

# SAVING OF MILLIONS ALL ARE CONCERNED

WHAT COMPREHENSIVE SYSTEM OF WATERWAYS IMPROVEMENT MEANS TO FARMERS.

IMPROVEMENT OF NATION'S WATERWAYS OF INTEREST TO EVERY CITIZEN.

## FIGURES TO SUPPORT FACTS

On Shipments of Grain Alone the Direct Return Would Mean \$100,000,000, and Proportionately All Other Products Would Be Affected.

In a former article we gave facts and figures to prove that, if the comprehensive plan of waterway improvement advocated by the National Rivers and Harbors Congress were carried out, the direct return to the farmers of the country, on the single item of grain, would probably be \$100,000,000 a year—and certainly be more than twice that sum.

But grain is not the only item on which the farmers would receive a benefit. The fact is that for the farmers—and everybody else, for that matter—the cost of transportation influences practically everything he buys, sells, eats, wears or uses in any way whatever, except water, air and sunshine. The average man is inclined to laugh when told that he pays out more for transportation than he does for taxes or because of the tariff—but his laughter does not alter the fact in the least.

There are three principal methods of transportation, the wagonway, the railway and the waterway, and there is so great a difference in the cost of transportation by these different methods that it is worth while to study the matter a little. The experts of the good roads bureau estimate the cost of hauling a ton of freight one mile by horse and wagon on the average road in the United States at 25 cents. The cost on a thoroughly good, smooth road might be reduced to 10 cents. Poor's Manual gives 7.32 mills per ton-mile as the average price received by the railways in 1907, while the official records kept at the Soo show that the average rate on the freight carried into and out of Lake Superior in the same year was only .8 of one mill.

### Facts in a Nutshell.

You can better understand what these figures mean if they are stated in another way. They mean that if you have a dollar to spend in shipping a ton of freight you can send it 4 miles on an average road, 10 miles on a first-class road, 127½ miles on a railroad, and 1,250 miles on a lake vessel.

It is very easy to see that good roads are a lot better than poor roads but that transportation by horse and wagon is too costly to be used except for small loads and short distances. So far as interstate traffic is concerned the wagon road must be left entirely out of consideration. It is just as easy to see what a great benefit would result from the building of a railway into a region where there was none before, and that a still greater benefit would result from so improving a river that it is made dependably navigable when it was not so before.

Waterways increase prosperity in three principal ways, viz: direct saving, indirect saving, and by what may be called a creative effect. The direct saving is that which occurs on goods actually carried by water, and some facts which indicate how great this direct saving is, will also make more plain the vast difference between the cost of transportation by rail and by water.

Through the Soo canal at the outlet of Lake Superior there were carried in 1907, 58,217,214 tons of freight. This was carried an average distance of 828.3 miles at an average cost of .8 of one mill per ton-mile. If this had been shipped by rail at the average railway rate for that year (7.82 mills), its transportation would have cost \$338,633,364 more than was paid for its carriage by water.

The total freight carried on all lakes that year was, in round numbers, 100,000,000 tons. This vast tonnage was carried for \$550,000,000 less than it would have cost to send it by rail, and the improvements, which produce a saving large enough to pay off the national debt in less than two years, cost only \$85,000,000.

### Proof of Good Results.

Wouldn't you call that a pretty fair dividend on the investment? And don't you think it would pay to improve all our waterways as fast and as far as we can?

"But," says some one, "what reason is there to suppose that improved rivers would give anything like as good results as have been obtained on the lakes?" That is a proper question and is entitled to an answer.

The only waterway in this country which has been improved as a whole is composed of the four lakes above Niagara Falls, but there are many improved rivers in Europe. From a careful study of the results obtained on these rivers the army engineers estimate that when the improvement of the Ohio river is finished, freight will be carried thereon for one-half mill per ton-mile. That means that the dollar which will carry a ton 127½ miles by rail and 1,250 miles by lake, will carry it 2,000 miles by river.

Cost of transportation will vary on different rivers with depth, width, swiftness of current, etc., but the estimated cost on a completely improved Ohio river can be increased by 60 per cent. before it will equal the average cost on the lakes in 1907, and there is still a margin of nearly 400 per cent. before you reach a rate one-half as high as that by rail. It will pay to improve our rivers.

## VITAL FACTS ARE PRESENTED

Cost of Getting Grain to Market Materially Reduced Through Shipment by Water—Benefits Distributed All Over the Country.

You may not know it—you probably don't—but it is a matter of importance to you whether the waterways of the United States are improved or not—and this is true no matter who you are, what your business is, or what part of the country you live in. It may be that you are a farmer and you tell me that it is nonsense to say that it can make any difference to you whether the waterways of the country are improved or not, because you live away out west, miles away from any river which is navigable now or ever will be.

Well, I admit that it is not as easy to see as the grain elevator down at your railway station, but the benefit is there just the same—a real, sure-enough, dollars-and-cents benefit! Waterways have already been of tremendous advantage to the farmers of the country and their further improvement will put more money into your pockets and those of your neighbors. Take grain for an illustration. A large part of the grain raised in the place where it is grown, some for use in the eastern states and some for export to Europe. Under these conditions the price of grain is not fixed at the nearest railway station. Your wheat, for instance, is worth just what it will bring in Liverpool—less the cost of getting it there. You can see at once that it makes a whole lot of difference to you how much it costs to send your grain to New York or Liverpool—and there's where the waterway comes in.

### Where Economy Comes In.

In 1908 the average cost of carrying wheat from Chicago to Buffalo by lake was one cent a bushel, while the cost by rail to New York was 11.7 cents—almost twelve times as much, although the distance is the same. But grain which is to go all the way by water must be transferred to the canal boats at Buffalo. Little canal boats drawn by mules cannot carry stuff as cheaply as big ships driven by steam, so the through rate by water was six cents a bushel, a little over half as much as by rail. For the twenty years ending with 1908 the water rate, on the average, was lower than the rail rate by 6.2 cents a bushel. On the shipments from Lake Superior the difference was greater still, since Duluth is less than 100 miles farther from New York than Chicago is by water and nearly 500 miles farther by rail, but no comparative rates are published.

The beneficial effects of the waterway, through lowered cost of transportation, are not confined to the grain shipped from cities on the lakes, but extend to practically all the grain produced. The total production of the five principal cereals—wheat, corn, oats, barley and rye—during the past 40 years, was over 120,000,000,000 bushels. If the average addition to the value of this vast volume of grain was five cents a bushel, and that seems a moderate figure in view of the facts stated above, the total is more than \$6,000,000,000—nearly all of which has gone into the pockets of the farmers.

But while the beneficial effect of the waterways extends to a surprising distance, a waterway close by exerts a very much more direct and powerful influence than one a long way off. If the Great Lakes and the Erie canal have increased the value of grain all over the west, what do you suppose would happen if the Mississippi, Missouri, Arkansas and Red rivers were so improved that boats could run every day in the year unless hindered by ice?

### Money Needed for Work.

The National Rivers and Harbors Congress is working for the improvement of the rivers, harbors and waterways in all parts of the United States. Chairman Alexander of the rivers and harbors committee, says that \$339,000,000 will complete every project which has been begun or has been recommended by the army engineers. Five hundred million dollars would probably finish up all of these and all the new projects which will be surveyed and adopted within the next few years.

The average annual production of the five principal cereals, which during the last ten years has been 4,151,000,000 bushels, has been steadily increasing and will probably continue to increase for some time to come.

The complete improvement of all our waterways would increase the value of every bushel of grain produced by at least five cents—more than opinion is that it would be more than that.

But let us be on the safe side. Suppose we spend a billion dollars on waterways instead of a half-billion; suppose that the production of grain remains as it is instead of increasing; and suppose that the price of grain is increased only 2½ cents a bushel instead of five.

Even so, with production stationary, the expense doubled and the benefit cut in half, the whole \$1,000,000,000 would be returned in less than ten years in the increased price of grain alone.



## MUCH PROFIT IN FATTENING

Nothing in Turkey Raising Pays Better—Better Results Obtained When Birds are Confined.

Nothing in turkey production pays better than thorough fattening and that for a number of reasons. First, more pounds are obtained, and that at a minimum cost. From four to six pounds may be easily added to the weight of a six months old bird, and these added pounds, being mostly fat, are more cheaply made than simple flesh and bone. Second, better prices are obtained. A plump, fat bird will bring more per pound than a thin, lean one, and is in better demand, so that there is a double gain. Third, it is more gratifying. There is always a pleasant satisfaction in offering for sale something first class in every respect—in knowing that one can and has produced something really good and worth while.

To fatten a lot of turkeys properly it is necessary to begin some time in advance of the market for which they are to be prepared, writes Mrs. Millie Honaker in Wisconsin Agriculturist. This is especially true of young turkeys, not yet fully developed. For these fattening is also a rapid finishing process which must be round and fill them out and which takes considerable time. For such a month to six weeks is none too long to feed with a view to putting into best marketing condition.

Many turkey producers do not confine their flock during the fattening period, but better results may usually be obtained by doing so, especially towards the last. However, for young birds which are to be simply forced for a time previous to actual fattening it is not necessary at least to confine closely. Yet these will do much



An Aristocrat.

better if not allowed to range too freely when so inclined. Many flocks, if fed regularly from the first, will practically give up ranging on their own accord as soon as put on full feed, but where they do not it is advisable to confine in some large, open lot, or yard, such as exists on most farms and could be easily utilized for the purpose. By clipping one wing the birds may be easily kept where wanted. Towards the last, that is from two weeks to ten days before killing, they should be more closely confined, preferably in a shed or other building where they can obtain little exercise, and which may be partially darkened. This last is to prevent the young gobblers from fighting, as they sometimes will with disastrous results, when closely confined under ordinary circumstances.

Corn in some shape, preferably ground, should be the main food during the fattening period. However, for young birds being prepared for the real fattening process, other things in connection are advisable. Wheat bran or shorts mixed with corn meal, or ordinary ground feed in which there is a large per cent of corn meal, wet up with warm milk or water is excellent. All kinds of boiled vegetables mashed up with corn meal or ground feed are also good. Barley and rye ground up with corn make an ideal ration for this stage. Care should be taken, however, not to feed too wet, or to feed too generously at first. Just wet enough to crumble nicely, and just what will be eaten up clean at once is about right. Whole grains of all kinds may be also fed, and are especially advisable at first. For the last week or two, or after being placed in close confinement, there is nothing better than coarsely ground corn meal wet up with scalding milk for the main ration. To this may be added, for variety's sake, a little shorts, a few boiled potatoes or whatever else is at hand. But whatever else is or is not supplied an abundance of sharp grit should be, even when practically all the food is soft. Also plenty of fresh water should be constantly within easy reach.

### Satisfaction in Improved.

There is a fascination about breeding thoroughbred fowls that gives one satisfaction. When we see the results of our trouble we do not regret the care and attention which good poultry raising demands.



## EXCELLENT NEW TRAP NEST

One Recently Designed Does Away With Bad Points of Other Styles—Is Simple.

A new nest has been designed by E. D. Sterry of the Maine experiment station which it is believed will eliminate the bad points of other nests. It is both simple and sure to lock as soon as a hen enters. When built of good material it is durable and can easily be cleaned and whitewashed.

The nest is a box-like structure, without front, ends or cover, 28 inches long, 13 inches wide and 16 inches high.

Side View, Showing Construction.

deep, inside measure. A division board with a circular opening 7½ inches in diameter is placed across the box 12 inches from the rear end and 15 inches from the front end. The rear section is the nest proper.

Instead of having the partition between the two parts of the nest made with a circular hole, it is possible to have simply a straight board partition extending up 6 inches from the bottom, as shown at c. The partition with circular opening is, however, recommended.

There are several reasons why the circular opening appears to be better than the straight board across the bottom of the nest. Experience has shown that a hen is less likely to go back and forth between the two compartments after she has laid when there is only the relatively small circular opening between them, than when there is a larger opening. This reduces the likelihood of broken eggs.

The front portion of the nest has no fixed bottom. Instead there is a movable bottom or treadle, b, which is hinged at the back end to c. To this treadle is hinged the door, a, of the nest. The treadle is made of ½-inch pine stuff with 1½-in. hardwood cleats at each end to hold the screws which fasten the hinges. It is 12 inches wide and 12½ inches long.

Across its upper face, just behind the hinges holding the door, is nailed a pine strip 4 inches wide beveled on both sides, as shown. The door of the nest is not made solid, but is an open frame, to the inner side of which is fastened (with staples or cleats), a rectangular piece of ¼-inch mesh galvanized screening (dimensions 8 by 9 inches).

The sides of the door are strips of ¾-inch beech stuff 12 inches long and 1½ inches wide halved at the ends, to join to the top and bottom of the door. The top of the door is a strip of hardwood 13 inches long and 1½ inches wide, halved in 2½ inches from each end. The projecting ends of this top strip serve as stops for the door when it closes.

The bottom of the door is a hardwood strip 10¾ by 4 inches. The side strips are fitted into the ends of this bottom strip in such way as to project slightly (about 1-32 inch) above the front surface of that strip, for a reason which will be apparent.

When the nest is open the door extends horizontally in front, as shown by the cut. In this position the side strips of the door rest on a strip of beech 1½ inches wide beveled on the inner corner. This beech is nailed to the front of the nest box proper.

To the bottom of this is nailed a strip 2 inches wide into which are set 4-inch spikes from which the heads have been cut. The treadle rests on these spikes when the nest is closed, as shown by the dotted lines.

## POULTRY NOTES

Young chicks need grit as well as their seniors.

We are apt to neglect the hens during the late summer months, particularly in August.

Never allow incubator chicks to become chilled. One-half the ills of young chickens arise from this cause.

Nature does not provide green feed during the winter months, but occasionally cabbage or green alfalfa hay is beneficial.

No use to try to raise turkeys unless the poults are kept free from lice. They should be examined at least every ten days.

At the first sign of droopiness in a chick, separate it from the rest of the flock; and if it does not quickly recover, use the ax and burn the body.

It is a busy time now in the poultry yard, but it means some good meat for the table, some valuable stock for sale and some good winter layers coming on.

Even a warm rain is bad for very young chicks, and arrangements should be made so they can get to shelter quickly when the showers come.

For sorehead, use a tablespoonful of bluestone to a quart of water, and bathe the parts thoroughly once or twice. You might dip the entire head in bad cases.

## DELINDA IS ENLIGHTENED

Importance of Right Start is Pointed Out by Her Wise Brother.

"Isn't it funny," said Belinda, practicing at the piano, "you start playing a thing wrong and you play it all wrong?"

"Why, not at all," said Belinda's wise brother; "that is true of many things besides playing a piano. Did you never hear it said of a man who seemed to be making heavy weather of it in some undertaking, who seemed to bungle and take wrong steps and not to be sure of what he was doing, who was struggling along and trying hard but not to very good purpose—did you never hear it said of a man in such case that he got in wrong?"

"Why, certainly; everything depends on making a good, that is to say a correct start; on knowing your ground and being sure of yourself, on starting right."

"That's one sort of good start. When we say of a man that he had a good start in life we mean that he started with advantages, in favoring circumstances of with friendly surroundings, under conditions likely to promote his success; but when we say of a man that he made a good start we are speaking of what he did himself; we mean that he was alert and keen, looking out for things, seeing that things were right and making sure; knowing the course, so that he could keep in the channel and go ahead without doubt or confusion."

"The man who makes a good start can go ahead with confidence and certainty, without fear and consequently without danger of getting twisted and tangled up on the way. It's just the same as it is with your practicing, see?"

Belinda didn't say whether she did see or not; but her brother's discourse having here apparently come to a full stop, her fingers fell heavily on the keys of the piano.

## THE POETRY OF MOURNING

Interesting Effects in Jewelry Shown During Mourning Days in England's Metropolis.

Jewels are always of interest and these days of mourning in London have produced some very beautiful articles of jewelry for mourning. The agate and onyx are most prominently used in this connection. The agate is a semiprecious stone, and a curious mixture of minerals. It has a touch of jasper, quartz, amethyst, chalcodony, and carnelian in its composition. And it appears in several forms—in clouded yellow, in a beautiful smoke shade, and in the black variety known as rind agate. These two last are used for mourning. And the onyx is really an agate, formed of alternate stripes of dark and white chalcodony.

At a noted jeweler's among some exquisite ornaments were seen a brooch in the form of a hollow circle formed of onyxes set in small diamonds; an inch-wide, pliable bracelet had one row of onyxes between two rows of pearls, and an oval-shaped clasp of diamonds. And best of all was a long necklace, made of the finest oxidized steel and jeweled at intervals with large, round amethysts alternated with pearls, each pearl having a band of small diamonds. There were other ornaments composed of black enamel, pearls, and diamonds; and the necklaces on view were formed either of oxidized steel or of platinum. Such things as these are the poetry of mourning.

### Writing in Bible Times.

Prof. Flinders Petrie says that there is nothing abnormal, nothing to be questioned, in the general outlines of the Bible story of the exodus. He contends that the spread of writings in those days has been enormously underestimated.

"It is my firm conviction," he says, "that the Europe of a century ago was far more brilliant than the eastern world in Bible times. We have for instance, a papyrus containing a cook's accounts scrawled in a very clumsy hand, but which the reckoning all wrong, but it shows that even a common servant of those days knew how to write. We have another containing a petition from a peasant. These things are extremely important, as showing the probability of documentary records of a historical nature existing at the time.—Jewish Chronicle.

### Girl Guides in England.

Miss Agnes Baden-Powell, daughter of Gen. Sir Baden-Powell, is president of the B. P. Girl Guides, the object of which is to teach girls "to do a good turn daily." The girl guides are taught gardening and housework, and will be ready to go to the colonies if needed, and are taught first aid to the injured and other hospital work. They are enrolled between the ages of 11 and 18 and eight girls form a patrol, the leader to be more than 15. Three patrols form a company, with a captain and lieutenant each over 21. Local committees of ladies will train the girls, whose parents must consent.

### As Directed.

A widow called on a maker of monuments to arrange about her husband's tombstone.

"And I want it to say 'To My Husband,' in an appropriate place," she told him.

"All right, ma'am," answered the mason.

"This is how it read when put up: 'To My Husband. In an appropriate place.'—Tit Bits.

## TO PREPARE SPANISH OMELET

Many Methods Are Used, but the One Here Given is Typical of Them All.

Spanish omelet is a toothsome dish that seems to appeal particularly to members of the stronger sex, and is therefore worth noting in the interest of the men of the household. It is variously prepared, but the following recipe is representative of all:

Beat (but only slightly and without separating), four eggs. Afterward stir in four tablespoonfuls of milk, one-half teaspoonful of salt and a third teaspoonful of pepper. Put into the omelet pan two tablespoonfuls of butter and turn in the eggs. "Pick up" with a fork to make it light and creamy. Brown quickly underneath and fold with the sauce given below, in the fold and around it on the dish.

Cook two tablespoonfuls butter and one of finely chopped onions until yellow. Add one and three-fourths cups of tomatoes and cook until all the moisture evaporates. Then stir in an ounce of chopped mushrooms, the same quantity of capers, a quarter teaspoonful salt and a small piece of finely chopped red or green pepper. Cook the latter first in butter into which a little chopped onion has been shaved.

### Riced Oyster Soup.

Wash one cupful of Carolina head rice and put over the fire in plenty of water to keep it "tumbling" until tender but whole. Drain the water. (This water can be used as nutritious drink for children or invalids in place of milk.) Cover the rice with milk and place in covered pan of water to steam or in steamer a half hour. Take one quart good sized oysters and fork singly into a shallow dish with cover. Salt, pepper (red, preferably), and dot generously with butter. Pour the oyster liquid into a double boiler and add three pints of milk. When this is quite warm, not hot, place the covered oysters over slow fire and shake gently two or three minutes, or until puffed up. Turn into the hot milk and add the steamed rice. The oyster flavor will be different from the usual soup.

### Fruit Rolls.

Three cupfuls of flour, six tablespoonfuls of baking powder, one-half teaspoonful of salt, one-third cupful of butter, one cup milk, two tablespoonfuls sugar, and one-half teaspoonful of cinnamon. Mix and sift the dry ingredients, rub in the butter with the tips of the fingers, add the milk gradually, cutting with a knife to a soft dough. Turn the dough on a floured board, and roll into a rectangular sheet about one-third inch in thickness. Brush over the sheet of dough with melted butter, then sprinkle with cinnamon and chopped raisins. Roll up the dough compactly and cut the roll in pieces an inch in thickness. These are delicious.

### Strawberry Pudding.

Beat the yolks of four eggs very light with a cupful of powdered sugar, add a quart of sweet milk and a tablespoonful of melted butter. Beat in thoroughly a cupful of fine dried bread crumbs, and pour all into a buttered pudding-dish. Set in the oven and bake until set. Remove to the door of the oven and spread over the top of the pudding a layer of ripe, sugared strawberries, and cover these with a meringue made of the whites of the four eggs beaten with a half-cupful of sugar. Return to the oven to color light brown. Eat with powdered sugar and cream.—Harper's Bazar.

### Help the Farmer's Wife.

Therefore, give the women of the family plenty of help and all necessary conveniences for expediting household labor and let the housewife urge system in every department and promptness in the performance of every duty; for with proper resources at command and competent help and system the domestic machinery will run smoothly and time for rest and recreation be provided and the tired housekeepers take a new lease on life.

### Cream of Tomato Soup.

Take a can of tomatoes or fresh ones. Rub through a sieve. Heat to the boiling point; thicken with corn starch. Make a cream sauce by rubbing a large spoonful of flour in a spoonful of butter, cooking over the fire till it is smooth and bubbles up. Add milk to make it thick. Mix the two together, season with salt, butter and a little bit of sugar. Cream tomato soup made this way will never curdle.

### Green Peppers.

The flavor of green peppers gives an acceptable variety. The seed should always be removed. The peppers should be chopped and added to chopped meat or other meat dishes. Meat mixed with bread crumbs may be baked in the pepper shells and the stuffed peppers served as a separate dish.

### Whipped Cream.

Be sure that the cream is rich. Pour it into a chilled bowl, and, with a wire egg whip, beat steadily until thick. This is the simplest and easiest way of beating cream. Add sugar and flavoring to taste, and keep in the ice until wanted.

### No Egg Cookies.

One cup sugar, one tablespoon lard or butter, one cup sweet milk, pinch of salt, one teaspoon soda, two of cream of tartar, one-half teaspoon flavoring. Flour to stiffen.