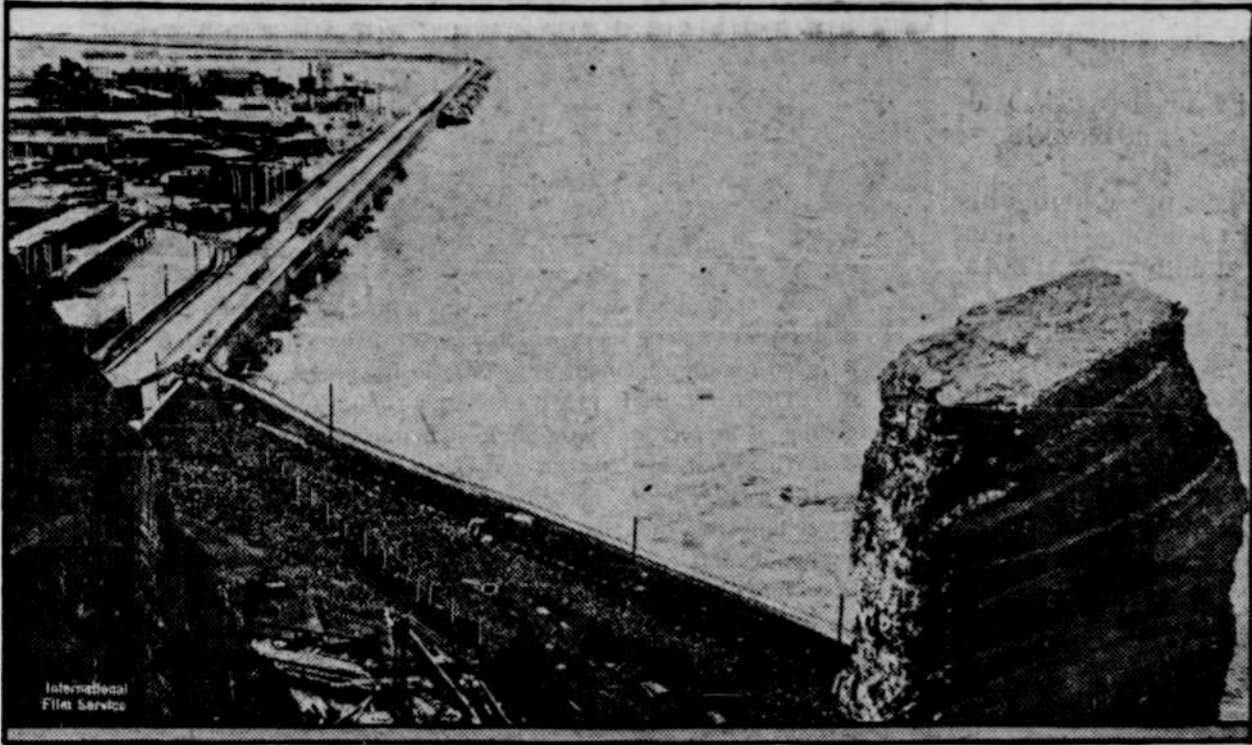


## SOON THIS MUST BE MADE A HARMLESS ISLAND



This is the first photograph of Helgoland, the great naval base of the Germans in the North sea, made since the war closed. According to the treaty German must demolish the island's fortifications.

## Plan to Salvage Sunken Cargoes

American Ingenuity Makes Practicable Reclamation of Invaluable Supplies.

### WILL BE GREAT INDUSTRY

One of Greatest Coal Fields in World Lies Off Atlantic Coast—To Be Brought Up by Submarine Salvaging.

Boston.—One of the greatest coal fields in the world lies off the Atlantic coast from Norfolk, Va., to Boston. It is made up of cargoes of sunken ships which lie on the floor of the ocean, and soon will be brought to the surface by means of a great after-war industry, known as the submarine salvaging of sunken cargoes, which will be the means of reclaiming millions of tons of coal, scrap iron and other raw products long since abandoned as lost.

The United States is taking the lead of all nations in fostering this great industry which grew out of the war, when the efficiency of the submarine as a monster of frightfulness was demonstrated. Peace will allow the submarine to come into its own as a great reclamation agency.

In Long Island sound there lie a million tons of coal, of which, it is estimated by salvaging experts, at least 25 per cent is reclaimable at a cost of about 25 cents per ton. Reclaimed coal sells at the market price of \$10 or \$12 a ton.

By means of the salvaging submarine it is possible to cover 20 square miles of ocean bottom a day in searching for sunken hulks. Once a wreck is located it will be a simple matter, now that the salvaging submarine is as perfect as the torpedoing submarine, to reclaim 300 tons an hour, and to locate half a dozen ships in as many hours.

#### Coal All Along Coast.

Along the sound from Bridgeport to Norfolk, Conn., 40,000 tons of coal were sunk last year alone. Similar coal wealth awaits a finder all along the coast, for, according to marine rulings, "findings is keepings," and the finder of the sunken cargo is the owner.

The reclaiming of wealth given up for lost when the boat which carried it sank is to be one of the most fertile fields of production of the reconstruction period. The perfection of the salvaging submarine makes possible and practical an enterprise that was beyond the scope of the most daring and doughty divers who sought to find sunken cargoes.

This is illustrated by a comparison of the work of the old-time divers with the mechanical work of the salvaging submarine. A diver named

Hooper held the record for immersion when he went down 180 feet in 1884 to reclaim the gold which sank in the Alphonso XII off the Canary Islands.

Hooper made 13 different trips to the wreck in as many months. So arduous and fatiguing was the descent that he was able to remain only 15 minutes each time before he signaled for the return journey. It took him four hours to make the descent, because of the necessity of accustoming his body by degrees to the increased pressure. The last time he went down he became paralyzed and was obliged to come up leaving \$150,000 in gold behind him—which still awaits a finder. In all he brought up \$350,000.

Today the salvaging submarine goes down at the rate of a foot a second, and the diver can remain a month in it if he desires, working an eight-hour day or however long his day may be. The materials salvaged are pumped to the surface by means of a 15-inch pipe, which will bring up 300 tons of coal or scrap iron in an hour, and place it on the deck of a cargo carrying steamer nearby. An entire cargo is thus salvaged in a few hours, and the work of locating and salvaging another wreck immediately undertaken.

In the matter of economy of time and money, the saving of the strength of the divers and in locating with dexterity the whereabouts of sunken cargoes, the salvaging submarine compares with the old-time method of picking up materials from the ocean's bed as does a high power motorcar with a one-horse shay.

## Prices May Rise Declares Board

Federal Reserve Bulletin Says Also Greater Shortage May Take Place.

### INVESTING PUBLIC MUST AID

Shortage of Many Essential Materials and Commodities in World at Large—Foreign Recovery May Be Rapid.

Washington.—In warning that still higher prices and a greater shortage of supply may be expected in the United States if foreign purchases be permitted to continue on the basis of the last few years, the federal reserve board in its July bulletin declares that the war period in exportation has come to an end and that it is the duty of the investing public to finance shipments needed by Europe.

#### Shortage in World.

"There is a shortage of many essential materials and commodities in the world at large," the board says, "increased credit demand for goods for export necessarily implies relatively decreased supply of goods for domestic use. Demand and supply are automatically equalized by changes in price, but such changes are in the circumstances here under consideration necessarily upward. If a large export financing process is conducted by banks out of credit the result is to place the fluid credit of the country at the disposal of foreigners in purchasing and settling for domestic products which they obtain from American producers."

Such an addition to credits not based on genuine savings, the board points out, would mean inflation, implying an increased tendency toward the bidding up of prices. In order to avoid the recurrence of such a menace the board recommends that the basis for exports should be found in the investment mar-

### English Court Fixes "Barefoot Kick" Rate

London.—The legal rate for kicking a gardener in "the place ordained by nature" has been established by an English court at 2 shillings and 6 pence, which is the amount Commander Forsyth Forest was assessed on the charge of assault brought by his gardener.

The evidence showed Forest was in pajamas and barefoot at the time of the assault.

Question: How much would the damage have been had the assailant's foot been shod?

Coal is decidedly improved by a repose of many years under sea, for marine salts enter its porous exterior and increase its power of combustion for both domestic and industrial uses.

Pig iron has been salvaged after a stay of 100 years in the farthest depths. Rails are brought up in good condition also. Copper bars, brass and all sorts of machinery are recovered in good condition, for although every metal has a different life, the sediment in the water forms a coating over the materials and preserves them. If copper and steel are near each other in a cargo, the copper will eat the steel and destroy it, so strong is the electrolytic action.

The scrap iron reclaimed in this way is sorted out, some going to rolling mills, others to brass foundries and all filling the world's constantly increasing demand for iron. In the English channel reposes a vast quantity of iron and steel, owing to the many ships which were sunk during the war.

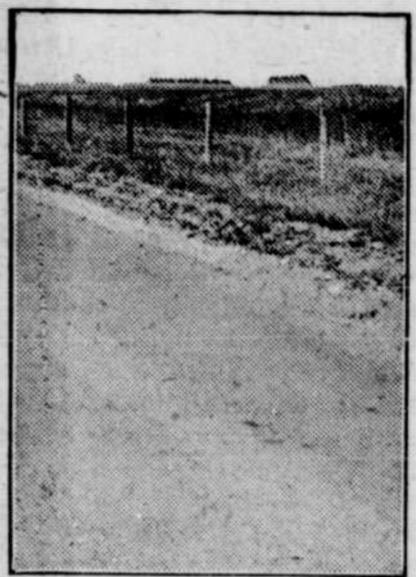
## ROAD BUILDING

### BENEFITS OF COUNTRY ROADS

Among Other Things They Cheapen Cost of Transportation of Farm Products to Market.

Good roads promote self-respect in a community. They make possible social intercourse. They bring the benefits of churches and schools within the reach of all. They help to keep the boys on the farm. They cheapen the cost of transportation of farm products to the markets and thus add to the farm profits. They add to the value of farm lands much more than they cost. They mark the degree of civilization of the rural community. This, in short, is the value of good roads as seen by the extension service of the University of Missouri College of Agriculture.

The building of good roads is of the greatest importance to a community. What kind of a road should be built? Of what should it be constructed?



Good Roads Like This Bring Farmer Nearer to City Markets.

What are the things to be considered in locating the road? What "grade" should be maintained? How should the road be drained? What are the laws governing highway construction? There are a few questions answered in extension circular 68 dealing with country roads.

Matters of prime consideration in locating a road are: Easy grades, good drainage, exposure to sunshine, elimination of culverts and bridges by avoiding unnecessary creek crossings, directness and the number of farms to be served for a given length of road. Whenever possible to avoid it, a good location should not be rejected merely because a certain roadway has been in use for some time. If the location of a used road is bad it should be changed if possible. In relocating roads avoid railroad crossings at grades.

The grade of the road is important for on this depends the weight of the load which can be hauled economically. By grade is meant the rise or fall in feet for each 100 feet in horizontal length of road, usually expressed in percentage. A 5 per cent grade means that the road rises or falls 5 feet each 100 feet along its center line. It has been calculated that on a smooth country road the load that one horse could pull on a level would require two on a 5 per cent grade, three on a 10 per cent grade and four on a 15 per cent grade. Engineers usually figure a 6 per cent grade as a maximum.

Road work in Missouri has not been as well managed as other public work. Projects have been too narrowly limited to localities, resulting in fragmentary effort. Skilled locating and supervision of construction have been generally lacking. The remedies are: First, a wider co-operation and the adoption of broad schemes of improvement, preferably with units no smaller than counties. Second, the absolute elimination of political considerations in the spending of money. Third, securing good engineering advice in the preparation of plans and requiring careful engineering supervision of construction.

### ENGLAND SPENDS 50 MILLION

Grants to That Amount Will Be Distributed for Reconstruction of Roads and Bridges.

Grants amounting to \$50,000,000 will be distributed by the British road board for the reconstruction of roads and bridges in England in 1919. Demobilized army units will be used to do the labor. Local highway authorities will be required to match this appropriation by at least as large a program of road work as they carried out in the year before the war. Area taken into consideration, England's program is thus far in excess of that of the United States, including both federal aid and state funds.

### POOR ROADS ARE EXPENSIVE

Congressional Report Places Annual Loss at \$504,000,000 for Transportation Alone.

The congressional report of 1914 placed the economic loss of the United States through poor roads at an annual figure of \$504,000,000 for transportation costs alone. The heavy increase in tonnage since that time probably makes the loss today close to \$1,000,000,000.

## MAKING SUCCESS IN HOME GARDEN

Much Depends Upon Interest of Gardener Being Maintained Throughout Season.

### WAGE FIGHT AGAINST PESTS

Man Must Make Continuous Fight From Start, Never Shirking Duty and Keeping Everlastingly on Job—Easy to Kill Weeds.

(Prepared by the United States Department of Agriculture.)

The ultimate success of a home garden depends largely upon the interest of the gardener being maintained throughout the season. Many persons have gotten the idea that when the garden is planted and cultivated two or three times their work has ended, and as a result the garden soon goes to weeds or is destroyed by insects and diseases. The successful gardener, declare the specialists of the United States Department of Agriculture, is the one who wages a continuous fight against the enemies of the garden from the very start, never shirking his duty and being everlastingly on the job.

A crop of weeds can be destroyed in a few moments by means of a steel rake or a hoe, if it is used when the weeds are just coming through the ground. If allowed to remain, the weeds become firmly rooted and a thorough renovation of the garden is necessary to rid it of them.

#### Seem Innocent, but They're Not.

A few old-fashioned hardshell potato bugs may not appear to do any great harm, but the crop of soft-shelled beetles they produce will eat the leaves from the potato vines almost before you know they are present. A few spores of some mildew or other disease may not do any great amount of damage, but if the weather is favorable for the spread of the disease, it will soon cause the loss of the entire crop.

The old adage of "A stitch in time saves nine" applies with double force to the care of the garden. Keep up interest in the garden and make successive plantings of various crops, so that a continuous supply of vegetables may be provided for the table. There is nothing gained by having the land lie idle, and it is easier to keep it clean if there is a paying crop upon it.

#### "Seedy" Gardens Show Neglect.

Too often gardens with a "seedy" appearance are seen in the middle of the summer. The brush on which the peas were grown or the wire trellis on which they were trained is left with the remains of the crop upon it, and general unsightliness rules the entire plot. It is a little more trouble to keep things neat and attractive, but it pays in the long run; and if you as a gardener want to maintain a reputation



Keep the Garden Growing Through the Summer.

for a good garden, the necessary attention will have to be given to its neatness and general appearance.

In sections where the weather becomes extremely hot in summer and it is not possible to keep garden crops growing, the land should be cleaned, replowed and kept stirred from time to time until conditions are suitable for the planting of fall vegetables. Under ordinary conditions it is best to have some crop growing on the soil, and if the period between the early spring vegetables and the fall vegetables is sufficient, a crop of cowpeas should be grown upon the garden land. This will shade the soil and prevent the sun burning the organic matter out of it, and at the same time will actually add fertility to the soil.

### KEEPING HARNESS IN REPAIR

Tools and Facilities Are Comparatively Inexpensive and Simple—Special Devices Needed.

(Prepared by the United States Department of Agriculture.)

The tools and facilities required for keeping harness in repair are comparatively simple and inexpensive. A considerable portion of the repair work on harness can be performed by the aid of tools required for other purposes, but there are a few special devices that are desirable.

## DAIRY

### INCREASE IN DAIRY PROFITS

Dairy Bull Associations Have Done Good Work and Show Big Increase in Incomes.

(Prepared by the United States Department of Agriculture.)

Scrub dairy bulls are doomed. The bull association sounds their death knell, but it replaces them with bulls of better breeding. In June, 1916, there were 44 dairy bull associations and several have been organized since then. They are doing excellent work. Without exception they show an increased income without an increased cost.

The New Windsor (Maryland) Bull association has furnished production records of dams and daughters for three successive years. Each year the daughters have produced more milk and butter fat than their dams, which



A Good Holstein Bull.

demonstrates that the bulls were well selected. Of the 21 daughters of association bulls for which the 1918 records are available, 16 excelled their dams in butter-fat production, and 15 excelled their dams in production of both milk and butter fat.

The average yearly production of the dams was 5,560 pounds of milk and 219 pounds of butter fat. The average yearly production of the 21 daughters was 6,523 pounds of milk and 263 pounds of butter fat. In milk production the daughters excelled their dams by 963 pounds or 17 per cent, and in butter-fat production by 44 pounds, or 20 per cent. These are not as large gains as some other bull associations have given, but are well worth while.

Because of co-operative ownership the bulls cost the farmers no more than would have been paid for scrubs; it costs no more to feed the daughters than to feed the dams, and it costs much less to feed the bulls because there were not so many of them. The increased production, therefore, was all net profit.

### GROWS GARDEN TO BUY CALF

Washington Boy Raises Prize-Winning Vegetables and Buys Jersey Heifer With Money.

(Prepared by the United States Department of Agriculture.)

Alfred Olson of Klickitat county, Wash., is a member of one of the calf clubs organized by the United States department of agriculture and the state college of Washington. With his purebred Jersey heifer calf, Arc's Babe, he won the state championship prize last year. In 1917 Alfred became interested in the calf club work, but a purebred calf costs money, and he did not have funds to buy that requisite for membership. To enroll in a garden club as the first step toward entering the calf club may seem unusual, but that was what the Klickitat county boy did, and he reached the desired goal. The weeds in his club garden kept him busy all summer, but he gave it such faithful care that his vegetables were prize winners. He exhibited a collection of them at the state fair and took \$60 worth of prizes.

Meanwhile he had been writing to Jersey breeders for prices and descriptions of calves. He decided on Jerseys because that was the breed his father had. With \$40 of his garden prize money he bought a month-old Jersey heifer calf in October. He kept her in the barn all winter, but in the spring she was turned out on the range. When brought in in September to be made ready for exhibition purposes she was larger at eleven months than his father's grade calves of fifteen months. At the state fair Alfred's Jersey was awarded the state championship prize in the boys' and girls' club class and was valued at \$150.

### SMALL-TOP MILK PAIL BEST

Prevents Entrance of Dust or Dirt and Greatly Reduces Number of Bacteria in Milk.

In modern dairies where clean milk is produced the small-top milk pail is a necessity, as it presents only a small opening into which dust and dirt may fall from the air or from the cow's body. It has been found by experience that the use of a pail of this kind greatly reduces the number of bacteria in milk from dairies where it is used. Many types of milk pails are for sale, but any tinner by the addition of a hood can convert an ordinary pail into a small-top pail.

### American Soldier Dead Will Be Buried in U. S.

Three-fourths of the American dead in France will find their final resting place in American soil. Answering an inquiry from Senator Chamberlain as to the wishes of relatives, General Marsh, chief of staff, said it was estimated that replies from relatives thus far received showed not more than 25 per cent who expressed a preference that the soldier's body remain permanently in France.

With more than 4,000,000 soldier dead of allied and enemy countries buried in French soil, General Marsh said, that nation was desirous of proceeding slowly with the task of exhuming those that are to go to their home lands. No date has yet been set for beginning the return of American dead.