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BALANCE BEAM AS A MULTIPLE PURPOSE APPARATUS IN GYMNASTIC SYSTEMS AND THE GREAT GYMNASTS OF THE FIRST HALF OF 19TH CENTURY

Key words: Jahn, Spiess, gymnastic systems, multiple purpose apparatus, balance.

ABSTRACT

The great gymnasts-pedagogues: Jahn, Clias, Amoros, Nachtegal, Ling and later Spiess adopted the balance beam from the Humanitarians. Each of them added a different exercise style or a different construction to the apparatus. The balance beam enjoyed the leading place in the Swedish gymnastic system, became square (from round) in shape and was mostly used as a multiple purpose apparatus for swinging, propping and jumping. The balance beam was not used in physical athletics (Turnverein) of the German gymnastics system, but – to some extent – it was accepted in German school and military athletics. The aim of this work was to study: a) the primal forms of the balance beam and the ways and purposes of balance beam exercises; b) the role the balance beam in different gymnastics systems and the approach towards this apparatus of the great gymnasts; c) the contribution of the balance beam to gymnastics and sports of that time.

INTRODUCTION

Since ancient time balance exercises on a strained string performed by special acrobat-artists, have held an intermittent place in show business. Balance movements and 'poses' of acrobats resembled those performed on the modern balance beam [1]. Ancient writers like Hippocrates, Ploutarchos, Galinos, mentioned acrobats, who sometimes performed to the music [2]. Literature and works of art reveal that balance exercises were cultivated in Roman times, the Middle Ages and the Renaissance [3].

The Humanitarians acknowledged the great utility of balance exercises and included them in their gymnastic methods and books. To cultivate balance routines, they used among others, beams of various sizes and forms. Basedow was the first one to use this apparatus in his school (Dessau Philanthropy) in the form of a pealed bole placed on the floor. From this primal beam evolved the beams of Guts Muts and Vieht, who used elevated beams with poles with adjustable height [4].

Guts Muts dedicated a large part of his book to the balance apparatus and specifically to the beam, while he first treated balance exercises in separation and provided useful training guidelines. He suggested the balance beam as the most appropriate apparatus for balance exercises and for acquisition of kinetic skills. In general, for Guts Muts, both the balance beam and gymnastics were means of physical education [5].

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A number of specialist works in Greek and international literature have been published on the subject of balance beam in different eras. The aim of this study was to cover the period of the first half of the 19th century. It should be noted that in the present study the multiple purpose of this apparatus was stressed. In this way it was shown that the beam is historically not only a female gymnastic apparatus, but a multiple purpose gymnastic apparatus for both sexes, addressing the needs of present-day mass athletics.

The study was mostly based on primary texts from Hippocrates, Ploutarchos, Galinos, Grigoras, Guts Muts, Vieht, Jahn and Pagodas. Also works of modern writers such as Kaimakamis, Chrysafis, Holmström, Törngrren, Borrman, Gasch, Krüger, Pahncke and others were used.

BALANCE BEAM ACCORDING TO JAHN

Friedrich Ludwig Jahn (1778-1852), considered to be the founder of the German gymnastic system, took the balance beam and other gymnastics apparatuses over from Guts Muts and Vieth and included it in his gymnastic kinetics. Balance beams were used in the first hypaethral gym opened in 1811 in Berlin under Jahn's supervision. In his book written in the 1816 in collaboration with his student Ernst Eiselen, entitled *Die Deutsche Turnkunst* (The German gymnastic art), Jahn dedicated four pages to beam and balance exercises [6].

In his book, Jahn described the apparatus as used for cultivation of balance "in movement and standing." One of such beams was a long pealed bole placed on the floor, resembling the primal beam of Basedow, on which one "*must not be either too stable or unstable*" [7]. Another beam was a similar bole of pine or fir 40 feet long, lean but longer and supported on four poles with adjustable height. Jahn stressed that "*the beam should not be either too stable or unstable*" (Fig. 1) [8] and described many balance exercises on this apparatus. In his methodology Jahn suggested that exercises should be first learnt on the ground for safety. It is noteworthy that even nowadays athletes perform first balance exercises on the floor, then on a low beam and finally on a raised one. Very interesting are Jahn's remarks on the positioning of the exerciser's body and the head, way of looking (staring away) and shoe soles (edges out). The same guidelines are still used by present-day beam gymnasts.

Jahn also demonstrated in his book several play forms of beam exercises in which two opponents tried to push each other off the beam using their hands, shoulders, legs, etc. [9]. Furthermore, Jahn also proposed other, different balance beam exercises such as standing on one foot, walking on tippy toes, jumps, turns and foot swings with obstacles. All these elements in the form of school and play instrumental gymnastics are still used nowadays [10].

BALANCE BEAM IN THE GERMAN AND SWEDISH GYMNASTIC SYSTEMS

The German gymnastics system, which evolved from Jahn's gymnastic kinetics, did not make any provisions to use the balance beam in gymnastic clubs and events (Turnvereine, Turnfeste). However, the apparatus was accepted in German schools and military in various forms, different from those used in the Swedish gymnastics system [11].

Pier Ling (1776-1839), who is considered to be the founder of the Swedish gymnastics system, adopted the balance beam from Guts Muts and Vieth like Jahn, and included it in his own gymnastics system. Balance beams soon became very common in Swedish outdoor and indoor gyms,

Figure 1. Jahn's balance beams with poles allowing height adjustment [6, p. 336; 9, p. 545]

under the name of "*Balansriba*", displaying different forms and dimensions (round, square, tall, low etc). In fact, balance exercises were the main exercises of the Swedish daily exercise program, while the beam was used as a multiple purpose apparatus for cultivation of different kinetic skills, replacing the horizontal bar and other apparatuses (Fig. 2) [12].

Beside the balance beam the two aforementioned gymnastics systems also used the Planche. Especially in the Swedish system, this apparatus was employed as a multiple purpose apparatus, and it was known as the *Swedish Planche* (Fig. 3) [13].

Balance exercises on beams of different shapes were also used in the methodology of other great gymnasts of the early 19th century. They included the Spanish Ondeano Amoros (1770-1848) founder of French gymnastics, Nachtegall (1777-1847) founder of Danish gymnastics, and the Swiss Phokion Heinrich Clias (1785-1854). These pedagogues used among others a oblique beam 3-4 meters long, which was also included in the sports program of the 3rd Zappeion Olympics in 1875 [14]. For balance exercises, Phokion Heinrich Clias also used poles (Fig. 4) [15].

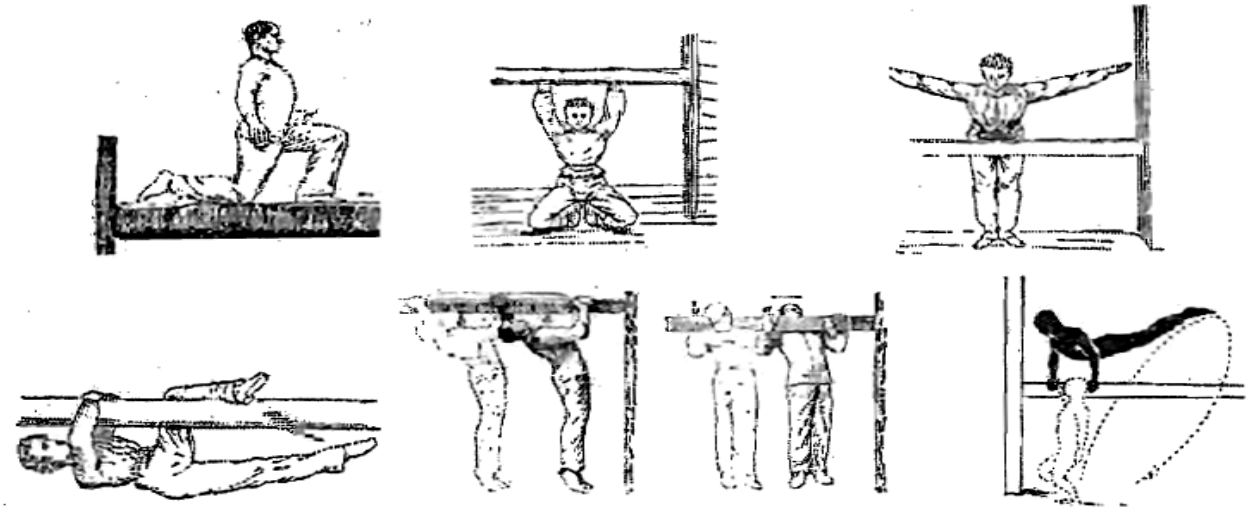

Figure 2. Balance beam as a balance and multiple purpose apparatus in the Swedish gymnastics system [12, pp. 19, 27, 66, 70, 72]

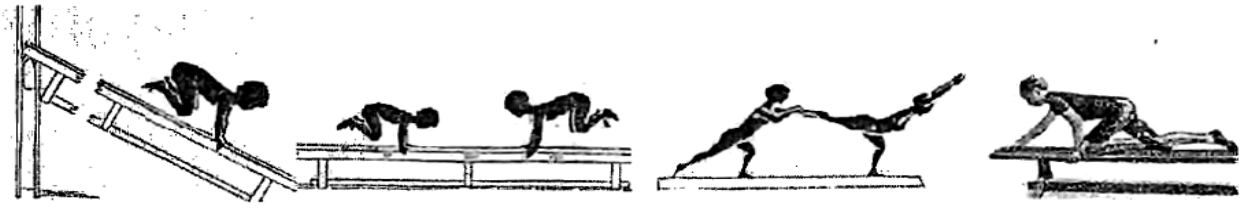

Figure 3. Planche as a multiple purpose apparatus in the Swedish gymnastics system [13; pp. 72, 169, 285]

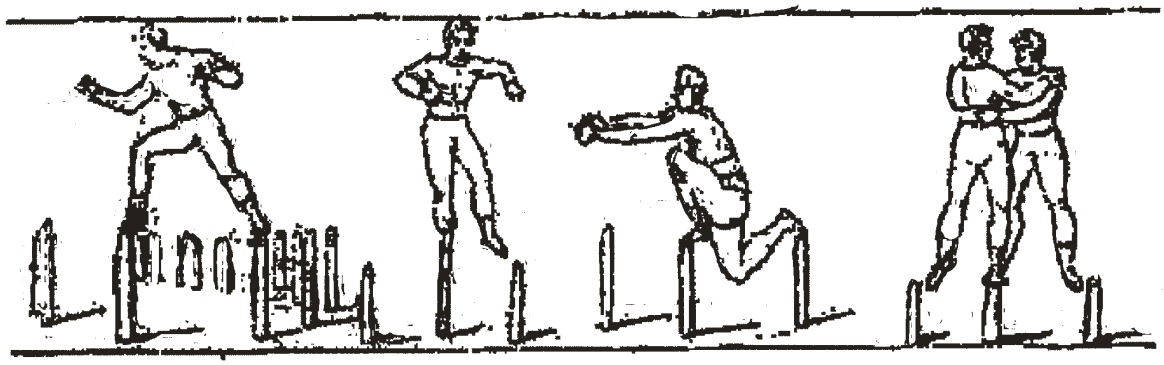

Figure 4. Balance exercises on poles according to Clias [15; pp. 122, 126]

In 1824, French Jacques Mathieu Delpech in his book *Two Volumes & Atlas*, referred to balance exercises and swinging on a strained string and other apparatuses [16].

Johann A.L. Werner (1794-1866) in his work published in 1834 in Meisen (Germany) entitled *Gymnastic für die weibliche Jugend, oder weibliche Körperbildung für Gesundheit, Kraft und Anmut* (Gymnastics for girls or female gymnastics for health, strength and grace) dedicated several pages to balance exercises performed on a beam (Fig. 16). Werner used the balance beam (and other gymnastic apparatuses) in his own medical institute in Meisen for treatment of musculoskeletal diseases in girls [17].

In 1837, Eiselen (Jahn's student and collaborator), published 46 illustrated "gymnastic tables" (Turntafeln), which demonstrated exercises on various gymnastic apparatuses followed by special guidelines for assistance and description purposes. The tables also included balance beam exercises followed by specific instructions (Fig. 5) [18].

Adolf Spiess (1810-1858) and Moriz Kloss (1818-1881) of Germany used the low beam mostly for gymnastics for girls. The former discussed balance exercises in his book published in 1847 entitled *Turnbuch für die Schule als Anleitung für den Turnuterricht duch die Lehrer der Schulen* (School book of gymnastics for the course of gymnastics for school teachers). Figure 6 presents a drawing from this book showing girls practising on low balance beams at Petersturnpratz in Basel, Switzerland [19].

George Pagodas (the first modern Greek gymnast and author of a sports book), in his work published in 1837 dedicated a special six-page chapter "On swinging or balancing" to the balance beam. He included there a sketch of a balance beam (Fig. 7), referring to it as a swing, and provided the following description: "*... a swing made from a bole of pine or fir, big sized and lean, the bigger the better, not smaller than 40ft. long and 10 fingers in diameter, supported on iron or wooden footstools with adjustable height, not to move either too much*

Figure 5. Balance beam exercises for treatment of musculoskeletal diseases in girls, according to Werner (1834). Balance beam exercises according to Eiselen

or too little" [20]. It should be mentioned that Pagodas studied in Munich with the chief-gymnast Ferdinand Masmann, who was Jahn's student and collaborator. Pagodas also reported that it was Massman himself who had encouraged him to translate Jahn's book *Die Deutche Turnkust* into Greek. Jahn's influence is apparent from the phrase "*not to move either too much or too less*", which is similar to the description of Jahn's beam [21]. The image of this beam came from the Atlanta of Odeano Amoros book, as revealed by Pagodas in his preface, which also explains the third stylobate in the middle.

Figure 6. School girls exercising on balance beams according to Spiess

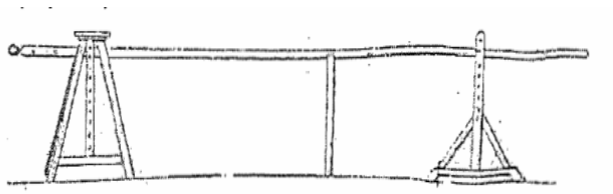

Figure 7. Pagodas's balance beam (1837)

Beside the proposals of Adolf Spiess and other enlightened gymnast-pedagogues who threw light on female gymnastics, in the first half of the 19th century the woman's position in both society and sports was rather degraded. As a consequence, men were mainly using the balance beam as a multiple purpose apparatus. The primary goal was the acquisition of kinetic skills and, above all, military strength. Thus beside individual exercises, other various exercises with co-athletes, obstacles, assistants etc. were conceived [22]. In the mentioned period it was quite remarkable that instrumental gymnastic was not considered a unique sport with different regulations and special apparatus specifications. All apparatuses were components of a general gymnastic system, where their construction was not standardized in any way. The athletes did not focus on technical perfection but on the number of performances and on acquisition of kinetic skills and physical strength [23].

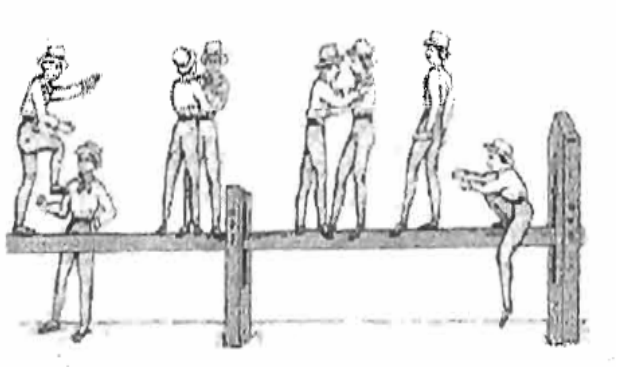

Figure 8. Mass gymnastic exercises on a balance beam in the early 19th century in various combinations (co-athletes, obstacles, opponents, assistants etc.) [22; p. 40]

CONCLUSION

It was men who invented the balance beam, and for decades it was only used by male gymnasts, since the woman's place in athletics was almost inexistent. After the Humanitarians, almost all the great gymnasts and gymnastics systems of the first half of the 19th century acknowledged the significance of balance exercises and used balance beams of various shapes and sizes. The beam was used as a multiple purpose apparatus for acquisition of various dexterities and cultivation of physical skills. This fact resembles present-day mass and school athletics, where the balance beam is used as a multiple purpose apparatus by both sexes for development of balance and other kinetic skills.

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