INTRODUCTION

Beekeeping with the Slovenian hive has over 100 years of tradition. A Slovenian beekeeper named Anton Žnideršič constructed this hive so it is easy to transport but can also be used in beehouse, one of the country’s great traditional structures. Today Slovene beekeepers use beehouses (Figure 1&3), but also modern adaptations built on the backs of trucks, trailers and containers (Figure 2).

Figure 1: The author’s beehouse.

* He was a Slovenian industrialist who established a pasta factory in his home town Ilirska Bistrica and later moved the factory in Ljubljana. He also established many accounting standards. Beekeeping was his personal obsession. He was among the biggest beekeepers in the first half of the 20th century. He owned a hive factory, produced queens and established honey-flow observation service. He was also a president of the Slovene beekeeping association.
The beehouse is the key of Slovenian beekeeping success! It has several advantages – with hives packed close together it saves space in positioning, it doesn’t require heavy lifting of supers, and a beekeeper can work inside while protected from the sun, wind and even when it is raining. Also, for Slovenians it has additional visual and cultural dimensions, like colored hives and front board paintings. It was hard for Slovenians to accept free-standing Langstroth hives, even though they had direct experience observing American beekeeper Frank Benton using them in Slovenia for five years at the end of 19th century. Instead they took to the new, well-designed hive from Anton Žnideršič, created a decade after the Langstroth hive, so they could continue using their cherished beehouses.

Figure 2: Movable beehouse on an old truck.
SLOVENIAN HIVE DESIGN

Before explaining how to manage bees we need to get comfortable with the hive design. If you already have one it will be easier. A photo gallery can help others to get an idea how it looks. The preparation of the hive and a bee house before putting inside the package of bees is one of the main concerns of adopters of the Slovenian hive.

COMPARISON WITH ORIGINAL LANGSTROTH HIVE

At the beginning of 20th century a typical Langstroth hive was composed of one deep hive body and one or two shallow supers. Such type of hives were also used by Slovenian beekeepers. I have read that Frank Benton, an American beekeeper who lived in Kranj Slovenia in the late 19th century, kept several different sizes of frames in his hives while he tested Carniolan bees. From that point of view it is evident why the editor of the “Slovenian beekeeper” magazine wrote that the hive constructed by the Anton Žnideršič is nothing else then Langstroth type of hive with fixed honey super\(^1\), although the same size as a brood section.

ORIGINAL DESIGN OF THE HIVE

The hive looks like a chest with two sections inside, hive doors and front board with hive entrance. Construction is usually started as a frame with two side boards, one bottom and one top board (Figure 4, photo gallery of Slovenian hive). Each side defines hive depth and has to be prepared from several joint boards to get the right dimensions. Boards are stitched together with “sparrow tail” connections, and nailed or screwed together with glue. The back usually has rectangular metal reinforcements. The front side needs an inner front board before joining the top board. For that purpose a shallow groove needs to be made into the side boards so the inner front board can slide in and be fixed. Before side boards are fixed in the frame, they must have holes drilled, grooves inserted for round supporting bars, hangers for queen excluder, and grooves for bars that will attach inner

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1 The editor was a school teacher Frančišek Rojina living in Šmartin (nowadays called Stražišče, part of Kranj). He described how he had extensive talks with Frank Benton in August 1905, when Benton began his last big journey to Europe and Asia, starting in former Austrian Hungary Empire with visiting his friends in Ljubljana and Kranj.
windows with wire mesh. Also frame spacers have to be fixed to the inner side of front board before the front board is joined with other boards into hive body. After putting together the body, the front side can be attached with entrance boards and hive "chins" - what we call landing boards. At the front is a shallow space between two front boards (inner and outer) where insulation can be put like glass wool (left empty) and then covered with final outer front boards. After that the hive can be fixed with door hinges and to finished with bars, a queen excluder, inner windows and a door. It is also good to have a board that can cover the queen excluder. The best is thin enough to fit the space between the excluder and rounded steel bars. If the bees only occupy the brood section then it is good to cover queen excluder and keep bees away from the empty top section.

Figure 4: Slovenian hive and its parts, middle section view from the side
Photo gallery of beehouses
**Basic examination**

Here I would like to describe how to take out combs for examination. It is the best to start at one side of the hive. After opening the doors and smoking the bees, push the second frame a few mm (max. half of bee space) toward the center. Use the standard hive tool if not by hand. Next, slowly pull out a side frame (Figure 22A). Most beekeepers who are used to Langstroth frames think that pulling the frames out from the side will crush many bees. With a little practice in an empty hive, it’s possible to find the grip required to push and pull the frames smoothly. Once extracted, you can examine it over the hive table, then place it in the comb stand (Figure 22G) and continue with a new frame. If you don’t need to do a detailed examination, you can pull a frame out only 1/3 and check the contents (Figure 22D, E). Sometimes you can look over several combs and try to find the last one with the brood. It is also a good idea to have a frame for drone brood (Figure 22B), which can be cut out to reduce Varroa mite infestation. Such a comb is not only a Varroa mite reduction tool but also a barometer of colony activity. For example, if a colony is strong and there is some pasture, but the bees are only producing a little done brood, then they are far into swarming preparation. At early stage of swarm development, you can observe queen cells in a such frame. In such case it is a good idea to check other frames and start additional anti-swarming activities or prepare splits. More on this topic in the yearly activities chapter.

Put the combs back into the hive in the reverse order. Be careful with the last comb, since you don’t have any extra space to slide by the other combs in the hive. For this one push the surrounding combs away to make more space. At the beginning, it is hard to have an exact routine to find space on the front side between the comb spacers. With practice you will get soon the right feeling.

![Figure 22: Basic examination of the hive](image)