

## SLOVAKIAN FOLK WOODEN CRADLE DESIGN, CONSTRUCTION, TYPOLOGY AND KINEMATICS

**Juraj Veselovský – René Baďura**

### ABSTRACT

The submitted work is focused on the research of the shape, kinematic and constructional concepts of the creation of children's cradles that were made in the area of the Slovak village in the 19<sup>th</sup> century and in the first half of the 20<sup>th</sup> century. The monitored parameters were examined on selected types of cradles from Slovak museums and open-air museums. The aim of the contribution is to deepen the knowledge of our cultural heritage and to support the continuity of the creation of traditional elements of Slovak folk craft and art in a new transformed quality. The main benefit and important result for this work is that we are seeing a clear graphical analysis of the typological, shape, kinematic and constructional principles of making cradles for children as the main benefit of the work. In this work were used following methods of research: expert description, analysis, synthesis, comparison and classification.

**Key words:** construction, cradle for children, design, kinematics, Slovakian folk furniture, typology.

### INTRODUCTION

We can characterize the children's cradle in the historical context as one of the most important parts of the inventory of human dwellings. The cradle arose or appeared before the bed. Its origin reaches to the prehistoric period and is naturally conditioned by the natural law and strength of mother care to her child. It was also an integral part of Slovak rural dwellings.

The cradle is, according to typology, included among to the folk furniture, which represents a specific category of furniture. This is bound to an ethnic and geographical base. Folk creators we could say that they are characterized as less trained craftsmen but with the well-defined aesthetic sensitivity which they have embedded in their works. Their creation has been focused on the most basic types of furniture, like dealing for sleeping, eating and storing food and clothing. Their production was designed for their own needs in the first line but also for the needs of the community in which they lived, that means mostly for the villages.

The richness of folk furniture forms with a high ethnographic and artistic value was reflected mainly in items that were created for children. There is a baby cradle in between them. The shapes of the cradles and their use in the interiors of the Slovak folk houses were captured and documented in works by significant Slovak painters of the 19<sup>th</sup> and 20<sup>th</sup> centuries like Gustáv Mallý, Jaroslav Augusta and others. Ethnologist POLONEC (1941), who processed the only available study on children's cradles from the territory of Slovakia,

describes the context of its creation as a material manifestation of the social-intellectual culture. Another author dealing with the cradle is BENŽA (2011), who worked on its brief characteristics for the electronic edition of the encyclopaedia "Traditional Folk Culture of Slovakia by the Word and Image". A similar short description of the cradle is given by ZUSKINOVÁ (2001) and VESELOVSKÝ *et al.* (2016). Due to the fact that the range of children's cradles are on interest of young families, their quality and safety parameters are now defined by following norms STN EN 1130-1 and STN EN 1130-2.

It has been retained in the real environment of the Slovak countryside only a part of the former rich representation of cradles till nowadays. The aim of our research was to analyse the shapes, materials, structures and constructions of the preserved cradles in the Šariš Museum in Bardejov, in the Vihorlats Museum in Humenné, in the Spiš Museum in Levoča, in the Museum in Kežmarok, the Liptov Museum in Ružomberok, in the Museum of the Orava village in Zuberec, in the Orava Museum of P. O. Hviezdoslav and Slovak National Museum in Martin.

Exact scientific methods of research were used in the work, such as expert description, analysis and synthesis of studied material, comparison of knowledge from practice and professional literature, their classification and examination of interrelationships and abstraction of essential features of the subject of research. Selected children's cradles have been thoroughly researched and documented photographically and graphically with regard to the objectives of the work.

## RESULTS & DISCUSSION

### TYPOLOGY

The cradle is a child's cot allowing swinging movement in a direction perpendicular to its longitudinal axis (STN 91 0000). It is among to children's furniture designed for sleeping and resting the baby. It is used to lay children (babies) until they are able to sit, snap or stand up; the inside length of the bed area is not more than 900 mm (STN EN 1130-01). (*Fig. 1*)

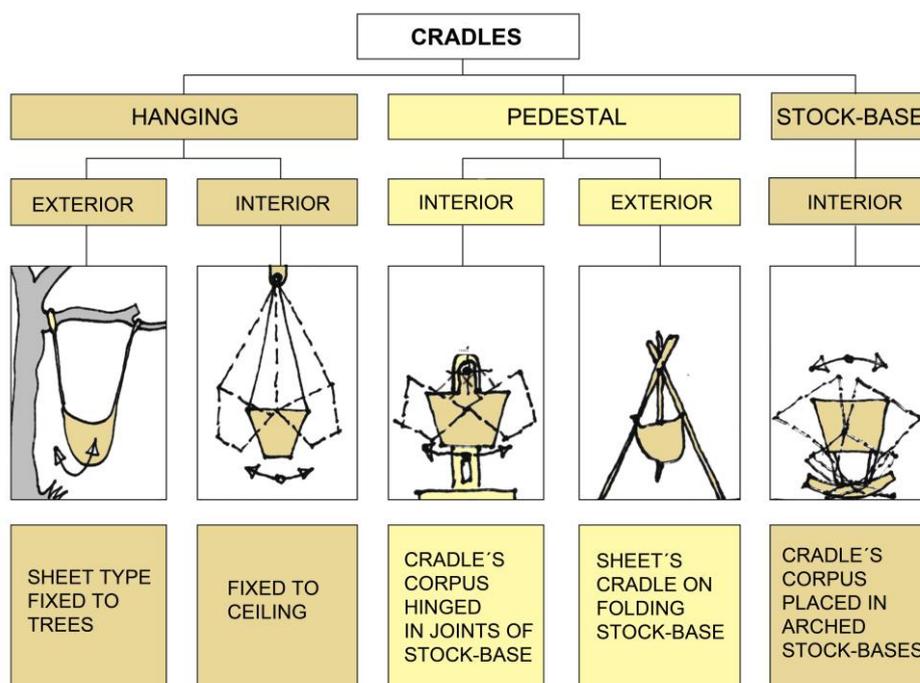


Fig. 1 Typological categorization of Slovak folk cradles.

In the context with the historical development of shape and construction, the cradles could be divided into **hanging**, **pedestal** and **stock-base** types.

**Hanging** cradles were in a simple structure that was fixed in the interior to the ceiling or in the exterior with a suitable vegetation.

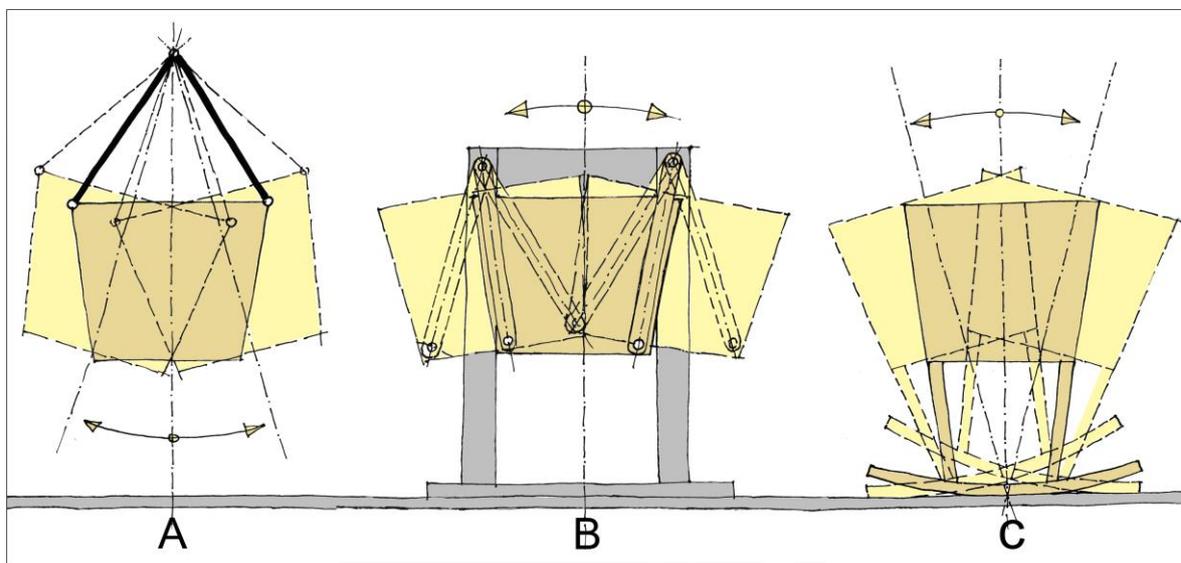
**Pedestal** cradles have a rotatable cradle corpus suspended on a solid (interior type) or a folding base (exterior type).

**Stock-base** cradles were the most used type and they also have the largest representation in the investigated exposures of the furniture. Together with other in the interior are used solid base cradles still today. Their specificity is the curved shape of the stock-legs firmly attached to the cradle corpus, this is allowing it to swinging movement by the foot of the baby's mother.

## KINEMATIC OF CHILDRENS CRADLES

The specificity of children's cradles is their kinematic mechanism of tilting the body in a direction perpendicular to its longitudinal axis of the cradle, which is attributed to the child's well-being while resting and falling asleep as well. Basically we are recognizing two principles of tilting of the loading area at the cot body relative to the horizontal plane:

- **Convex** (*Fig.2A*) – corpus of cradle is articular fixed by joints at two rotary points above the cradle – simple single swinging mechanism
- **Concave** – corpus of cradle is hinged at four rotary points on the cradle base and at four points on the body of cradle - a two-rockers swinging mechanism (*Fig. 2B*), or the corpus of cradle is firmly attached to the curved stock-bases (*Fig. 2C*)



**Fig. 2 Kinematic of cradles: A – Simple single swinging mechanism of cradle, B – Two-rockers swinging mechanism on both sides on each side of the front head corpus of the cradle. C – Swinging rocking motion of rotation of the corpus using a circular cradle rootstocks.**

## SHAPE AND CONSTRUCTION

### HANGING CRADLES

These were been considered as the oldest types, which are characterized by simple design, construction and functionality. The simplest cradles are **tarpaulins**. (*Fig. 3A*) The body of

cradle is formed by so-called “grass sheet” which is consisted from cannabis or linen canvas in square cross-section form, here were sewn on the corners a tangled twine from the same material. They were tied to the ceiling structure of the folk houses interior. It was usually near at the mother's bed. She had a baby near her at the night and she could as lie down to swinging baby to asleep. Capture nodes were on roof joist, wooden sticks, hanging or self-drilling wooden hooks, metal rings... Suspension hinges with a rigid body were attached similarly too. It was created in variants such as:

- wooden frame with tarpaulin filler (*Fig. 4A*)
- corpus formed from arched heads and hazels sticks (*Fig. 4B*)
- portable corpus, braided from cleaved hazel (*Fig. 3B*)
- wooden manger...



**Fig.3** Suspension tarpaulins mounted on a wooden ceiling structure of a wooden house. A – Cradle from Orava region. Museum of the Orava village in Zuberec – Brestová. B – Cradle from Liptov region – combination of sheet and rigid braided cradle corpus. Museum of Liptov Village in Pribylina.



**Fig. 4** hanging cradle with the fixed structure secured to corpus to wooden ceiling by using twines. A – Vihorlat Museum in Humenné – Exposition of Folk Architecture and Housing, B – Šariš Museum in Bardejov. Open-air Museum – Museum of Folk Architecture.

The tarpaulin cradle was used in the exterior also. Young mothers are cared for their children even at field work and tarpaulin cradle was suitably tied to a nearby tree. That was used to for sleeping of baby.

### **PEDESTAL CRADLES**

Pedestal cradle is characterized by using solid or folding structure of the pedestal on which the jointed corpus is hinged to the cradle. Currently, the most commonly used type is a cradle with a fixed pedestal on which the cradle corpus is rotatable suspended in two hinges (*Fig. 5*). The load area of the cradle is tilted convexly to the plane of the floor. We have discovered during our research a cradle that has a corpus suspended on four swivel joints too. The loading area is tilted concurrently to the plane of the floor in this case (*Fig. 6*).

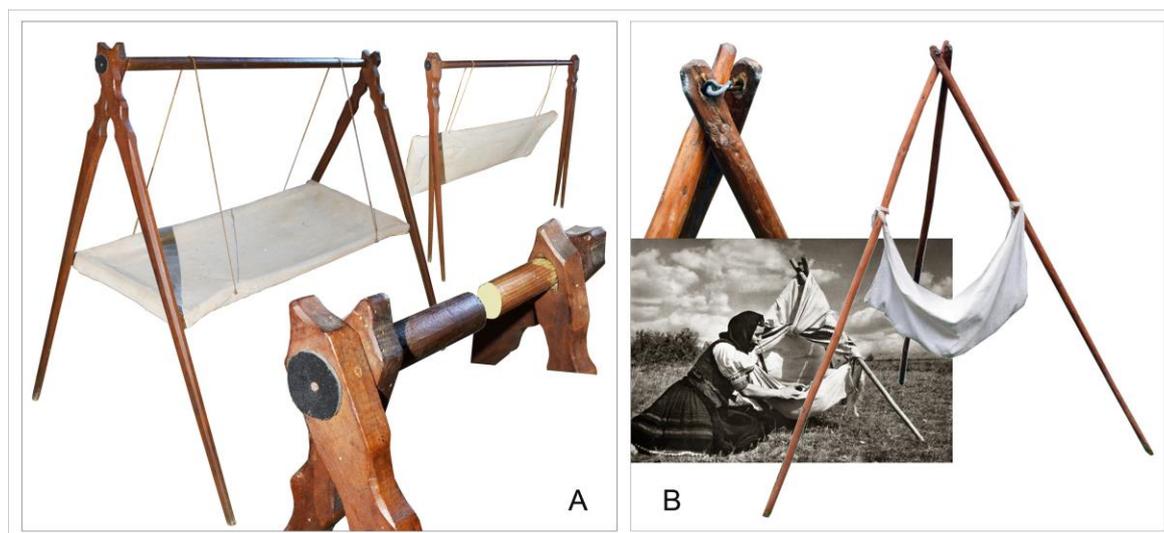


**Fig. 5** Cradle on a solid pedestal. The swinging movement of the cradle corpus is allowed by hinged fixation at two rotatable points on the pedestal. SNM in Martin – Museum of the Slovak village in Jahodnícke háje.



**Fig. 6** Cradle on a solid pedestal. The swinging movement of the cradle corpus is allowed by hinged fixation at four rotatable points on the pedestal. SNM in Martin – Museum of the Slovak village in Jahodnícke háje.

**Cradle with a removable stock-base**, it was called a field cradle too. This was used in the field work of the mother of the child. The pedestal was either three (*Fig. 7B*) or with four legs (*Fig. 7A*). This has been easily dismantled so as to be able to hang a simple sheet or a reinforced frame construction of the loading surface of the cradle either too. The most commonly used type was triple cradle type. The foundation consisted from three powerful sticks of hazel. These were loosely joined by twine, wire or belt at the top. These were built themselves into a triangle pyramid shape. A grass sheet, usually from cannabis or linen, was attached to two sticks. The third stick was pushed into the ground to stabilize the cradle.



**Fig. 7 A – Hanging cradle on a folding supporting stock-base from the Šariš region. Vihorlat Museum in Humenné – Exposition of Folk Architecture and Housing. B – Portable field tarpaulin cradle. SNM in Martin – Museum of the Slovak village Jahodnícke háje. BW photo – Plicka, K. 1960.**

### STOCK-BASE CRADLES

These are the most frequently occurring typological type of cradle used in the interior of the Slovak countryside. For its construction was used solid wood from local sources. The cradle's corpus is firmly connected to the support structure of the rounded base of the stock-base. The swinging movement of the cradle was created by the baby's mother's leg, as shown in the Gustave Mallý's picture (*Fig. 8*).

In Fig.12–14 are presented the selected shape solutions of the faces of the cradles, which has been recorded in their ethnological study by POLONEC (1941). The simplest shaping faces are made of one piece of material (*Fig. 9*). More demanding shaping of the faces of cradles are composed of several pieces as shown in Fig.10–11. The most common design element of the decorating faces of the side of the bed is "heart" as a symbol of love from which a new life was born. Its shape is embedded in the forehead of the cradle in the form of cut or paint. We did not find painted cradles in our research area unfortunately, so these motifs were processed into the contribution according to the ethnological study POLONEC (1941) (*Fig.12–14*).

In Fig.15–18 are the shapes of the stock-based cradles that have been investigated by our research. Their common shape element is the curvature of the stock that allows swinging movement. Three principles are presented from the construction point of view:

- cradle's corpus is separated and it is rigidly attached to the stock-base (*Fig. 15*)
- construction of cradle's corpus is part of stock-base construction (*Fig. 16–17*)
- cradle's corpus and construction of stock-base are separated units (*Fig. 18*)

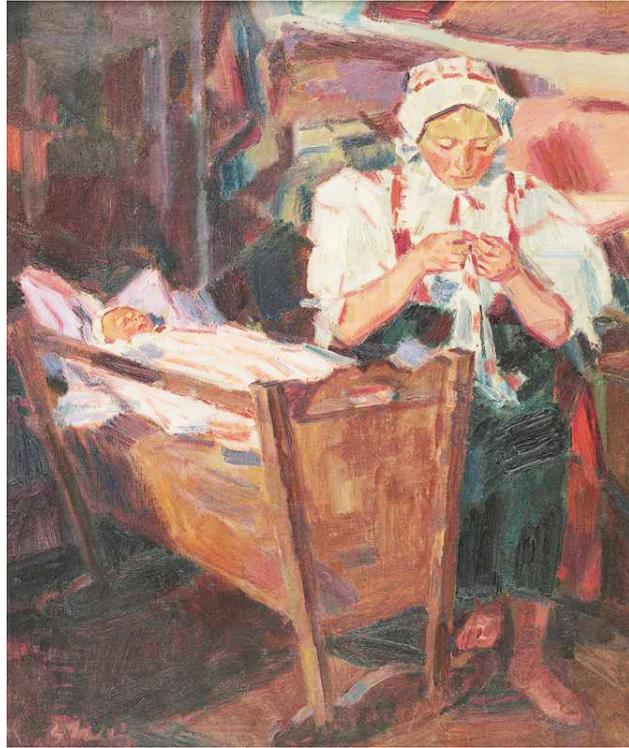


Fig. 8 Gustáv Malý - At cradle. Oil painting on canvas from 1937-38. Orava gallery in Dolný Kubín.

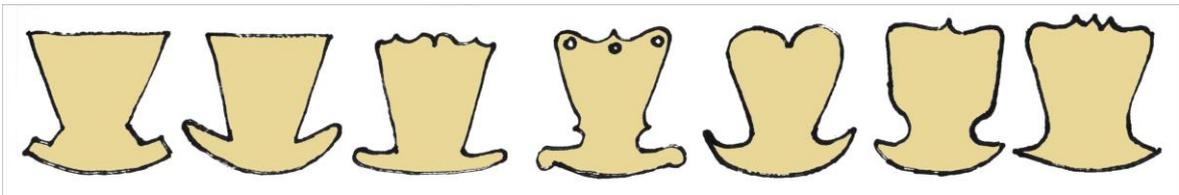


Fig. 9 Shapes of cradles faces made of one piece. Processed according POLONEC (1941).

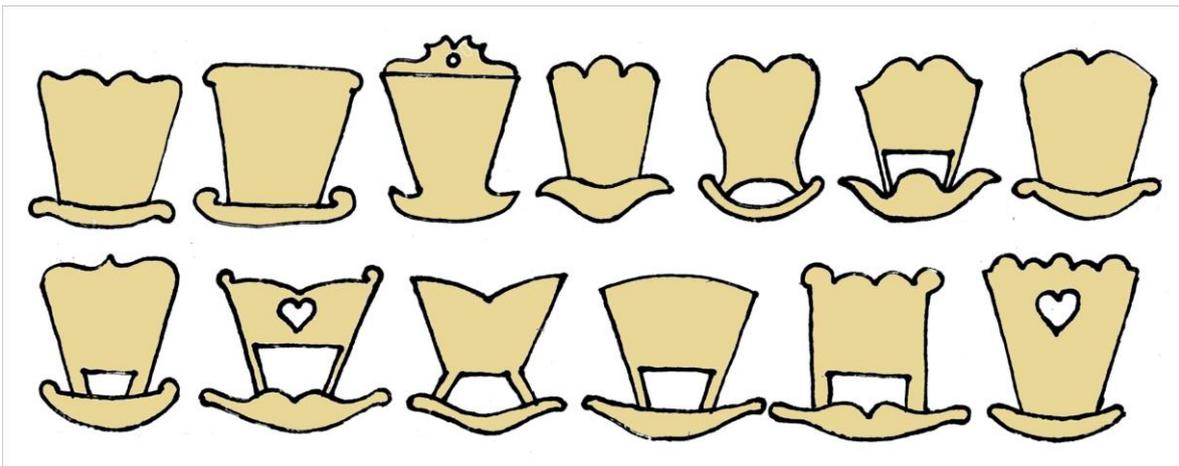


Fig. 10 Shapes of cradles faces made of two pieces. Processed according POLONEC (1941).



Fig. 11 Shapes of cradles faces made of multiple pieces. Processed according POLONEC (1941).



Fig. 12 Flower motifs on painted cradles. Processed according POLONEC (1941).

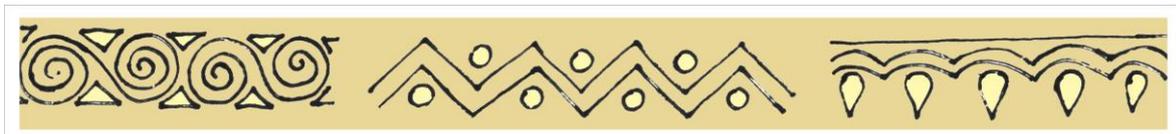


Fig. 13 Geometrical motifs on painted cradles. Processed according POLONEC (1941).



Fig. 14 Most often repeated motif of the heart on the painted cradles. Processed according POLONEC (1941).



Fig. 15 Cradles with separated corpuses mounted on a swinging stock-base. A – Orava Museum of P.O. Hviezdoslav, exposition Orava Castle, B – SNM – Spiš Museum in Levoča.



Fig. 16 Cradles which have construction of corpus as part of stock-base with full faces, A – Museum in Kežmarok, B – Šariš Museum in Bardejov – open-air museum – Museum of Folk Architecture. C – SNM in Martin – Museum of Slovak Village in Jahodnícke háje, D – Vihorlat Museum in Humenné – exposition of folk architecture and habitation.



Fig.17 Cradles which have construction of corpus as part of stock-base with bloom faces, A, B – Vihorlat Museum in Humenné – exposition of folk architecture and habitation, C – Museum of Orava's Village in Zuberec – Brestová, D – SNM in Martin – Museum of Slovak Village in Jahodnícke háje.



**Fig. 18** Cradle on a movable pedestal. It was made in the beginning of the 20<sup>th</sup> century in the Liptov region. The swinging movement of the cradle corpus is caused by its firmly attach to the pedestal with arched stock-base. The cradle body is braided from hazel wood. Liptov Museum in Ružomberok – Museum of Liptov’s Village in Pribylina.

## CONCLUSION

Cradle as a typological type was one of the most important parts of the inventory of human dwellings. The submitted work focuses on the research of the shape, kinematic and construction concepts of the creation and design of children's cradles which were made in the environment of the Slovak village in the 19<sup>th</sup> century and in the first half of the 20<sup>th</sup> century.

The monitored parameters were investigated on selected types of cradles found in exhibitions of Slovak museums. The result of this work is clearly graphically processed complex characteristic of cradle formation in terms of:

- typological (hanging, pedestal, stock-base)
- kinematic (concave, convex)
- shape (basic shapes, decoration)
- constructional (relationships of ground and corpus)

From this presented research, it can be seen that the children's cradle as a typological type has its justification even nowadays. Researched shape, time-based, shape-based, kinematic principles and design forms can be inspirational for the contemporary creation of this typological type of furniture. We consider the research results could be interesting also for the educational area and the museums practice.

This work deepens the acquaintance of the knowledge of our cultural heritage and it supports the continuity of the creation of traditional elements of Slovak folk craft and art in a new transformed quality.

Photo and draws: Veselovský, J.

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## **Addresses of the authors**

Prof. Ing. Juraj Veselovský, PhD.

Assoc. Prof. Mgr.art. René Baďura

Technical University in Zvolen

Department of Furniture Design and Interior

T.G. Masaryka 24

960 53 Zvolen

Slovakia

veselovsky@tuzvo.sk

badura@tuzvo.sk

