

## The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE  
DOMINION.

Published weekly by,  
THE WILLIAM WELD COMPANY (Limited).

JOHN WELD, Manager.

Agents for "The Farmer's Advocate and Home Journal,"  
Winnipeg, Man.

1. **THE FARMER'S ADVOCATE AND HOME MAGAZINE** is published every Thursday. It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.
2. **TERMS OF SUBSCRIPTION.**—In Canada, England, Ireland, Scotland, Newfoundland and New Zealand, \$1.50 per year, in advance; \$2.00 per year when not paid in advance. United States \$2.50 per year; all other countries, 12s.; in advance.
3. **ADVERTISING RATES.**—Single insertion, 25 cents per line. Contract rates furnished on application.
4. **THE FARMER'S ADVOCATE** is sent to subscribers until an explicit order is received for its discontinuance. All payments of arrearsages must be made as required by law.
5. **THE LAW IS,** that all subscribers to newspapers are held responsible until all arrearsages are paid, and their paper ordered to be discontinued.
6. **REMITTANCES** should be made direct to us, either by Money Order, Postal Note, Express Order or Registered Letter, which will be at our risk. When made otherwise we will not be responsible.
7. **THE DATE ON YOUR LABEL** shows to what time your subscription is paid.
8. **ANONYMOUS** communications will receive no attention. In every case the "Full Name and Post-office Address Must be Given."
9. **WHEN A REPLY BY MAIL IS REQUIRED** to Urgent Veterinary or Legal Enquiries, \$1.00 must be enclosed.
10. **LETTERS** intended for publication should be written on one side of the paper only.
11. **CHANGE OF ADDRESS.**—Subscribers when ordering a change of address should give the old as well as the new P. O. address.
12. **WE INVITE FARMERS** to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve "The Farmer's Advocate and Home Magazine," Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
13. **ADDRESSES OF CORRESPONDENTS ARE CONSIDERED AS CONFIDENTIAL** and will not be forwarded.
14. **ALL COMMUNICATIONS** in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

Address—THE FARMER'S ADVOCATE, or  
THE WILLIAM WELD COMPANY (Limited),  
London, Canada.

Dominion Government use their influence with the Imperial Government to get the embargo removed. There is no good reason why it should not be taken off. All agree that the embargo should be removed, but we to favor the finishing of all cattle possible in this country.

### More "Frightfulness."

Germany, the country which a short time ago seemed desirous of holding a peace conference, the aggressor in this war, the country which tears up treaties as mere scraps of paper, the murderer of innocent women and children, the destroyer of non-combatants be they neutrals or citizens of the allied countries, the arch conspirator in all forms of devilishness in secret diplomacy and in war, the poison of the civilized world, has shown her hand once more. An unrestricted submarine campaign of murder is no more than one could expect from the hand of those who sank the Lusitania, from the fertile, though misguided, minds of those who perpetrated one of the worst offences of the entire war, viz., poison gas upon an unsuspecting and fair-fighting foe. This last effort to civilization shows how slow the mad dog of Europe is to grasp any idea of the spirit of democracy. Over two years and one-half of almost unbelievable frightfulness have only seemed to strengthen the steady resolve of the Allies to win. No allied nation and no neutral is afraid of Germany's submarine policy. The United States has shown what they, as the strongest neutral, thought of it. Allied shipping goes on and will go on. The announcement of the unrestricted submarine campaign is only a further admission of weakening on the part of the Central Empires. The war gradually resolves itself into the world against Germany—democracy vs. Prussianism. The last card of the latter is on the table, but the play is not finished. The supreme effort is now necessary. Let no man fool himself into believing that the war is about to speedily terminate. We must be prepared for trying times and terrific struggles. The outcome is not in doubt. The monster will die hard, but Prussian militarism, great as it has been, cannot longer be allowed to menace the world. A united and well-organized effort, with every man and every woman doing their part, should see the end in 1917. If it doesn't come then the struggle will go on until democracy wins.

### Current Problems.

BY PETER MCARTHUR.

I hope you will not be shocked, but to-day I am drawing comfort from a wonderfully wise remark of Bismarck's. Even though we cannot help blaming him for much of the evil that has come upon the world, that man of blood and iron was still one of the world's great men. Few statesmen have ever grappled so grimly with national and world problems, and when he spoke it was from the depth of a profound experience. In a book of "Table talk" it is recorded that he once made an observation which has been proven to the hilt by the present war. He said: "You can prepare for everything except for what will really happen." Germany, under the guidance of plans laid down by this same Bismarck prepared, with scientific attention to detail, for everything except what has really happened. Although some of the plans went far, none of them really worked out. And the plans that Bismarck had to grapple with were only the A. B. C. of the problems that confront the world to-day. Every day the war is becoming more incomprehensible and its results more incalculable. As far as the plain citizen is concerned, about all he can do is to fall back on another saying which is older and wiser than Bismarck's, and is the real answer to it: "Takeno thought for the morrow." All we can do just now is to attend to the duty nearest to hand. We have delegated to others the work of conducting our part in the war, and it is useless for us, with insufficient and unreliable information, to waste our strength trying to figure out what they should do. That way madness lies.

\* \* \* \*

To-day I have a chance to meditate on what a slave I am to the newspaper habit. Although I put only a limited faith in what I read, I still want to read, and this morning, when the news is most exciting, the papers have failed to come. Instead of the usual bunch of morning papers I got a note written on the corner of a circular by either the postmaster or the mail carrier—"No papers to-day." To make matters worse this is Saturday and I will not get any papers before noon on Monday. According to yesterday's papers the United States is on the verge of entering the war. (This is Feb. 3rd.) A boy who was at the village brought home the news that Ambassador Bernstorff has been handed his passports and that Gerard has been recalled. He also brought a rumor that a message was picked up from the C. P. R. wires somewhere that the United States has declared war. What a day to have the newspapers fail me! And I know that before this gets into print all sorts of things may happen. Still, I cannot keep from writing, for there is a relief in doing something. I know that many people will rejoice if the United States enters the war, but I dread the prospect. Although no one can foresee the future it seems to me that the entry of the United States will not only complicate matters but may cause the war conflagration to spread around the whole world. To have the United States taking an active part in the war will make the peace problem more difficult when the war is finally ended. But there is something else that is even more ominous. In yesterday's papers there was a little paragraph saying that Japan had entered a protest against certain anti-alien laws that are being enacted by Idaho and other Western States. A United States with the war spirit aroused will be less likely to make a diplomatic and placating reply than if the question came up when the nation was at peace. With the world chessboard in its present state there is no foreseeing what will happen through a new move by any nation. That is why I dread the possibility of the United States taking an active part in the war.

\* \* \* \*

It strikes me that this is a good time to remind people of a bit of practical wisdom that was popular with the pioneers. I remember hearing them say, "When you are troubled about anything go to work." They used to say that by working they would forget their troubles, and that the passing of time cures almost all evils. In addition they managed to do a lot of needed work, and even if things went wrong that was always a help. There is a lot of sound wisdom in that point of view that might well be applied to-day. Thinking and talking about the war will get us nowhere, but doing useful work about the place and planning for the years' crops will not only take our minds off the horrors that are crowding upon us, but put us in better shape to bear the burdens of the war that are sure to come, no matter what the outcome may be. Of course, there can be but one outcome—that is a point on which everyone is unanimous. That attitude of mind of itself will help to win the war. Our faith to win may prove stronger than Germany's boasted will-to-win. And while I think of it, there is at least one good point about having the United States enter the war. Lloyd-George stated at the beginning that "The silver bullet will win," and certainly the United States could supply plenty of silver bullets, even if the men and ships they could supply might not help so very much on the crowded battle-fronts.

\* \* \* \*

A correspondent has written to me protesting against the movement to have everybody plant a garden this spring. She points out the fact that the business of the market gardener, now well established in the neighborhood of every city will be greatly injured. In her opinion it would be better for the well-to-do people of the cities to keep on buying their vegetables as in the past, and in that way giving employment to many industrious persons who have their money invested in market gardening. Her argument goes to show how hard it is to put through even a thrift measure without

working injury to someone in our complex social system. I do not think, however, that the movement will do so much harm as my correspondent suggests. People could use many times the amount of vegetables that they do now, with profit to their health. This plan will make them give more attention to the subject, and when their own little gardens are not yielding they will be more likely to go to the market and buy. Even though they might produce most of the vegetables they would use this year they would not be likely to keep it up, and in future years the market gardeners would profit because more people had learned to use more vegetables. But there is another good feature about the scheme that no one has mentioned. If city people begin farming on their town lots they will learn more about farming and will find that raising vegetables, let alone field crops, means much hard labor for a very narrow margin of profit. This new movement may not do all that is hoped in the way of reducing the cost of living, but it may educate the city people to a more sympathetic interest in the work of the farmer and the many problems he has to face.

### Nature's Diary.

A. B. KLUGH, M.A.

In our consideration of the animal mind we next come to the insects. On this large and important group a great deal of experimental work has been done.

One of the most fundamental things in insect psychology is instinct, and while we find instinct lower down in the scale of animal life and also higher up, it is in the Insecta that it reached its most perfect development.

What is instinct? It is a term with a quite definite meaning in animal psychology, and a word which is often quite incorrectly used. For instance, we often hear it used in connection with some such action as the blinking of the eyes when an object is thrown at the face, which is, as we have already seen a reflex action. We hear such expressions as "I knew it instinctively," when a function of the mind really a good deal higher and very different from instinct is meant. A definition of instinct in the sense in which it is used in modern psychology is.—An instinct is an action, of a more or less complicated nature, which is performed perfectly without previous experience and in an unvarying manner. Thus when the larva of the *Promethea* Moth binds the petiole of the leaf in which it is about to pupate to the stem in such a way that the leaf will not fall in the autumn, though it has never performed this action before and though no *Promethea* caterpillar ever saw a leaf fall, we call it an instinct. So we use it also in the case of an insect which in the adult stage feeds on quite different plants to what it does in the larval stage, and yet deposits its eggs on the proper feed-plant for the larva, in the case of the young spider which builds as perfect a web the first time as it will ever build in its life, of the wasp which stores its nest with insects to act as food for the offspring which it will never live to see.

The point in regard to instinct with which we are particularly concerned is invariability. An instinctive action is always performed in exactly the same way, a way which meets normal conditions perfectly, but is not modified to suit unusual conditions. As soon as we find an animal thus modifying its behavior we say it acts by intelligence and not by instinct. A little experiment illustrates this point very nicely. There is a wasp, known as *Sphex*, which stores grasshoppers in a burrow, lays an egg on the last one stored, and closes up the burrow. The young, on hatching, feed on the grasshoppers. This wasp has the peculiar habit of dragging its prey to the mouth of the burrow, running down the burrow, coming up head first, seizing the prey and dragging it down the burrow. An experimenter who was watching a *Sphex* took the grasshopper and, while the wasp was down the burrow, removed it six inches. On coming up the wasp searched for the grasshopper, found it, dragged it to the mouth of the burrow, and left it there while it once again ran down the hole. The experimenter again removed the grasshopper six inches, and the wasp once more searched for it and dragged it to the mouth of the burrow. This was repeated four times. But the fifth time the wasp did not leave the grasshopper at the entrance, but dragged it down after her. Now, if this wasp had been activated entirely by instinct it would have continued to carry the grasshopper to the entrance and leave it there just as long as the experimenter removed it. Instead, it modified its behavior to suit unusual circumstances and thus showed intelligence. That it was an unusual circumstance is undoubtedly true, for it is not likely that a *Sphex* had ever met with any animal which had nothing better to do than to move grasshoppers back six inches! This illustration is only one of a host of experiments which have been made on insects, and which, summed up, force the conclusion upon us that insects are activated mainly by instinct but that they show the beginning of intelligence—of that faculty which becomes more and more characteristic of animals the higher we proceed in the scale.

There are a great many points of interest about the insect mind as we see it through their behavior. We see the faculty of memory well developed, we find that the ants have but two primary color sensations, one representing red and green, and the other blue-violet, instead of three: red, green and blue-violet, as in ourselves, we find that the so-called "sense of direction" (about which we shall have more to say later) in bees is sight. But perhaps the main way in which the majority of insects differ from higher animals is in the possession of a sense which is peculiar to them—a sort of compound of the senses of touch and odor, (which we may term the "contact-odor sense") and which resides in the antennae. If we imagine ourselves blind and with very delicate