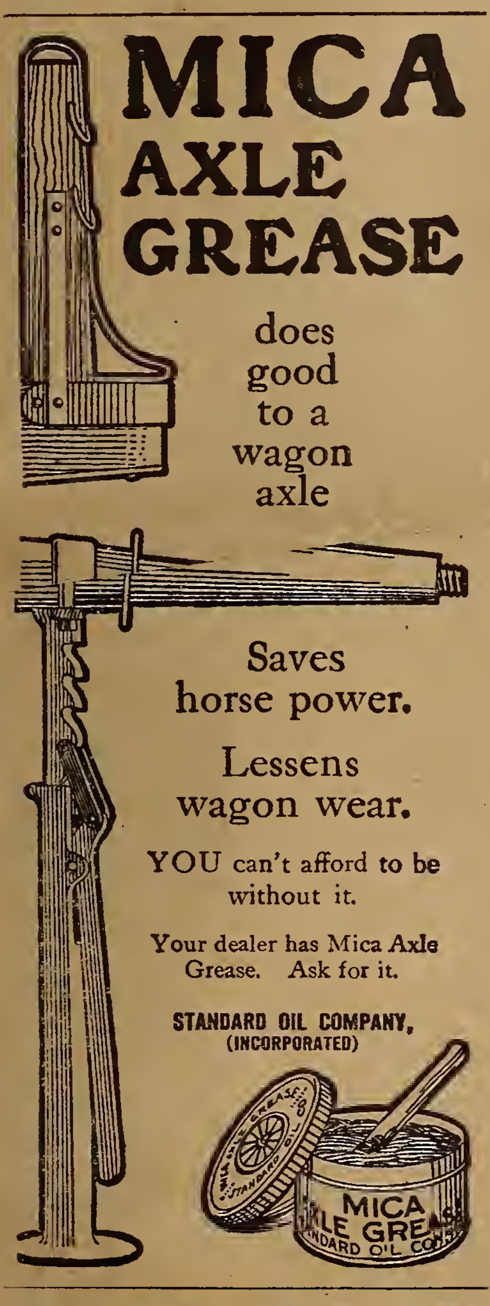
In speaking of basic-slag phosphate, Professor Brooks says, on page 271 of Volume II. of his standard work on agriculture: "The phosphoric acid in the fine-ground slag is not soluble in pure water, but a considerable portion of it is soluble in weak soil acids or in the acid of the root of the growing plant. The phosphoric acid of fine-ground slag is much more available, therefore, than in any of the natural rock phosphates. Many experiments to determine its value have been tried in Europe, where it is much more abundantly purchased than here, and the results have been so good that it is now generally regarded as one of the best phosphates for general use."

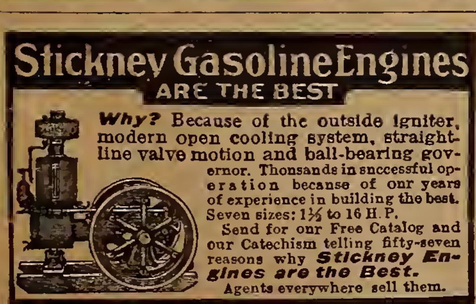
An [illegible] is necessary in the building of chlorophyll (the substance that gives the green color to all the foliage). As it is the function of chlorophyll to form new plastic material under the influence of sunlight, it is natural that the absence of iron, which is shown by the paleness of the leaves, should cause a cessation of assimilation. This accounts for the deep color and the healthy condition of the plants and trees fertilized with the slag phosphate. There seems to be no question, also, that the iron together with the manganese (of which basic slag carries about seven to nine per cent) is helpful in developing high color in fruits."

Experiments with fertilizers in Europe show conclusively that an application of two hundred pounds of basic slag and one hundred of nitrate of soda or its equivalent in sulphate of ammonia constitutes an excellent and profitable combination for increasing grain crops. Basic slag not only supplies phosphates, but also about forty per cent of lime, which tends to sweeten the soil and reduce it to a better mechanical condition, whereas superphosphate does not have this most desirable effect. In determining the availability of phosphoric acid in basic slag by the Wagner method used in Germany, the average per cent of total phosphoric acid in the four samples of imported slag which were examined at the Massachusetts Experiment Station was 17.71 per cent, showing them to be of excellent quality. According to Wagner, the noted agricultural chemist of Germany, phosphoric acid is combined in the slag as a double salt of calcium phosphate and calcium silicate, and that in this form the fine rootlets of the plant are able to utilize it.

Basic slag has been found to be especially well adapted to improve marsh and meadow lands which are rich in humus, as well as upon sandy soils which are deficient in lime. The amount of basic slag used to the acre ranges from three hundred to one thousand pounds, but six hundred is the usual amount. This may seem to be a large quantity for grain and grass crops, but in a three-year rotation it is now known that this amount when used in connection with barn-yard manure is amply sufficient for three successive crops which require the special fertilizing materials found in basic slag. W. M. K.

Owing to the unexampled prosperity of farmers in the West, more grain is likely to be retained on the farm for a prospective rise in price, than ever before. *





Newest Designs

Latest Models Lowest Prices

All Shown in Our New Book of Stoves

Are you going to buy a steel range this fall? Do you need a cook stove, a hard coal base burner, an air-tight heater, an oak stove, a laundry stove? Do you want an oil or a gasoline stove, an oil heater, a gas range? Are you building or about to build a new home and in need of a heating plant—a steam or hot water boiler or a high grade furnace? Don't spend a cent for any kind of stove, don't let a contract for a heating plant of any description until you have written a postal card for our Free Book of Stoves, Ranges and Heating Plants. Largest assortment, finest qualities, lowest prices for *good qualities*. We are the largest retailers of good stoves, ranges and heating plants in the world and thousands of our customers have learned that

We Save You from One-Third to One-Half

We sell a good air-tight heater for 84c, guaranteed Oak stoves as low as $3.52, base burners from $20.95 up, cook stoves as low as $5.30, steel ranges that are marvels of convenience at from $12.07 up, hot water and steam boilers, radiators and fittings at big reductions over retail prices. The newest designs by the most skillful stove modelers, manufactured in the center of the iron and steel industry, built for us in large quantities and sold at a very small advance over manufacturing cost, are fully illustrated in our new and enlarged Book of Stoves, now ready for mailing. You will want this free book before you buy any kind of a stove, because it tells you of the best built, and most economical fuel consuming stoves and ranges in the world, sold on honor at very low prices—lower than the prices of any other dealer. Write for this free book now before you forget it. Just a postal saying: Please send your free book of stoves and we will send it postpaid by return mail.

83

Montgomery Ward & Co.
Write us at the address nearest you
CHICAGO, ILL., and KANSAS CITY, MO.

The Rochester Radiator will SAVE HALF YOUR FUEL or give you double the amount of heat from the same fuel, if you will give it a trial, or we will refund the money paid for it. Write for Booklet on heating homes.
ROCHESTER RADIATOR CO.
57 Furnace St., Rochester, N. Y.
Prices from $2 to $12
For hard or Soft Coal wood or gas
Fits any Stove or Furnace

HARVEY BOLSTER SPRINGS
Soon save their cost. Make every wagon a spring wagon, therefore fruit, vegetables, eggs, etc., bring more money. Ask for special proposition.
Harvey Spring Co., 758 17th St., Racine, Wis.
Free Trial To You

Bargain Sale of Vehicles
190 Show Room Vehicles to be Sold Cheap
Absolutely in first class order. Never used except for exhibition purposes in our salesrooms. *They are new.* The very finest products of our factory. To be sold at a big discount to make room for new goods.
State your wishes. The list includes buggies, runabouts, surries, delivery [illegible] bargains stanhopes [illegible] if you have a Catalog. It's the largest catalog ever published, devoted exclusively to vehicles and harness. New catalog issued yearly. Don't delay. Write at once and get first pick.
The Wilber H. Murray Mfg. Co., 322-328 E. 5th St., Cincinnati, O. U.S.A.
Murray's Catalog free with Bargains Marked

Better and Cheaper than Lath and Plaster
BISHOPRIC WALL BOARD
No Dirt, Cracks or Damp Walls
You Yourself Can Nail It to Studding—All Ready for Paper or Paint

This wonder-worker in building construction is used as a substitute for sheathing as well as lath and plaster. It is made of kiln-dried, dressed lath, imbedded in hot Asphalt Mastic, and surfaced with sized cardboard. It is cut at the factory in 4 by 4 ft. sheets, which are nailed to studding all ready for wall paper or paint.

Bishopric Wall Board is clean, sanitary and odorless; is guaranteed not to shrink, warp, crack, flake or blister; is proof against moisture, vermin, heat or cold. Being a non-conductor, it saves fuel in winter and keeps the building cool in summer. It also deadens sound.

Bishopric Wall Board is suitable for costly dwellings, modest cottages, bungalows, flats, pleasure and health resorts, office and factory buildings, new partitions, in old buildings, finishing attics, back porches, laundries, cellar ceilings, garages, poultry houses, dairy barns and buildings.

AS A SHEATHING nothing equals Bishopric Wall Board. Ideal material for many purposes.

Write Today for Free Sample descriptive booklet and prices, freight paid from Cincinnati or factories in New Orleans, La., and Alma, Mich.

Dealers Should Write for Our Attractive Wall Board and Roofing Propositions

Requires no Paint
Bishopric Roofing is composed of Asphalt Mastic (a patented discovery) and woolen felt, surfaced on both sides with flaked mica.
The only Asphalt Roofing that is self-protecting, requiring no paint. Most durable and handsome. Proof against cold, heat, moisture, wind, weather and acid. Best fire retardent. Unaffected by climatic conditions. No cost of up-keep. Easy to lay.

STANDARD QUALITY.
BISHOPRIC ASPHALT MASTIC ROOFING

We Pay Freight
east of west line of Minnesota, Iowa, Missouri, Oklahoma, Texas.
Sold direct at factory prices
3-ply, $2.50; 2-ply, $2.25; 1-ply, $1.75 per square of 108 sq. ft.
Free cement and nails in each roll. Order from this ad. Prompt and safe delivery guaranteed. Money back if not just as represented.

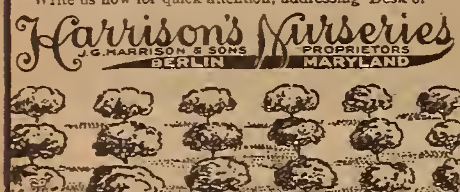
Write to-day for FREE samples of Wall Board and Roofing, and Illustrated Booklet.
The Mastic Wall Board & Roofing Mfg. Co., 47 East Third St., Cincinnati, O.

Suppose You Want to Plant an Orchard—

Large or small; for supplying fruit to market in car lots, or furnishing it to the kitchen by the peck or half-bushel—do you know how to go about it? How to determine the right location and soil, how to set the trees and to care for them, and how the fruit can be best shipped and sold?

"How to Grow Fruit" Tells How

It's a 32-page book that contains the best of our experience, gathered through more than twenty years in raising and selling fruit trees and producing fruit.
"How to Grow Fruit" will be sent to any address for 25 cents, postpaid. Free to intending purchasers.
Also, "How to Plant about the Country Home." Price, 25 cents, postpaid—free to you if you expect to buy.
Write us now for quick attention, addressing Desk 8.



10 More Bushels of Wheat for 87 Cents

The result of a test. Two Fertilizers used, in which the quantities of Nitrogen and Phosphates were the same. **No Potash** yielded 21 bushels per acre. **With Potash** the yield was 31 bushels. The extra cost for Potash was 87 cents.

Potash makes deep roots, gives strength to the stalk, vitalizes the plant, fills out head and grain and increases the weight.

This Fall add 15 pounds of Muriate of Potash per 100 of bone or plain phosphates, or—to 2-8-2 add 10 pounds per 100. All elements are required, but be sure to add

POTASH

Arrange *now* with your dealer to get **Potash** *when* you need it.

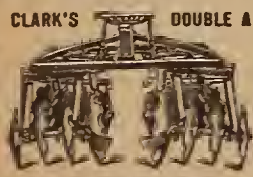
GERMAN KALI WORKS
93 Nassau St., New York
CHICAGO—Monadnock Block

KNOW Your Weights—Don't Guess

The successful farmer of to-day KNOWS the exact weight of the supplies he *purchases*; he KNOWS to a certainty how much the products weigh that he *sells*. Accurate weights are a big, vital feature in profitable farming. Public scales are expensive, unreliable and often situated at a distance, but every farmer can be sure of perfect accuracy if he owns an

OSGOOD PITLESS SCALE

These Scales are *absolutely reliable*—warranted so; every farmer can now afford one. Prices range from $45 to $80. Catalogue illustrates many styles of scales and contains valuable scale information. Write for it.



$45
OSGOOD SCALE CO.
Box 165, Binghamton, N. Y.

A WONDERFUL INVENTION

CLARK'S DOUBLE ACTION COMBINED CULTIVATOR AND HARROW, can be used to cultivate crops in rows, as a Listing Harrow, and when closed together is a Disk Harrow cutting 4½ feet wide. Drawn by two horses. Jointed pole. Perfect centre draft. Send today for FREE Booklet.

CUTAWAY HARROW CO., 854 Main St., Higganum, Ct.

Monarch Hydraulic Cider Press

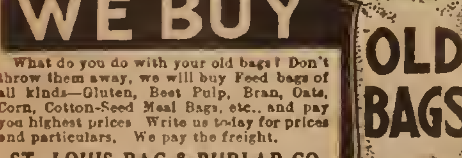
Great strength and capacity; all sizes; also gasoline engines, steam engines, sawmills, threshers. Catalog free.
Monarch Machinery Co., 603 Cortlandt Bldg., New York

5 Fine POST CARDS GIVEN

Send only 2c stamp and receive 5 colored Gold and embossed cards free, to introduce post card offer.
CAPITAL CARD CO., Dept. 94, Topeka, Kan.

WE BUY OLD BAGS

What do you do with your old bags? Don't throw them away, we will buy Feed bags of all kinds—Gluten, Beet Pulp, Bran, Oats, Corn, Cotton-Seed Meal Bags, etc., and pay you highest prices. Write us today for prices and particulars. We pay the freight.



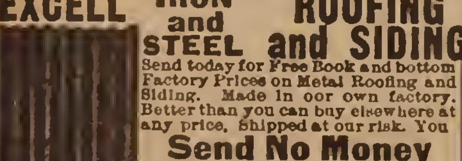
ST. LOUIS BAG & BURLAP CO.
330 N. Main St., St. Louis, Mo.

EXCELL IRON and STEEL ROOFING and SIDING

Send today for Free Book and bottom Factory Prices on Metal Roofing and Siding. Made in our own factory. Better than you can buy elsewhere at any price. Shipped at our risk. You

Send No Money

so you take no risk. Our guaranteed and see-what-you-buy-before-paying-Plan specify you pay nothing unless fully satisfied. Lowest prices on all roofing and roofing supplies sold straight to you from Factory at real Factory Prices. Don't buy till you get our prices and FREE Roofers' Guide—Write for this Book today.
The United Factories Co., Dept. R-49, Cleveland, O.



Gardening

By T. Greiner

Pumpkin and Squash-Vine Troubles

About the time when the pumpkin or squash is half grown, says one of our Long Island (New York) readers, grubs or maggots have dug into the root near the surface of the ground, eating into the stalk for several inches and killing it with all its fruit unripened. Now still another enemy has appeared. Clusters of bugs congregate on the leaves, often a hundred or more in a bunch, the bugs varying in size from that of a pinhead to a large sow-bug.

Our friend has sprayed his vines with Paris green without any visible effect, which I am ready to believe. The enemy which runs up into the stalk from the root, is undoubtedly the squash borer, and a number of the fat grubs of this moth are often found infesting a single root stalk and usually killing the plant.

These grubs, worms or larvæ, whatever you may call them, are easily found and recognized. They are fat and pinkish in color. Before they have done much damage they may be dug out and destroyed, thus saving the plant. A better way, however, is to cover the first joints of the vine with moist earth, packing it well over the runner and thus inducing it to strike roots at those points. They do that very readily, and I have had plants in thrifty condition and continuing to ripen fruit (pumpkins or squashes) after every connection of the vine with its original root was entirely cut off by borers.

We do not see this insect in our parts. My experience with it dates from my sojourn in New Jersey, where the pest is quite common and destructive. A handful of tobacco dust thrown around the root part of the vine before it begins to [illegible] seem to repulse the parent [illegible] caution. [illegible] good pre-

The insect which appears on the vine [illegible] in bunches now is undoubtedly the brood of the common black squash-bug. I have seen plants completely covered with them in the fall, and at times resorted to the heroic treatment of spraying the plants with clear kerosene, or piling some dry rubbish on them, spraying with kerosene and then setting fire to the piles, in either case killing bugs, plants and all. These late broods of bugs usually come after the fruit on the vines has nearly all matured. In the past five years or more we have been but little troubled by these bugs and their broods.

The Season's Blessings

The time has come again when we (meaning people who manage to have a good garden) have such an abundance and such a variety of good things that it is the daily puzzle of the good housewife, what to have for dinner, or for supper. Perhaps it is more a question of what not to have, for there is a wide range for choice. We might have green peas, carrots (or both in combination), string beans, Lima beans, sweet corn, egg-plant, tomatoes, cabbage, cauliflower, besides peppers, cucumbers, beets, kohlrabi, celery, etc. What we did have for dinner to-day was tomatoes, sliced raw, also cooked; cauliflower in cream; potatoes (Early Ohio), fried egg-plant; for dessert Paul Rose melon, apple pie; for drink postum. This is a plain and wholesome menu. We have had no meat on our table for weeks, and have not missed it. We have no butcher bills to pay, and yet we have a continuous feast.

Words would fail me if I wanted to describe to anybody how we enjoy our feasts on sweet corn, for instance, on corn that was still in the field in the morning, brought in, husked, and put into the kettle only a few minutes before dinner-time, then brought to the table a big heaping platter full. It takes salt and butter to make it good, but with the ears of good corn gathered when just right, and in full and steaming supply, few members of the family care to touch a potato, or a piece of bread. Good sweet corn is a feast and a picnic in itself. A good melon will make a good dessert, however.

Green Peas

I am very fond of green peas when they are real good, sweet and tender, such as we get in the Champion and Thomas Laxton. I would grow them in my garden even if I could buy green peas in open market at a lower price than what it costs me to raise them.

It is very seldom one can buy peas in the market of the quality we find in the fresh-picked Thomas Laxton. But they are by no means a cheap crop. Seed is usually high. This spring we had to pay six or seven dollars a bushel for these choicer varieties of seed-peas. If we raise a big crop, and carefully utilize it for our own table or for sale at fair retail prices, it will pay well enough. If we plant these peas on poor soil or if for any reason we fail to secure a good crop, we certainly are the losers.

We should remember that these peas are garden peas, needing good strong garden soil. I sow a quart or more of seed-peas to the one hundred feet of row, which, with rows being three feet apart, means about four and a half bushels of seed to the acre, or an expense in planting an acre of peas of little, if any, less than thirty dollars. Yet no matter what the expense for seed, we must have these peas for our own use anyway, and we cannot often buy them as good and enjoyable as we can raise them.

Some people may not know that young carrots cut in small pieces, and cooked with the peas, make a good combination with them, not only increasing the bulk, but actually improving the flavor.

Onion Troubles

A reader in Ohio asks me to tell the reason why his potato onions are not doing well this year. He has been raising them for the past twenty-five years quite successfully until up to about three years ago; they started off all right for five or six weeks, but after that the blades began to die off at the ground, some of them getting curly. The onions have but few green (live) roots. He has changed the location of the patch every year, and for fertilizer has used horse-manure, chicken-manure and some wood-ashes mixed.

I cannot tell offhanded what the trouble is. It may be the thrips which Onion growers [illegible] blast, this insect in a wet season, but look out in a dry one. Thorough spraying with whale-oil soap solution, one pound to four gallons of water, or rose-leaf insecticide, one pint to four gallons of water, or kerosene emulsion is recommended.

Forward some affected plants to your experiment station (Wooster) for investigation. Also, never mix wood-ashes with chicken-manure. Apply each alone, and mix it well with the soil. It is easily possible to apply the wood-ashes poultry manure combination so freely that the plants will suffer in a dry season.

Applying Water

Don't imagine that a bucket or garden sprinkler full of water carried into the garden in these dry spells will amount to much. Nothing short of a thorough soaking will aid a celery-plant, or a hill of vines, to make strong growth and yield a good crop when they would not do it without water applications. Unless the drought is most severe, for many crops, especially tomatoes, potatoes, beans, corn, peas, etc., more can often be done with cultivator and hoe, than with the water pail. A barrel on wheels is a convenient equipment to have on hand; however, where you have small patches of celery, cauliflower, cabbages, cucumber-vines, etc.; but use a barrelful on two or three rods of row rather than on two or three rods square. Apply enough water or none, and always cultivate or hoe soon after applying it.

Canning Vegetables

Just now while "we eat what we can and can what we can't," we should pay particular attention to see that the stuff we do can is worth canning. This is especially true of tomatoes. We find that when we take really good tomatoes, well-ripened, without decay, and can them in the proper way, we have them on the table a year, or even two years, later about as good as if taken fresh from the patch cooked and brought at once to the table. The new style spring-top cans are especially serviceable for canning vegetables.

Recently a farmers' bulletin has been issued which treats on canning vegetables, and will be found of considerable help to the housewife. Better send to the Department of Agriculture, Washington, D. C., for a copy.

Before you talk about the weeds in your neighbor's garden, be sure there are none in your own. M. L. PIPER.

Write for This Free Roofing Book

Before you decide on any kind of roofing material, you should read this book. It tells you about all kinds of roofing—and especially about the kind that never wears out—Sea Green and Purple Slate.

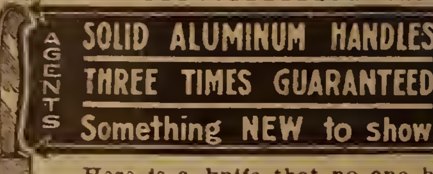
It proves to you conclusively which roofing is the most economical, durable and reliable.

It shows you how you can save money and at the same time secure a roof that never needs repairs—a roof that will last a lifetime and give absolute satisfaction year after year.

This Roofing Book costs you nothing, but it is worth many dollars to any man who expects to buy roofing. Write for the book to-day.

American Sea Green Slate Co.
"Roofs that never wear out"
Box 13A, Granville, New York

Agents Wanted



Here is a knife that no one has ever seen because it is a new, patented kitchen knife never offered for sale before
All Up-to-date Agents should get our plan
and see our guarantee. It will be the biggest money maker ever offered. Send me your name and address.
S. R. MILLER, Pres., 362 Royal Building, Detroit, Mich.

Farmers "Ever-Ready" Tool kit does it. Agents going wild over results. M. Snyder made $46 in 9 hrs. Joseph Pine took 65 orders in two days. M. D. Finch sold 49 in 9 hrs. Had no experience. You can do it. To show it means a sale. FREE SAMPLE to workers. Foote Mfg. Co., Dept. 201 Dayton, O.

AGENTS WANTED $2.19 SAMPLE OUTFIT ALMOST FREE. 50 per cent profit. Credit given. Premiums. Freight paid. Chance to win $500 in gold extra. Let the largest wholesale agency house in the United States start you in a profitable business without one cent of capital. Experience unnecessary. Write for outfit at once. McLean, Black & Co., Inc., 580 Beverly St., Boston, Mass.

$400 DAILY has been made selling this wonderful Noodle Cutter. Mrs. M. Pickerill sold 616 in small town. Cleared $61.60. Durable. Sanitary. Lightning seller. Special terms. Write today. S. THOMAS MFG. CO., 3146 Wayne St., Dayton, Ohio

ESTABLISH a Permanent Agency in Your Locality for the most attractive and comfortable men's and women's shoe ever offered the public. KUSHION KOMFORT SHOE CO., 9 F SOUTH ST., BOSTON

Fruit-Growing

By Samuel B. Green

Planting Nursery Trees

J. A. S., Hammond, Indiana—When planting nursery trees in the autumn, I always prefer to trim the trees at time of planting, for the reason that I dislike to leave so much top on for evaporation during dry winter weather. Whenever the pruning is done on newly-set trees, all wounds over half an inch in diameter should be protected by grafting-wax or similar material.

Tamarack for Posts

H. R., Mora, Minnesota—I find that tamarack that has a large amount of heart-wood in it is durable, but that which has little heart-wood soon decays. There is quite a difference in this respect. Six-inch tamarack posts peeled and cured, we think, are good for seven to nine years as fence-posts. The life of them in these places will depend somewhat upon the kind of soil in which they are placed.

Pine-Tree Injury

Mrs. G. N. B., Buffington, Kentucky—In regard to injured pine tree, the specimens you sent on I have carefully examined, and I find that the trouble seems to be some disease which has attacked the outer half of the needles. I do not see any work on it that appears to have been done by an insect. It is possible that the trouble may have been aggravated by the gas fumes, but I hardly think so. The specimens sent on appear to be vigorous and healthy in every respect, except for the portion of the needles at the ends of the branches which are often dried up. I do not think there is any satisfactory remedy for this trouble, and believe that probably your best way is to let it alone, and that it is one of the lesser diseases which is sometimes quite severe for a year or two, and then we have comparative immunity from it.

The Norway Poplar

H. D., Marietta, Minnesota—I regard the Norway Poplar as a form of the cottonwood, which has been selected on account of its great hardiness and freedom from disease. It is much like the Carolina Poplar if not identical with it. I like it and believe it will prove better than the general run of cottonwood, and for many locations an exceedingly desirable tree. Where cuttings are several inches or more in diameter, as is sometimes the case, decay will occasionally work from the bottom of the cutting upward and the tree become rotten on the inside and break over, but where the cuttings are less than one inch in diameter, both ends soon heal over and the danger from decay is largely imaginary.

I think the best tree for planting on your high land is probably the native green ash, but I have no doubt but that the Norway poplar or Carolina poplar would do fairly well in such locations if they were given a little cultivation.

In regard to the circular depressions, so common in western Minnesota, that are so difficult to drain, and which occasionally are ponds and only tillable in dry seasons. I do not think tamarack adapted to these locations, as they generally have some alkali in them; then, further, the tamarack seldom makes a good growth, except on land where the surface is out of the water for several months during the growing season.

Rose-Bug on Grapes

E. S., Pierceton, Indiana—The insect which you inclose is the well-known rose-bug of the Eastern states, where it is extremely troublesome. It seems to be proof against any of the ordinary insecticides, and the only practicable way of protecting grape-vines from the ravages of these insects is by covering the flower clusters as soon as they appear with paper bags.

It has been recommended to spray with Bordeaux mixture, and to some extent it furnishes protection, but is not entirely satisfactory. This insect is stupid, and can be easily picked by hand, and hand-picking has been recommended as a remedy, but where they occur in large quantities it is out of the question to keep them in subjection in this way. Jarring the plants and collecting the buds or shoots is also practised. They eat not only the flowers, stems and very young fruit of the grapes, but rosebuds as well, and almost every kind of vegetation.

On a large scale the bagging is quite expensive, and some of the larger growers prefer to take their chances with Bordeaux mixture. Grapes that are bagged are far better in quality and appearance than those that are ripened without this protection.

Apple-Leaf Rust

B. N. C., Stoughton, Massachusetts—The apple leaf which you sent on is injured by what is commonly known as apple-leaf rust. This is a very bad disease. It is especially troublesome in neighborhoods where there is a considerable amount of red cedar. It lives one season on the red cedar, where it produces what are known as "cedar-apples," which swellings have scarlet, jelly-like appendages in the early summer. These fruiting bodies grow the next generation on the apple and produce this rusty appearance of the leaf, which is occasionally extremely troublesome.

The best remedy is to destroy the red cedar in the immediate vicinity. If this is not done, then the cedar should be kept free from the cedar-apples. In addition to this, the foliage of the apple-trees should be sprayed with Bordeaux mixture, beginning as soon as the leaves are well developed in the spring, and repeating at intervals of about three weeks up to midsummer. With this Bordeaux mixture should be applied Paris green or arsenate of soda to destroy the codling-moth. You will find that this mixture will not only protect the foliage, but will prevent the fruit from having so-called "scabs" on it.

Black Peach-Aphis

What is known as the "black peach-aphis" is a very troublesome pest, and occasionally does great damage. There is, of course, some chance of its being introduced into new sections on the trees brought in, and it will be difficult to be sure that every tree brought in is entirely free from aphis of any kind, since the eggs are attached in the crevices of the bark or close to the buds, where they are inconspicuous.

If there is any question as to the liability of the introduction of this pest into your section, I think you would do well to take it up with your State Entomological Department, which is well equipped to deal with an injurious insect of this sort.

The most satisfactory way of fighting this insect is by the lime-sulphur wash, which is put on during the winter. This, when thoroughly applied, will destroy the eggs of the aphis, together with those of other insects and also the spores of fungous diseases.

Oak Injured by Earth-Closet

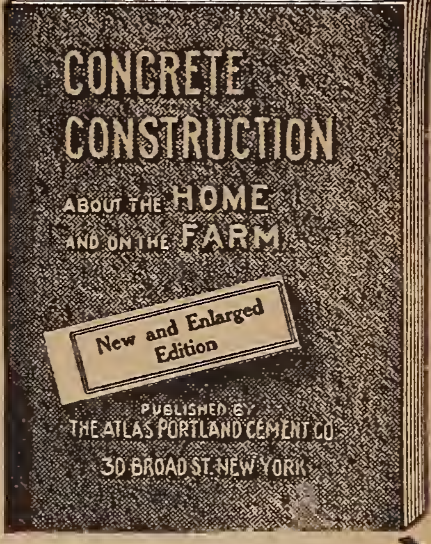
L. M. C., Osceola, Wisconsin—In regard to an earth-closet located about five feet from an old oak, you ask if it is liable to injure the tree. My experience would indicate that the location of an earth-closet of this kind near the tree would be a help rather than a hindrance to the tree, and that you would see the effect of this within a year by the improved dark green appearance of the foliage. I do not think you have anything to fear from it in its present location.

Care of Lucretia Dewberries

It is customary to allow the canes of dewberries to grow the full length for the first season. However, it would undoubtedly be a good plan to cut off the ends of them when they have attained a length of five or more feet and allow them to branch. This would have a tendency to bring about the development of the buds near the root. In the spring it is a good plan to raise the dewberries over a wire or rail to keep them off the ground. Some growers, however, prefer to mulch them, and in this way protect the fruit from getting dirty.

Best Soil for Strawberries

M. G., Akron, Iowa—Strawberries may be grown on any soil that is in good enough condition to produce a crop of corn, but the strawberry is a gross feeder, and for its best development needs good conditions, and it is difficult to get the soil too rich. Strawberries are sometimes grown upon quite light, sandy loam, where they will do well, provided they have a reasonable amount of moisture in the fruiting season, and they may also be grown upon well-drained, mucky lake bottoms with good success.



This is our NEW CEMENT BOOK Just Published FREE To Every Farmer

We want every farmer and cement worker to send for this *new* edition of our Cement Book, **"Concrete Construction about the Home and on the Farm."** It is larger and better than any previous edition, and it describes and illustrates many new ways of using concrete. There are 160 pages and over 150 illustrations. The directions for making cement structures are given in plain language that everyone can understand, with tables showing the exact amount of material required for the work in hand.

Send for this book now and get the benefit of many new ideas for this year's work.

When you build, do not forget that ATLAS Portland Cement makes the best concrete and that the U. S. Government bought ATLAS for the Panama Canal.

Ask your dealer for ATLAS. If he cannot supply you, write to

The ATLAS Portland CEMENT Co.
Dept. 122 30 Broad Street, New York

Daily output over 50,000 barrels—the largest in the world.

NONE JUST AS GOOD

MANSON CAMPBELL,
President,
The Manson Campbell Company, Ltd.

I'll Give You Plenty of Time to Prove that the CHATHAM Fanning Mill is the Best Seed Grader and Cleaner Made —And Will Pay for Itself in a Year

You can prove this by simply taking my proposition and cleaning your grain—before you sell it—or before you sow it. $1,000,000 lost by Farmers in every state each season by selling and sowing dirty grain is a low estimate. You won't haul it to be cleaned before you sell your grain, so you are "docked" on the price because of dirt in every bushel. Just take me up on my offer—get a CHATHAM Fanning Mill and save its price easily by using on your place. Take 30 Days' Free Trial first.

WHAT IT DOES BESIDES GRADING

Cleans—wheat for market, oats out of wheat, cockle out of wheat; garlic, chess, mustard and all other foul seeds out of wheat; buckhorn plantain out of clover, separates rye from wheat. Cleans beans—oats—barley—timothy seed. Grades seed corn. A general purpose seed grader and fanning mill all in one. Has screens and riddles for all purposes.

Chatham Free Book Tells You My Plan On 30 Days Free Trial
Freight Prepaid

This valuable book tells many other ways than those above that a Chatham Fanning Mill will make and save for you. As a practical man you know that all I've said above is true and you also know that in selling direct from our factory—prepaying freight to you—giving you 30 DAYS' FREE TRIAL—and our wholesale price—we have simply got to give you a CHATHAM Fanning Mill that does all we claim for it. Our business life depends on our mills making good.

Remember that I Prepay the Freight

I'll send you a CHATHAM Fanning Mill on 30 Days' Trial without any advance payment, just to prove it will do all we say it will. 250,000 sold already in U. S. and Canada. Experiment Stations indorse them, and Agricultural Papers recommend them to subscribers. So why take low prices for dirty, mixed grain, or sow seed that grows weeds and mixed crops? Write nearest office for full particulars, prices and New Catalog.

MANSON CAMPBELL, President,
THE MANSON CAMPBELL COMPANY
Detroit, Mich.; Kansas City, Mo.; St. Paul, Minn.; Portland, Ore.; Omaha, Neb.
24 Branch Warehouses for prompt shipments.

17 Screens and Riddles Enough for Every Purpose

The Louden Way

One man with a **Louden Litter Carrier** on Louden overhead steel track system can clean the barns in half the time that two men would take without it. **That's** Louden economy. On **every** up-to-date farm—**your** farm—the **Louden Litter Carrier** and steel track system will earn its cost many times a year.

Track can be bracketed to barn wall—out one door—in at other, and in this way no switch is needed. Manure loaded direct on wagon or spreader—its full fertilizing value thus saved.

Louden Litter Carriers

are made of heavy galvanized steel—wear for years; have improved worm gear—1 pound on chain lifts 40 pounds in box; box stands at any elevation—raised or lowered any distance up to 25 feet; have many special advantages not found in other makes. Send today for valuable free book on manure uses, and catalog of hay and litter carriers, sanitary steel stalls, cow stanchions, etc., for modern barns.

Louden Machinery Co.,
633 Broadway, Fairfield, Iowa

ROOFING

Like Laying a Carpet. Anybody can do it. At Wholesale Prices Freight Paid

You've got the price, now get the SAMPLE that we postpay to you, FREE.

WE WANT to give you the benefit of our low, factory wholesale prices on No. 1 guaranteed Breese Bros. Roofing. Look at these prices, which include all freights paid. Now, if we could show you the high quality of "Breese Bros. Rubber Roofing" you farmers—not one of you—would ever buy any other kind.

Let us send you generous free samples of this 1, 2 and 3-ply roofing so that you can see the high-grade, long-fibre-wool felt, saturated in hottest asphalt, that forms the body of "Breese Bros." Roofing; and tell you all about our water-proof, fire-resisting process that enables us to place almost an unlimited guarantee on our roofing.

Order direct from price-list below, or give name and get free samples, prices and fullest facts regarding the most durable roofing ever made.

BREESE BROS. CO., Roofing Dept. 24, Cincinnati, O.

Prices (Freight paid on 100 pounds or more to points east of west line of Minn., Iowa and Mo., and north of the south line of Tenn. We pay that far if you live beyond):

35-lb. Roll—108 Square Feet—1-ply......$1.35
45- " " " " " 2- " 1.85
55- " " " " " 3- " 2.25

15 Cents a Rod

For a 22-inch Hog Fence; 16c for 26-inch; 19c for 31-inch; 22 1-2c for 34-inch; 27c for a 47-inch Farm Fence. 50-inch Poultry Fence 37c. Lowest prices ever made. Sold on 30 days trial. Catalog free. Write for it today.

KITSELMAN BROS., Box 271, MUNCIE, IND.

California Privet—the Distinctive Natural FENCE

Thoroughly useful and practical, too—keeps out intruders, conceals unsightly objects, dignifies the home grounds. No other form of fence is more effective, nor anything like as attractive.

I am a specialist on California Privet—grow it by the hundreds of thousands. Let me send you literature showing how and why it pays to have live fences, and making prices on California Privet that will interest you.

C. A. BENNETT
Box 55, Robbinsville, New Jersey

Ornamental Iron Fence Cheaper than wood for Lawns, Churches, Cemeteries, Public Grounds. Also Wrought Iron Fence. Catalogue free. Write for Special Offer.

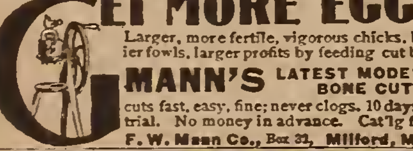
THE WARD FENCE CO., Box 665, Decatur, Ind.

FARM FENCE

16 cts. a rod For a 26-inch high Hog-tight Fence. Made of heavy wire, very stiff, strong and durable; requires few posts. Sold direct to the farmer on 30 DAYS FREE TRIAL. Catalogue free.

INTERLOCKING FENCE CO.
BOX 21 MORTON, ILLINOIS.

ORNAMENTAL FENCE
25 Designs, All Steel.
Handsome, cheaper than wood, more durable. Special prices to churches and cemeteries. Don't buy a fence until you get our free catalog.
Kokomo Fence Machine Co.
427 North St., Kokomo, Ind.



GET MORE EGGS

Larger, more fertile, vigorous chicks, heavier fowls, larger profits by feeding cut bone.

MANN'S LATEST MODEL BONE CUTTER cuts fast, easy, fine; never clogs. 10 days free trial. No money in advance. Cat'lg free.

F. W. Mann Co., Box 31, Milford, Mass.

About Practical Poultry-Raising

Lice and Red Mites

Either of these pests is sufficient to destroy whole flocks of young chickens. Lice present one of the dangers to the raising of chicks with hens. The hen-hatched chick, the hen-mothered chick, is in constant danger of having lice to make its life miserable, if indeed they do not end it. You cannot hope to raise chicks in brooders infested with lice and red mites, nor chicks housed at night with the hen, where they are plentiful. Lice and red mites give you all symptoms of all diseases.

Whenever you have sick and drooping chickens, look first for vermin. It will be time to think of other causes of disease when you have cleaned out the lice tribe. No matter how free from lice your birds were last year, no matter how thoroughly you got rid of them this spring, you must keep in mind and look out for lice all the while. You have probably overlooked a few in your killing process, and the few lice of April may become a hundred thousand in June.

Lice are not so hard to get rid of as mites. Lice live on the birds, while mites spend their resting hours in the cracks of the nests and roosts. They are out of reach much of the time, coming out for food only at night, unless they have been kept from food by the method of the poultryman. Red mites are in many instances the cause of cholera in chicks.

Until the chicks are fully feathered you should look them over every day with the thought of lice. Examine carefully the heads of the chicks. Take time to do this, and do it carefully, or you will overlook lice many times. Whenever you find the large head-lice, grease the heads of the chicks with olive-oil or lard. Brooder chicks seldom need to have this done more than once, but hen-hatched chicks may need it every week. Guard against lice and mites from the time the chicks are hatched.

A few lice will soon suck the vitality out of the very strongest chick. Clean your brood coops and brooders often and keep them sprayed with kerosene, or a good liquid lice-killer. It is a very good plan to whitewash the coops occasionally. This will help to keep away the lice and is also a good disinfectant. In your laying houses keep the perches and nests well sprayed and be on the lookout for lice and mites all the time, especially in hot weather.

Archie E. Vandervort.

Loss in Confining Hens

We have proven to our own satisfaction that it is a losing game to shut hens up in summer, after they have been in the habit of having full swing all over the farm. It makes a good deal of difference, of course, whether or not you feed plenty of good fresh feed, especially green stuff. Also, it seems to be necessary to give good shelter from the hot sun.

For several years we have had grain near the house, so that it was not advisable to let the hens run over the fields until the shocks were taken into the barn. The good wife, who knew what the result would be, said when we took the hens into the park, "Now, they will drop off in eggs as sure as the world, if we do not feed them better than we have at such times." And she was right. Even with the extra care and feed we tried to give them, they fell off in production very perceptibly.

The only way to keep up the yield of eggs when hens are in close confinement is to feed liberally a good variety of feed, provide all the pure fresh water the hens will take, and the best possible shelter from the heat.

Any one who has followed hens out into the field can see why this loss should take place. Grass, bugs, worms, bits of shell, now and then a bite from an apple—all sorts and kinds of fresh food go to make up the bill of fare, saying nothing about the grain we give at the regular feeding-time. This variety we must make up, or down goes the egg production. And that costs.

E. L. Vincent.

Incubator Chicks

I wish to say I can't quite agree with the article in Farm and Fireside of July 10th about "Some Incubator Experience," as I have hatched chicks with two incubators for several years and find them just as strong and hearty as the hen-hatched chick, and I raise a greater per cent of the hatch than I ever did with the hen and with less care.

I find the earliest hatched ones, while the weather is cool, are the easiest to raise with a brooder. I think most brooders are kept shut to tight and kept too warm.

There are many good incubators while there are some that are worth very little. Of course one has to use good common sense in running an incubator.

I never put the chicks with hens as some do. One must use good judgment about feeding, as they can be overfed very easily, but after they get to be two weeks old, there is no danger as long as they have good outdoor range.

I find it is not always the machine that costs the most that does the best work. I have had chicks hatched by the 8th of March several times and I kept them in a warm room until five or six days old, then, as the weather was too cold to put them in their three-by-seven-foot coop, I would use a vacant room up-stairs with no other heating device except their brooder-lamp, which was turned very low, and discarded both night and day after the chicks were eight days old. I put chaff out of the horses' manger on the floor and it was interesting to see those chicks a week old scratch and hunt for the seeds, and that is the way they kept warm. Of course the sun shone in through the windows on them, which was much better than stove warmth.

As I hatch all my chicks with incubators, I have them hatched early. I don't have to wait for biddy to get broody, but hatch them when I get ready; therefore, I have pullets to fill the egg-basket both fall and winter. I cannot do that without plenty of good feed; but the feed I fed was all raised on the farm, no high-priced stuff being used. Wheat and oats are a good feed until cold weather, then I want some corn mixed in with any vegetables for a change.

Mrs. S. A. Bassett.

Turkey Notes

This is the time of year that turkeys take "blackhead." This disease is sometimes called cholera. Nearly every turkey-grower is more or less familiar with this disorder, but very few can "doctor" the affected birds with any degree of success. "An ounce of preventive is worth a pound of cure."

Blackhead is a bad form of bowel and liver disease combined. As a rule, it is caused by overfeeding. Too much grain, with not enough sharp grit to grind it, will usually bring on an attack of indigestion which soon turns to blackhead. Sometimes the head turns pale instead of black. The sick birds should be removed from the flock.

Turkeys should not be allowed to eat rye. The grain is too flinty for their digestive organs and, besides, its food properties are not adapted to the needs of a growing turkey. While the insects last, it is not advisable to feed grain more than once a day. Where grasshoppers are plentiful, turkeys will thrive on these better than upon grain. However, if grain must be fed, let it be wheat, until the weather begins to get cold.

Don't keep turkeys penned while fattening. They resent it and sometimes lose their appetite. A turkey needs exercise and will not thrive long in close quarters. It is a good plan to have a house or shed, with removable roosts, for the turkeys to stay in at night. One side, or at least doors and windows, should be fitted with poultry-netting to give ventilation. When the turkeys are to be caught, remove the roosts, as they interfere with the work. If turkeys get their will, they are sure to roost upon the highest trees, or roof of a building.

When the weather begins to get cool, and the turkeys are great big husky fellows, then it is time to begin feeding corn. If there is a corn-field near, encourage the birds to visit it. They will do very little damage to the shocks. They will strip some of the ears on the outside, but they will not tear down the shocks. When turkeys have access to a corn-field, they need not be fed at regular intervals. If they are slow about starting out in the morning they should be given the regular ration. They will usually take a ramble in the afternoon, in fine weather, and return in the evening. A close observer can tell by their actions and also by the appearance of their crops whether they need to be fed or not. This is not a matter of economy in feed. It is a case where too much is worse for the bird than too little. We usually begin feeding corn (a little at first) about the last week in October, if it is cold enough for the ground to freeze at night.

Anna Wade Galligher.

Poultry Pick-Ups

Work for better stock. You can get it

Foul nest-boxes breed lice fast. Clean 'em out!

Poultry hasn't seen its best days yet It is a growing business still, and it will be as long as you and I live.

Ever get a mite on your hand or neck. Fun, isn't it? What do you think of hens that have ten thousand such pests crawling all over them? How can they help getting poor in flesh and all run down? Help the biddies out by cleaning the houses from top to bottom with some good lice-killer, and then dope the birds themselves thoroughly till the last one is gone. You never will be much of a hand with poultry till you get the hang of fighting these pests.

E. L. V.

Live Stock and Dairy

Raising Fall Colts

FALL colts are not favored by horse-breeders, and yet there are reasons that may be given for producing them. They are less trouble on the average farm than those born in the spring. Some of the horses on nearly every farm are idle all winter, anyway, and the mares might better be nursing colts and giving them a good start than to give nothing in return for the food they consume. When the spring comes and the mare is needed for farm work the colt can be weaned and the mare can do her work without annoyance from the colt. One has to be careful of a mare in hot weather while a colt is suckling her, because overheating her very often gives a colt the scours. By having the colt come in the fall the mare suckles it while she is doing no work and she can give it a much better start than if it were born in the spring.

Some farmers are of the opinion that it is expensive to feed the mares well enough during the winter to cause an ample flow of milk, but this is a mistake. In feeding the mare, the colt is being fed, and each pound of gain that the colt makes at that age is made more economically than at a later date. With a little care and attention the fall colt can be kept in just as good condition and will make just as fine a horse as the spring colt.

Either in spring or fall the mare should foal in a good, roomy box-stall that has been thoroughly cleaned and disinfected and the colt's navel should be kept saturated with carbolized oil for a few days after it comes.

It is important that the foal suckle as soon as possible after birth. The first milk of the dam acts as a purgative and prepares the colt's digestive tract for the assimilation of the milk. It is well to give the colt frequent access to the dam, at least three or four times a day, but it must not be allowed to suckle when the mare is heated.

If for any reason the mare cannot suckle the colt, cow's milk may be used. It should be reduced one fourth with water and fed at blood-heat, with a little sugar added for taste.

The colt should be weaned when it is about five months old, and should be prepared for the change by having been taught to eat oats, bran, cracked corn, etc. If the youngster is thrown on its own resources and left to hustle for its own living, it is pretty sure to develop into a scrawny colt and that means later a horse not worth raising. If, on the other hand, good, nutritious food is furnished there will be no question about it developing the best kind of an animal that the breeding will warrant.

WM. H. UNDERWOOD.

The Brood Sow

THE brood sow should never be allowed to run in the fattening pen before farrowing. While she is to be kept in good condition by a liberal supply of grain and slops, it will be detrimental if she is allowed to fatten. Fat sows at farrowing-time are most certain to overlay some of their pigs, and as a general thing her litter will be weakly and few in numbers.

Just before farrowing, the brood sow should be separated from other hogs and placed in a pen or lot to herself, for on chilly nights hogs pile up together and she is liable to be seriously injured. Even if she be allowed where other stock range, a cow may stumble over her, a mule paw her with his front feet, or a horse kick her severely. So it is best to entirely separate her from all other stock. In spring or summer a small grass-lot near the house is an ideal place for a brood sow.

Plenty of slops should be given the sow before and after farrowing. She must have succulent food, and nothing better than slops can supply this. If she runs on pasture the supply of slops need not be so great. Milk and slops from the kitchen mixed with bran or shipstuff are splendid for the brood sow, and the more succulent food she gets, the better will be her condition and the faster the growth of her young.

I noticed when a boy that the sow and pigs that used to run around the barn in the summer-time and had access to the grass-lot near-by always looked better and made more rapid advances than the rest of the sows and their young. The pigs looked healthier, came to maturity sooner, and weighed more at market-time. The real secret was in the fact that they received the slops from the kitchen and picked up the refuse about the barn. If this is not possible for every sow and her brood, a clover-patch or alfalfa-field will come nearer than anything else to supplying such a nourishment.

W. D. NEALE.

Use of Vaccine for Blackleg

MY experience in the use of vaccine for blackleg in cattle indicates that a person cannot be too careful in its use. The directions should be carried out to the letter. I know that persons not accustomed to the use of instruments used in putting the vaccine in the cattle do not think of the danger from the neglect to carefully wash and dry the instruments after they have been used. They often regard the sterilizing of the instruments as foolishness, but they forget that they are working with something full of living germs and that the neglect to carry out the directions which accompany the vaccine may cause great loss.

I have used blackleg vaccine two years, and in both instances one animal had already died from blackleg. The animals vaccinated were turned into the pasture where the ones had died, but no more died from blackleg in either instance. Some other cattle-raisers have used vaccine for several years, and in a few cases cattle have died apparently from the effect of the vaccine, but I am pretty sure that the fault was with the operator rather than the remedy.

Awkward and careless work does not give the remedy a fair trial. It gives it a bad name, when the facts are that the fault is in the person using the remedy.

A. J. LEGG.

The Percheron—A Good Type for the Farm Horse

50 CENT BUTTER BEFORE CHRISTMAS AND WHAT IT MEANS

"50 CENT BUTTER BEFORE CHRISTMAS"—is the prediction freely made by the big leaders in butter production, based upon their close knowledge of trade conditions.

Butter at anywhere near such a price means that a De Laval Cream Separator WILL PAY FOR ITSELF BEFORE THE END OF THE YEAR in its savings over any gravity or setting system.

It means that a De Laval Cream Separator WILL PAY FOR ITSELF BY SPRING over any competing make of separator in use or on the market.

It means that an Improved De Laval Cream Separator WILL PAY FOR ITSELF WITHIN A YEAR over the older style De Laval Cream Separators in use.

It means that no one separating cream from the milk of even a single cow CAN AFFORD to continue to do so a day longer than can be helped without an Improved De Laval Cream Separator.

And buyers should remember that a De Laval Cream Separator—on which there is just one reasonable price for everybody—can be bought at a fair discount for cash down or on such liberal time that it WILL PAY FOR ITSELF out of its own savings.

That means that NO ONE need go a day longer without a De Laval Cream Separator than may be necessary to order and receive it, and that they CANNOT AFFORD to do so.

It emphasizes the urgent importance of seeing the local De Laval agent or communicating with the Company directly AT ONCE, with a material dollars-and-cents loss EACH DAY of delay in doing so.

Then WHY delay another day?

THE DE LAVAL SEPARATOR CO.

42 E. MADISON STREET CHICAGO
1213 & 1215 FILBERT ST. PHILADELPHIA
DRUMM & SACRAMENTO STS. SAN FRANCISCO

General Offices: 165 BROADWAY NEW YORK

173-177 WILLIAM STREET MONTREAL
14 & 16 PRINCESS STREET WINNIPEG
1016 WESTERN AVENUE SEATTLE

Don't Pay Two Prices for Stoves & Ranges
Buy at Factory Prices, SAVE $18.00
HOOSIER STOVES
HAVE NO EQUAL
"Why not buy the best when you can buy them at such low unheard of Factory Prices." Hoosiers are delivered for you to use 30 days free in your own home before you buy. A written guarantee with each stove, backed by a Million Dollars. Our 20 new 1910 improvements on stoves absolutely surpass anything ever produced.
Send Postal Today for Free Catalogue.
Hoosier Stove Factory, 126 State St., Marion, Ind.

TRAPPERS MAKE MORE MONEY
Copy of HUNTER-TRADER-TRAPPER a monthly magazine, 160 or more pages about steel traps, snares, deadfalls, trapping secrets, raw furs, dogs, big game hunting, etc., and a 64-page booklet containing GAME LAWS, Camping Hints, etc., all for 10 cents.
A. R. Harding Pub. Co., Box 29, Columbus, Ohio

Saw Mills
If you need anything in saw mills or wood working machinery, send for our catalog. Our line is complete. Goods highest quality and prices reasonable. American Saw Mill Mach. Co., 130 Hope St., Hackettstown, N. J. New York Office, 1576 Terminal Building.

LEARN JEWELERS' ENGRAVING
A high salaried and easily learned trade, taught thoroughly by mail. We will teach the beginner better engraving than he can gain in years of rigid apprenticeship. We will also improve the skill of any engraver. Send for our catalog.
THE ENGRAVING SCHOOL, Dept. 25, Page Building, Chicago

Live Stock and Dairy

The Study of Pedigree

To one who is really interested in the breeding of pure-bred stock, next to the stock itself nothing gives so much pleasure as the study of its pedigree. It is pleasing to think that in these more enlightened days pedigree is becoming more and more popular with the general run of breeders, and much greater value is attached to it by the general body of agriculturists than there was in the days of "paper pedigree" in Shorthorns. Those days, when the value of a pure-bred beast was entirely gaged by the length of its pedigree, and when thousands or tens of thousands of dollars were paid for animals that were unseen by their purchasers until after their sale, did a great deal toward bringing pedigree into disrepute amongst practical men. Happily, that sort of thing has long since come to an end, and however well-bred an animal may be nowadays, it must be a good beast as well, if it is to fetch a long price.

The value of pedigree is well known to all breeders, and the study of it is of considerable help in mating the breeding animals. No careful breeder of Shorthorns, for instance, would think of buying a bull without being assured that his pedigree was such that he could with confidence use him on his cows, and also feeling assured that his blood and theirs would nick well together. By studying pedigree one is enabled to trace the different lines of blood, and also to see who were the owners and breeders of the different animals far back in the line of descent, and thus be able to find out whether those animals were bred in herds that had a high reputation for first-class stock or not.

Years ago, before the days of herd-books, our best breeders of cattle believed in pedigree, and although they had not the advantage of herd-books, yet they were careful only to select sires for service in their herds from breeders whose stock possessed a high reputation for excellence, and for being bred with good judgment and care. Thus it is that we find at the end of several old Shorthorn pedigrees such entries as "Mr. T. Brown's bull," or "Fisher's old bull," and so forth. No doubt these men had a good reputation for their cattle.

It is an old axiom in the breeding of stock that like begets like, and upon this the whole structure of pedigree rests. Shorthorn breeders and others conduct their trading with the printed records of the breeding of the animals before them. For upward of a century this has been the case with Shorthorns. Then is seen the difference in value between those with registered pedigrees and those that have not had their pedigrees recorded or are not eligible for entry in the herd-book. We also see, at sale-time, the difference in value between animals whose pedigrees have been recorded ever since the herd-book was first published and those with only just sufficient crosses of blood to qualify for registration.

When we consider that the pedigree of an animal is merely a record of names of ancestors, it is apparent that to be of any practical value to one who studies breeding it is necessary that something should be known of the characteristics of the animals whose names are in it. Under the system of registration in our herd-book one cannot get beyond names and numbers, and therefore one has to depend on the names and reputations of the breeders of the animals recorded as an indication of their merit. Further assistance, too, in getting at the merits of recorded animals is to be gained from the study of show-yard records.

The system under which pedigrees are recorded, although perhaps more concise than instructive, is apt to mislead. It leads to too great appreciation of certain families. A good cow, one of more than ordinary merit, was at some remote time entered under a certain name, and that name was fixed upon as the initial name of a family. Families bearing the name of a foundation cow of great note have, in many cases, had more value put on them than they deserved; inasmuch as that although the family name on the female side has been kept up, yet the blood of the original foundation cow has been lost sight of through the continued infusion of blood of the different sires in the pedigree having little, if any, relationship to each other or to the foundation cow. Great length of pedigree is not an advantage in cases where, through a desire to maintain a certain strain of blood, breeders have mated animals with little regard to merit, but simply to continue straight breeding, thus intensifying defects to an extent which renders the length of the pedigree of but little advantage, for it may take years of crossing with fresh blood before those defects can be wiped out. A long pedigree is of the greatest value in which good blood is concentrated, and which is shown in a family of good animals.

Interbreeding

Much has been said and written about the evils of "line" breeding and "close" breeding. There is, however, no denying the fact that all our great breeders made their name by pursuing a system of "close" breeding. Evil results have followed only where the system has been carried to extremes, or "paper pedigrees" have been relied on, or the animals mated without sufficient knowledge and ability. One cannot fail to be struck in comparing the present volumes of the herd-book with the old ones by the great change that has taken place. The number of breeders has increased to an extent one would hardly credit. This is, no doubt, in a great measure due to the high prices obtained for good animals having encouraged many farmers and others to embark in pedigree breeding, and also due to the fact that greater facilities are offered for the disposal of young bulls at the periodical sales now held all over the country. In some parts of the country, too, farmers have been grading up new pedigrees by the use of pedigree bulls on foundation cows of superior merit, either as dairy or general-purpose animals. The value of these new pedigrees can only be determined by the breeding and merits of the sires that have been used in building them up, and where care and good judgment have been used, there is no denying the fact that many very excellent animals have been produced in this way.

In the past, great advantages have been derived through certain strains of blood having been closely bred in the hands of men who knew what they were about. Close breeding can be pursued with safety, provided none but good, robust animals are mated. It is from herds bred in this way that sires are to be obtained, from the use of which good results can be confidently anticipated. Shorthorns formerly belonged to two great families. The demand for Scotch blood has, however, altered all that; and if constitution, form and pedigree receive due consideration, great results are, and can be, achieved by the blending of the Scotch with the old Bates and Booth blood. If the pedigrees of some of the best Scotch cattle are traced out it will be seen that they have been closely bred, but by men who were thorough masters of the art of breeding, and to this is no doubt due in a great measure the value of Scotch sires in the old "closely" and "line" bred cattle of the two great families above mentioned. In speaking of pedigree, we must all agree that a good beast is a good beast, come how he may, but that it is to pedigree alone that we can look for succession.

W. R. Gilbert.

Selecting and Raising Heifer Calves for a Dairy

Many dairymen make a practice of raising every heifer calf, and fail to get results. Then they select the heifer calves from the best producing cows and get nearer to what they want, but still there are many inferior cows raised by them.

It is not until we begin to carefully examine every heifer calf that we can conduct any systematic plan of improving the quality of our dairy herds, for unless the calves are good individuals and have stamina and strong vigorous constitutions, no matter how good their breeding, nor how liberally they are fed, many will fail to be as good as their dams.

Every calf should be carefully examined, and if they show signs of any weakness they should not be raised. Open their mouths and if you find after examining its teeth that you can see but four of its milk teeth you can make up your mind that it is hardly worth raising. Many raise these calves, but few ever turn out to be profitable cows. Next examine the navel and teats. If the teats are not placed in their right places do not waste your time and food raising the calf, for it will surely prove a disappointment as a dairy cow.

When we find a heifer calf that comes up to our standard of requirements, and when we decide to keep it, we must not forget that its value as a cow will depend largely upon the treatment that it receives during the first two years of its life. Calves must be well cared for and fed in such a manner that they will never lose their calf flesh. After they are a few months old they should be turned out and allowed plenty of exercise and good air so that they may build up strong muscles and good sound organs of respiration. W. Milton Kelly.

Up-to-Date Dairymen Do Not Skim Milk Like They Did a Generation Ago

They have found a better way.
They use machines and separate the cream from the milk at milking time.
They get all the cream, they save half the work and worry of the old way, and they have fresh, warm, sweet milk instead of stale, sour milk to feed to the calves, pigs and chickens.

The I. H. C.
Bluebell Cream Harvester
Dairymaid Cream Harvester

These machines have revolutionized the dairy methods of thousands of cow owners and put them in the way of making real profits out of their dairies.
What they have done for others in the way of labor saving and profit making they will do for you.
If you keep a dozen cows now, you can, with an I. H. C. Cream Harvester to aid you, keep 25 to 30 cows and more than double your profits with no increase in labor.
Figure out the matter for yourself and see whether you are not losing money instead of making money by not owning a Cream Harvester.
The Dairymaid Cream Harvester is a chain-driven machine. The Bluebell is gear-driven. Both are made in four sizes, are simple, easily operated, easy to keep clean and get the cream out of the milk down to the thousandth part.
If you want to enlarge your operations and get into the modern way of dairying it will be to your interest to call on the International local agent and talk over with him the matter of owning a Bluebell or Dairymaid Cream Harvester. He will show you the machine he handles and supply you with a catalogue and all necessary information.
INTERNATIONAL HARVESTER COMPANY OF AMERICA, CHICAGO, U. S. A.
(Incorporated)

Can you afford to risk losing your horses, machinery and stored crops, to say nothing of the danger to your home and family from fire? A steel shingle roof will not burn. We guarantee it with a $10,000 bond against lightning. You can lay it yourself with hammer and nails. It lasts six times as long as composition roofing and four times as long as wood shingles and costs less.

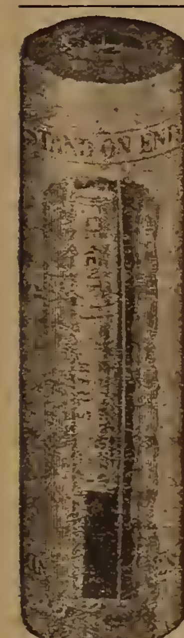
Edwards "REO" Steel Shingles

are stamped in sheets of fine quality steel 5 to 10 feet long, covering width 24 inches. Furnished painted or galvanized. Galvanized never rust or corrode, need no painting and do not taint rain water. Cheapest kind of fire insurance. Last a lifetime.

Buy at Factory Prices. Freight Prepaid

We are largest makers of iron and steel roofing and will quote prices on steel shingles, plain, galvanized, corrugated or V-Crimp roofing, imitation brick, etc. Give size of your roof, and we will tell you cost delivered. Catalog No. 49 sent FREE. Write for it. Local representatives wanted.

THE EDWARDS MANUFACTURING CO.
909-929 Lock St., CINCINNATI, OHIO



INDRUROID ROOFING

Requires no Coating or Paint.
Acid and Alkali Proof.
Elastic and Pliable Always.
Strong and Tough.
Absolutely Waterproof.
Climatic Changes Do Not Affect It.
Practically Fire Proof.
Can Be Used on Steep or Flat Surfaces.
Any Workman Can Put It On.
No Odor.
Will Not Shrink or Crack.
Light in Weight.
Does Not Taint Water.

Write for samples, prices and circulars.

H. F. WATSON CO.
ERIE, PA.
Chicago Boston
Mention F. & F.

Elkhart Buggies
have been sold to the consumer
For Thirty-Six Years
May We Send You Our Large Catalogue?
Elkhart Carriage & Harness Mfg. Co.
Elkhart, Indiana

ABSORBINE

Removes Bursal Enlargements, Thickened, Swollen Tissues, Curbs, Filled Tendons, Soreness from any Bruise or Strain, Cures Spavin Lameness, Allays Pain. Does not Blister, remove the hair or lay the horse up. $2.00 a bottle, delivered. Book 1 D free. ABSORBINE, JR., (mankind $1.00 bottle.) For Synovitis, Strains, Gouty or Rheumatic Deposits, Varicose Veins, Varicocele, Hydrocele. Allays pain. Book free.
W. F. YOUNG, P. D. F., 23 Temple St., Springfield, Mass.

YOU SAVE 20%
By using The STAR FEED GRINDER
Grind feed yourself as needed—then it's fresh—makes fatter stock—better chickens—saves waste. Sweep or Belt Mills. Star Grinders are strong, long-lived and reliable—absolutely guaranteed. 30 years actual experience in mill building makes it possible for us to say most emphatically, that Star Grinders are better than the majority. Send for low prices and booklet—now.
THE STAR MFG. CO., No. 19 Depot St., New Lexington, Ohio.

DON'T SHIP until you get a free list of reliable produce dealers in 29 leading markets from the National League of Commission Merchants, Division J, Buffalo, N. Y.

FEED MILLS AND COB GRINDERS that will save you money. Direct from manufacturer to user. Nine sizes. Send for Catalogue. SLATER & MARSDEN, Beloit, Wis.

Death to Heaves Guaranteed
Or Money Refunded.

NEWTON'S
Heave, Cough and Distemper Cure.
$1.00 per can at dealers, or express paid. 18 years' sale. Send for booklet, Horse Troubles.
THE NEWTON REMEDY CO., Toledo, Ohio.

It is to your advantage to mention Farm and Fireside in writing to advertisers. Farm and Fireside the very best attention.

The Most Profitable Cow

The cow that gives the largest mess of milk is not always the most profitable one. The herdsman who accomplishes an extraordinary amount of work in a brief period of time and then fails to enjoy another such period for a long time, never is of as much value to himself or any one else as the steady, persistent worker who accomplishes a reasonable amount of work in a given period of time and then keeps right at it.

This is true with the cow. She is hired to work for her owner and she should be expected to do a reasonable amount of work. It is not what she can perform in a week or a month that determines her value to the farmer. It is what she is capable of doing in a year or a lifetime that determines her producing qualities.

The cow has the advantage over the hired man on the average farm. She can fail to do her work for her owner and he is quite likely to know nothing about it. She may even give a large mess of milk very poor in quality for a short period and he will be convinced that she is one of the best cows on the farm. She will later cut down the quantity and he forgets to keep account of that period when she gave the large amount.

Keeping steadily at a thing usually produces the best results, and many of our best dairy cows are those which do not give the large amount of milk for a brief period, but give a good quantity and keep it up for a long time.

A. E. VANDERVORT.

Care of Ewes While Mating

The relation between the nature of the lamb crop and the management of the ewes at the time of mating is closer than is usually supposed. When the ewes are overfat at such a time, or when they are on pastures dry and dead, impregnation is less certain than when the opposite conditions prevail. When the ewes are failing in flesh at such a time it becomes even less certain.

The greatest certainty in breeding is attained when the ewes are increasing in flesh. The renovating influence which at such a time comes to the system extends to the generative organs, and this adds not only to the certainty of conception, but it tends to hasten the time for breeding.

When the lambs are weaned, the ewes are usually thin in flesh. The better their milking properties the thinner they are likely to be, because of the amount of daily ration that has been converted into milk. If the ewes are then put upon succulent pastures they at once begin to regain the flesh that has been lost.

It is when they are thus building up the system that the breeding season comes on. The relation between the quickness or slowness with which it comes is dependent on the character of the food. The richer it is in the proper elements of nutrition, the sooner will the ewes come in heat.

Usually, the uncertainty in breeding is greater with ewes one year old that have never produced lambs than with those that are older. This is owing to the fact, chiefly, that such ewes are liable to carry too much flesh, especially if they have been fed on nourishing pastures all through the season.

The remedy in this case would be to confine them to pastures succulent and a little lacking in quantity if such could be found, as, for instance, young winter rye, where the short growth would force them to do much traveling.

The aim should be to have ewes in good condition at the time of mating. Where they are not, they do not produce as many lambs, nor is it likely that the lambs will be so strong. The ewes require more food also to carry them properly through the winter. It is an easier matter to lay flesh on a ewe before she is pregnant than subsequently, when a part of the food is used in sustaining the fetus.

WM. H. UNDERWOOD.

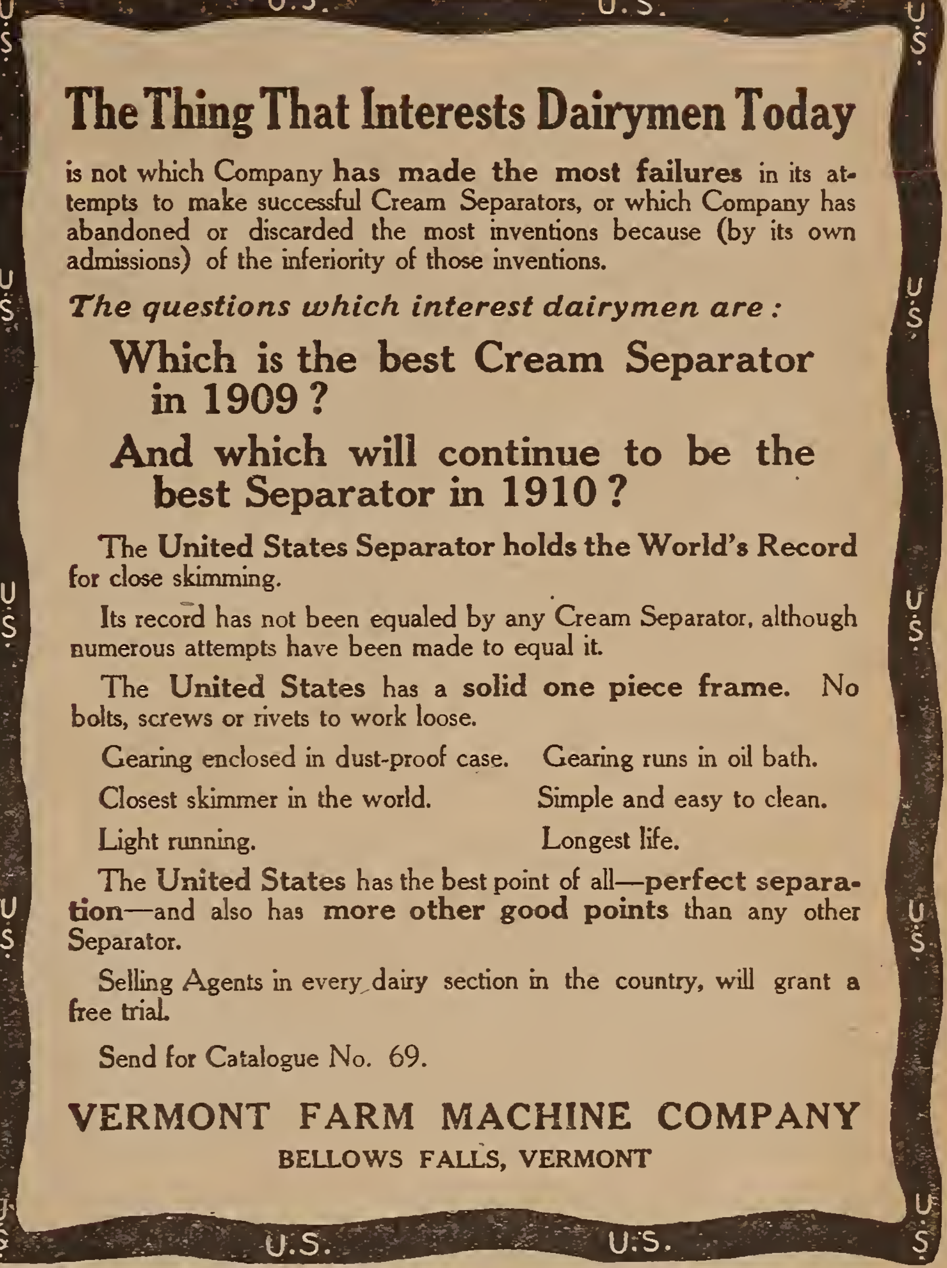
A Few Sheap Shearings

If lambs are suffering from diarrhea, give castor-oil and follow with twelve drams of prepared chalk, one dram powdered ginger, and one dram of laudanum, mixed.

Dipping is profitable. Always dip when the wool is short, as less dip is consumed and ticks will be more apt to leave the sheep's body. Commercial dips are good, but some farmers make their own with tobacco, sulphur and carbolic acid.

A good plan to pursue in docking lambs is as follows: Tie a cord tightly about the lamb's tail one inch from the body. With a pair of pruning-shears clip off the tail just below the cord. Rub carbolated vaseline on the wound and remove the string at night.

W. D. NEALE.



6% BONDS

Any Amount—Any Maturity

Secured by Farm Liens

The most popular bonds that we handle today are Irrigation bonds, secured by first liens on the most fertile farm lands in America.

They are issued in denominations of $100, $500 and $1,000. They run from two years to twelve years, so one may make short-time or long-time investments. And the bonds pay six per cent. That is a higher rate than can now be obtained on any large class of equal security.

Doubly Secured

The farmers in the irrigation districts, to secure perpetual water rights give to an Irrigation Company a first lien on their farms. The lien is seldom for more than one-fourth the land's value. It is paid in ten annual installments.

These liens are placed with a Trust Company as security for the bonds. Back of each $100 bond there will be $150 in liens. Thus the margin of security is very wide indeed.

In addition, the Irrigation Company deposits with the Trust Company a first mortgage on all it owns—dams, reservoirs, ditches, etc. This mortgage is held until the last bond is paid, as an extra security. Thus the bonds are doubly secured.

Some Are Tax Liens

Some of these bonds are issued, like School bonds, by districts. Such bonds form a tax lien on all taxable property in the district. The interest and principal are paid out of taxes.

Some are issued under the Federal law, known as the Carey Act.

All of these bonds, if rightly issued, form ideal securities. It is hard to conceive of anything better. Yet the bonds pay at present a high rate of interest because the projects are very profitable.

The first crop from irrigated land will frequently pay the whole cost of the land. So the ten-year liens which the farmers give are very easily paid.

15 Years' Experience

We have had 15 years of experience in selling Reclamation bonds. These include Drainage District and Irrigation bonds, all secured by farm liens. During this time we have sold seventy such issues without a dollar of loss to any investor.

We are now the largest dealers in this class of security. Our own trained engineers and attorneys pass on every project. The officers of our company also inspect every enterprise on which we sell bonds.

We have now written a book based on all this experience. It covers the facts about irrigation in a clear and interesting way. Every investor, whether small or large, should read this book.

Cut out this coupon, send it at once, and the book will be mailed you free.

Trowbridge & Niver Co.
First National Bank Building
CHICAGO, ILL.

Please send your free book on Irrigation Bonds.

Name ________

Address ________

Name of my bank ________ 434

We sell the bonds, if you prefer, through your local bank. If so, please give us the name of your bank, and we will send full information when we send it to you.

(3)

SUBSCRIPTION PRICE

One Year (24 numbers) . . . . 35 cents
Four Years (96 numbers) $1.00
Canadian Subscriptions . { 1 Year, 60 cents / 4 Years, $2.00 }

Entered at the Post-Office at Springfield, Ohio, as Second-Class Mail Matter.

Subscriptions and all editorial letters should be sent to the offices at Springfield, Ohio, and letters for the Editor should be marked "Editor."

The date on the address label shows the time to which each subscriber has paid.

Subscribers receive this paper twice a month, which is twice as often as most other National farm journals are issued.

Silver, when sent through the mails, should be carefully wrapped in cloth or strong paper, so as not to wear a hole through the envelope.

When renewing your subscription, please say it is a renewal, and if possible send the label from a recent copy. If all our subscribers will do this a great deal of trouble will be avoided.

PUBLISHED BY
THE CROWELL PUBLISHING COMPANY
SPRINGFIELD, OHIO
Branch Offices: 11 East 24th Street, New York City.
Tribune Building, Chicago, Ill.

Copyright, 1909, by The Crowell Publishing Company

ABOUT ADVERTISING

FARM AND FIRESIDE does not print advertisements generally known as "readers" in its editorial or news columns.

Mention FARM AND FIRESIDE when you write to our advertisers, and we guarantee you fair and square treatment.

Of course we do not undertake to adjust petty differences between subscribers and honest advertisers, but if any advertiser in this paper should defraud a subscriber, we stand ready to make good the loss incurred, provided we are notified within thirty days after the transaction.

FARM AND FIRESIDE is published on the 10th and 25th of each month. Copy for advertisements should be received twenty-five days in advance of publication date. $2.00 per agate line for both editions; $1.00 per agate line for the eastern or western edition singly. Eight words to the line, fourteen lines to the inch. Width of columns 2¼ inches, length of columns two hundred lines. 5% discount for cash with order. Three lines is smallest space accepted.

Letters regarding advertising should be sent to the New York address.

Conservation of Individual Resources

We hear a great deal about the conservation of national resources—and we are sure to hear more as the years roll by. Collectively, we have laid waste the forests, and are still ravaging the mountain-sides, and have "skinned" the soil of millions of acres. The matter is more important as an issue in government than tariff or railway regulation or the trusts; for when the earth itself is reduced in productiveness, one generation is too brief a time in which to restore it.

But it is often forgotten that the long end of the job of conservation of national resources lies in the conservation of individual resources, and that, like most big national jobs, it rests on the farmer. The writer of this has a friend—an authority in this country on agriculture—who is building up an old Connecticut farm. "Was it run down?" he was asked. "Certainly," he replied, "all farms down there are run down." And yet Connecticut has a pretty good reputation for farming. She grows more wheat to the acre than does North Dakota, with her new soil. But in the two hundred years of cropping, according to this authority, all her farms are run down.

Now two hundred years is but a moment in the life of a nation. If the exhaustion of the soil is such as to make rebuilding a problem in two hundred years, the eventual desertion of the land becomes certain.

* * *

But one does not need to look to the older states for the horrible example. The new, rich regions of the Dakotas and western Canada afford some startling instances of the waste of national resources through waste of individual resources. From St. Louis north and west to Winnipeg, on to Prince Albert and Edmonton, and beyond to the valley of the Peace River is an almost unbroken expanse of fertile soil, perhaps unequaled on earth in natural richness. Iowa, which may be taken as the choicest bit of this region in the United States, has been farmed now from twenty-five to sixty years. Iowa farmers within the memory of middle-aged men used to declare that manure was not only useless to their soil, but actually harmful. They burned their straw, and sowed wheat or planted corn year after year in the same fields. Rotation of crops and soil-recuperation were things unknown to their thoughts.

They know better now. They are greedy for manure, and buy manure-spreaders by the hundreds. The "inexhaustible" Iowa soil needs barn-yard manure, needs legumes in the rotation, and in some places cries out for commercial fertilizers.

The Dakotas and western Canada now stand where Iowa stood forty years ago. They burn their straw, and they crop to wheat year after year. The writer heard a substantial farmer at Regina, Saskatchewan, not long ago protest that manure is injurious to the wonderfully fertile soil which even then smiled with a bountiful harvest which reminded the beholder of the Iowa of not so very many years ago.

* * *

But in returning through Manitoba a proof was seen that the waste of national resources through individual waste is beginning to be felt even in western Canada. The warm wind was blowing from the west, and all about the horizon was a veil of dust. From some fields it rose in a cloud like the smoke from a prairie fire. An examination of the fields themselves showed the cause. The soil, robbed of its humus by twenty years of small-grain cropping, was blowing away. Every summer fallow was giving to the winds its quota of the soil which it took Nature thousands of years to create. The same sort of lands which, further north and west, promised a hundred bushels of oats or forty bushels of wheat to the acre at its best, here indicated yields of forty of the one crop and fifteen of the other.

The problem of recuperation is on, even in new Manitoba, in these older fields. The people there will not admit it, but the unprejudiced and competent observer need have no doubt. Crop-rotation, humus-creating grasses and nitrogen-producing legumes must be resorted to to make up the waste of a few years.

Are you "skinning" a part of the earth's surface? Is your farm being depleted of its humus, and robbed of its fertility? If so, the conservation of natural resources ought to begin right on your farm. The hill slope that is washing should be protected, and cultivated according to the contour. Shovel off the snow from your own sidewalk, and if the whole street is not clean it will not be your fault. Drag the road in front of your own farm, and if the whole road is not kept up it will not be your fault. Keep up the fertility of your own farm, and if the nation's resources are wasted, you will have no part in the waste. And then—pull for national conservation with all your might.

Secretary Ballinger and the Conservation Policy

Perhaps the largest conception ever adopted by a President as a political policy is the "conservation" policy of President Roosevelt. It related to the conserving of our public lands in the hands of the people's representative—the government—the arrest of spoilation in coal-lands, power-sites and timber-lands, the study and prevention of soil waste, the utilization of streams for reclamation and navigation, the control of floods and the drainage of swamps. It was a start toward a higher national efficiency.

The so-called "Pinchot-Ballinger" controversy, with reference to the power-sites on public lands along our rivers, is a part of the history of the "conservation movement." It broke into the headlines about the time of the National Irrigation Congress at Spokane on August 11th, but has now subsided to the smolder of the one-line heads in the papers. But it will break out again. It is the outward sign of what seems to be directly conflicting aims in Secretary Ballinger's department and that branch of Secretary Wilson's which is presided over by Mr. Gifford Pinchot, the forester.

* * *

Roosevelt, it will be remembered, long before his retirement sounded the alarm that a water-power trust is being formed for the purpose of monopolizing all the water-powers in the country so far as possible, and that, by hook or by crook, the people forming it were even at that time seizing the public lands under the Homestead Act and other laws. It is whispered that the outgoing administration expected that Secretary Garfield would remain in charge of the portfolio of the Interior. However that may be, one of the last things President Roosevelt did on the night of March 4th was to withdraw one hundred and eighty-six million acres from entry, in which withdrawal was included a great many water-power sites. The transaction on its face bore appearances of haste. Millions of acres were withdrawn in which no power-sites existed. It has been stated that Roosevelt acted without accurate descriptions of the lands, because he had no time to get the data after it was announced that Garfield was not to be retained. Whether this be the case or Roosevelt had found out that the power monopolists were about to grab the sites, he acted on the eve of his retirement, and when Richard A. Ballinger was made Secretary of the Interior by President Taft, he found this huge acreage of land withdrawn.

Very soon Mr. Ballinger found means to restore them to entry. They had been withdrawn on request of the Reclamation Service. This is a branch of Mr. Ballinger's department. Soon after the change of secretaries, a statement was made to Mr. Ballinger by the Reclamation Service to the effect that there seemed no prospect of these lands being needed for irrigation purposes, and asking that they be restored to entry. It is an open secret about the Washington bureaus that this request was made by the Reclamation Service under orders from Mr. Ballinger or, at least, from some one "higher up." Anyhow, acting on it, Mr. Ballinger restored to entry—and to seizure by the water-power trust, it is alleged—all or most of the lands which the Roosevelt administration had so lately withdrawn. It seemed a complete reversal of the Garfield-Roosevelt policy. The reason given by Mr. Ballinger and by the President is that Mr. Garfield's withdrawal was unauthorized by law. Many good lawyers agree with this opinion. President Taft is a good lawyer, and was, no doubt, thoroughly convinced that Mr. Ballinger had merely undone an illegal act of Mr. Garfield.

Legal or illegal, however, the present administration soon heard a protest from the people against the undoing of the Roosevelt withdrawal. It was taken by many as proof that Taft does not believe in the conservation movement. Taft wrote Pinchot a letter asserting his belief in it, but the country seemed restive so long as those power-sites remained subject to entry as homesteads. So Mr. Ballinger reversed himself, and directed the Geological Survey instead of the Reclamation Service to designate power-sites by legal descriptions, so that he might withdraw them. It is asserted by the Ballinger people that under this system more power-sites have been withdrawn than Roosevelt ever withdrew. Nothing is now said about the illegality of it; and Mr. Ballinger has even withdrawn lands all along streams, without any legal descriptions, where there is reason to believe that power-sites exist. If Roosevelt's withdrawals were illegal, Mr. Ballinger's must be.

Under such conditions, one would think everybody would be satisfied. But, as a matter of fact, the dissatisfaction is keener than ever. The power-sites were uncovered for a short time, and in that interim, according to statements of many reputable authorities, power-sites of enormous value were seized by power companies. Samuel M. Evans, of Helena, Montana, asserts in a newspaper article widely published:

"The power-sites, scores of them, were grabbed. . . . The Amalgamated Copper Company . . . swallowed thousands of acres of these important Montana lands, holding power-sites of untold wealth." This is denied at the General Land Office.

Mr. Pinchot, at the Irrigation Congress, spoke strongly against the policy of allowing such entries. Governor Pardee, of California, spoke in similar vein. This is the latest phase of the "Pinchot-Ballinger controversy." Friction has existed between Mr. Pinchot's branch of the Department of Agriculture and the Department of the Interior almost ever since Mr. Ballinger took office. Most of the causes of this were disputes over lands. The largest individual matter is one concerning the so-called "Cunningham claim" to coal-lands in Alaska, said to be worth a billion dollars. Mr. Ballinger was attorney for the claimants to these lands before he became Secretary of the Interior, a relation which puts him in a delicate position.

More will be learned of this hereafter. It is to be hoped that the future will show that Mr. Ballinger is heart and soul with the people and against the exploiters, as Mr. Taft evidently believes him to be. Where Mr. Pinchot stands is clear. More than any one else, probably, he represents the great conservation policy which is so important to the farmers and producers of the nation.

Back Talk to Lewis

Letters From Readers

Editor of Farm and Fireside:—

I am a Republican in politics and had no idea when I sent in my five years' subscription to Farm and Fireside that you would turn it into a free-trade, Democratic political paper. No doubt thousands of your subscribers are caught in the same way. Of course you will get plenty of letters from Socialists and Democrats in praise of Alfred Henry Lewis' political writings.

Arkansas. Edward Hoag.

Editor of Farm and Fireside:—

I see a good many letters to you from people from different parts of the country criticising your action in giving space in your paper to Mr. Alfred Henry Lewis to express his views in general, and more especially on politics. I wish he had two pages instead of one. I judge he is a Republican, from the way he writes; I am a Democrat. But be that as it may, he is a statesman and, I believe, an honest man. If we had enough men in Congress like him, who would speak their sentiments boldly without fear or favor, I think we would have better government.

North Carolina.

In the Public Eye

What I Saw and Heard and Thought in Washington

By Alfred Henry Lewis

If you don't agree with Mr. Lewis, "talk back" to him, confining your reply to two hundred words. We shall hope to publish some of these replies from time to time.—THE EDITOR.

In turning my desk upside down, I ran across certain Lincoln data from the lips of the late Senator Vorhees. Fifteen years ago I knew and liked the "Tall Sycamore," and put in many listening hours in his company. Boy and man he had been an intimate of Lincoln, and was in Congress when the other filled the White House.

One time and another, I heard many a Vorhees anecdote of Lincoln. Some of them, I take it, are worth printing here. True, they have no present political bearing, and it may be said that I'm hired to write of the present. What then? Apollo, as saith the wise man, can't always be bending his bow.

"Lincoln," remarked Senator Vorhees, upon a Press Club occasion, "was, as every one knows, lean and lathy. He stood six feet four inches tall, most of which was legs. Sitting down, Lincoln was no taller than the ordinary man. It was when he stood erect, and had the advantage of those long legs, that he towered. His weight was in the neighborhood of one hundred and eighty pounds, and his long, dangling, rake-handle arms were as strong as steel.

"You hear stories about Lincoln being awkward. I never thought he was. He stooped a little, and was long and angular, a man of many bony corners; but the awkwardness was all in his looks. In his movements he was quick, sure, graceful. Even when he crossed his spider-like legs, or threw one of them over the arm of his chair—a common trick—he did it with natural grace.

"When Lincoln was a young man," went on Senator Vorhees, "physical strength counted for as much as mental strength in fixing one's position in society. To be the strongest man, or the best wrestler, in the country, placed you upon a level with the best lawyer or the richest man in the county.

"The law circuit which Lincoln rode used to bring him over to my own home-town in Indiana, and I remember, as a boy, that he was pointed out to me as the best wrestler, not alone of a county, but of the whole broad, big state of Illinois. I'd go down to the tavern and gape at him as, chair tilted back against the wall, he sat on the tavern porch with the other lawyers waiting supper.

"Years later I spoke to him about it. 'That story about me being the best wrestler in Illinois,' he said, 'was exaggerated. There was one man at least who could throw me. He was "Dow" Thompson. I met him during the Black Hawk war, and we wrestled a match. Thompson was the strongest man I ever put my hands on. I myself had lifted eight hundred pounds with my bare hands, but he was a stronger man than I. He threw me twice. The second time my fellows, to the tune of one hundred, off with their coats, yelled "Foul!" and were for turning the thing into a free fight. Oh, they wouldn't have had it all their own way; there were full a hundred Thompson fellows, coats off, ready to meet them. As it was, however, I stilled the storm by assuring my partizans that, foul or no foul, they might take my word, Thompson could throw me whenever he pleased.

"'Speaking of wrestling,' Lincoln continued, 'as good a friend as I ever had I made by throwing him. That was Jack Armstrong. He lived about four miles out of New Salem, and was the leader of a rough-and-tumble band of young fellows called the "Clary's Grove Boys." I was clerking in Offutt's store, and they brought Jack into town to wrestle me. We wrestled three falls. I dusted his jacket every time. The Clary Grovers were for mobbing me, just as my fellows were for tearing into "Dow" Thompson; but Jack made them a speech, in which he said that I was the best man in the whole length and breadth of the Sangamon bottoms. To the day of his death, Jack Armstrong was among my best friends. I've stayed weeks on end at his cabin, living on hog and hominy, venison and mush and milk, rocking the baby's cradle while Hannah, Jack's wife, "foxed" my trousers or darned my socks. And, somehow, Vorhees,' Lincoln would conclude, his eyes a bit wet, 'even to this day I think more of the Jack Armstrongs and the Hannah Armstrongs than of any I've met since, we'll say, I've been worth meeting.'

"Wherever you went in those days," said Senator Vorhees, "you'd hear tales of the humor of Lincoln. He was a good lawyer, too, and successful. The first big fee he got was five hundred dollars, and the first thing he thought of in connection with it was to devote every dime of it to buying a quarter section of land as a home for his step-mother. Lincoln used to tell a story that reflected upon my own beloved Hoosier State. He had an old gentleman upon the witness-stand who didn't want to tell his age. After a great deal of coaxing and questioning, he declared that he was sixty years old. 'Come, come, Uncle Joe,' protested Lincoln, 'you know you are older than that.' The witness fidgeted and gulped, and at last returned in tones of half-innocent reproach, 'Oh, I see! You think I oughter count them ten years I put in over in Indiany.'

"Lincoln described to me his wardrobe as a boy. It consisted, he said, of a coonskin cap, a linsey-woolsey shirt, deerskin breeches—hair outside—and moccasins. Over this romantic costume he in cold weather drew on a deerskin hunting-shirt.

"When Lincoln rode circuit, the public generally was very jealous of anything that looked like style, or fashion, or aristocratic innovation. Also, in hot weather it was rulable for lawyers to remove their coats and waistcoats while in the court-room, the judge himself setting a shirt-sleeve example.

"Lincoln was trying a case against a pompous, grandiloquent lawyer. The latter, however, like the others, in the course of a blistering afternoon, got down to his shirt-sleeves. It was noticed that, departing from what was usual, the grandiloquent one's shirt opened in the back.

"Having but a shaky case, Lincoln seized, as it were, upon the shirt. 'Are we,' he thundered, 'to take the law of the land from one who knows so little of the law of apparel that he can't tell which side of his shirt should be in front?' The jury resented the shirt and Lincoln scored a victory.

"Lincoln," concluded Senator Vorhees, "was often pitched upon to settle disputes, bets and bickers of all kinds. Two young men got into an argument as to how long should be the human leg to be proportionate to the human height. They brought the question to Lincoln. He listened with the gravity of an owl. Each disputant stated his position and advanced his reasons. Then looked anxiously at Lincoln.

"'Boys,' said that Solomon, 'I'm glad you've brought this to me. This dispute has vexed the ages. Blood has been shed over it; blood, unless it is settled, will be shed over it again. For once and all the business should be determined. I give it as my finding then, that whatever the height of the man, the human leg should be of that precise length necessary to reach easily and without effort from the man's body to the ground.'"

* * *

This is war talk. I met Mr. Niles of Honolulu. Mr. Niles dilated upon the military work being done by the government in and about the Sandwich Islands. At Diamond Head there are already five forty-five-ton mortar batteries. Long-range rifles are being installed at Pearl Harbor, Honolulu and Hahuku. Pearl Harbor and the bay of Honolulu are being dredged at an expense of millions. The fortifications about Honolulu, now in progress, are to cost eight million dollars, and those at Pearl Harbor will eat up a like sum. When completed, the forts and other defenses in the Sandwich Islands will be the strongest in the world. War prophets and soothsayers of carnage declare that the great battle of the century will be fought in the Sandwich Islands and the blue waters thereabouts.

* * *

Speaking of war, those dread sisters, the suffragettes, are preparing for a December swoop. Near the Capitol, at No. 18 B Street, northwest, the suffragettes have made unto themselves a nest. The building is called the "Bebel," and upon the principle of idem sonans is held to be well named.

The Bebel suffragettes plan ferocious descents upon House and Senate, and even upon the White House itself. There will be stirring times. They have a flag with four stars. The stars stand for Colorado, Idaho, Utah, Wyoming—the four states where women vote, and nothing unusual in the way either of good or ill results therefrom. True, the men of those four commonwealths do seem a little bit more reticent, and the women a little bit more heroic than in the states next door.

When Mr. Taft went up B Street to his inauguration, our suffragettes shook that four-starred flag at him. He waved his hand. Poor man, he saw not the fierce faces in the windows. He guessed not what he saluted. Later he shall learn, and learning, tremble like a quaking custard.

The suffragettes in their Bebel aery say that they intend following those violent tactics which distinguished their intrepid sisters in England and caused several of them to go to jail. Well, to every day its danger, to every dog its flea! Only it is sadly trying, when those who were born angels, and might have lived and died angels, prefer of deliberate and meditated plan to become public terrors in their old age.

* * *

Mr. Taft announced that he would see newspaper-men only when he sent for them. Mr. Roosevelt saw them every day, saw them twenty at a clatter and talked to them all at once. Mr. Taft says he is unequal to this. He will let the newspaper people know when he wants them. To be sure, they will still have the right under the constitution to decline to come. Many of the newspaper-folk are murmuring, for they cannot get used to this lack of White House warmth. But Mr. Taft is firm. He declares that they "must adjust themselves to new conditions." It is extremely difficult to "adjust" a newspaper-man. The query is going about: Was that campaign smile, which delighted some, but wearied others, on the level?

* * *

There is nothing like enthusiasm and taking hold with energy. Mr. Taylor of Colorado is one of our new House members. Plainly, he was elected to Congress when his district was thinking of other things. Mr. Roosevelt on some unbelted occasion said, "Colorado is the playground of the nation." It isn't, but it sounded well to say so.

The Roosevelt utterance greatly affected Mr. Taylor. Led or misled by it, Mr. Taylor introduced a bill to appropriate two hundred and fifty thousand dollars for a summer cottage at Glenwood Springs for the hot-weather occupation of our presidents. That enterprise launched, and the appropriation fever growing upon him, Mr. Taylor, in rapid succession, introduced bills to build monuments over dead presidents at an expense not to exceed three hundred thousand dollars; to build a monument over the grave of General Denver; to establish an agricultural station in his district; and last, yet not least, to build there a post-office and a land-office building, besides quarters for the forestry service. Mr. Taylor declares his belief that he will pass all these measures at the regular December session. Nota bene: Mr. Taylor in that belief stands as lone as Lot's wife.

* * *

From a gentleman named Norris, who dwells in old Geauga, I got a letter asking about the "lobbies." For the most part the lobbies are on the very floor of House and Senate. In the old, clumsy, buccaneering days of Sam Ward, the lobbyist was on the outside and worked from the corridor. Now he is a member and works from the floor.

Such rich influences as beer, steel, sugar, hides, lumber, cotton and wool have still their outside men. However, each has also its Oliver Twist in Congress itself to do its bidding. I do not know the personal interests of these divers Oliver Twists who represent the great trusts, or what is to be their share of the swag. Perhaps they only hope for reëlection, and do the mean work of the "interests" to help themselves at home. Any one acquainted with the make-up of Senate and House could give the names of full threescore. They do not represent the people, are not thinking of the country. They stand solely for the big, "protected" rogues, who, to serve their rascal turns and fill their rascal pockets, have put them where they are. In these days of advancement, a great Captain Kidd of industry would no more be without his private congressman than without his private secretary. Has the world already forgotten certain statesmen and that little, dingy stub of evil, Mr. Archbold?

Mrs. Warington's Habit

By Nellie Cravey Gillmore

Illustrated by H. H. Leonard

The telephone-bell jangled an imperative summons at Mrs. Warington's elbow. With a little frown she picked up the receiver and applied it to her ear. Would those Beresfords never stop ringing her up about their chickens in her garden? She would much rather lose every turnip and radish than be bothered out of her wits. This was the third time to-day. But instead of Mrs. Beresford's piping voice, it was Warington's cheerful bass that responded to her somewhat petulant "Hello."

"I've a little surprise in store for you, Kit," he said. "A boy came by a while ago with some quail and canvasback. I got a dozen of the quail, fine ones they are, too, and told him to leave them at the house."

"Quail? Dear me, Tom! They must have cost a lot at this season of the year. Of course, it was awfully good of you to remember, only I half wish you'd consulted me first; the duck would have been so much nicer. Anyhow, it doesn't particularly matter. Good-by."

As Warington's careless "So long" floated to her over the wire, she hung up the receiver and started out to the kitchen.

The quail had already arrived, and Sarah was industriously singeing the pin-feathers from their plump little bodies over a freshly-kindled fire. "They're the prettiest I've seen this year, Miss Kate," she said pridefully, "and the toast is a regular golden brown."

A little pucker developed slowly between Mrs. Warington's pretty brown eyes as she interrupted, "But I wanted them put into a pie, Sarah. You might save the toast for tea."

A disappointed look swept over the maid's homely face. When had her mistress ever ordered her game cooked that way? And she had taken such pains with the toast! But she set to work without a word making up the pastry. At one o'clock Mrs. Warington went out among her flowers to gather a few of the blossoms for the luncheon-table.

As she started across the lawn on her quest, the front gate clanged and Gertrude ran over the grass to meet her. "We got out early to-day, mama, those of us who finished our exams. I am not sure about history, but I know I'm perfect in arithmetic." And she stood on tiptoe to receive her mother's kiss.

"That is just lovely, pet, but I wish you would give more attention to your other studies. Arithmetic is the least important of all, for a girl."

A hurt look made its transient passage across the little girl's flushed face, but she resolutely crushed it down and babbled on merrily of her school work and companions until Mrs. Warington sent her up-stairs to change that "horrid red hair-ribbon" for something less offensive.

Promptly at two Warington came home to luncheon. According to custom, he immediately hunted up his wife and found her arranging a bowl of sweet peas on the hall table. For an instant before he spoke he stood watching her with the glowing, prideful eyes of possession. And indeed Katherine Warington was well worth looking at and being proud of; a woman just verging on thirty, with masses of shining chestnut hair crowning an exquisitely-poised head; skin soft and pink; deep brown eyes, dreamy or sparkling as the mood dictated, and a figure straight and slim as a young sapling.

"Kit!"

She looked up with a start, blushing girlishly under the look of admiration her husband bent upon her.

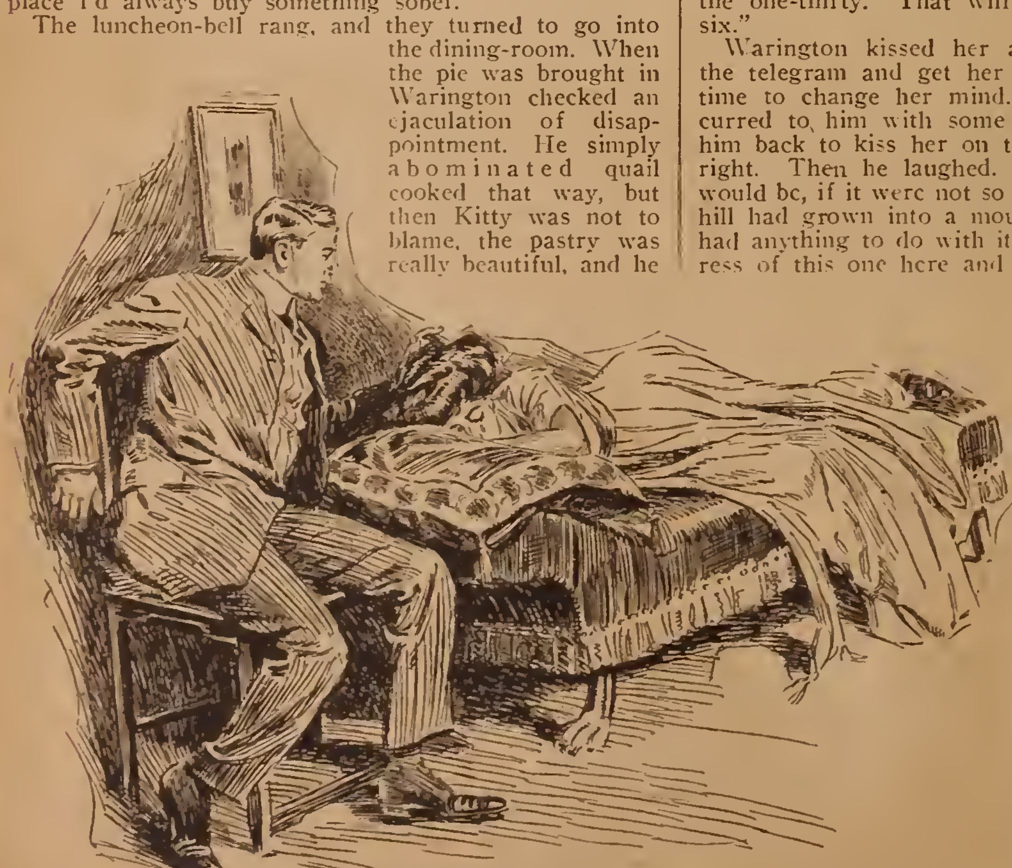
"That gown is a beauty, sweetheart. Where did you get it?" he asked as he came up to her and put an arm about her and kissed her.

Mrs. Warington gave a little discontented laugh. "I've had the old thing a year, Tom. I always liked the pattern right well, but if it had just been pink instead of blue!"

"And how do you like my new tie?"

"Oh, Tom! It is a pretty color, but if I were in your place I'd always buy something sober."

The luncheon-bell rang, and they turned to go into the dining-room. When the pie was brought in Warington checked an ejaculation of disappointment. He simply abominated quail cooked that way, but then Kitty was not to blame, the pastry was really beautiful, and he said pleasantly, "How good it looks. Sarah is a gem."



"'Nothing else matters—now that—you—you've ceased—to—to—care—'"

Mrs. Warington smiled appreciatively. What a dear fellow he was, and she already regretted that she had not recollected his particular fondness for the quail on toast. But he seemed to enjoy it, and the meal passed off agreeably. Afterward, they went out on the veranda for their customary chat.

"By the way, Kit," he said, as he rose to go back to the office, "I have tickets for 'Lucia' to-night. I thought you'd enjoy going."

"But isn't the Reindeer Musical Company at the Orpheum? Try to change them, dear. I feel in the mood only for something light."

"Very well; I'll do what I can." And he left her standing on the steps as he hurried down the avenue to catch a car. Optimistic as he had always been and doubtless would continue to be, in the main, Warington could not divest himself of a nagging sense of annoyance at his wife's habit of continually objecting to things. When he first became conscious of it, he had tried to pass it over by falling in with her suggestions or to circumvent her dissatisfaction by "pouring oil" upon it. Never in a single instance had he done aught to establish the habit by an antagonistic course. But things had gotten to a crisis. Something must be done, both for her sake and her family's. He came to the conclusion with abrupt determination.

In every other way, he reflected, Kate was not to be improved upon. She was industrious, capable, tactful; a good housekeeper, a delightful companion and a charming woman. If she could just be educated out of her "habit," a habit that had been acquired probably during the long spell of illness when Gertrude was a baby. At least it was then that he first began to notice it. Something must be done. Several solutions flashed into Warington's mind, only to be rejected instantly. When he reached the office, he found a letter from Myrtle Woodridge begging him to send Kitty up for a visit. Was this providential? The thought leapt into Warington's brain that possibly herein lay the answer to the puzzle. Perhaps, after all, it was a change that she needed. When he began to look back, it occurred to him with something like a shock that she had never been off on a vacation since their honeymoon! There was nothing so wearing or so narrowing as monotony, and he would make her go.

Exhilarated over his plan, Warington hurried home as early as possible to dinner. His wife protested at first, but finally, after a lot of persuasion, she consented to go.

Gertrude was to stay with her grandmother, and the maid Sarah was to take her trip while Mrs. Warington was away.

When his wife said she would go, Warington could have hugged himself, he was so delighted, but he managed to appear very matter-of-fact as he said, "I'll go right down and arrange about your transportation. I think you'd better take the ten o'clock train."

"I know that's the best, dear. But I believe I prefer the one-thirty. That will put me in Beech-haven by six."

Warington kissed her and hastened away to send the telegram and get her ticket before she could find time to change her mind. On the way down it occurred to him with some relief that she did not call him back to kiss her on the left cheek instead of the right. Then he laughed. How absurd it all was, or would be, if it were not so nearly tragic. Many a molehill had grown into a mountain. But if determination had anything to do with it, he meant to stop the progress of this one here and now!

The next day Mrs. Warington boarded the train for Beech-haven, and Warington watched the last coach disappear around the curve with a sensation akin to triumph. The first step had been taken.

A week after her arrival, Mrs. Warington wrote:

Dear Tom:—

I am having a simply charming time. Every one is lovely to me and the days fly fast. We bathe in the surf every morning and afternoon, and go motoring on the beach between times.

Myrtle is a beautiful hostess and her children are little dears. Gertie writes encouraging letters of her school work and seems very contented at mother's. I'm so glad I came! Keep me advised about everything, and don't work too hard during this hot weather. I was, of course, delighted to hear of your promotion; I knew it would be bound to come in time.

Myrtle sends kindest regards and a kiss for Gertie.

Lovingly, Kit.

Warington's heart leapt within him. It was the first time in years she had said so much without a single objection. He was beginning to feel rejuvenated over the success of his little scheme, when his eyes dropped to the inevitable postscript below her signature:

I am sorry you bought that expensive parasol and put it in with the dresses. Not that it wasn't just dear of you to think of me, but when one is going to invest twenty dollars in a sunshade, it is too bad not to get just the right thing. I should have liked a pearl handle so much better than the gold. But as it is too late to change it now, we'll let it pass. K.

Let it pass! Warington crumpled his wife's letter into a ball and tossed it in the trash-basket. His temper, long suppressed, was up in full flame. He would not endure the tyranny of her discontent another day. Diplomacy to the winds! He would try something salutary. But what?

For an hour he sat immersed in painful thought. Then, like a streak of light flashing athwart a leaden sky, an inspiration was born to his harassed brain. Seizing a pen from the rack, he dashed down the following:

Dearest Kit:—

Delighted you are having such a good time. Stay as long as you like and draw on me for any amount you see fit. You don't often have a vacation, and I want this to be a famous one.

Gertie and I are getting along splendidly, and I shall be certain to keep you posted.

The kid enjoys your letters immensely, but just between you and me, I should like it better if you didn't write so often. I am afraid it makes her homesick for you, hearing from you too much. And, by the by, she asked me to tell you that the green organdie fitted her exactly, but she was a good deal disappointed that it was not pink.

Devotedly, Tom.

P. S.—Your photographs came home from Trimbler's to-day, and they are beauties. But don't you think it would have been better if you had worn a high-neck dress? I don't care much for the décolleté. T.

Warington laughed to himself over his little maneuver. Would it, like all the rest, fail? He waited exactly six days for an answer. And a very stiff little note it was when it came. But it contained not a single "if" or "but." Following it was a wire stating that she would be home Saturday.

Warington and Gertrude met her at the train. And as she stepped down on the platform in her new, exquisitely-fitting tailor-made gown, her husband thought that he had never seen her appearing to better advantage. It was on his tongue's end to tell her so, when he remembered his resolution and checked himself sharply.

"Had a good time, Kit?" he asked her as they whirled home in the runabout.

"Splendid. Don't I show it?" she asked eagerly.

"You surely are a bit stouter and rosier, but—"

"But what?"

"I don't know, but I think the spirituelle type becomes you better."

Mrs. Warington bit her lip, but said nothing. In a moment she changed the subject.

That night Warington found fault with the corn-colored silk gown she wore at dinner, and at breakfast the following morning he complained that the coffee had a peculiar flavor and that the rolls would have tasted better if they had been oblong instead of round.

Mrs. Warington listened with downcast eyes and trembling lips.

And so a week passed, during which time it was borne almost unconsciously to Mrs. Warington that in some way she was the cause of it all. Her husband had grown absurdly critical, where formerly he had been so easy to please. Perhaps he no longer cared for her! Perhaps she had bored him with her very

[CONCLUDED ON PAGE 19]

The Household Department

Good to Remember

To clean piano-keys, rub over with alcohol.

Spirits of camphor and ammonia will remove white spots from furniture.

If you wish to prevent baked apples from looking wrinkled and wizened when cool, try this method of cooking them: Boil the apples until they are full enough to crack, and then put them in the oven and bake them. They will remain round and smooth and will be far more tender and juicy.

If in a hurry and the tin tip pulls off your shoe-lace, take a needleful of black thread and sew through and through the end of the lace, wrapping thread around the lace after each stitch and sewing it for an inch from the tip. Fasten thread, and cut off frayed ends. Your lace will be stiff and good as new.

If your jelly refuses to jell, after several days in the sun, don't boil it over, for that usually gives it a strong flavor. Simply set it aside for awhile until apples are plentiful; then add one part apple-juice and one of sugar to two parts of jelly, and cook as for apple-jelly; when you will find that you have saved the "spoiled" jelly, and with no impairment of its original flavor; the apples lending solidity, but not flavor.

Carrots in Many Ways

Creamed Carrots—Scrape and wash the carrots, cut in thin slices crosswise; boil in salted water until tender, drain off the water, cover with sweet milk, add salt to taste, and a small piece of butter. Thicken with a spoonful of flour to the consistency of good cream.

Carrot Croquettes—Boil four large carrots until tender; drain, and rub through a sieve, add one cupful of thick white sauce, mix well, and season to taste. When cold, shape into croquettes, and fry same as other croquettes.

Carrot Soup—One quart of thinly-sliced carrots, one head of celery, three [illegible] four quarts of water, boil for two and rice, and [illegible] add one half cupful of son with salt and [illegible] longer; season with salt and [illegible] cupful of cream. [illegible]mall

Carrot Pie—Scrape and boil the carrots until very tender; then mash thoroughly, and to one cupful of carrot add one pint of milk, one half teaspoonful each of salt, cinnamon and ginger, one well-beaten egg, sugar to sweeten to taste. Bake slowly in one crust like squash pie.

Carrot Preserve—Boil the carrots until tender; peel and slice them, and to each pound add one pound of granulated sugar and one half cupful of water; flavor with lemon. Simmer slowly until rich and thick, then seal.

Carrot Marmalade—Boil the carrots until perfectly tender; then mash to a fine, smooth pulp, and to each pound allow one pound of sugar, six almonds, the grated rind of one lemon and the juice of two, and a few drops of almond flavoring. Bring to a boil gradually, and let boil, stirring constantly for five minutes; then pour into jars and seal.

To Pick and Pack Apples

How to pick and pack apples without bruising them is a question that we can solve for you. This simple little bag is the answer, and it is a very, very easy bag to make.

Take the handle and rim off a grape or market basket. Tack the top opening of a grain or gunny sack securely around the rim. Cut the bottom out of the sack and turn up a flap. Then make a buttonhole in the flap and sew a strong button well up on the side of the sack. Be careful to see that the flap turns up far enough to close the opening in the bottom—say half way up the bag. Pick apples, pears, etc., and put in this receptacle, being careful not to bruise the fruit. When the bag is full let it down in your barrel (or box) in which you are packing the fruit, unbutton the flap, and pull gently outward. This lets the fruit into the barrel and avoids bruising. It's an easy process, too.

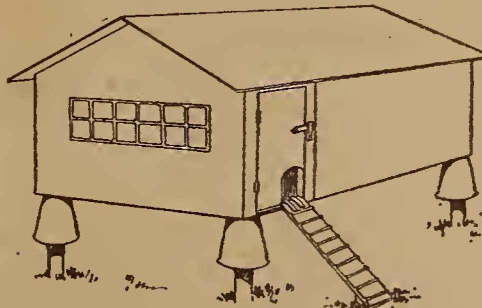
Tempting Corn Recipes

Corn Soup—Grate corn from three large ears. Boil the cobs in three quarts of water, take out the cobs and put in the corn. Boil for fifteen minutes; thicken with two tablespoonfuls of butter, one of flour, one cupful of cream and the well-beaten yolks of two eggs. Cook a few minutes, season, and serve. Milk instead of cream may be used and less water.

Corn With Beans—Cut and cook equal parts of corn and string beans. The beans should be cut very fine. Place in alternate layers, seasoned, in baking-dish, pour in one half cupful of milk and add bits of butter on top. Bake half an hour. Serve hot.

Scalloped Corn—Cut corn from the cob, put a layer in a buttered baking-dish, sprinkle with salt and bits of butter. Add a thin layer of cracker-crumbs; cover this with boiled, chopped and seasoned potatoes, another layer of corn, sprinkle with salt, add butter, one cupful of milk. Cover closely, and bake one hour.

Corn Patties—Two tablespoonfuls of flour to a pint of corn-pulp, two well-beaten eggs, with salt and pepper to taste. Mix well with a very little milk to a batter, drop in hot fat, and fry, or pour into buttered patty-pans, and bake.



Rat-Proof Chicken-House

Perhaps you all know it, but if you do not, here is a suggestion for making a chicken-house absolutely rat-proof.

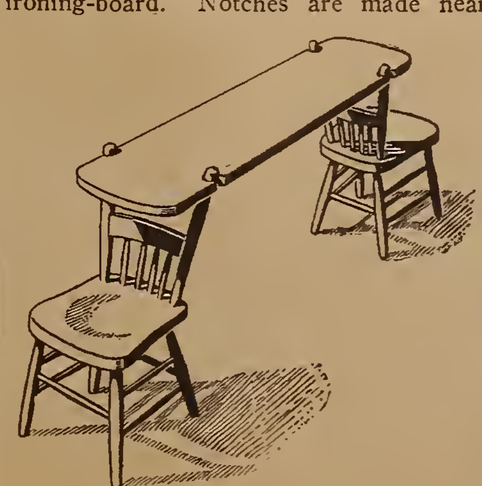
It is about eighteen inches above the ground, and on each of the four posts there is an inverted milk-pail. The house is then built right on the milk-[illegible]. The rats climbing the posts find They are [illegible] gnaw through the pails. ground. The board [illegible] back to the is on hinges and is pulled up at [illegible] door is absolutely impossible for rats to [illegible] into such a chicken-house.

Concerning Jelly-Bags

Never use soap when washing jelly-bags, strainers or pudding-bags, as it is almost sure to impart an objectionable taste to the foods passed through these articles. They should be thoroughly washed in quite hot water and a little baking-soda or borax as soon as used, before anything has had time to dry on them, then well rinsed in two or three clear warm waters, and dried in the air.

Improved Ironing-Board

An open space underneath the ironing-board is absolutely necessary when ironing skirts and shirts, but many times it is difficult to know just where and how to place the board so that it will be convenient. The illustration shows an ingenious way of making a rest for the ironing-board. Notches are made near



the ends to allow the tops of two chairs to pass through, while a clothes-basket or some heavy object may be placed on one of the chairs to steady it. All the tools that are needed to make the notches are saw, plane and square.

Jellies for Garnishing

Jellies make the prettiest of all garnishes for sweet dishes. A few glasses of each desirable variety should be in every store-room, no matter how modestly its shelves must be filled. Sparkling red currant-jelly is perhaps the handsomest of all for garnishing, but its flavor is much improved if three quarts of raspberries are added to one quart of currants when making the jelly. The resulting color will be darker than that of the currants alone, but will still be a beautiful, rich ruby.

Cranberries make another handsome ruby jelly, but lack the delicious flavor of summer fruits. For a beautiful, clear, light-colored jelly use two parts of apples to one of red rhubarb. A very delicious and pretty pinkish amber is procured by using Baldwin apples. Crab-apples make a delicate and handsome rich amber jelly, and if properly made should be clear and sparkling. For both crab-apple and Baldwin-apple jelly a small rose-geranium leaf placed in the bottom of the jelly-glass will add a delightful flavor.

For a tart, appetizing, amber jelly use grapes that are decidedly green. If a few rich purple grapes are added to green ones a beautiful claret color will result. Plums make a rich, dark purple jelly, and cherries make a handsome, dark ruby. Quince-jelly is a very dark red, quite as delicious as it is handsome, but its flavor is generally preferred when made with one part of apples to two of quinces. Mary Foster Snider.

Breakfast Coffee-Cake

One cupful of flour, one half cupful of sugar, three level teaspoonfuls of baking-powder, a small pinch of salt and a sprinkling of cinnamon sifted together twice. Beat into this one egg, four tablespoonfuls of melted butter and one half cupful of sweet milk. Pour into a shallow pan, sprinkle with sugar and cinnamon, bake in a quick oven, and serve warm for breakfast.

Potato Drop Cakes

Pare, wash and grate six large potatoes. Press out the water, add three well-beaten eggs, a heaping teaspoonful of flour and salt to taste. Beat well, and drop by spoonfuls into hot fat. Cook to a delicate brown.

Sweet-Potato Puff

Into two cupfuls of mashed sweet potato beat one teaspoonful of melted Salt to [illegible]cupful of milk and two eggs. a greased baking-dish. [illegible] and turn into brown. [illegible]lden

Delicious Nut Bread

One egg, one half cupful of sugar and one cupful of sweet milk. Put these together in a mixing-bowl and beat thoroughly, then add four cupfuls of flour, to which four level teaspoonfuls of baking-powder have been added and sifted, and one teacupful of peanut or walnut meats which have been put through the food-grinder. Beat well, and pour into a well-buttered baking-dish, such as is used to bake a long loaf of bread. Let rise twenty-five minutes, then bake. For breakfast with hot coffee this bread is especially appetizing, and the children are sure to like it for their school lunch.

Corn-Scraper

This little device will scrape corn, cooked or raw, equally well. It cuts the kernels right out and leaves the hulls on the cob. This makes corn cakes and puddings delicious and most easily digested. If you once try this scraper, you will never be without one. Take a piece of lath or similar wood, cut a piece about seven inches long, and shape like the accompanying drawing. Then in the larger end drive through double-pointed tacks, the kind used in laying straw matting. Use seven to ten tacks. If you haven't got this kind of tacks, the galvanized common carpet-tack will do, but use more of them. Drive through till the head of the tack is flush with the wood. This leaves the ends on the other side like a comb, and that is the scraper. It will last for years and costs so little that any one can have one. If there is no man in the house, make one yourself. It is very easy.

A DELICIOUS DRINK

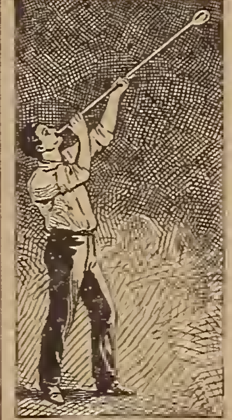
Baker's Cocoa

made by a scientific blending of the best tropical fruit. It is a perfect food, highly nourishing and easily digested.

52 HIGHEST AWARDS

Walter Baker & Co. Ltd.

Established 1780 Dorchester, Mass.



Half the money spent for chimneys would be saved if everybody bought Macbeth "Pearl Glass" lamp-chimneys.

Because Macbeth lamp-chimneys *never break from heat*—they *will melt first.*

Then they're handsome—clear—crystalline—and give a lamp a well-bred look.

Unless my name is on a lamp-chimney it is *not* a Macbeth.

I have a book which tells which chimney to get for any burner made. It is free. Address

Macbeth, Pittsburgh.

MEN WANTED

1200 men average $6.92 profit per day

Selling "WEAR-EVER" Aluminum Specialties

Half of these men had no previous experience. Work made pleasant by our 175 page Instruction [illegible] door canvassing. Let us show

The Aluminum Cooking Utensil Co., [illegible]

Opportunity knocks but don't expect the door to be kicked in.

KNOW NOW

And Will Never Forget the Experience

The coffee drinker who has suffered and then been completely relieved by changing from coffee to Postum knows something valuable.

He or she has no doubt about it. A California lady says:-

"I learned the truth about coffee in a peculiar way. My husband who has for years been of a very bilious temperament decided to leave off coffee and give Postum a trial and as I did not want the trouble of making two beverages for meals I concluded to try Postum, too, and the results have been that while my husband has been greatly benefited, I have myself received even greater benefit.

"When I began to drink Postum I was thin in flesh and very nervous. Now I actually weigh 16 pounds more than I did at that time and I am stronger physically and in my nerves, while husband is free from all his ails.

"We have learned our little lesson about coffee and we know something about Postum, too, for we have used Postum now steadily for the last three years and we shall always continue to do so.

"We have no more use for coffee—the drug drink. We prefer Postum and health."

Look in pkgs. for the famous little book, "The Road to Wellville." "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

Wearable Clothes

THAT is what you will find illustrated in the new Fall Catalogue of Madison Square Patterns, which is just ready for distribution.

It shows all the best of the new fashions for fall and winter—French ideas, many of them, but all modified to suit the needs of the American woman.

This new Catalogue is an authority on fashion—a 32-page style book vitally important to every woman.

It is more profusely illustrated than ever before. Many of the fashion drawings, especially those in color, are as charming as pictures as they are useful as fashions. There are a number of interesting articles about the new trimmings, fabrics and dress accessories. In fact, the catalogue brings the big fashion establishments of Paris and New York right to your own door.

We will send this catalogue to your address if you inclose with your order ten cents in stamps.

Address Pattern Department

FARM AND FIRESIDE

11 East 24th Street, New York City

THE DOCTOR'S WIFE

Agree's With Him About Food

A trained nurse says: "In the practice of my profession I have found so many points in favor of Grape-Nuts food that I unhesitatingly recommend it to all my patients.

"It is delicate and pleasing to the palate (an essential in food for the sick) and can be adapted to all ages, being softened with milk or cream for babies or the aged when deficiency of teeth renders mastication impossible. For fever patients or those on liquid diet I find 'Grape-Nuts and albumen water very nourishing and refreshing.'

"This recipe is my own idea and is made as follows: Soak a teaspoonful of Grape-Nuts in a glass of water for an hour, strain and serve with the beaten white of an egg and a spoonful of fruit juice for flavouring. This affords a great deal of nourishment that even the weakest stomach can assimilate without any distress.

"My husband is a physician and he uses Grape-Nuts himself and orders it many times for his patients.

"Personally I regard a dish of Grape-Nuts with fresh or stewed fruit as the ideal breakfast for anyone—well or sick."

In any case of stomach trouble, nervous prostration or brain fag, a 10 day trial of Grape-Nuts will work wonders toward nourishing and rebuilding and in this way ending the trouble.

"There's a Reason," and trial proves. Look in pkgs. for the famous little book, "The Road to Wellville."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

THAT the sleeve stamps the gown old or new is a familiar fact to every woman, and every woman knows all about her own individual trials with the constantly changing fashions in sleeves, for she hardly gets accustomed to the style of the sleeve of the moment, when it suddenly isn't the style any more. This season the sleeve question is one to watch very carefully, for the form of the sleeve is rapidly changing and new ideas are many.

The long sleeve is still with us. Many sleeves in seven-eighths length are being used with undersleeves of lace or chiffon. Bishop sleeves will be the height of fashion and will be often trimmed with bands forming the sleeves into puffs. In all the first autumn waists the sleeves will be long. The conventional shirt-sleeve, close of outline and finished with a narrow link cuff, will be used as it has been for so long for the strictly tailored waists. For the costume waists a more elaborate sleeve will be used, and later in the season there is a big chance that this sleeve will show a small puff either at the elbow or wrist.

No. 1371—Princess With Plaited Flounce

Pattern cut for 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, nine and one fourth yards of thirty-six-inch material, or seven and one half yards of forty-four-inch material, with three eighths of a yard of all-over lace for yoke and collar

Back View of No. 1371

This dress would look well developed in cashmere, serge, cheviot or any of the medium-weight woolen materials. It is a comfortable one-piece affair, fitted to the figure by small dart tucks. The tiny, round yoke, to be effective, should be made of some white material, such as net, batiste or lawn

No. 1340—Empire Kimono

Pattern cut for 32, 36 and 40 inch bust measures

No. 1374—Tucked Waist With or Without Yoke

Pattern cut for 32, 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, four and one eighth yards of twenty-four-inch material, or two and one half yards of thirty-six-inch material, with one half yard of all-over lace for trimming

MADISON SQUARE PATTERNS

For every design illustrated on this page we will furnish a pattern for ten cents. The Madison Square Patterns are very simple to use. Full descriptions and directions come with the pattern, as to the number of yards of material required and how to cut, fit and put the garment together. The pattern envelope shows a picture of the garment. All of the pieces of the pattern are lettered, so that even if the collar in the pattern should look like the cuff, there is no possible way of mistaking one for the other, for each bears its own letter identifying it.

Send orders to the Pattern Department, FARM AND FIRESIDE, 11 East 24th Street, New York City. When ordering, be sure to comply with the following directions: For ladies' waists, give bust measure in inches; for skirt, give waist measure in inches; for misses and children, give age. Be sure to mention the number of the pattern you desire. Satisfaction guaranteed.

A distinctive feature of the Madison Square Patterns is the originality of their designs. They are always up to the moment in style and yet they are never extreme.

Back View of No. 1363

Copyright, 1909, by The

FALL CLOTHES

No. 1372—Bib Waist With Cap Sleeves

Pattern cut for 32, 34, 36 and 38 inch bust measures. Quantity of material required for medium size, or 36 inch bust, two and one fourth yards of thirty-six-inch material, or one and one fourth yards of fifty-four-inch material, with two and one fourth yards of all-over lace for yoke and sleeves

No. 1373—Modified Moyen Age Skirt

Pattern cut for 22, 24, 26 and 28 inch waist measures. Length of skirt in front, 43 inches; sweep at back. Quantity of material required for medium size, or 26 inch waist, five and one half yards of thirty-six-inch material, or three yards of fifty-four-inch material

This design shows an attractive little bib waist with cap sleeves and a modified Moyen Age skirt. There is just enough fullness in the skirt to make it graceful.

With the advent of the more voluminous models comes the demand for soft and supple materials, and for this model nothing could be prettier than chiffon cloth or fine voile, although the design readily lends itself to a material of a rougher character.

The new pressed hat shapes for the autumn and winter are fascinating. They are very often made of fine French felt, unusually satiny and smooth, and they are shown in all the loveliest of the new shades—somber grays and light ones, sometimes with a brown cast, and then again with a faint shadow effect of green or blue, a brownish bronze tone called rhubarb, and a number of entirely new shades of green which are termed aeroplane. These greens are on the grayish order; in fact, they contain about as much gray as green. They are not far removed from the lichen greens and promise to be among the most fashionable of the art millinery tones of the season. Then there are a number of soft reddish and bluish mauve tints which put one in mind of mulberries.

Now that contrasting facings are all the vogue, there is no reason why any woman should have an unbecoming hat, for she may have her hat of any of the dull, faded tones of gray or brown or mauve to match her costume, and yet introduce in the facing some particular shade that will help to make her look her best.

This smart tailored hat is of soft felt rolled slightly at the side, with a brown velvet bow and a turkey-feather in shades of brown and cream as the trimming

As to trimmings, much thought is given to feather novelties. Wings of all kinds, large and broad ones especially, are making their début on dress, as well as on the more simple hats. Sometimes they are so large that they are almost overpowering, but in all cases they are beautiful in coloring, combining three or more tones of one color or several exquisitely blended contrasting tones. Quills are used in many clever ways. The wide satiny ones are sometimes covered with dots or streaky shadow stripes.

No. 1250—Girl's Underwaist and Petticoat

Pattern cut for 2, 4, 6, 8 and 10 year sizes. Quantity of material required for medium size, or 6 years, one and three fourths yards of thirty-six-inch material, with two yards of edging for the waist and three yards of embroidery for the ruffle. Eyelet embroidery makes a pretty finish for the petticoat

No. 1363—Coat-Dress

Pattern cut for 34, 36, 38 and 40 inch bust measures. Quantity of material required for medium size, or 36 inch bust, eleven and one half yards of twenty-four-inch material, or eight yards of thirty-six-inch material, with one half yard of contrasting material for the trimming

Crowell Publishing Company

THE NEW AUTUMN STYLE BOOK

Are you accustomed to see the style book of the Madison Square Patterns? If you are, of course you realize its value to you in making your own clothes. The new style book, better and bigger and more attractive in every way, is just out. Be sure to send your order for it. Inclose ten cents in stamps, and address your letter to the Pattern Department, Farm and Fireside, 11 East 24th Street, New York City.

This style book will make you familiar with all that is newest in the fall and winter fashions. It will tell you all about clothes for the little folks as well as the grown-ups. It costs a few cents more than the one we last issued, but it is well worth it.

Here is our latest liberal offer: We will give one Madison Square Pattern for sending two yearly subscriptions to Farm and Fireside at the regular price of thirty-five cents each. Your own subscription may be one of the two. When ordering, write your name and address distinctly. We will send Farm and Fireside one year, new or renewal, and any one pattern for only forty cents.

THE LATEST
FAD
Jig-Saw Puzzles
Without Cost to You

Every One Wants Them

Everywhere throughout the country, they are having Jig-Saw Puzzles, and every one is fascinated, trying to get the puzzle done first. If you actually had this puzzle to try, you would not be satisfied until you had one for your own.

A Jig-Saw Puzzle Half Completed

This illustration shows a picture very nearly finished. The hardest part is to get started on it.

It Will Amuse the Whole Family

You will hardly be able to wait for your turn to put the puzzle together. The whole family will want to work at it at the same time. There will be a scramble from the dinner table to see who will get the Jig-Saw first.

How to Get the Jig-Saw Puzzle

We will send you this intensely interesting Jig-Saw Puzzle without cost, and Farm and Fireside for three months, if you will send us five two-cent stamps, together with your name and address on the coupon below. This is surely an extra fine chance to get the **leading farm and family paper** of the country for three months and this great Jig-Saw Puzzle at the small cost of only five two-cent stamps.

For Yourself or a Friend

You can have your own subscription sent **three months longer** if you are a subscriber now, or **you can have Farm and Fireside sent to some friend who can make use of its valuable information and enjoy its pleasant stories.** Tear off this coupon now while you are interested, and attend to it at once.

Very truly yours,

FARM AND FIRESIDE
SPRINGFIELD, - - - - OHIO

TEAR OFF HERE

Farm and Fireside,
Springfield, Ohio

Gentlemen:—Please send me at once the Jig-Saw Puzzle and Farm and Fireside for three months, for which I inclose ten cents (stamps or silver) to prepay the cost of postage.

My Name is ....

My Address is ....

....

Friends in Canada should include five cents extra postage. F. & F. 9-25-09.

The Young Folks' Department

Little Doris in Quest of a Friend

By Carroll Watson Rankin

The Parkmans were the very newest tenants in the Bayswater Flats. They had lived there just three days. To eleven-year-old Doris it seemed strange to live in a great big building that fairly swarmed with children without knowing a single one. In Doris' native town one knew everybody else.

"But here," said Doris, plaintively, "a body doesn't even know herself. I think I've shrunk, and I feel," here dangling recklessly over the window-sill, "just as if I were up in a balloon all the time; and I do want somebody besides grown-ups and babies to play with. It isn't very cold. Can't I go out, Mumsey, and hunt for a friend? I must have a friend."

"It can't be any worse," sighed tired Mrs. Parkman, "to have you down on the sidewalk than it is to have to sit here and hold you in by one ankle. And you certainly do need a friend. But Doris, you mustn't go beyond the corner."

"Bye," floated back from the hallway, where Doris was struggling into her jacket as she fled toward the stairs. "I'll be good, Mumsey."

Doris halted and stood in the most secluded corner of the doorway. It was rather a cold day, but the noisy children in the street seemed not to mind that. Doris tried to count them.

"But surely among so many children," said Doris, hopefully, "there ought to be at least one friend."

The little girl looked earnestly at each child that flashed past the doorway, to see which was worthiest of her friendship. One small person in large red mittens looked promising until she turned around and showed a face that was very far from clean. Another red-mittened child looked neat enough, but her voice was so sharp and disagreeable that Doris was thankful not to know her. A pretty little maid in a blue sailor suit seemed as if she might really be the needed friend until she fell upon an offending playmate and boxed her ears. One by one Doris discarded the entire congregation of street children as possible friends.

Suddenly, there was an odd, pattering sound along the hallway. The big door was ajar; Doris, with her back against it, could feel that somebody was standing behind it. She had an odd feeling that somebody was peering out through the crack. It was rather an uncomfortable feeling. Doris was glad when the door opened gently and the hidden person came out. The newcomer was a thin, poorly clad girl of twelve, and she hobbled between crutches. Her face, with its big timid brown eyes, its crown of brown curly hair, its sweet pink mouth, was reassuring, too.

The lame girl swung herself neatly down the steps and along the pavement. At first the playing children did not notice her, but when they did a chorus of taunting cries began.

"Bettina, oh Bettina!" shouted the boys. "Hippety-hoppety Bettina's going to buy her supper—her uncle's given her a cent!"

Then the thoughtless little rascals, hastily forming in line, limped along the roadway, imitating as closely as possible the lame girl's painful gait. Bettina, her cheeks white, her eyes miserable, her lip trembling, hobbled faster.

Doris, her blue eyes blazing with indignation, forgot her own shyness, tore down the steps and hurried after Bettina.

"I'm going with you," panted enraged Doris, getting between Bettina and the procession. "I never saw such unladylike boys!"

Bettina smiled through two big tears. "It's Tim Finnegan," said she. "He's a horrid boy, and he leads all the others. They wouldn't be like that by themselves. I haven't seen you before, have I?"

"No," returned Doris. "I'm brand new. And just now I'm looking for a friend."

"What's your friend's name?" asked Bettina, whose voice was soft and sweet. "Perhaps I can help you."

"I don't know," replied Doris. "You see, I haven't found her yet. But I have to have one because I always have had. Do you know of anybody—a girl, of course—that would make a nice friend for me?"

"I'll try to think of one," promised Bettina, earnestly. "But nice ones of exactly your size are scarce, I guess."

"I'm awfully particular," chattered Doris. "You see, she will have to suit mother, too. She must be clean, and talk nicely, and have nice manners, too. My own aren't so very good, 'n' mother told father that she hoped I'd get a friend that would have a good—a good

"Doris had to do all the visiting"

—oh, well, something—over me. Oh, is this bakery where you're going? I'm glad it's here because I can't go beyond the corner—and—and this isn't very much beyond. I'll carry the bundle for you. Goody! The boys are gone."

"You made me forget them," said Bettina.

The girls parted at Bettina's door.

"You can't come in," explained Bettina, flushing with embarrassment, "Because my uncle's home, and he doesn't like me to have company. But I tell you what! If you'll come down some other time and scratch like a mouse on the door—like this—I'll let you in if I'm alone."

Doris returned to the door-step. Although she stood there until she was tired, no possible friend turned up. So the disappointed little girl toiled up the inside staircase to her home, and told her mother that she guessed there weren't any friends.

The next morning Doris scratched like a mouse at Bettina's door. The door opened gently and soft-eyed Bettina beamed at her little visitor.

"Have you thought of a friend for me?" asked Doris, eagerly.

"Not yet," returned Bettina. "But I'll keep it in mind. Come in. I have to sew buttons on shirts, but I can sew and talk, too. Every one of these (she pointed to a great stack of coarse blue garments) has to have six buttons on it."

"Could I sew shirts to buttons, I wonder?" asked Doris.

"I'll give you a scrap of cloth to try on, if you like. We don't sew them tight—that would take too much thread. Just watch me."

As her fingers flew, Bettina told Doris about the cross uncle, about the pretty mother who died when Bettina was seven, about a moderately kind aunt, that wasn't really an aunt, who came home occasionally, and about the endless buttons.

Doris told about the pretty home they had left in Ohio because her father's work had called him to the city, about the two babies that kept her mother busy indoors, about her own hopelessly friendless condition. She spent a happy morning with Bettina, but left her at noon.

"You see," explained Doris, "I can't spend all my time with you because I've got to hunt for a friend."

Nevertheless the friend-hunting little girl did spend a great deal of time with Bettina. Fortunately the cross uncle was away a great deal, but Bettina had to stay with her buttons, so Doris had to do all the visiting. Sometimes she swept the floor for Bettina, sometimes she sewed on buttons. Often she brought down her own best-loved books and read aloud to Bettina. Always her tongue ran merrily, and every day she talked a great deal about the still unfound friend and the good times that they meant to have together. Bettina listened patiently, but rather sadly. She, poor girl, had had very few good times. All this went on for three weeks, during which time Doris kept her eyes very wide open for the long-sought friend. And then, quite suddenly, she found her.

"Doris," said Mrs. Parkman one morning, "wouldn't you like to take your friend one of these little cakes."

"Friend!" exclaimed Doris, grasping at the word. "What friend? I haven't found a single—"

"Bettina, of course. What is she if—"

"Why. Why, Mama!" gasped Doris. "Why! Why! Give me that cake! Why! Oh, please, please! Quick—I'll be back."

Doris was gone. A small excited person in blue was fairly flinging herself down the stairway and jumping the last four steps of every flight. She burst in upon Bettina, who was sewing on buttons. She overturned the stack of shirts. She scattered the box of buttons in every direction, and flung impetuous arms, cake and all, about surprised Bettina's neck.

"Oh, Bettina!" cried Doris, "I've found a friend!"

"Have you?" stammered Bettina, her big eyes growing wistful. "I ought to say I'm glad, but I—I guess I'm not. I'm awfully afraid you won't be coming to see me any more."

"More than ever," declared Doris, stoutly. "Lots more. You see, you're it!"

"What!" gasped Bettina, not believing her ears.

"You're the very friend I was looking for," explained Doris, "and I never guessed that I'd found you until this minute."

"I never thought," said shabbily-clad Bettina, beaming happily, "that anybody'd ever want me for a friend."

"I do," said Doris, with another hug that almost finished the cake. "And I guess you're the kind mother meant, too, or she'd never have sent you this."

Good Work From Our Boys and Girls

Whippoorwill

By Harter F. Wright, Age Fifteen

In twilight when the summer sun
Has sunk behind the west,
And all the birds save whippoorwill
Have sought their lowly rest.

The whippoorwill begins his song,
Which lasts through all the night,
Until the eastern sun begins
To give us morning light.

Oh! lonely watch-bird of the night,
With melancholy tune,
Make us to ever live for right,
For life ends but too soon.

My Favorite Pastime

By Anna L. Flory, Age Fourteen

My favorite pastime is reading. There is nothing that affords me so much pleasure as a good book or magazine. Aside from being an enjoyable pastime, it is instructive and uplifting.

Reading, in my opinion, is the safest way to use up spare time. I think the best kind of reading for young people is history, travel and good stories; only the kind of stories that make one wish to be better and nobler. "Little Women," by Louisa M. Alcott, is my favorite book. I love all of Miss Alcott's works and I like books on travel and history. They are so interesting and broaden the mind. However, I do not believe in spending all spare time in reading. A game is lots of fun and is good for the mind and body.

And then a magazine is also a good companion. A home is incomplete without one or two, for by reading them one gets an idea of what is going on in the world outside of one's own territory.

My Dolly

By Florence Thacher, Age Twelve

I have a little dolly,
Her lips are cherry red,
And lovely hair that looks as if
It grew right on her head.

She has such lovely dresses,
Some white, some pink, some blue,
With lovely ribbons on them
And pretty buttons, too.

And then she has some slippers,
They're black, with dear white bows;
And then some nice white stockings
As white as driven snows.

Her name is Barbara Helen.
I call her "Barb" for short;
I think she's very pretty,
And I've told her what I thought.

When I'm a Man

By Marie Canfield, Age Thirteen

"When I'm a man," said little Carl,
"A president I'll be;
I'll live down in the White House,
Great crowds will call on me.

"When I'm a grown-up man I'll wear
My best clothes every day;
I'll play ball in the parlor, and
I'll always have my way.

"I guess—I'm tired—" the blue eyes close,
While nods the curly head;
And mama's would-be president
Is kissed and put to bed.

Cousin Sally's Letter

Dear Boys and Girls:—

Though I haven't given up a lot of space to my letter, I want you to know that I am still thinking of you and as interested in your work and your letters as ever. I have made my letter short, so that I could print a little of your own work. I wish I could publish every one of the interesting and enthusiastic letters that you have written to me, but, nevertheless, I am sure you know that I enjoy hearing from you, and I thank you all most heartily for the interest you are showing in our little corner. I expect to do great things this coming fall and winter, so you must watch our page closely and keep up with the good times we are planning.

As ever, faithfully always,
Cousin Sally.

Prize-Winners in August 10th Contest

Frank Hout, age twelve, Middlebury, Indiana. Nellie Sipes, age fifteen, Emmett, Kansas. Edna Filken, age sixteen, San Marcos, California. Helen L. Smith, age fifteen, Frederick, Maryland. Julia Anderson, age sixteen, Storm Lake, Iowa.

Sunday Reading

Soldiers of Christ

Those who are surrounded by household cares, who are subject to more or less discouragement, who do not know from day to day which way they shall turn: to all such I would say: Be faithful still, whether in sickness or in trouble; bear the yoke; endure hardness in your places as good soldiers. What if you are not known? What if you have not friends? What if you are obscure? What if you have no altar at which to worship? Then worship where you are. Stand where God has put you. Bear, endure, fulfill. No matter if there is no window through which men can look into your life. There is One that sees you. God's eye is on you at morning, and at evening, and through the whole day. The Saviour is at present with every father and every mother who are seeking to do their appropriate work faithfully in the household. So be of good cheer.

Do not care what the world says, if Christ praises you. In all kinds of business there are men who are seeking to do their Master's will, finding themselves bruised, their best moral efforts overthrown and themselves, oftentimes unsuccessful. They counsel with themselves as to whether they shall still bear witness to integrity; whether they shall not go with the rushing throng and accept custom. But the Saviour says to every man who is seeking to have the spirit of Christ in him, "Carry that Spirit into your affairs. I behold. Endure to the end. I will make you a pillar in the temple of my God, if you hold out to the last."

Do not be discouraged, then. Do not yield to conflict. Stand steadfastly in your place. Still ask for the brightest inspirations. Still attempt to pour from your soul into the affairs and channels where you are. God's truest thoughts and feelings; and the time will come when God will reward you.

And to those who are in schools, and are discouraged with the inaptitude and stupidity and ignorance of scholars, to those teachers who labor with small compensation; to those who find themselves shut out from respectability, and from sympathy, and who are obliged to herd with the poor and make their bed with them; to all such I would say; Be of good cheer. The God of the widow and of the orphan, the God of the poor and the needy, the God of final and quick-coming judgment—he beholds you, and is interested in you, and will multiply to you ten thousand fold for every sorrow or joy in overmeasure. "In patience possess ye your souls"; do in obscurity the thing that is true, and right, and noble; and wait for God.

All those who are preaching in discouragement in the midst of superstitions, and in rude neighborhoods are seeking to build foundations whose superstructure they never expect to see; to them I would say; Dear friends of Christ, be ye not discouraged. "In due season ye shall reap if ye faint not." The time is short. The work is great. God needs just such men as are willing to work without witness, and without earthly reward. Speak with a homely tongue, if God has given you no better. Speak from house to house, if it be not yours to stand on the platform and command an audience. If you cannot do the things which you do as you fain would do them, and as others expect you to do them, do them as best you can; and remember that it is the heart that measures the deed, and gives it its value. And the time is not far distant when the God of the poor widow will call you from your labor, and own you in the presence of his angels. Then you will be measured, not by the eloquent tongue, not by the ready hand, not by the skillful finger, but by the love, the fidelity, and earnest sincerity, which there was in your soul, which inspired your labor, and which kept you faithful to the very end.

Henry Ward Beecher.

Religious News Items

The Salvation Army has brought fifty-five thousand starving and out-of-work people from England and settled them upon government lands in Canada.

The Protestant churches of America maintain 11,052 missionary stations and out-stations in foreign lands, and employ in these fields 2,043 men and 3,031 women missionaries besides 25,093 native laborers. More than three hundred thousand persons receive instruction in these missions and the estimated income for carrying on the work is between eight and nine million dollars.

Mrs. Warington's Habit

[Continued from page 14]

efforts toward "perfection," and that was why he had sent her up to Beech-haven!

It was the day of the horse show. Mrs. Warington had put aside her wretchedness for the occasion, and was waiting in the parlor for her husband to come for her. She was beautifully gowned in one of Paquin's latest models, a delicate mauve, so becoming to her style of beauty.

Presently Warington ran up the steps, a mammoth bunch of Marechal Neil roses in his hand.

"Heavens, Kit!" he exclaimed, "is that the best gown you have? You know how I detest purple. And how on earth have you got your hair done?"

Purple! That was the final straw. Mrs. Warington fled into her bedroom and collapsed into stormy weeping.

It was there that her husband found her a few moments later.

"Why—why what's the matter, sweetheart?" he asked her gently, coming up and trying to take her hand in his. He was divided between a hysterical desire to laugh and an aching pity for the unhappy little woman he loved better than his life. But everything depended upon his ability to keep his poise, and he sat silent, stroking her hair softly with fingers that were just a trifle unsteady.

She kept on sobbing, and at last he lifted her tear-stained face to his and kissed her. "We've just ten minutes to squander, Kit. Come, let's be off."

"Not a step!" she cried chokingly.

"What! After all this preparation, and the Witherells waiting—"

"Nothing else matters—now that— you—you've ceased—to—to—care—" she jerked out miserably, and buried her face in the cushions again.

"Why, what do you mean?"

"Oh, I am just plain, every-day, absolutely wretched and desperate."

Warington could stand it no longer. He clasped her to his heart then and there, and told her everything. "I thought you had ceased to love me," she said, "that I had nagged you into it. I never realized it until you began to—to nag me. Then it came to me with a rush."

"Then you forgive me for being a brute, dear? You'll never know how hard it was at times."

"I'll forgive you anything, so long as it's in the past. As for the future—" But he kissed the words from her lips.

And to this day the odious word of "habit" has never regained entrance into the Warington's family dictionary.

"With Roosevelt in Africa"

Post-Cards Without Cost

Do You Want to See Some of the Places and Things That Mr. Roosevelt is Seeing?

This "Roosevelt in Africa" post-card set shows Mr. Roosevelt and the principal members of his party, a map of Africa showing the route of the expedition, natives, views in the deep African jungle, ways of hunting used there, and also some of the strangest, biggest and fiercest animals. The "Roosevelt in Africa" post-cards are the highest grade post-cards, printed in the exact natural colors, true to life. There are twenty-four cards in the set. The supply is limited and you should not fail to get your set early. There will be a big demand for them.

Get a Set Without Expense

If you will send two subscriptions to Farm and Fireside for a year at 35 cents each, we will at once send you the "Roosevelt in Africa" post-card set, post-paid, absolutely without any cost. One of the subscriptions may be your own for a year ahead.

Another Way to Get the Roosevelt Cards

If you will send 50 cents in stamps or silver, we will send you Farm and Fireside for a year and the complete set "With Roosevelt in Africa" at once.

Farm and Fireside is the biggest farm and family paper in the country. It comes every two weeks. Any neighbor will be glad to take Farm and Fireside if you show a copy to them. Then send your two subscriptions and get the "Roosevelt in Africa" post-cards.

Address FARM AND FIRESIDE, Springfield, Ohio

The Old "DUTCH OVEN" Come Back to Life!

This IMPERIAL Steel Range, with STONE OVEN BOTTOM, Odor Hood and other Remarkable Improvements, Excels even the Old Dutch Ovens in Baking Qualities, and is a Marvel of Convenience.

Grandest COOKER, BAKER and FUEL SAVER Ever Invented

The out-door "Dutch Ovens" made Colonial housewives famous as bakers and cooks. But because of their terrible inconvenience these ovens were superseded by stoves and ranges. Baking as done in those good old days later became "a lost art" because the "all-metal" ovens were wrong in principle. We have practically added a "Dutch Oven" to a Modern Steel Range—the finest, handsomest and handiest range on earth. Thousands sold! Demand growing amazingly! Housewives delighted! Their success surprises even themselves! Bread, pastry, etc., looks better, tastes better, is better! People everywhere admit we have solved the baking problem. This range, with all its improvements, fully protected by U. S. and Foreign patents. Infringers, beware! We sell direct from our big factory, at factory prices. 30 Days' Absolutely Free Trial! Easy payments! Freight paid by us! Get the Great Free Imperial Catalog and Special Offer at once. Free Book! Free Trial!! Easy Terms!!! Special Price!!! Write!!!

THE IMPERIAL STEEL RANGE COMPANY, 268 State Street, CLEVELAND, OHIO

Backed by a Great Organization

If you should buy a sewing machine for $18, and with it spoil a $20 gown in the making, it would be poor economy.

Take no chances with unknown or obscure sewing machines—buy the machine backed by the greatest organization—the machine used by everyone who makes sewing a business—

The SINGER Sewing Machine

Four times as many SINGER Sewing Machines are sold as all others combined. This demand can mean but one thing—Superiority.

Buying a machine is not an incident of a day—it is to work for you for 20 years or more—it is to do work on valuable materials; so the first cost is not to be considered so much as the efficiency, accuracy and life-long usefulness.

Try a SINGER in your Own Home Free of all Charges

Just drop a postal for our free booklet, "A Wireless Message from the SINGER Tower."

Select the type of machine you prefer and have it sent to your home for trial—all charges paid.

If you decide to keep it, terms of payment will be made to please you.

If not, it will be taken back at our expense.

You put yourself under no obligation to buy.

Write for the booklet.

Address

SINGER SEWING MACHINE COMPANY,
Room No.1130 Singer Building, New York.

Farm Notes

Cold Storage on the Farm

One of the greatest mistakes made on the farm is the failure to provide for the summer supply of ice. There will soon be ice everywhere, but if there is no ice-house provided to store it in, there will be no ice on the farm next season, when it will be greatly needed for the milk and butter storage.

There is often a demand for fresh meats on the farm in the summer season, and this is prohibitive, practically, owing to the lack of ice to properly preserve it. It is a fact that on the farm, where ice is most needed in the summer, there is the least attention paid to providing it. The loss about every home, because of a lack of good, clean cold storage through the heated season for the food products that the family uses each day, is much more in one season than the cost of an ice-house and ice-supply.

This is the time of the year to think of the ice-supply, because these hot days make us think of it. This is especially true when there is an attention given to milking and the making of butter. In these times of selling cream and eggs fresh from the farm the cold storage of these products for a few days would mean a great saving. Cream can be carried for quite a while, comparatively fresh, if kept in a temperature such as a good refrigerator would provide with plenty of ice in it.

Ripe fruits and fresh vegetables of all kinds are saved from decay by the use of ice and the cold-storage appliances that any farm home can and should have. This saving in the table-supplies soon amounts to a sum that will go a long way in the construction of a cheap ice-house.

It is authoritatively stated that much of the summer ailments of children, and adults, too, for that matter, is directly traceable to poisons created by decaying foods caused by the lack of ice or a proper temperature to properly preserve them.

For cooling purposes, a quality of ice can be used that could not be recommended for putting in drinking water. There is no real good ice-supply except from water of the clear, running brook. This may be arranged so that it can be dammed up in the early winter. The month of November is a good time to arrange for the damming of the water and the construction of the ice-house. After the ice has been stored let the water drain off.

The ice-house is a simple arrangement and inexpensive, unless you desire a very good and permanent building. If you have no plan or idea of how to construct one, go to a neighbor who has one that is giving good satisfaction and study the plan of construction. Good underdrainage and a double wall, well filled with sawdust, are important matters in the ice-house, but reasonably successful ice storage is made with single walls.

Under no consideration let the approaching cold season pass over without getting a liberal supply of ice for your use next summer. C. A. Umoselle.

Caring for Farm Tools Pays Well

There is so much loss of time during the busy season on the farm by reason of tools giving out on account of improper care, and often new machines to be bought, that I feel too much cannot be said regarding the care that should be given them. It is not an uncommon sight to see binders, mowers, rakes, plows, drills and other machinery standing in fence corners, under trees, by the side of the barn and in other places exposed to all kinds of weather. Such implements cost considerable money, and it is up to the owner to give them the best possible care. Possibly some of these farm tools that are seen lying out on most farms are regarded as out of date and unserviceable. Even in that case they should be sold or disposed of as junk and gotten out of the way.

The excuse that is generally made for not properly housing farm tools is that it is too expensive to build a tool-house. Even in that case it is simply a question whether it is not cheaper, even if one has to borrow the money, to build a house for this purpose, where room in other buildings is not available, than to wear out a machine inside of two or three years that should last and be serviceable for ten years. It will always be found on investigation that it is a good deal cheaper in the long run to build a house than to allow the wear and tear of machinery, inevitable under exposure to the trying conditions of inclement weather.

In building a tool-house, it should be located some little distance from the other buildings, to be out of danger of fire in case the barn or some other building should burn. This will avoid the necessity of keeping the machinery insured. If practicable it should be located along the drive to the field so that the tools can be left in it without any special trip for that purpose.

The roof of the building should be just high enough to allow the highest machine to pass under; the width and length, of course, will be determined by the number of tools to be housed. A few loads of coarse gravel or cinders will make a good, dry floor.

If the house is conveniently located, it would be a good plan to establish a department in one end of the building where necessary repairs may be made quickly, or the machines overhauled during mild days in the winter-time. It does not require a very great outlay for tools with which to repair the machines, and a handy man can do almost anything required in the way of repairs, thus saving quite an item of expense.

When machines that are not to be used for some time are being stored, they should be thoroughly cleaned and oiled, and if necessary painted. A good coat of paint will go a long way in preserving the condition of any implement.

A good tool-house will more than pay for itself in a few years, besides one has the satisfaction of using tools which are always in good condition and ready for service. The machinery will last much longer if housed, and the longer the machinery lasts, the more shekels will be found in the purse.

Wm. H. Underwood.

Some Evils of Farm Renting

We often hear the expression, "Renting runs down a farm." It is natural for one to inquire into the reasons for this. Why has the renter been harder on the farm than the owner?

One cause is found in the lack of a well-defined system of crop rotation. The owner always rotated the crops, but the renter kept corning the land year after year, until its vitality was exhausted. The tenant may be a first-class farmer, but he could not afford to raise other than the one crop of corn or wheat. His living and the payment of his rent depended upon it. Land that is put in wheat or corn year after year without the addition of a fertilizer of some kind is most certain to be depleted in those elements that make plant-life. So, after a few years of renting his farm, the owner wakes up to the fact that the land is all run down. Is the renter altogether to blame for this? Not at all. The fault lies almost entirely with the owner. He demanded a high rental, making himself secure with a mortgage over the crop to be grown. This necessitated that the renter get all out of the land he possibly could, not caring what condition the soil might be left in at the end of the year. Now, if the landlord would charge a reasonable rental, so the renter could afford to contract for the place for a number of years, arrangement could be made for a rotation of crops which would maintain the fertility of the soil.

Then again, the tenant being under the burden of paying a large rental cannot afford to spend his time or money to keep the fences or buildings about the place in good repair. There are a very few landlords that want to pay for keeping up fences or putting house and barn in first-class condition with paint or lumber, so buildings and fences go to rack. The only remedy for this condition is for the owner of the farm to allow his renter a certain amount each year for repairs about the place, or make the rent so reasonable that the renter can afford to pay for the necessary material and do the work on buildings and fences that is needed.

I know a renter who has had charge of a farm for eight or ten years. The rent has been so reasonable that he has spent his own money for paint, and the house, barn and out-buildings look clean and fresh. He has also built fences and some small houses for his own convenience. The farm-land is kept in fine condition by a sensible rotation of crops. Reasonable rent and a long-time contract is the secret of this well-preserved farm. Any good tenant will be willing to spend some time and money in repairs and improvements if he knows he is to have the place for a number of years. W. D. Neale.

What Paint?

That's the question—not what to paint, nor when to paint. You know that everything exposed to the weather should be painted. You know how to utilize your spare time between regular work on the farm to improve your buildings and farm machinery.

You may not know that there is as much difference in the quality of paint as there is in the quality of seed corn or farm machinery. Therefore what you need to know is the name of the paint that makes good every time.

Sherwin-Williams Paints

are such paints. They are made with a correct knowledge of just what you will require of them. They last longer, protect better and improve the appearance of your buildings more than paints that cost less, because they are made especially for your purpose, and of the best obtainable materials.

A talk with the Sherwin-Williams dealer in your town will be of great assistance to you. Write for our booklet, "Paints and Varnishes for the Farm." It is sent free and will tell you how to save money with the right paint.

Sherwin-Williams Paints & Varnishes

Address all inquiries to 691 Canal Rd., Cleveland, O. In Canada to 639 Centre St., Montreal

1544