

CONCRETE KEEPS OUT MANY PESTS

Rats and Mice Destroy Crops and Property Valued at Millions Each Year.

PLAN TO STARVE THEM OUT

This is Best Done by Building Rat-Proof Buildings or Re-arranging Old Structures—Cut Off Their Supply of Food.

(By W. G. KAISER, Agricultural Engineer.)

Since the time when the Pied Piper of Hamelin destroyed the rats, no other such satisfactory method of ridding farms of these pests has been found. The best way is to starve them out.

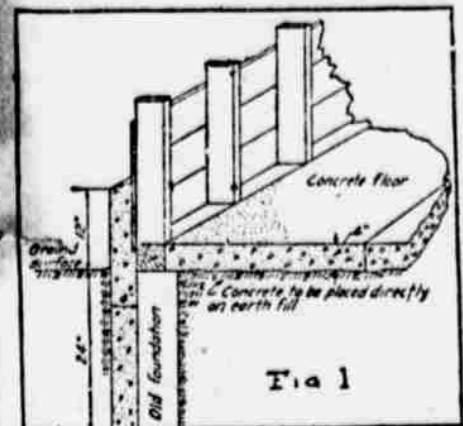


Fig. 1—How an Old Foundation May Be Ratproofed and a Concrete Floor Installed.

and this can only be done by building ratproof buildings or ratproofing such structures as are already built. The United States Department of Agriculture says that rats and mice destroy crops and property valued at more than \$200,000,000 yearly. They carry bubonic plague and other fatal diseases. One pair of rats at the end of three years will be the ancestors of 18 generations amounting to 359,709,482 individuals.

Plan for Foundations.
In the three illustrations, I have shown how to build foundations and floors ratproof; how to build a false foundation alongside an old foundation and floor it to keep rats from working through and how to ratproof a wooden building.

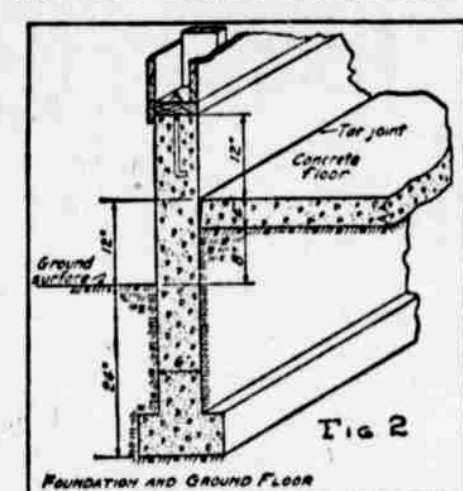


Fig. 2—Showing a Good Method of Making Foundation and Floor of a New Building Ratproof.

Lumber piles and other miscellaneous structures form a living place for rats which should be eliminated. Lumber piles should be elevated at least 18 inches from the ground, board walks should be replaced by concrete and garbage should be kept in concrete or metal containers having tight-fitting tops. There should not be a scrap of food left where rats can get it.

Concrete Mixture.
For foundation work such as I have mentioned a 1-2 1/2-4 mixture of concrete is recommended. This means one sack of portland cement to 2 1/2 cubic feet of sand and 4 cubic feet of pebbles or broken stone. As is absolutely necessary in all concrete work, the sand and pebbles should be free from loam and trash and the water used should be fit for drinking purposes.

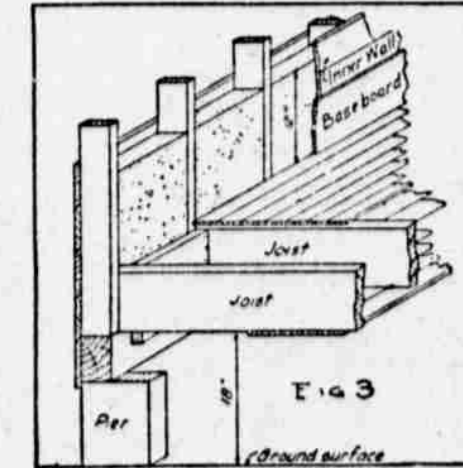


Fig. 3—Buildings Supported on Piers Are Ratproofed by Raising Above Ground Level and Placing Concrete Between Walls Above Sills.

Only enough water should be added to make the mixture of a quaky and jelly-like consistency. Floors of concrete should not be less than 4 inches thick. They may either be placed directly on the ground or on a cinder base, but always be sure the soil is well drained. For floors, a concrete mixture of one sack of portland cement, 2 cubic feet of sand and 3 cubic feet of gravel or stone is recommended.

Along with ratproof buildings, start a campaign for killing rats. If the ground is undermined with holes, it is possible to drive them into the open or to suffocate them by connecting the system of holes with the exhaust pipe of an automobile.

OPPORTUNITIES FOR KEEPING HONEY BEE

Nectar Going to Waste in Tulip-Tree Regions.

No Question but That Area May Furnish Many Times More Product Than at Present—Bulletin Discusses Methods.

(Prepared by the United States Department of Agriculture.)

With the tons and tons of nectar going to waste every year in the tulip-tree region of the United States because the colonies of bees are not strong enough to get the full amount of surplus, there is no question that this area may furnish many times more honey than it does at present. This opinion is expressed by the United States Department of Agriculture in Farmers' Bulletin 1222, "Beekeeping in the Tulip-Tree Region," prepared by E. F. Phillips and George S. Demuth, and now available for distribution.

The tulip tree is occasionally found as far north as Vermont and Rhode Island, and west to Michigan, Arkansas and Louisiana. On the outer limits of its distribution it is not abundant. It is more plentiful on the south shore of Lake Erie and rare west of the Mississippi river, except in northeastern Arkansas and southeastern Missouri. The trees are more abundant and larger in the south-central part of its range, especially in Tennessee, Kentucky, the western part of the Carolinas, and in the Ohio river basin. It is common throughout the Piedmont plateau of Maryland and Virginia.

That this honey can be marketed at a profit is attested by the fact that this section now sends to outside re-



Modern Homes for Bees.

gions for part of its honey supply. There is not the local prejudice to dark honey which exists in the clover region and in the West. All these factors taken together make the region one of promise. The enormous number of colonies of bees in this region is pointed to as proof of the great nectar resources, and if these colonies are given proper care vast quantities of honey can be produced.

The abandonment of the "gums" and box-hives and the adoption of modern equipment, together with practices more suited to the region, is advised. The region, it is said, needs more men engaged in beekeeping on a commercial scale as a chief or only occupation. The peculiarities of the region, however, are such as to demand a close study of the business. Careless beekeeping, it is pointed out, is entirely unprofitable, especially in places where the main honey flow comes so soon after the last killing frost of the spring.

Copies of the bulletin, which discusses methods for carrying on the business successfully, may be had free by writing to the Department of Agriculture, Washington, D. C.

LAYING HENS IN FARM FLOCK

Most Efficient Number is Between 150 and 500, Say Ohio Poultry Experts.

At least 150 laying hens should constitute the farm flock, say poultry experts at the Ohio experiment station. The most efficient flock is between 150 and 500. The flock containing fewer than 150 hens is not efficient, while flocks of more than 500, though perhaps too large for the general farmer, may be better adapted to those specializing fruit and poultry farms.

PROPER FERTILIZER TO BUY

Most Economical Material is That Containing Highest Percentage of Plant Food.

The most economical fertilizer to buy is the one containing the highest percentage of the plant food needed. It will cost more per ton, but may be used at a lower rate per acre because it does not contain so much useless material.

CARING FOR TOMATO PLANTS

Four or Five-Foot Stake Should Be Driven Alongside Each Vine When Soil is Soft.

Secure a four or five foot stake for each tomato plant and be ready so the stakes can be driven down by each plant when the ground is soft. If the tomatoes are to be trellised similar to grapes, secure posts and two wires for each row.



IN THE GREEN-HOUSE

"Shall I take you on a little trip through the green-house?" asked the Fairy Queen of some of the Fairies.

"It is a wonderful park green-house and there are many interesting plants from all around. I've been there and I can tell you about a good many of the plants and blossoms if you'd like to take such a trip."

The Fairies had said they would like some new kind of a trip, and so the Fairy Queen had suggested this.

"The house isn't a house painted green, you know. A green-house such as I'm speaking of means a house for flowers and ferns and shrubs.

"We'd love to go on the trip you suggest," said the other Fairies. "When will you take us?"

"After the visitors leave," said the Fairy Queen. "We will go late this afternoon."

So all the fairies who were going on the trip got ready in their new outdoor suits which no one could see because they looked the color of air. If you can see that color and know what it is you're very, very smart!

"Now we're off," said the Fairy Queen, some time later.

They went to the green-house. Attached to the big one were many



"Looking at Everything."

smaller ones. They were all filled with flowers and plants and palms and mosses and ferns.

They saw some dear little crocuses and tulips and daffodils outside the door and then they went in. There were many palms and trees from hot, hot countries, known as the tropics.

It was very hot in this house for it had to be in order to have the plants and trees grow as they would in their native lands.

Gold fishes were swimming in little pools and there were rocks and lovely moss of different kinds growing from the rocks and ferns everywhere, and great tall palms which reached the ceiling.

Some of the ferns hung down and some were little ones. There were ferns that grew in water and other water plants growing there too. There were sugar cane and coffee trees and banana trees, and lovely maidenhair ferns enjoying the shade.

Nearly were some cactus plants, queer and knotty and ugly in a way and yet rather fascinating.

Each plant had to be treated just so—receiving what it would receive in the way of heat and proper earth and water as it would if growing in its own part of the world.

There were some palms with great branches and spreading leaves. Plants and ferns which had grown too fast were clipped off so they wouldn't go up through the ceiling!

Of course they couldn't do that, but they would push other plants out of the way and bend over and break themselves so they had to be stopped from growing too much.

In one house which was called the "show house" there were tulips of all colors and gay flamingo lilies, orchids which were called Indian Orchids and orchids known as Tiger Orchids. The Orchids were quite decided in letting everyone know that they liked warm and sunny weather and that they would complain if the weather were cloudy and had, though they liked drinks of water.

There were long pink hanging flowers which were called Medinilla Magnifica! And there were red flowers which drooped and hung down in a very attractive way and which had the gorgeous name of Acalypha Sant!

There were flowers and plants from other parts of the world and some had colored leaves.

And little bumble bees came in and buzzed through the green-house room where were the hyacinths and the forget-me-nots and the jonquills and the snapdragons and the Jack-in-the-Pulpit families.

The Fairies and the Fairy Queen looked at everything and they whispered little secrets to some of the flowers while the flowers told the fairies of some of their sweet secrets. Little Friend Heliotrope told the Fairy Queen that she must take a look at the Butterfly plants which had blossoms of pink and white, rose and red and lavender and which looked like butterflies. They wanted so much to be admired by the Fairies.

And the Bird of Paradise flowers with their gorgeous blue and yellow flowers and the other members of the family with their blue and white flowers which only bloomed once a year for six weeks—all told the Fairies who they were as I have just told you!

SCIENCE ON FARM

Agriculturist of Today Must Know Business Thoroughly.

Canadian Tillers of the Soil Have Proved That Old Days of Haphazard Methods Have Gone.

Agriculture in Canada has the status of a profession which both its high standard of operation and the prime place it occupies in national life justify. The days when land was casually flung on and farmed without any intelligent understanding of agricultural processes are going with the dwindling availability of the land, and rapidly passing is the epoch of the destruction of soil values, and the abandonment of farms which have been rendered unproductive. Clearer and clearer has become the realization that farming is a specialized profession requiring special training, and in the place of this spoliation there is an intelligent system of crop rotation, preservation of the virtue of the land, a discovery of the nobility of the farmer's calling and a determination to secure and achieve the best possible in everything.

The Education of the Farmer.

Agricultural colleges, experimental farms, government literature, railway propaganda, all in an appreciation of the national benefits which accrue, contribute to the education of the farmer who, if he starts out in ignorance, speedily discovers the futility and profitlessness of continuing in this state. It is only of comparatively recent years that farming in Canada has become the comprehensive and exhaustive study it is and its tenets are so widely absorbed, and older farmers who have followed haphazard methods or systems scientifically unsound are gradually forced from necessity into an intelligent study and application of their profession.

This brings us to the city man who is anxious to leave his old life for the greater freedom of the country and take a farm for himself, and, the foregoing holding good, he need not follow far behind the older farmer if he take up the study of his work seriously, bring energy and intelligence to bear upon a following out of the systems of experienced and successful agriculturists, and utilize the results of the expert investigation and research the Dominion places at his disposal. The

whole country is working for him and the novice has almost an equal opportunity with the farmer of a lifetime.

A census of Canadian farmers would probably show that fully one-half are not farmers' sons and were not brought up to the life of the farm. Yet none would criticize Canada's farmers on the score of poor farming methods in general, the excellency of their crops with international honors and the universal demand for their live-stock products refuting this effectually. Significant is it, too, that practically all the farmers who have achieved the most signal honors at International farming competitions have not been lifelong farmers, but city men who, taking to the land after reaching maturity without the remotest previous knowledge of agricultural activities, have through intelligent study and close application of the best farming methods surpassed the efforts of those agriculturists who have continued doing things on the farm in the way their fathers used to do them.

For further particulars, pamphlets regarding Canada, railway rates, etc., apply to W. V. Bennett, Room 4, Bee Bldg., Omaha, Neb.—Advertisement.

Oldest Biblical Versions.
The four oldest versions of the Bible are the Aquila, Symmachus, Theodotian, in Greek, and the Peshitta in Syriac.

SWAMP-ROOT FOR KIDNEY AILMENTS

There is only one medicine that really stands out pre-eminent as a medicine for curable ailments of the kidneys, liver and bladder.

Dr. Kilmer's Swamp-Root stands the highest for the reason that it has proven to be just the remedy needed in thousands upon thousands of distressing cases. Swamp-Root makes friends quickly because its mild and immediate effect is soon realized in most cases. It is a gentle, healing vegetable compound.

Start treatment at once. Sold at all drug stores in bottles of two sizes, medium and large.

However, if you wish first to test this great preparation send ten cents to Dr. Kilmer & Co., Binghamton, N. Y., for a sample bottle. When writing be sure and mention this paper.—Advertisement.

Happy in Their Fate.
Rub—Riches are a curse!
Dub—Yes, but only the poor realize it.

We know best what is best for us to do, but the trouble is to persuade ourselves to do it.



The reason a woman keeps house so well is—you'd better tell her so, anyway.

A dull man who knows it has one extremely attractive quality.



Is out of fashion, is unnecessary—for you can have abundant hair of the original shade by using Q-Ban Hair Color Restorer—Safe as water—try it. At all good druggists, 75 cents, or direct from HESSIG-ELLS, Chicago, Memphis, Tenn.

W. N. U., LINCOLN, NO. 23-1922.

Baby Specialists.

THAT there are Physicians who specialize on Infant ailments you know. All Physicians understand Infant troubles: all Physicians treat them. It is his profession, his duty, to know human ills from the Stork to the Great Beyond.

But in serious cases he calls in the Specialist. Why? He knows as every Mother knows, or ought to know, that Baby is just a baby, needing special treatment, special remedies.

Can a Mother be less thoughtful? Can a Mother try to relieve Baby with a remedy that she would use for herself? Ask yourself; and answer honestly!

Always remember that Baby is just a baby. And remembering this you will remember that Fletcher's Castoria is made especially for Infants and Children.

Children Cry For



The False and the True.

Advertising by the use of large space, the expenditure of huge sums of money have placed on the market, have put in your home, perhaps, many articles that today have been discarded, as you will readily admit.

Do you recall anything that has more modestly appealed to the public than has Fletcher's Castoria: modest in all its claims, pleading at all times—and truthfully—for our babies?

The big splash, the misleading claims may win for a time, but the honest truth-telling advertiser is like the old story of the tortoise that beat the hare.

Mothers everywhere, and their daughters, now mothers, speak frankly, glowingly, enthusiastically in praise of Fletcher's Castoria. Speak of it lovingly as a friend that has brought comfort, cheer and smiles to their little-ones.

To them: to these true mothers no argument can induce them to set aside their bottle of Castoria, their old friend, that they might try even another and unknown remedy for babies. Then, would YOU think of going to YOUR OWN medicine chest to find relief for Baby's troubles? Can you not separate the false from the true?

MOTHERS SHOULD READ THE BOOKLET THAT IS AROUND EVERY BOTTLE OF FLETCHER'S CASTORIA

GENUINE CASTORIA ALWAYS

Bears the Signature of

Chas. H. Fletcher.

THE CENTAUR COMPANY, NEW YORK CITY.

O-So-Easy to Use
Colors Silk, Wool, Cotton
All At The Same Time.

PUTNAM FADELESS DYES 10c per Package WHY PAY MORE FOR ANY DYE?