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A New Hive Architecture for Improved Stability and Efficiency, patent reference FA675216 and FR0600618

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Since learning that the internal temperature of a hive should be close to that of the human body and the humidity level should resemble a tropical climate, every visit to the apiary became a lesson.

The transition from cold or after adding or removing supers to examine the brood requires significant effort from the bees to restore balance within the hive. A single failure can weaken the hive for the entire season, affecting its productivity and health.

After observing the behavior of bees over several years, I developed this bipyramidal hive architecture. It introduces a new design that is more resistant to temperature variations and provides a more stable internal environment for the bees.
The flight floor, located at the top of the lower pyramid, enables multidirectional airflow, reducing wind impact on the hive's entrance and helping maintain a constant temperature inside.

The honey supers are placed on the four sides rather than on top, which helps maintain optimal temperature and humidity levels in the main part of the hive. This design allows interventions without disturbing the brood or removing the supers, ensuring minimal disruption.

Even during severe cold spells, the brood, located at the center of the hive instead of the bottom, will be better protected from temperature fluctuations.
The hive's base connects the two pyramids by their bases, providing greater stability against vibrations and minimizing disturbances.

The frames are composed of small sections connected with hooks, increasing flexibility in creating smaller hives, managing swarms, and adjusting the internal layout. The hooks come in various sizes, allowing precise adjustments of the frame spacing, making the hive adaptable to changing conditions.

Access between the hive body and supers is easier to control, whether by the bees or the beekeeper, compared to traditional hives.

This new concept also facilitates the integration of smart accessories for hive management, allowing more efficient monitoring and development.

This hive design is particularly suited to urban beekeeping and regions difficult to access for transhumance, offering a sustainable and adaptable solution for modern beekeeping.