

# WHAT FARMERS OWE to the BEE

**Colonies of honey makers necessary to fruit raising because they are the chief fertilizing agent: : And there can be nothing more tempting than hot biscuit and honey for breakfast on a crisp winter morning**

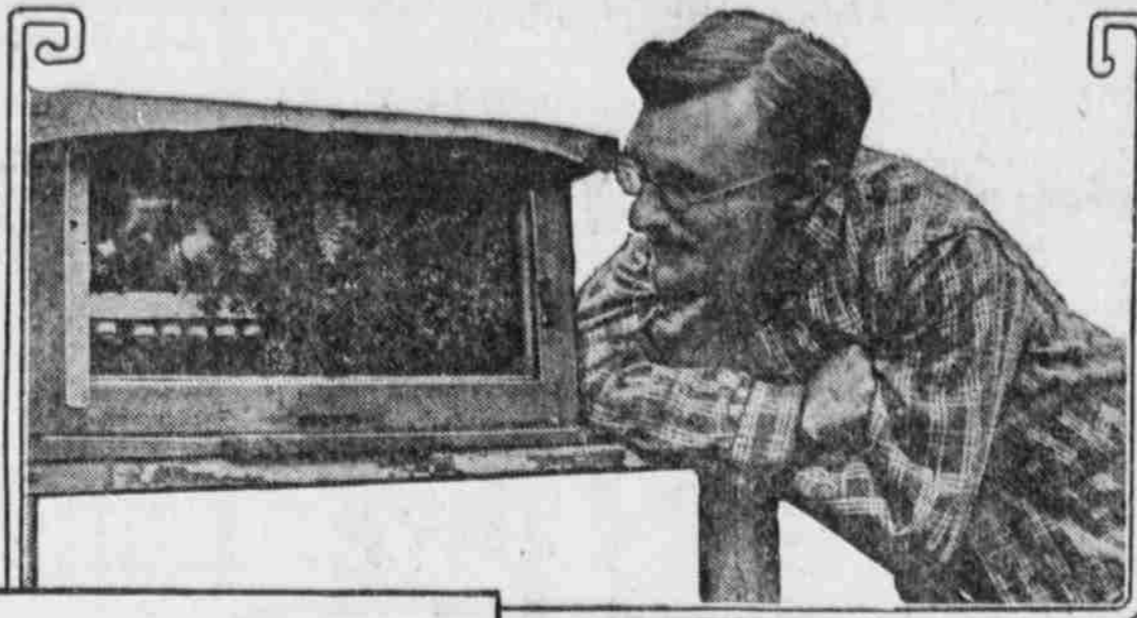
By ROBERT H. MOULTON.

**F**ARMERS in this country are just coming to realize the debt which they owe to the honey bee. It has long been understood, of course, that this busy little insect fertilizes the blossoms of apple and other fruit trees and so helps to increase the crop, yet the bee has seldom been credited with doing so much good as it actually does. Indeed, in times past some fruit growers have sought to get rid of the bees on the ground that they damage the ripe fruit. The crop so quickly decreased in size, however, that the fruit men were glad enough to have the bees back again. There is a well-established belief that bees puncture grapes in order to extract the sweet juice, but the fallacy of this belief has been proved beyond a doubt. Ripe fruit has been placed inside a beehive, with thousands of the insects present, but it has not been molested. It is true that if hornets or birds make holes in grapes, pears or other ripe fruit, the bees will feed on the juice which is exuded. In point of fact, the jaws of the honey bee are so made that it would be unable to bite into or otherwise make holes in fruit, even if it had a will to do so.

Orchards in which bees are present in large numbers are almost always much more productive than those in which only a few bees are to be found and many apple growers are now establishing apiaries in or near their orchards. It is not necessary to have the hives actually under the trees and it may be better to have them in an adjoining field if the orchard is to be cultivated, as otherwise the hives might be in the way and the horses stung. Bees seem to have an instinctive dislike for horses and will even attack the beekeeper sometimes if he starts to work in the yard when the odor of horses is upon his clothing. Beekeeping is not to be recommended to hostlers.

To the orchardist the honey and wax which he gets from his bees are merely by-products. An extra yield in fruit is what he is after. And he gets it, as may be judged from an instance cited by one of the state experiment stations. It seems that two orchards situated in the same part of the country were cultivated in exactly the same manner and had the same kinds of trees. Yet one was prolific and the other a failure. When the experiment station was appealed to, the trouble was diagnosed as a lack of bees to pollinate the flowers. "You are wrong," the answer was flashed back, "for there are no bees in either orchard."

The inspector was not convinced, however, and after a search he found a very strong colony of bees in a fallen log in one corner of the bearing orchard. Bees were immediately installed in the other orchard by the owner, and as a result he netted nearly \$4,000 the next season—pretty good interest on an investment of \$15 or \$20 in bees. Most people do not know that an apple blossom requires to be fertilized several times in order to produce the best fruit, but this is a fact. Moreover, the blossoms of some trees must be pollinated from another source if fruit is to be set. The work is done largely by honey bees, although wild bees and other insects help out to some extent. Once, as a test case, 2,536 apple blossoms were covered in order to keep the bees away, and only three apples matured. Of course, the bee does not pollinate the blossoms purposely. She is in search



IOWA STATE INSPECTOR OF APIARIES EXAMINING BEES

slive to be feasible. It has to be done in greenhouses where strawberries are grown, for when bees are used the fruit is always misshapen, but the winter strawberries sell for a dollar or two a plant!

Perhaps it may be said without getting anybody into trouble that the free use of water by spraying makes possible some of the remarkable exhibitions which bees occasionally give. Water is not always used, by any means, but when it is the bees are rendered surprisingly tractable and docile. There are no bee tamers, however, who are not stung at times. Indeed, they may be stung very often, but they are inured to the experience and do not even wince. And, of course, an experienced beekeeper learns how to handle bees without making them angry. Furthermore, some bees are much gentler than others. Many times it is a good plan to kill the queen in a cross colony and replace her with a young queen from a quiet colony. Yet the cross bees are likely to be among the best honey producers in the apiary.

Many farmers fail to succeed with bees simply because they neglect to learn anything about their management. It is true that bees do not require a great amount of attention and do best when left alone most of the time. Yet there are certain things which have to be done just at the right time and in just the right way. These are the few things that the farmer should know about. In early spring, for example, the bees may easily starve to death for lack of stores, although they may have come through the winter safely. In that event they must be fed on sugar sirup if no honey is available. Equal amounts of sugar and water may be used and it is best to have the water warmed, but the sugar should never be melted on the stove, as it is likely to be burned. The sirup may be given in one of several different kinds of feeders, but few are better than a shallow pan from the ten-cent store with a little excelsior in it for the bees to walk on. If this pan filled with sirup is placed on top of the frames of the hives the bees will quickly take the liquid down and be tided over the period of famine.

It is a mistake for any farmer to try to keep bees in the old-fashioned box hives, for they cannot be managed so well and getting the honey out is likely to be a painful as well as exciting process. Likewise, thousands of bees are needlessly sacrificed, and the hives are almost sure to be neglected. Modern hives cost but little, yet may be taken entirely to pieces and the bees looked over without the loss of a single one. And taking honey out is no trouble at all, when a bee escape is used, for the bees do not even know what is going on.

The best way to begin beekeeping is to buy a colony or two from some up-to-date apiarist in the neighborhood, but a hive full of bees can be shipped by express or the insects may be bought by the pound if one already has an empty hive. Indeed, this is a practice which is becoming very common, for even experienced beekeepers often invest in one, two or three-pound packages of bees in order to build up weak colonies. It is not an unusual thing for bees to be shipped all the way from Texas to Canada.

Sometimes wild bees may be captured in the woods and brought home. Although called wild bees, these honey makers which are found in logs and hollow trees have escaped from captivity at some time, for there were no honey bees in this country until they were brought here by the Pilgrim Fathers.

If the farmer owns more than half a dozen colonies of bees it will pay him to get an extractor. This is a simple device for separating the honey from the combs, the latter being placed in a frame which revolves at a high rate of speed, the liquid honey being thrown out of the wax cells by centrifugal force, just as cream is separated from milk. Then the combs may be put back in the hives for the bees to fill again. The farmer can usually get more honey this way and will have less swarming.



EXPERT HANDLER RARELY STUNG



CATCHES QUEEN, SAVES SWARM



BEEKEEPERS AT A STATE APIARY DEMONSTRATION

of nectar from which to make honey, but all unconsciously she brushes the pollen from one flower and carries it along to another, thus carrying on her part of nature's plan. The value derived from the cross fertilization of blossoms in this way is probably much greater than that of all the honey and wax made by the sum total of all the bees in the country.

It is practically impossible to grow cucumbers in the greenhouse unless bees are depended upon to fertilize the blossoms, and so the market gardeners are obliged to yield tribute to this useful insect. Even in the dead of winter, with snow drifts six feet high outside, thousands of bees are to be found flying around in the great glass houses where cucumbers are produced for the exclusive winter trade. It is true that the bees get but little nectar from the blossoms and have to be fed on sugar sirup, but they accomplish the purpose of transferring pollen from one flower to another. Of course this work might be done artificially. That is, a man might go from one blossom to another with a small brush and transfer the pollen, but the process would be tedious and too expen-

all, they spread over nearly 9,000,000 square miles, or three times the connected area of the United States! They contain mountains higher, rivers longer and more navigable, valleys wider and more fertile, and climates more varied than those of the United States.

Noting the population, we find that Costa Rica starts the small end of the list with 400,000 inhabitants, and Brazil tops it with 20,000,000. All Latin America supports today approximately a population of 75,000,000, which is increasing by reproduction faster than is the population of the United States. When the new emigration from Europe starts in after the war, and when the Panama canal is in full use by the shipping of a peaceful Europe, this total may soon overtake and pass that of the big sister nation of North America.

We are almost astonished by the figures of Latin-American commerce. They make us respect many of the southern republics and peoples, even if some other influences may not be so favorable. Last year the twenty southern neighbors of the United States, through sheer strength and capacity, pushed up the total of their foreign trade to the huge sum of nearly \$3,000,000,000. This was divided almost equally between exports and imports, with the actual balance of trade in their favor. Argentina, for example, with an ambitious, vigorous and prosperous people numbering about nine millions of souls, conducted a foreign commerce valued at the surprising total of \$900,000,000, which makes an average of about \$100 per head. Chile, a land of achievement and promise,

lying on the Pacific coast of South America (like the states of California, Oregon and Washington, on the Pacific slope of the United States), covering an area of nearly 300,000 square miles, or more than that of Texas, and directly tributary to the Panama canal, bought and sold in foreign commerce products valued at nearly \$262,000,000.

#### Advantages of the Telephone.

Evan B. Stotsenburg, attorney general, tells a story concerning the early days of the telephone in New Albany.

A character of the town, who operated an office in rooms just above the livery stable, was impressed with the benefits of the telephone and had one placed in his office.

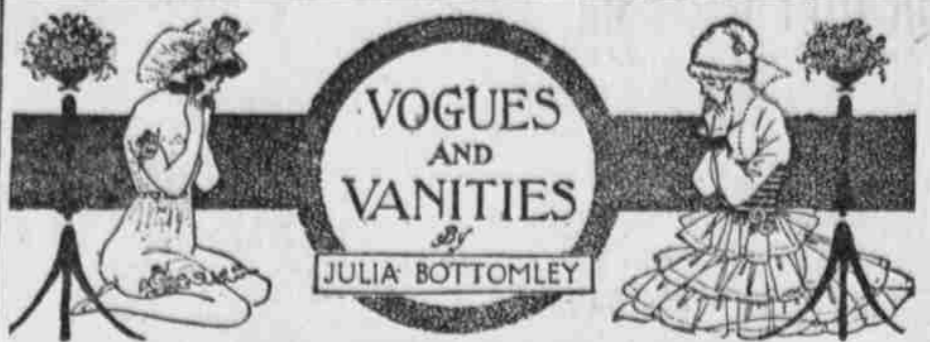
Meanwhile the new-fangled instrument also went into the livery stable. Then the town character sat down and waited for someone to take advantage of the new instrument. No one did. One day the telephone bell in the livery stable, however, rang with all its might.

"Hello," yelled the livery stable proprietor.

"Hello, yourself," answered the voice of the town character, upstairs.

"Just pass me the broom up through the front windows, will you?" said the voice.—Indianapolis News.

Seventy per cent of the world's cork supply is said to be produced in Spain and Portugal.



Two-Color Blouse of Crepe.

One of those new blouses in which georgette crepe in two colors is combined has several points of interest for the seeker after new things in waists. The two-color idea was successfully introduced in the spring and has the endorsement of women of fashion. It gives designers a chance to exercise a great amount of cleverness in embodying both colors in the body of the garment, and in carrying out the color scheme in embroideries, buttons and ornaments.

The blouse shown is of white and navy blue georgette crepe. A band of the navy blue crepe is set in about the armhole and it is used to make the wide cuffs and the collar.

Small pendant silk-covered buttons are placed down each side of the front, and they are sewed to a plait near the armhole. They are in navy blue silk, suspended by small white silk cord.

The waist sets nicely and is bloused over the top of the skirt a very little. Hemstitching serves to join the two colors in crepe, together.

The blouse possesses two style features that are new and especially interesting. The neck is round and finished with a narrow band of white crepe. The collar, of blue crepe, is cut circular and in two pieces, making a narrow crescent-shaped cape at the back and front. It fastens on the left shoulder and is edged with very fine point Venice lace.

The deep cuffs of blue are smart and very practical, as they do not soil as easily as white. Fragile and dainty as crepe looks, it is in reality a durable material if given the care it deserves. The light colors wash well and may be retinted when they begin to fade.



Pretty Party Frocks for Girls.

There are many pretty frocks on display for members of the primary class in the school of social wisdom, and they are calculated to develop her taste. By the time she arrives at the "flapper" stage, with a mind of her own as to clothes, she will know something about party frocks, anyway.

There are many dresses for the little miss, made of plain and changeable taffeta in light colors. And there are others of crepe or chiffon much beruffled. Some of them are short-waisted, some of them are long-waisted, and others have no waist at all. All of them barely reach to the knees and their sleeves are as brief as their skirts. Necks are round or square, and a little sleeveless body in several good designs is worn over a dainty underbody with sleeves, made of tulle or lace, in narrow ruffles, set close together on a net foundation.

A new idea is successfully carried out when taffeta is the material used. Short-waisted dresses, or slips without a waistline, are trimmed with several rows of narrow ruffles of the silk about the bottom of the skirt and on the sleeves. These ruffles are sewed to the frock along their lower edge—that is, they are upside down.

Other styles may come and go, but the pretty lingerie frock for the little

miss refuses to go at all. Here is one of the latest creations for a little girl. It is made of French batiste and is trimmed with narrow valenciennes lace and a little frill embroidery. The long waist has a front panel of five tucks, and when it is set into the side body a frill edged with lace is set on. Similar frills finish the neck and sleeves.

The short skirt is laid in fine plaits and trimmed at the bottom with insertion and edging of valenciennes lace.

The girdle is made of wide soft satin ribbon laid in plaits. At each side there are double rosettes with hanging ends of baby ribbon in the same tint as the girdle. Little bows are tied in the ends of the pendant ribbons. The girdle slips through a strap of batiste at the back and fastens under one at the front. It is tacked to the dress at each side, under the rosettes.

*Julia Bottomley*

#### Pretty Lingerie.

Dainty lingerie is made of soft, white pongee, trimmed with bands of finest blue linen, and laced with blue linen laces.

## Our Opportunity In Latin America

By JOHN BARRETT, in the Review of Reviews.

These are the times when everybody should be studying the twenty American republics lying south of the United States. These are the days of unprecedented and legitimate opportunity in Latin America for the commercial and financial interests of this country. This present year should be the beginning of a new epoch in the material, social and political relations of North and South America.

The next ten years are going to be "all American" years. All America is to attract the attention of all Americans. This new development is inevitable. The cause is found in the natural wealth, resources and potentialities of Central and South America, their actual commerce and trade, their remarkable progress during recent years, together with the unceasing propaganda of the Pan-American union, which was at first even ridiculed and little appreciated, but is now generally valued and recognized. The occasion of this new interest at this moment is the European war and the emphasis it has placed upon the geographical segregation and commercial solidarity of the nations of the western hemisphere.

Consider Latin America in any phase one prefers, and it is worthy of keen interest. Let us first look at it geographically and physically. We see twenty countries ranging in area from little Salvador, with less than 8,000 square miles, or smaller than Vermont, up to mighty Brazil, with 8,200,000 square miles, or greater than the United States proper with Great Britain thrown in! In