Musical instrument and toy

Keywords: toys, musical instruments, learning materials, interior design/flooring

Further details: http://www.unibas.ch/wtt/Info_Comp/Lic_opp/Music_Instrument/music_instrument.html

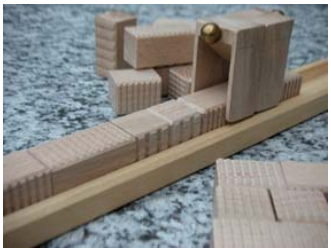
Summary of Invention

The invention consists of a specially constructed track which, together with an object drawn across it, creates a sound or tone. It lends itself to the development of new products for all age groups and diverse requirements. Several functioning models are already available and wait for further development, realization, and marketing.

Depending on the design of the individual module, the following potential market segments

- toys
- musical instruments
- learning materials
- interior design/flooring

could be approached.



The strength of the invention lies in its simplicity and universality. Anyone, whether old or young, can be musically creative – on the one hand by generating musical sounds with their hands or feet (tone production) and on the other hand by being thus motivated to further experiment/combine/compose (shaping of information production).

Learning materials

The acoustic, visual and kinesthetic stimulus produced by the sounding modules speaks to each individual's preferred cognitive field. The interaction between the different senses also make the instrument pedagogically valuable. Therefore it is suitable for classroom use in various subjects and is virtually predestined to be an ideal teaching material for interdisciplinary thought and action in diverse fields.

Toy

Probably everyone is familiar with the basic principle of this toy, and as a child has run their hand or a stick along a fence, a radiator or a railing, creating a sound. The present invention is the marketable implementation of this phenomenon and consists of modules of diverse materials and in various dimensions for interior and exterior use. Targeted consumers are families, kindergartens and schools, and public playgrounds. Integration into existing production lines is both feasible and sensible, and several price categories conceivable.

Musical instrument

Unique to this instrument is the fact that the desired tone sequence is physically laid out as an actual „sound track“ before the music-making begins. The expected tones can be verified at any time, they are visible both to player and listener and the sound production itself is physically apparent. The parameters tempo/pitch (mutually dependent), the choice of segment to be played, as well as the duration of the action and the decision whether to repeat or vary, can all be influenced spontaneously. Each section can be played backwards and one or more players can create several tones simultaneously on one or more tracks. The instrument lends itself to use in an educational or professional environment . Electronic amplificaton as well as the connection to computers (sampling and sequencing) via sensors, or the transmittance of electromagnetic or optical impulses, is also conceivable.

Teaching and learning materials

The unique linking of the visual, tactile and acoustic representation of time/space structures open up innumerable new approaches to problem-solving in varied disciplines (language, mathematics, physics, motor activity and sport). Relationships between time and distance, combinatorics, decimals, patterns and order, measurements, approximations and calculations, vibrations, speech patterns and inflections, motor coordination and control, etc. are phenomena which can be approached from a different vantage point using this learning tool. An appropriately designed product belongs in every kindergarten, classroom, and physics department.

Interior design/flooring

The effect of corrugated flooring in airports and train stations could be used as a way of transmitting simple advertising messages in the stores and shopping passages as well as an auditory aid in directing passenger traffic. The latter could be of particular use in helping those with visual impairment navigate through large facilities of any kind. Other applications could be the creating of acoustic art or a low-cost and interactive sound envelope in public squares or in corridors and halls of buildings.

IP-Position

Owner:	Member of Fachhochschule Aargau
Status:	Patent pending
licensing/sale conditions:	The technology is available on an exclusive or non-exclusive basis.

Contact

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