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A TEASER

Signalling a game changing patents and a redyness for collaboration with musical instrument manufacturer

This is a letter to well chosen manufacturers of electric or acoustic musical instruments written in person by me, a healty men over 70 whose speciality is microwave engineering and amator violin playing in Hot Plasma Orchestra playing mostly Gypsy tunes of Django Reinchardt and Stephan Grapelli. Quite a long time ago I was forced to construct an instrument which I could play avoiding irrigation and pain in my shoulder. The new shape of chin-rest and a new shape of electric violin were subject of patended design. Soon after I focused on improving the sound of electric violin which after trying practically all available pickups I found far unsatisfactory. The research led me to the conclusion that natural sound of every acoustic instruments comes from string producing lots of aliquotes and only afterwards these are well chosen and amplified by the action of instrument's resonator. Bad instruments cant reject bad modes even if they sound ok in several octaves. Thus what can substitute for and play the role of resonant box when we have an electric boxless design? Only the strings oscillating in the vicinity of the appropriate combination of magnets. Distribution and stregth and even shape of the magnets placed along the strings have deciding role in forming on desired voice. Having poor acustical nstrument one can correct its voice with those magnets, or find a combination for the most natural performances.

Half a year ago I came up with the idea of a new family of pickups for stringed instruments for which I think there is very good prognosis for future use. And just before I showed it to anyone, I managed to submit several versions of these devices to the Polish Patent Office, which gives me a date of protection in my country, but also constitutes a granted 'priority date' for applications in the international PCT system providing that PCT is filed within 1 year from the national application, that for this case means until August 25th, 2023 (i.e. one has to hurry up with this).

Abstract of the present patent description

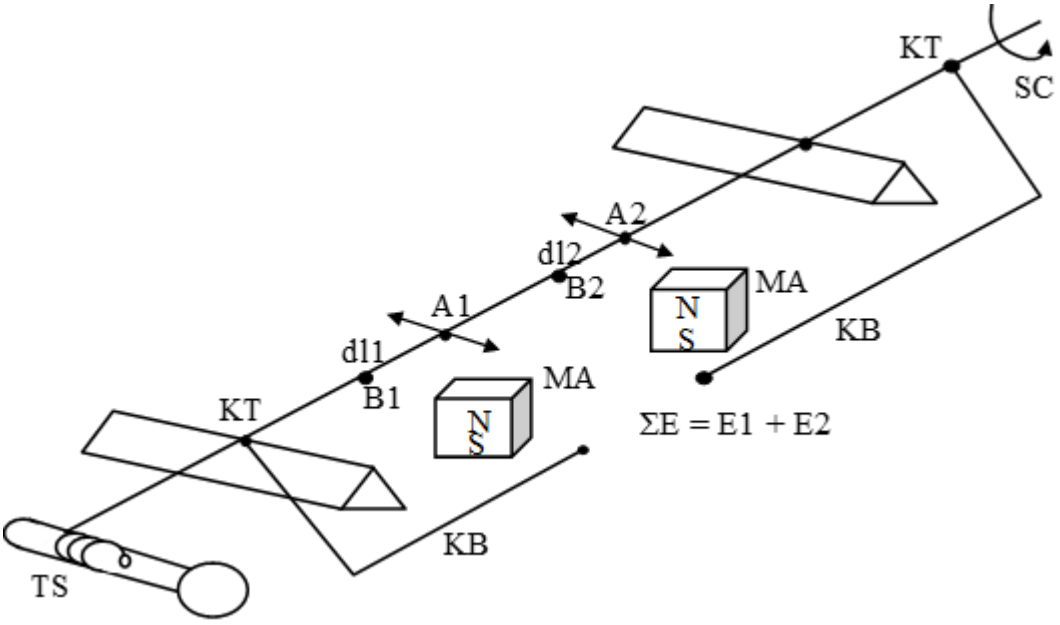
The subject of the invention is a stringed instrument, in particular a guitar with a new dynamic electroacoustic transducer of string vibrations, capable of immediate conversion of actual sound into electrical signals generated along the string placed in the field of a magnet. This idea may generally find use in electric stringed instruments such as guitar, mandolin, violin, viola, cello, double bass, piano and others.

A stringed instrument is characterized in that at least one string (ST) made of electrically conductive (and not necessary magnetic) material is placed in the magnetic field of at least one magnet (MA) and the ends of the string (ST) are connected to a low-noise preamplifier (LNA), while the output signal from the low-noise preamplifier (LNA) is then sent to the input of the power amplifier (WM).

Dynamic transducer includes at least one electrically conductive string (ST), under a mechanical tension stretched between rigid supports (OR, PO), which has two electric connections located outside the vibration area of the string (ST) connected to the input of the low noise amplifier (LNA), the string (ST) being exposed to the magnetic field of at least one induction magnet (MA1) which generate along this vibrating string (ST) an electromotive force (E1, E2) then applied to input terminals of the low noise preamplifier (LNA). (11 claims)

The physical principle is known from Faraday.s low of induction: a conductor moving (here oscillating) in magnetic field produces Electromotive Force along its length. Here the output signal is taken between the nut and the bridge (contact KT1-KT4) and is then sent to low noise amplifier LNA. The quality of voice can be adjusted with two magnets MA.

Mosaics conc. Principle of operation

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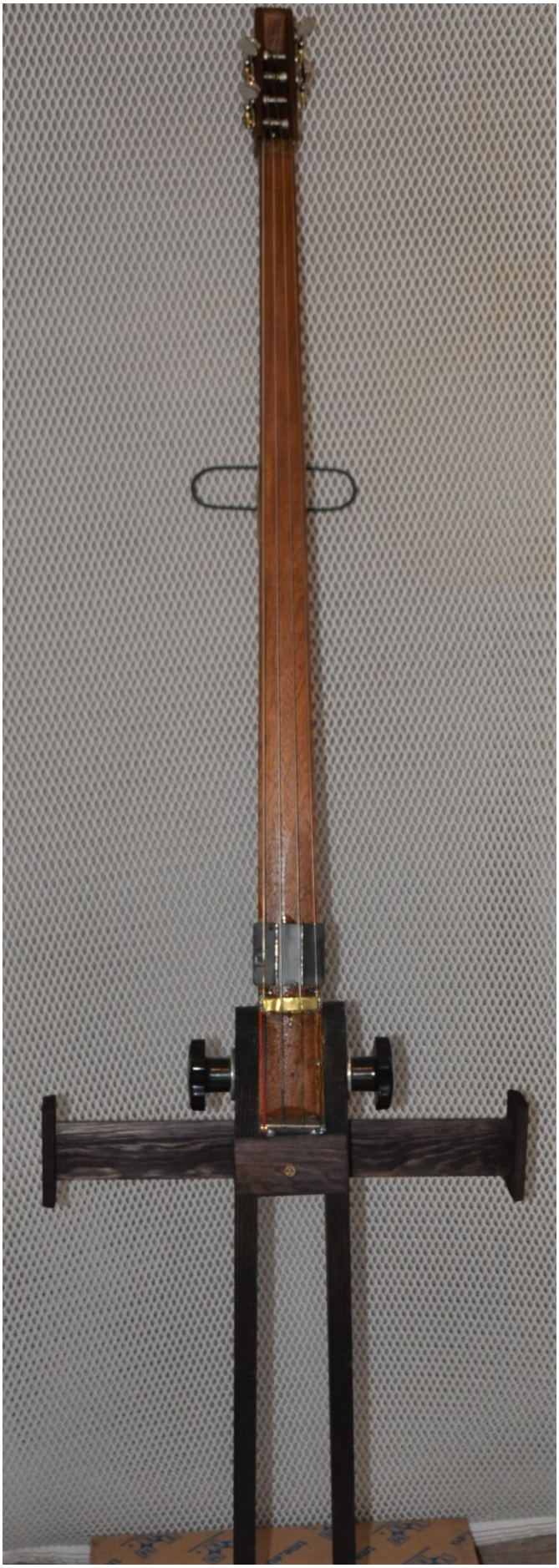


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