

the Straits of Mackinac, in a house-cellar at 40 to 60 degrees, with no flight, (there is often a period of six months that they can't fly if they are out) with no greater loss than six or eight pounds of honey or syrup, and practically no bees, and keep clean, healthy and quiet to the last, I see no reason why they can't in Kansas, providing the honey or syrup is good. If your alfalfa, honey candies above the bees, keep the cellar very warm (say 60 to 75 degrees) so warm that the bees will be compelled to spread out over the honey, and thus keep it dry and warm. For this condition an underground cellar, as a matter of economy in heat and fuel saving, might be best. But if your bees often get a lot of thin, unripe and unsealed honey, I would build a cellar above ground. Build an inner and outer door of double thickness with tarred paper in the centre of each door and inside of inside door, and pack the roof well with sawdust or chaff.

Put in two eight-inch ventilators with dampers.

You need no floor or window. Put an inch gas-pipe through the south or east wall five feet from the ground. I would extract the unripe honey if practical, but if not, keep the temperature high. Allow the great excess of moisture to pass freely from the hives, and also from the cellar. If honey will ripen in September, at a daily temperature of 75 degrees, and nightly temperature of 40 to 50 degrees, why wouldn't it ripen in a cellar at a temperature of 60 to 80 degrees? It would; but most bee-men confine the evaporated moisture in the hive, and instead of ripening, the honey absorbs more moisture; and what isn't absorbed condenses on the top-boards, and falls back on bees and honey; or else, if the bees are strong and will consume four pounds of honey per month, with a cellar at 40 degrees, the moisture is driven to the cold corners and

sides, where it condenses and runs down and out; that is, what doesn't scak into the wood, dead bees, and form in mould on the combs.

One of the oldest bee-men in the State, who has spent a life-time inventing things for bee-men, has finally got an underground cellar so tight that not an ounce of water can enter, yet he makes absolutely no provision, that I know of, for ridding the bees of a ton of water, except as I have indicated, and what passes off through three big ventilators. R. H. Boardman, (September "Review" 1903) winters his bees in a big cellar above ground, without ventilators, but with absorbing sawdust walls and artificial heat. Ira Barber (February and May "Review", 1903) winters bees in a manner satisfactory to him in an ordinary house cellar maintaining a high temperature by crowding; while Doolittle, can winter his bees on four pounds of honey. All these men have trouble towards spring, unless it is Doolittle, whose hives are unpainted, and so old that they are like a sponge, so that the moisture readily passes through. I get the same results with ordinary hives with the covers off. If Mr. Barber would leave the covers off his bees would not get uneasy and roar. Mr. Bingham could winter his colonies on four pounds each, instead of twenty, if he would

Leave the Covers Off.

In hives without covers, the moisture not only all passes off, but the bees have perfect control of the heat, and we can permit a very much greater variation of cellar temperatures, in fact, I don't hesitate to say that a strong colony would winter perfectly, clustered on the outside of a two-bushel bag, with ten pounds of honey or syrup in it, in a dark cellar where the temperature ranged anywhere from 40 to 100 degrees.

Build your cellar just large enough