

the legs, and all raspings made in eating the burrow out are cast forth from the entrance. The sawdust expelled becomes of subsequent use. One by one, successive partitions of the chippings, caused to adhere with some sticky fluid, probably saliva, are constructed, dividing the entire tunnel into cells somewhat less than an inch long. Each is supplied with an egg and a compound of pollen and honey; the door is closed; but before deserting her bevy finally, the bee forms a lateral opening from the outside to the bottom of the cells and chokes it with sawdust paste; and through this the young escape when the time for their emergency arrives.

For Dairymen Bee-Keepers

About this time, as the almanac says, fix up the cow stable. Fix it up so that it will be warm there for the cows next winter. Don't forget that it should also be ventilated. Provide for this important feature in a special sense. Proper ventilation is as necessary to perfect health as suitable food. Keep that thought before you when the "fixing up" is going on. Don't neglect the horse's stable either. Above all don't neglect yourself in the fixing up. In consulting the welfare of your cattle and stock do it in a manner that will lighten your labors at stable and barn.

Try warming the water your cows drink this winter. Of course to do so is some bother, but the result will pay handsomely. Look around to see how the advantages that suggest themselves on cold days last winter can be made. Plan out how, gather the tools and material at the point where they are to be used and commence operations in good time. Don't let winter catch you unprepared in this important matter. It may be an open one or it may be a hard one, but in either event it is your duty to provide a comfortable home for your cattle and stock. We write these lines to stir the careless dairymen into action. We heard so much about the suffering of cattle last winter that was caused by the thoughtlessness of their owners that we believe there is a large field to be worked in this direction. Fix up as a matter of duty. If that does not move you do it as a means of conserving your own selfish interest. Anyway, fix up stable, barn, shed and pen for the period when the winds blow cold, and the days are sharp and frosty. —Kansas Farmer.

ST. DAVIDS, Aug. 16th, 1894.

I must say here that your BEE JOURNAL is the best I have read, it gives so much information.

A. SLEEMAN.

Selection in Breeding and other matters.

DR. C. C. MILLER

Attention to the really practical matters in bee-keeping and especially the little things, seems to be well to the front in the C. B. J. It's what makes a good bee journal. There's the matter of getting bee glue off the hands. I'll have to try your plan with coal oil, friend Holterman. I'm wondering whether it will work any quicker than butter. I've used that for years. It's easily got, doesn't have the bad smell of coal oil, and will not run off. Coal oil is cheaper and possibly better.

It is seldom that I give the opinion of another without quoting the author. I see I have got myself into trouble by failing to do so in one case, for you give me credit that belongs to T. M. Cowan, or rather to Dr. von Planta. Cowan says, p. 189, "The Honey Bee-wax, when pure, is pale yellow, but sometimes nearly white, and the coloring is due, as Dr. Planta has pointed out, to pollen consumed by the bees. For instance, when bees are collecting pollen and honey from heather, pollen being white, the wax is also white; whereas, when collecting from sainfoin, the pollen being orange-coloured, the wax also partakes of this colour."

I wrote Mr. Cowan that I thought I had seen wax that was entirely white, but he replied that it was never entirely white, but if taken in any considerable quantity and laid upon white paper it would look quite yellow. I have never fully tried it.

According to Planta it is the kind and not the quantity of pollen that decides the color of the wax. This would be easily in accord with a new theory advanced by a German writer, who asserts that wax is not manufactured by the bee, but is obtained ready-made as a covering on the grains of pollen. If this is true, it may be of some practical importance that we know it. It would help to explain why we should have such varying opinions as to the amount of honey—from three to twenty—required to produce a pound of wax. According to this German writer, the amount of honey would have little or nothing to do in the case. He claims that with all pollen wax is consumed, and if needed in the hive the wax is found in little scales under the abdomen, otherwise it is passed out as excrement. If this is true, there would seem no great economy in furnishing heavy foundation to the bees. On the other hand in a late number of the American Bee