

guns, and "keeps its powder dry."

The National Bee-keepers' Union is now under the fostering care of the North American Bee-keepers' Association, and I trust that it will endure for "the ages to come," and will bless all coming generations. We must not take the selfish view that as individuals we are safe from annoyance, and may never require its services in our own behalf. We should consider that we are "building" for posterity, and rearing a "tower of defense" which shall last long enough to be used by our children's children.

The Union's "legitimate work" is to follow in the line already marked out, and to grapple with any foe which may hereafter present itself—forming a "place of refuge" for the unborn millions of the twentieth century of the Christian era.

The Bee-keepers' Union has already won a glorious record in the defense of apianian interests. It is true its numbers are not as numerous as they should be, but the organization has made itself felt in every state and territory, either directly or indirectly. If this has been done with a few hundreds, what might be done with several thousands? If a small company of "soldiers" have thus caused the rights of the pursuit to be everywhere respected, what may be accomplished by "an army" equipped for war?

Rise! for the day is passing:

While you are dawning on

The others have buckled their armor,

And forth to the fight are gone;

A place in the ranks awaits you.

Each man has some part to play—

The past and the future are nothing

In the face of the stern to-day.

Stay not to sharpen your weapons,

Or the hour will strike at last,

When from dreams of a coming battle

You may wake to find it past.

Your future has deeds of glory,

Of honor, God grant it may!

But your arm will never be stronger,

Or the need so great as to-day.

Doctor Wiley, chemist department of agriculture. Washington, D. C., was called upon. In his remarks he dwelt upon two great points towards success Production and market. Some kept bees for pleasure, but many for profit. To hold their markets he wanted to help bee-keepers. From actual test he knew bee-keepers had been cheated out of a market. By many purchases he found that much of the honey in the United States was adulterated. There was at present no absolute method of detecting all falsifications. He regarded pure honey as nectar gathered from flowers and stored by them. One method of adulteration was to feed bees with mixture of invert and not in-

verted sugar, say 10 to 20 per cent. of the latter. Another method practiced in Europe was to artificially invert sugar, with samples such as mentioned he would hesitate to pronounce an opinion as to purity. Again, the exudation from plant lice would be difficult to tell from pure honey. But it was his intention to pursue this subject and assist bee-keepers. He had no doubt that science, by improved methods, would be able to keep abreast with those who practiced adulteration. A discussion followed upon some of the work of Doctor Wiley, especially the analysis of a sample of honey with the label of C. F. Much. upon it found adulterated. Doctor Wiley stated he thought if some one was adulterating Mr. Muth's honey or getting up a label, a fraud on Mr. Muth, it was in that gentleman's best interest to find it out. The discussion brought out that no one suspected Mr. Muth, but that some one had attempted to trade on Mr. Muth's good reputation.

After recess the following paper was brought before the convention:

SWARMING AND THE PREVENTION OF SWARMS.

THE CAUSES OF SWARMING.

can be traced to several sources. First of all, we must consider it is a natural instinct of preservation whereby young queens are secured, new homes are formed, and bees fulfil the supreme command, "Go forth and replenish the earth."

Next the conditions of locality, the honey seasons and resources have much to do with the act of swarming.

But when we come to the action of a man in relation to the control of swarming, we find the foremost reasons why bees are allowed to carry out to the full this natural disposition of theirs, is negligence. Let them have irregular brood combs with plenty of pop holes, and queen cell are constructed where otherwise none would have been found. Then allow the brood nest to be crowded, not necessarily with bees or brood, with too large proportion of the combs choked with honey, and pollen in particular, then the queen is soon conducted to another site, and another colony established. In this connection too the negligent bee-keeper is sure to be careless as to the removal of his aged queens, and he suffers in consequence.

On the other hand we have a more careful and far-seeing class of bee-keepers, and what is it they do towards

PREVENTATION OF SWARMING?

The usual process where comb honey is be-