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EUROPEAN QUALIFYING EXAMINATION 2015

Paper C

This paper comprises:

*	Letter from opponent to professional representative	2015/C/EN/1-2
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*	Annex 6	2015/C/EN/24-26
*	Form 2300: Notice of opposition to a European patent	

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Manistee, 23 February 2015

Dear Ms Pauley,

Our competitor Winterwute Corp. has recently been granted a European patent (Annex 1) which could greatly affect our business. Please file an opposition in our name against this patent. You may find the following details to be of use.

On-line file inspection revealed the following about the application history of Annex 1:

- During examination, claim 4 of Annex 1 was added. Originally filed claims 4 and 5 were renumbered and are now claims 5 and 6. All other parts of Annex 1, in particular claims 1-3, are as originally filed.

- Claims 1, 2, and 5 of Annex 1 are identical to claims 1, 2, and 3, respectively, in the priority document US10/545,717. US10/545,717 does not have any other claims and does not contain paragraphs [0017] and [0018] of Annex 1. The remainder of the description and all drawings of Annex 1 are also in US10/545,717.

Annex 2 is an excerpt from a blog authored by a well-known snowboard designer, Mr Sam Cauliscrest. The content of the blog entry of 18 September 2010 consists of paragraphs [0001] to [0010] and figures 1 and 2 in Annex 2.

One of our employees, Ms Dela Udenevis is a regular reader of Mr Cauliscrest's blog. She remembers that the blog entry of 18 September 2010 was indeed posted on that day. Ms Udenevis would be ready to confirm this as a witness. She has also told us that she remembers that Mr Cauliscrest already presented the content of said blog entry in an oral presentation at the public trade fair "Skip, Hop & Jump" in Seattle in September 2009.

Further documents (Annexes 3 to 6) are enclosed which may be useful for filing the opposition.

Regards,

Eilasie Kacez

Enclosures:
Annex 1: EP 2 364 386 B1
Annex 2: Excerpt of Internet Blog by S. Cauliscrest, Snowclone Corp.
Annex 3: J. Bigg, H. Naflinger, "Recent results on snowboard oscillation modes", in Steigen & Bergen, Journal of Managing Risk and Fun
Annex 4: EP 2 001 836 A1
Annex 5: US 6,001,618 A
Annex 6: EP 2 314 159 A1

(19) **Europäisches Patentamt**
European Patent Office
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(11) **EP 2 364 386 B1**

(12) # EUROPEAN PATENT SPECIFICATION

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(21) Application number: **10 00 01 37.9**

(22) Date of filing: **4 October 2010**

(54) **Sports article with improved damping**

Sportgerät mit verbesserter Dämpfung

Article de sport avec amortissement amélioré

(84) Designated Contracting States:

AT BE CH DE ES FR FI IS IT GB HR LI NL SE NO

(30) Priority:

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(43) Date of publication of application:

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Note: Within nine months from the publication of the mention of the grant of the European patent, any person may give notice to the European Patent Office of opposition to the European patent granted. Notice of opposition shall be filed in a written reasoned statement. It shall not be deemed to have been filed until the opposition fee has been paid (Art. 99(1) European Patent Convention).

[0001] Snowboards and skis are sports articles used for gliding on snow. Both have an elongate body on which a user rides in a standing position. A snowboard differs from a ski in that it has a wider body on which both feet of the user may be attached.

[0002] Figure 1 shows a known snowboard 10. Figures 2 and 3 are reference figures. Figures 4 and 5, respectively, show a snowboard 20 and a damper 30 according to the invention.

[0003] Figure 1 shows a known snowboard 10 in a reference system as typically used by snowboard designers. A body 11 extends lengthwise along a longitudinal axis X from a nose 12 to a tail 13. Orthogonally to this longitudinal axis X, the body 11 extends widthwise in a transverse direction Y. The thickness of the body 11 is much smaller than its length and width.

[0004] Typically, the flat structure of body 11 has a constant thickness but is slightly bent lengthwise to provide elasticity to the snowboard. The thickness of the body 11 has up to now not been a design parameter in prior art snowboards.

[0005] A snowboard usually has a laminated structure of several layers of constant thickness. They comprise a core 14, typically made of foam or laminated wood, and at least one lower layer 15 below the core and at least one upper layer 16 above the core. A core may be partially or completely enclosed.

[0006] The known snowboard 10 of figure 1 is a freestyle snowboard. It is generally known that a freestyle snowboard has a nose 12 and a tail 13 which are both bent upwards, away from the ground. This enables bidirectional use of the freestyle snowboard which is important for landing safely after acrobatic manoeuvres. Unidirectional snowboards (not shown but also well known) have only the nose bent upwards and a flat, unbent tail. The latter cannot be used for acrobatic manoeuvres but are instead for racing downhill.

[0007] All snowboards suffer from chatter. Chatter is an oscillation that appears while the snowboard travels and leads to sections of the snowboard's edges moving up and down repeatedly. This is annoying for a rider and renders the snowboard unstable.

[0008] Chatter is caused, in any kind of snowboard, by unwanted oscillation modes. These are periodical deformations and are either longitudinal modes or torsional modes. Longitudinal modes behave like waves along the longitudinal axis X (figure 2 shows two such modes). Torsional modes behave with a periodic twisting motion which transversely distorts the snowboard's shape around the longitudinal axis X (figure 3 shows two such modes). Conventionally, chatter is reduced with strips of viscoelastic material laminated within the snowboard's body. This dampens the unwanted oscillation modes to some extent.

[0009] The present invention provides a snowboard with a core having a thickness which varies lengthwise. One of the advantages of such a core is better adaptation of the snowboard to the anatomy of a user standing on it. Adaptation to the anatomy of a user's legs, improves ergonomics, which is one aim of this invention. The inventors have further found that conventional damping is insufficient against chatter if the core has a lengthwise varying thickness. Better reduction of chatter is therefore another aim of this invention.

[0010] The invention uses dampers comprising piezoelectric material and at least one electronic component. Such dampers can focus the damping on specific unwanted oscillation modes, because piezoelectric material can convert mechanical stress into electrical current and vice versa.

[0011] According to an aspect of the invention, a damper may provide focussed damping by being placed at a location of high mechanical stress from an unwanted oscillation mode. In another aspect a damper may also provide focussed damping by means of an electronic component that is frequency-selective for the specific resonant frequency of the unwanted oscillation mode. Each of these approaches reduces chatter in a snowboard having a core of lengthwise varying thickness better than viscoelastic dampers.

[0012] Figure 4 shows a snowboard 20 according to the invention having an elongate body 17 with a core 18 whose thickness varies along the longitudinal axis X. The dampers 19 are placed at positions of high mechanical stress from torsional modes (cf. figure 3) and thereby provide focussed damping.

[0013] In the invention, the piezoelectric material is formed into one or more flat pieces. As used herein, a flat piece has a small thickness and can extend in surface in the two other dimensions. A preferred piezoelectric material is P27, which has excellent piezoelectric properties. It is usually formed into a monolithic platelet, this being an example of a flat piece.

[0014] A damper used in the invention is particularly effective for damping torsional modes in freestyle or unidirectional snowboards with a core of lengthwise varying thickness if it comprises P27 formed into at least one flat piece. However, P27 is brittle. A monolithic platelet of P27 which is large enough to cover the area necessary to provide sufficient damping has a high risk of breaking.

[0015] Figure 5 shows a damper 30 with a plurality of smaller flat pieces 31, 33 of P27 arranged side-by-side in a single layer and electrically connected by wires 37. This reduces the risk of breaking and thereby improves the reliability of the damper. Advantageously, a first flat piece 31 is used for sensing oscillations, while one or more second flat pieces 33 impart damping. In addition, the damper 30 comprises an electronic component 35.

[0016] The electronic component may be an integrated circuit. It may also be frequency-selective for frequencies between 30 and 80 Hz, meaning that it allows only frequencies between 30 and 80 Hz to pass through. This improves reduction of chatter because damping is focussed on the unwanted oscillation modes in this frequency range. In snowboards these are the torsional modes of figure 3.

[0017] Instead of monolithic platelets, the damper may use fibres of a piezoelectric material suitable for having fibres spun therefrom. Such fibres, e.g. made of piezoelectric PGGB, are suitably embedded in a matrix, e.g. a flexible polymer resin. Such a composite is not brittle. Shaped as a thin film, this composite can cover the area necessary to provide sufficient damping as a single flat piece which has a much reduced risk of breaking. This is very advantageous for freestyle snowboards.

[0018] To provide effective damping it is proposed to identify by measurement on an undampened snowboard locations of peak amplitude for the principal torsional mode. Based on this information, a position of high mechanical stress is calculated at which the damper 19 is then mounted. This inventive concept saves time because it is not necessary to repeatedly mount the damper to find out whether it is in the right position.

Claims

1. A sports article (20) comprising

– an elongate body (17) having a core (18), wherein the thickness of the core (18) varies along the longitudinal axis (X) of the elongate body; and

– at least one damper (19), said damper comprising piezoelectric material and an electronic component.

2. A sports article according to claim 1, the sports article being a unidirectional snowboard, wherein said damper

– comprises said piezoelectric material formed into at least one flat piece, and

– is arranged on the elongate body so as to dampen torsional modes of the sports article.

3. A sports article according to claim 1, the sports article being a freestyle snowboard, wherein said damper (19) comprises a composite of a matrix and fibres of said piezoelectric material.

4. A sports article according to claim 2 or claim 3, the piezoelectric material comprising P27.

5. A damper (30) for frequency-selective damping of oscillation modes in a sports article, the damper including:

– a first flat piece (31) of piezoelectric material for sensing oscillation modes,

– a second flat piece (33) of piezoelectric material for imparting damping, and

– an integrated circuit (35) electrically connected to said flat pieces, said integrated circuit (35) being frequency-selective for frequencies between 30 and 80 Hz.

6. A method for obtaining a sports article in which torsional modes are damped, the method comprising:

   – providing an elongate body (17) having a core (18), wherein the thickness of the core (18) varies along the longitudinal axis (X) of the elongate body,

   – providing at least one damper (19), said damper comprising piezoelectric material and an electronic component,

   – selecting a position for said damper (19) by measuring, without the mounted damper, the amplitude of a torsional mode of said elongate body (17) at a plurality of locations, and

   – mounting the damper (19) at said position.

Fig. 1

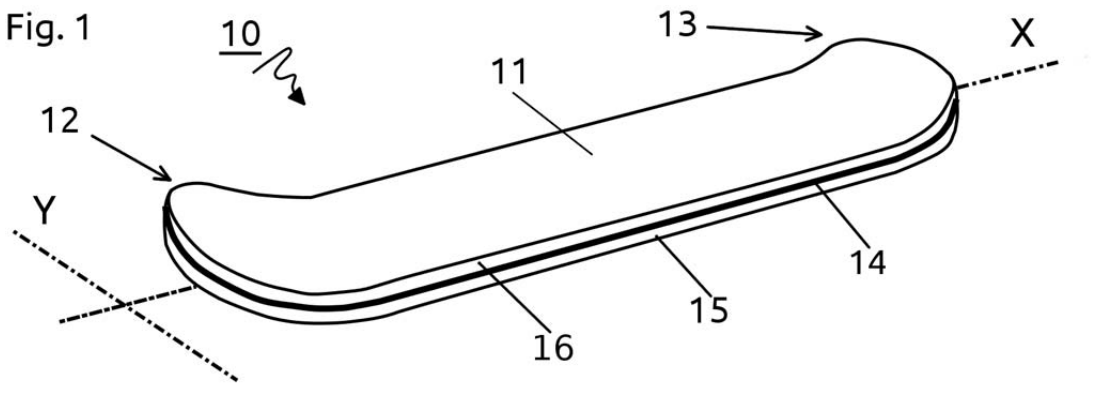


Fig. 2

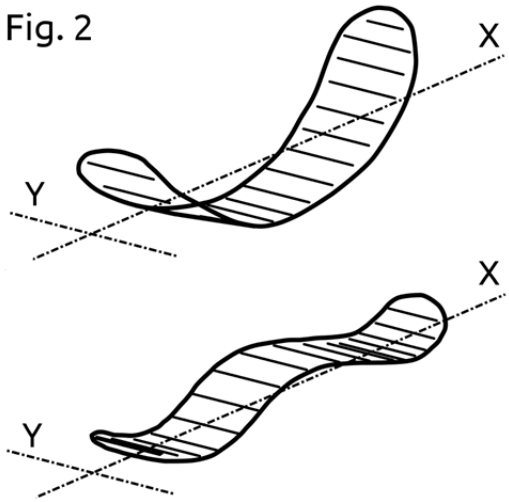


Fig. 3

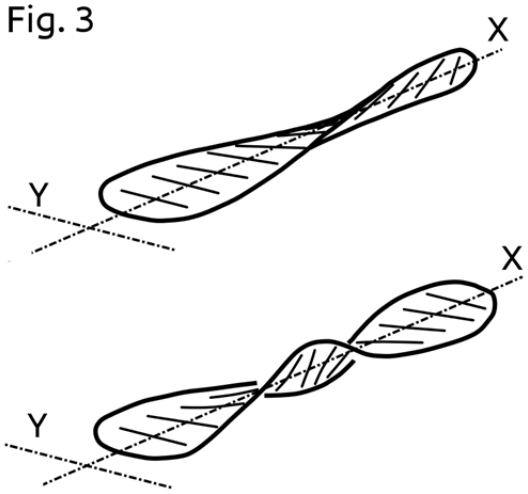


Fig. 4

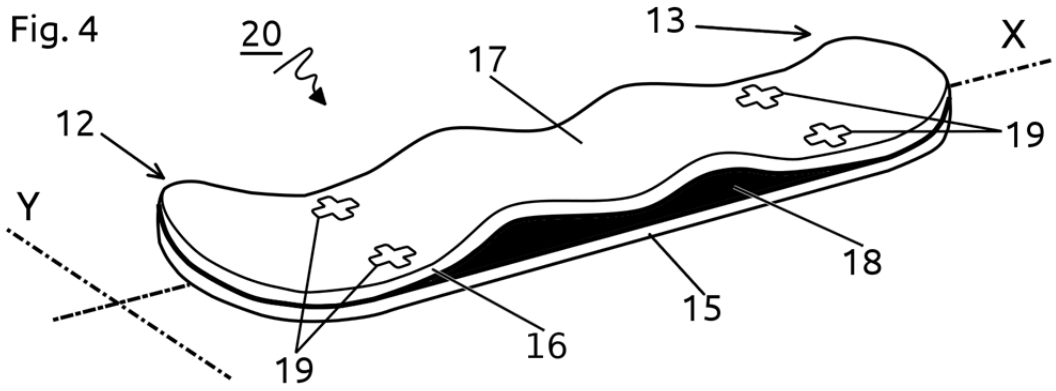
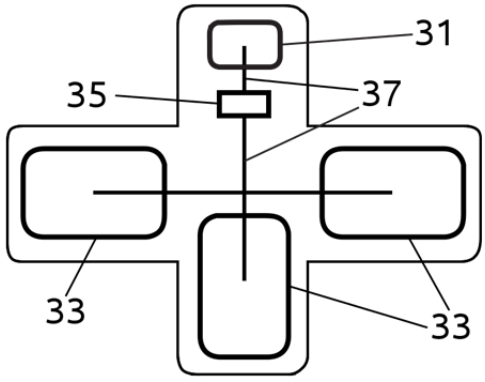


Fig. 5



http://blog.snowclonecorp.com/2010_September_18

Printed 22 February 2015

Snowclone Corp. Internet Blog by Sam Cauliscrest

Our boards make the difference

Internet blog entry of 18 September 2010, last modified on 18 September 2010

[0001] Using a computer, our researchers have numerically modelled a snowboard as transverse “slices”, i.e. cross-sections at small increments along its longitudinal axis. The height of each slice was then optimised to improve the turning properties of the snowboard.

[0002] The graph in figure 1 shows the outcome of an optimisation run on the computer. The optimised height of each slice along the longitudinal axis P of the snowboard leads to a distribution curve of optimal thickness T. In the foot mounting zones 41 and 43 the optimal thickness is greater than in centre zone 42.

[0003] We built a prototype based on the design of one of our standard freestyle snowboards. Figure 2 is a schematic side view of the prototype with the thickness somewhat exaggerated. The prototype's core is not shown, but was machined so that the snowboard varies in thickness according to figure 1.

[0004] The prototype was then tested under realistic conditions on a slope and was found to have much improved turning properties. However, in these field tests we have also found that this prototype was more prone to chatter (the well-known undesired vibrations in snowboards).

[0005] Traditional dampers would have made the snowboard feel too sluggish, so we developed a new damper. It absorbs chatter almost completely without making the snowboard feel sluggish, if placed at the right spot. Near this “sweet spot” our damper will optimally absorb the energy of the periodic twisting motions which are mostly to blame for chatter.

[0006] The sweet spot is different for each type of snowboard. It can be found by trial-and-error, i.e. repeatedly positioning the damper and determining how good the damping is. This is time consuming, so it would be desirable to have a quicker way of finding, or at least approximating, the sweet spot. One could then have mobile “snowboard clinics” near ski resorts where dampers can be mounted on existing snowboards.

[0007] Our new dampers are patches embedding monolithic platelets of the piezoelectric material P27. With these patches mounted near the sweet spot of the prototype, chatter disappeared almost completely.

[0008] The new dampers are still somewhat experimental. To cover an area large enough for use on a snowboard several small monolithic platelets and electronic components are embedded in the patch.

[0009] We expect soon to have improved the patches to be reliable enough for our next line of snowboards.

[0010] Our next line of skis is also making progress. However, everybody knows that skis are not snowboards so this is off-topic in this blog.

Comment added by user flexboard@snouboadbreddl.com on 17 October 2010

[0011] Hey Sam, when will your patches come out? Patches, patches, everywhere - I just heard that Kaytwo-Corp will soon sell damping patches with composites of piezoelectric fibres in a polymer resin. I'd love to compare them with your patches with monolithic platelets of P27.

Answer by Sam Cauliscrest on 19 October 2010

[0012] We do not have a release date for our patches yet, but if you sign up to become one of our testers I can send you a sample.

Figure 1

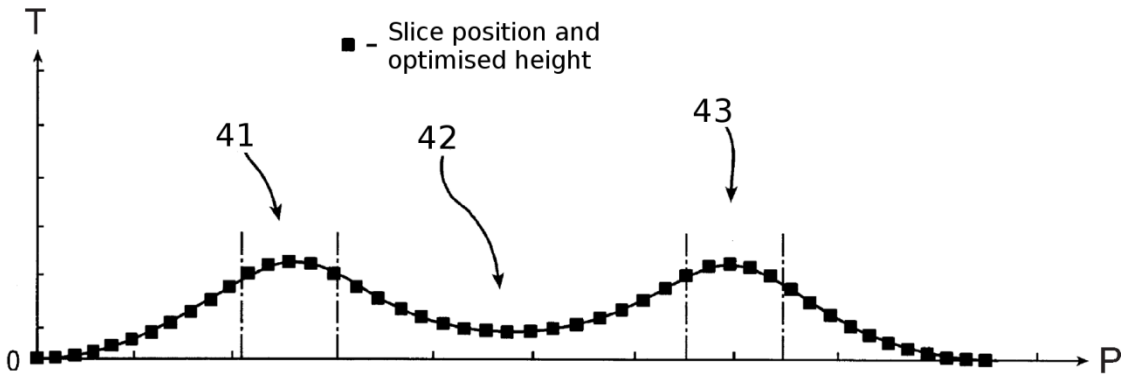
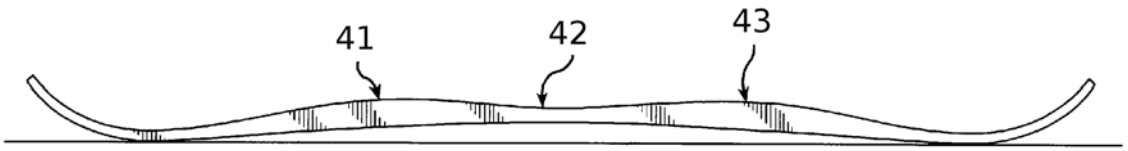


Figure 2



Steigen & Bergen, Journal of Managing Risk and Fun, Vol. 17, page 240 ff.

Recent results on snowboard oscillation modes

Jeffrey D. Bigg, Lebow Skis Labs & Hick K. Naflinger, Snowcrash Labs

Article received 5 January 2008; published 4 June 2009

DOI: 10.1139/p04-010

[0001] Current research aims to improve ergonomics and control of snowboards so that users can ride comfortably and safely at higher speeds. Control at higher speeds is compromised by chatter. In this paper we report on studying and damping unwanted oscillation modes responsible for chatter.

[0002] We have performed computer simulations with a numerical model of a snowboard. The simulation results indicate that chatter is not caused by longitudinal modes, which in snowboards have frequencies between 10 to 25 Hz, but instead by torsional modes, which in snowboards have frequencies between 30 to 80 Hz.

[0003] These torsional modes create several regions of high mechanical stress in the snowboard. Figure 1 shows part of a snowboard overlayed with a plot of simulation results, in which darker hatching signifies regions of higher mechanical stress. The results indicate that the torsional modes cause high mechanical stress in certain regions close to the edges, on the left and right sides of the snowboard.

[0004] We investigated the simulation results experimentally. A real snowboard of the unidirectional type with constant thickness and standard shape was held in a laboratory rack. We provoked the torsional modes and studied them using couplers for mechanical stress comprising the piezoelectric material P27, in the form of a monolithic platelet 55 as shown in figure 2. These couplers were very effective in our test setup, but the size of each monolithic platelet had to be kept rather small to prevent breaking.

[0005] In a first setup, the couplers were used as sensors. By iterating their location on the snowboard, we mapped the distribution of mechanical stress resulting from the torsional modes. We found the peaks of the distribution of mechanical stress at locations 58 shown in figure 3. Locations 58 of highest mechanical stress correspond exactly to the regions of highest mechanical stress in figure 1. This confirms the simulation results.

[0006] In a second, separate setup, the couplers were combined with a simple dissipative electronic circuit to form basic dampers. The components of such a circuit are not frequency selective and may couple to unwanted oscillation modes at any frequency. The coupling strength is only dependent on the location on the snowboard. We found that these basic dampers achieved considerable damping of the torsional modes and thus reduction of chatter when placed exactly at the locations 58 of highest mechanical stress.

[0007] The experimental setups were very basic, leaving room for future improvements.

[0008] In the first setup the couplers would have provided a better signal in combination with frequency filtering allowing only frequencies between 30 and 80 Hz to pass through. With this frequency filtering, the setup would have coupled better to the torsional modes causing chatter, which would have improved the relative signal strength for mapping the distribution of mechanical stress.

[0009] Our second setup of using couplers as dampers indicates a potential for improving control for riding safely at higher speeds. This could be complemented by any other concept aimed at improving the riding experience at higher speeds.

[0010] As a side result of the first setup we discovered an approximation technique for approximating the locations 58 of highest mechanical stress. This discovery was made, while provoking the torsional modes in the snowboard. We measured the undampened amplitude of the periodic twisting motion along the snowboard edge and determined the position 57 of peak amplitude (cf. figure 3). We found that locations 58 of highest mechanical stress are about halfway along the edge between this position 57 of peak amplitude and the tip 59 of the snowboard.

[0011] This technique, later confirmed on other snowboards, gives a quickly obtainable approximation if the locations 58 of highest mechanical stress are not exactly known. However, the basic dampers of our second setup were not compatible with this approximation technique because they had to be placed exactly at said locations 58 of highest mechanical stress.

Figure 1

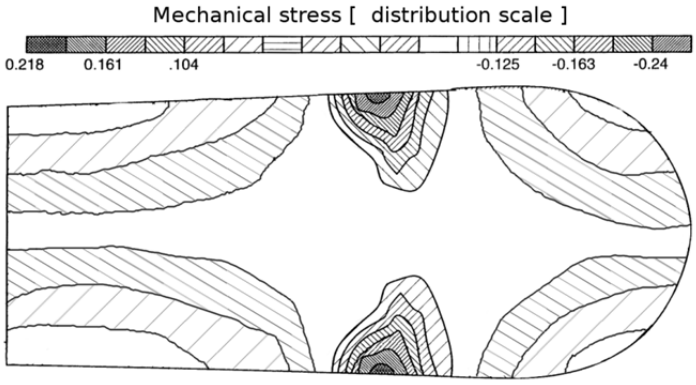


Figure 2

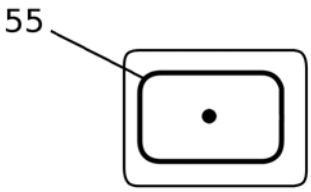
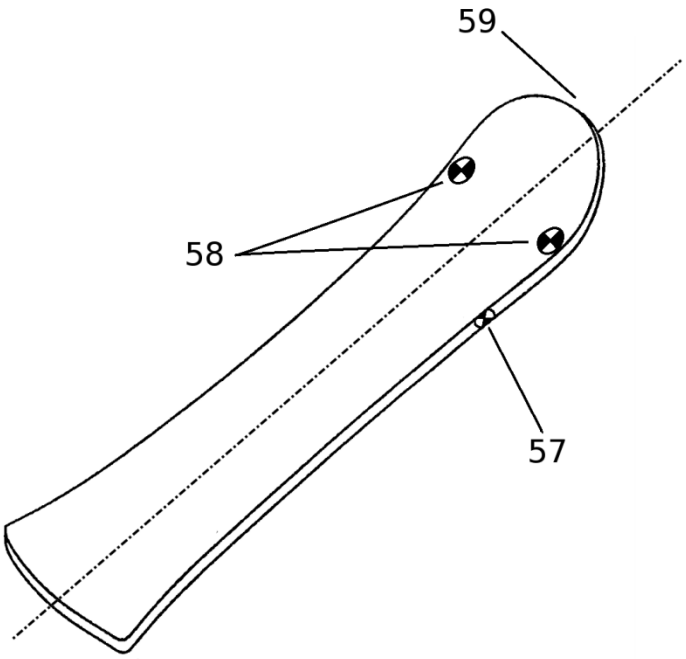


Figure 3



(19) European Patent Office

(12) European Patent Application

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(11) Publication number: **EP 2 001 836 A1**

(22) Date of filing: **8 January 2007**

(30) Priority: **9 January 2006 DE 102037183088**

(43) Date of publication**:** **8 June 2007**

(51) Int. Cl.: **B63B35/73, A63C5/04**

(71) Applicant: **Rystoff Brettl KG**

(72) Inventor: **Puristsaf T. Fastsirup, Wasita C. Atisaw**

(84) Designated Contracting states: **AT BE GB HU IS LU LV**

Ergonomic sportsboard

[0001] Conventional sportsboard constructions have a flat upper surface on which a user's body adopts a position which is comfortable for a ride at low speed. However, when riding at higher speeds, this position can lead to accelerated wear on the hips, knees and ankles, because the user has to quickly react to sudden movements of the sportsboard. Accordingly, there is a need for an improved sportsboard which reduces wear on a user and allows riding comfortably also at higher speeds.

[0002] Figure 1 shows a user standing on an ergonomic sportsboard of the invention. A lower surface of the sportsboard is generally for contact with a medium (e.g. water) and an upper surface forms an interface for the user's feet at mounting sections 61 and 62.

[0003] The upper surface is curved at mounting sections 61 and 62. Because of this curvature the user's feet pivot inwardly toward the centre of the sportsboard. Thus, the legs assume a better anatomical position and the ergonomics for the user are improved.

[0004] The structure providing the curvature of the upper surface preferably is the core of the sportsboard. The resulting sportsboard is strong and solid, because the core typically extends from one end of the sportsboard to the other.

[0005] Figure 2 shows such a core 63 in a perspective view of a length-wise and cross-wise cut through the sportsboard of figure 1 at mounting section 62. The core 63 is sandwiched between lower and upper surface layers 64 and 65. Note the locally increasing height W of the core 63. This results in the upper surface layer 65 being curved.

[0006] Because of the curved upper surface the sportsboard according to the invention is better adapted to the anatomy of its user and also more comfortable when being ridden at higher speeds.

[0007] Other structures may provide the same effect and are likewise part of the present invention. For instance, a moulded platform may be attached with an adhesive to the upper surface of a previously manufactured flat sportsboard.

[0008] The present invention is equally applicable to improve the ergonomics of any sports article ridden in a standing position (e.g., surfboards, water skis) or kneeling position (e.g., wakeboards).

Claim:

A sportsboard having a body with increased thickness at a mounting section (61, 62) and a decreased thickness outside said mounting section (61, 62).

Figure 1

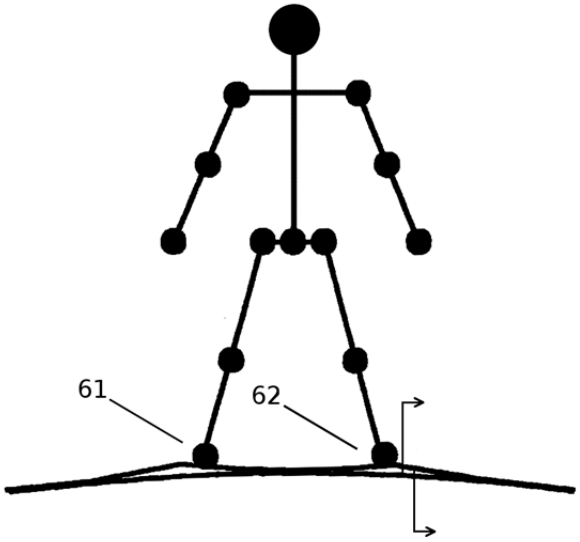
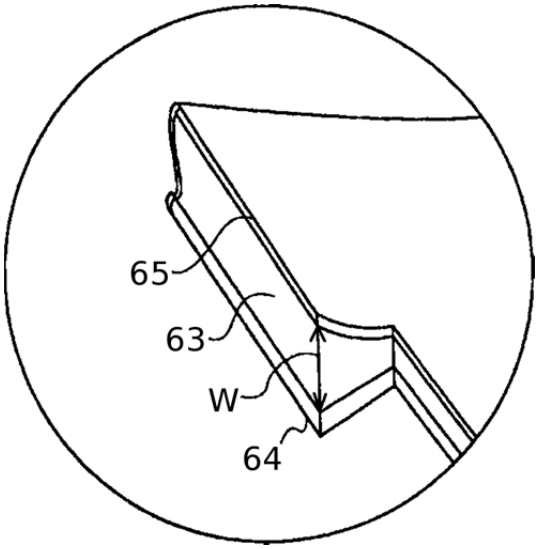


Figure 2



(19) United States Patent

(11) Patent number: **US 6,001,618**

(45) Date of patent: **June 5, 2000**

(51) Int. Cl.: **A63C5/075, F16F15/00**

(21) Application number: **23/995,140**

(22) Filed**:** **July 6, 1998**

(71) Assignee: **Oehren Ski Samfundet**

(72) Inventors: **Gohan G. Asalami, A. Rozalabad**

(54) Electronic system for improving control of snow skis

[0001] User control of snow skis can be reduced due to chatter caused by unwanted oscillation modes. Longitudinal modes are the only type of unwanted oscillation modes occurring in such skis because of their long and narrow shape.

[0002] Figure 1 illustrates a ski 70 according to the invention. A shovel 72 prevents the front of the ski 70 from digging into the snow. Extending along its longitudinal axis 79, the ski 70 narrows to a waist 74 and then widens into a tail 73. Ski 70 includes an electronic system 80 mounted centrally along the longitudinal axis 79 in a manner to couple to the longitudinal modes of the ski 70.

[0003] The inner structure of the ski 70 is not shown but contains a core. The core is thinner at the shovel 72 and tail 73 and thicker at the waist 74 to facilitate turning on snow. Means 75 for attaching one foot of a user may be conveniently placed at waist 74.

[0004] As shown in more detail in figure 2, the electronic system 80 comprises a plurality of monolithic platelets 83 of piezoelectric material and a control circuit 85. The monolithic platelets 83 are electrically connected to the control circuit 85 via wiring traces 87.

[0005] A sensor 88 detects any unwanted oscillation mode and sends a corresponding signal to the control circuit 85. The control circuit 85 then uses an energy source, e.g. a battery (not shown), to send a counteracting electrical signal to the wiring traces 87. This signal causes the material of the monolithic platelets 83 to deform or resist deformation in such a way that the electronic system 80 dampens the unwanted oscillation mode.

[0006] The control circuit may be an integrated circuit mounted onto the sensor. Preferably, one of the monolithic platelets is used as the sensor. Then the electronic system is very compact and could also be easily attached after manufacture of the ski. It could also be attached to other types of sports equipment or sold separately.

[0007] The control circuit may include a microcontroller which is frequency-selective for a frequency range of 10 to 25 Hz. Thereby the electronic system couples principally to the frequencies of the dominant longitudinal modes. If necessary, the microcontroller can also be modified to be frequency-selective for a different frequency range.

[0008] Such a microcontroller may be implemented as part of said integrated circuit. The integrated circuit may also contain a memory which stores data generated by the sensor for downloading after skiing.

What is claimed:

1. A ski (70) for use on snow, comprising an electronic system (80) with piezoelectric material coupled to the ski so as to flex when the ski flexes.

Figure 1

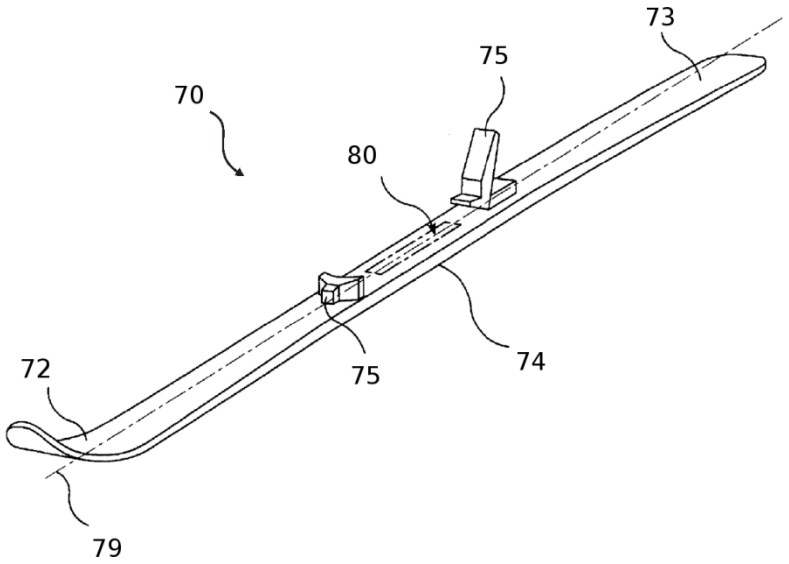
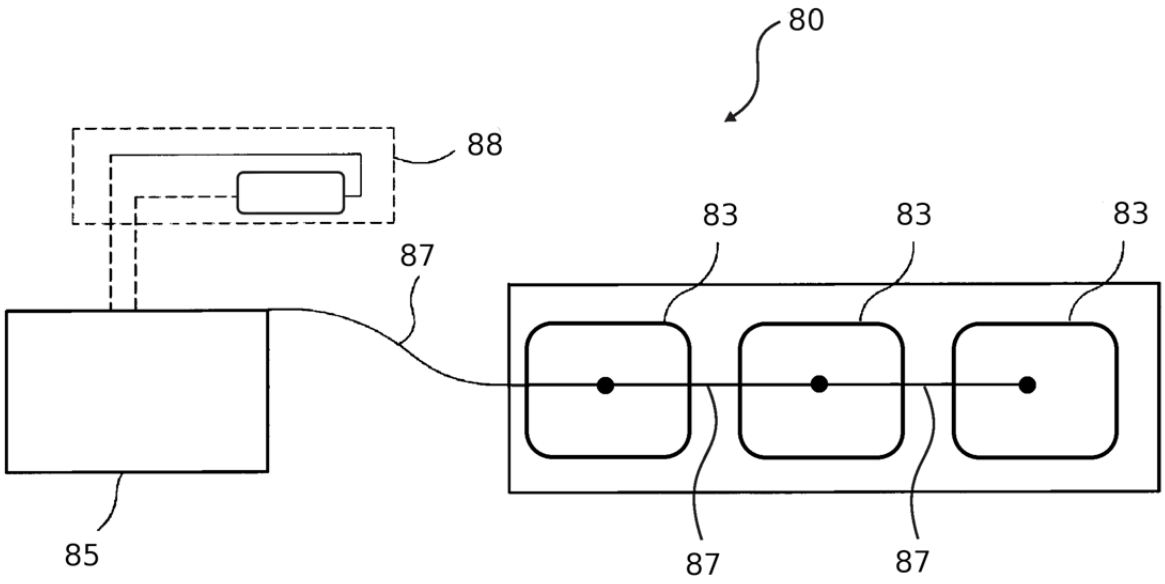


Figure 2



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(71) Applicant: **Ames Sheets Inc.**

(72) Inventor: **N. Radd, J. Cornelius, A. Calfeutrail**

(84) Designated Contracting states: **AL BE IS NO RO SE**

Flexible piezoelectric films

[0001] Piezoelectric material in crystalline form, as used in known dampers, is difficult to attach to curved surfaces. It is usually also brittle and cannot withstand too much bending, otherwise it breaks.

[0002] This invention overcomes these problems with a flexible piezoelectric film.

[0003] Figure 1 illustrates the method according to the invention. A block 100 is provided; it is made of RZCH, a piezoelectric material that has been found to work with the method according to the invention. The material is transformed into fibres 110 which are aligned and then embedded in a polymer resin 120 having suitable flexibility after curing. Moulding and curing then provides a piezoelectric film 130 of a desired shape and flexibility. A usable flexible piezoelectric film 140 is obtained after further treatment, such as trimming excess resin to permit an electrical connection.

[0004] The following example illustrates the broad range of applications of the invention.

[0005] Figure 2 shows a golf club using dampers with the flexible piezoelectric film of the invention. The golf club includes an elongated shaft 92, at least part of which is mounted inside a grip 95. The shaft is a tube whose core may be filled with suitable material. The tube has a constant wall thickness, but its outer and inner diameter taper from a larger width needed to mount the grip 95 to a smaller width to connect to a head 96.

[0006] Dampers 97a, 97b, and 97c each comprise the flexible piezoelectric film in the shape of a thin strip attached onto the surface of the club. Using the flexible piezoelectric film, the dampers dampen undesired vibrations of the golf club.

[0007] Preferably, the dampers 97a, 97b, and 97c are obtained with a single curing step by which the flexible piezoelectric film embeds circuitry necessary to obtain sufficient damping. The circuitry may comprise an integrated circuit to provide a pass-band filter for the frequencies of undesired vibrations.

[0008] Such dampers can be adapted also for sports other than golf. The flexible piezoelectric films can be attached onto uneven or large surfaces, so that undesired vibrations of many other well-known types of sports articles can be damped, such as tennis racquets, skis or snowboards.

[0009] The flexible piezoelectric films may also be used instead of multiple wire-connected monolithic platelets in traditional dampers with piezoelectric material. Dampers with the flexible piezoelectric films have fewer components, are less complex to manufacture, and are more reliable.

Claim:

A method of making a flexible piezoelectric film comprising: transforming a piezoelectric material to fibres; embedding the fibres, and optionally further components, in a resin.

Figure 1

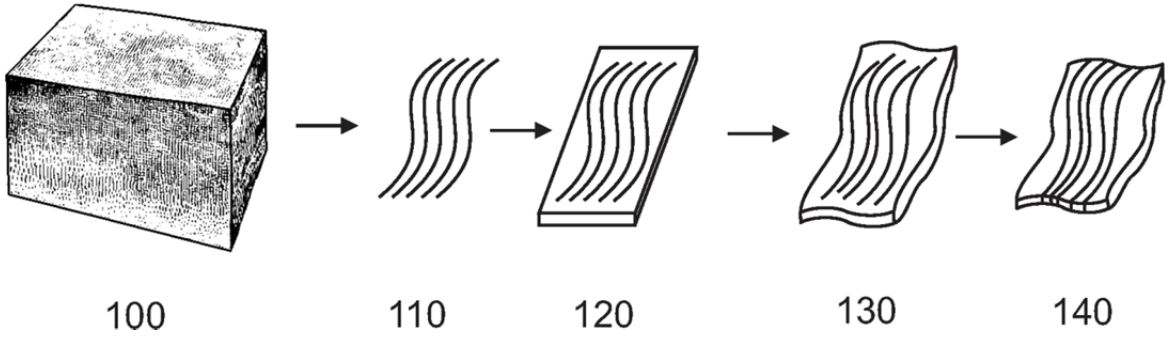
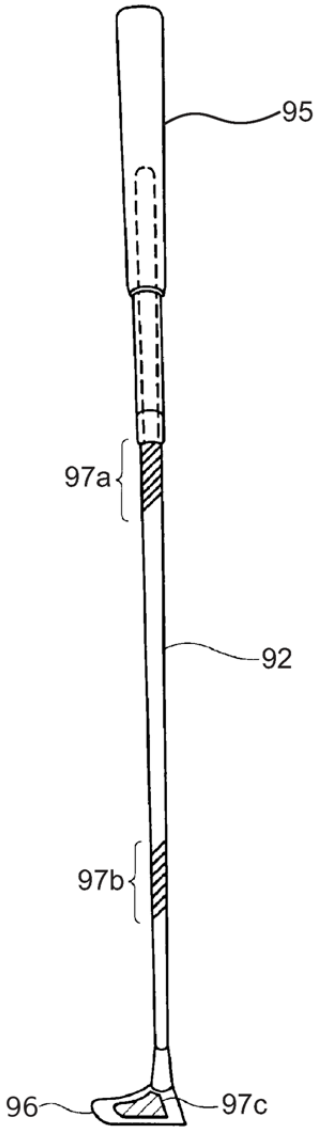


Figure 2



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Notes to the notice of opposition (EPO Form 2300)

Although the opposition form is not mandatory for the purpose of filing a notice of opposition, it specifies all the information required for such a notice to be admissible and hence facilitates the formulation and processing of the opposition. In stating and explaining the grounds for opposition, the opponent is free to comment as he wishes.

Explanatory notes to the various sections:

I. Patent opposed

Under **Patent No**. the number of the European patent against which opposition is filed (Rule 76(2)(b) EPC) must be given.
If known, the **application number and the date on which the Patent Bulletin mentions the grant** (Art. 97(3) EPC) should also be given. The latter makes it easier to monitor compliance with the opposition period.
The title of the invention must be given (Rule 76(2)(b) EPC); it should be indicated as shown on the cover page of the printed patent specification under item 54.

II. Proprietor of the patent

Where there are **several** patent proprietors, it is sufficient for the proprietor first named in the patent specification (under item 73) to be given.

III. Opponent

The **name, address and nationality** of the opponent and the **state** in which his residence or principal place of business is located must be given, in accordance with Rule 41(2)(c) EPC (Rule 76(2)(a) EPC). If the identity of the opponent has not been established by expiry of the opposition period, such deficiency can no longer be remedied (decision of the Technical Board of Appeal T 25/85, OJ EPO 1986, 81).

IV. Authorisation

If the opponent has appointed a **representative**, his name and the address of his place of business must be given, in accordance with Rule 41(2)(c) EPC (Rule 76(2)(d) EPC). If **several** professional representatives are appointed, only one representative to whom notification is to be made should be named. Any further representatives must be named in an annex (please put a cross in the appropriate box). In the case of an association of representatives, only the name and address of the association must be entered (see Rule 143(1)(h)).
An opponent who has neither a residence nor his principal place of business within the territory of one of the EPC contracting states must be represented and act through his representative (Art. 133(2) EPC). Professional representation before the EPO may only be undertaken by professional representatives (Art. 134(1) EPC) or legal practitioners entitled to act as professional representatives (Art. 134(8) EPC). Natural or legal persons having their residence or principal place of business within the territory of one of the EPC Contracting States may also be represented in opposition proceedings by **an employee**, who must, however, be authorised (Art. 133(3), first sentence, EPC). In this case notification will be made to the opponent (not the employee) unless a professional representative has also been authorised.
To avoid delaying the proceedings, any authorisation which has to be filed should if possible be enclosed with the opposition. Under Rule 152(1) EPC in conjunction with the decision of the President of the EPO dated 12 July 2007, listed professional representatives identifying themselves as such normally no longer need to file signed authorisations (cf. Special edition No. 3, OJ EPO 2007, L.1.). These are, however, required from legal practitioners and employees who are not professional representatives and are acting for the opponent under Articles 134(8) and 133(3), first sentence, EPC respectively. If they do not file an authorisation, the EPO will ask them to do so within a specified period. Failure to comply will result in any procedural steps performed by the practitioner or employee being deemed not to have been taken (Rule 152(6) EPC) – which means that the notice of opposition will be considered not to have been filed.

V. Statement of the extent to which the patent is opposed

The notice of opposition must contain a statement of the extent to which the European patent is opposed (Rule 76(2)(c) EPC). If the opposition is not filed against the patent as a whole (place a cross in the appropriate box), the number(s) of the claims (as in the patent specification) which the opponent considers to be affected by one or more of the grounds for opposition must be given.

VI. Grounds for opposition

The alleged grounds for opposition (Art. 100 EPC) must be indicated by a cross in the appropriate box(es).
Under the heading of non-patentability (Art. 100(a) EPC) the most frequently cited grounds for opposition are lack of novelty and lack of inventive step, for which separate boxes are provided. The form otherwise gives the opponent ample scope for

indicating other possible grounds for opposition. Under the heading “other grounds” the following Articles may be cited in the box provided: 52(1) and 57; 52(2); 53(a); 53(b); 53(c) EPC.
A full list of grounds for opposition is given in Article 100 EPC. The following in particular are not admissible grounds: lack of unity of invention (Art. 82 EPC), lack of clarity in the claims (Art. 84 EPC) and prior national rights (Art. 139(2) EPC).
For general information on grounds for opposition see Guidelines for Examination in the EPO, D-III, 5.

VII. Facts and arguments presented in support of the opposition

The notice of opposition must contain an indication of the facts and evidence presented in support of the opposition (Rule 76(2)(c) EPC) and, where documents are cited, an indication of the relevant part(s) (Guidelines D-IV, 1.2.2.1).
The facts, with the relevant arguments and evidence, in support of the opposition must be presented on a separate sheet enclosed as an annex to the Form (indicated by a pre-printed cross in the box).
The fact that the evidence is listed separately in Section IX does not anticipate the presentation of facts, evidence and arguments but merely makes for greater clarity and simplifies processing of the dossier. Section IX of the Form (Evidence presented) may of course always be referred to in this presentation.
Where documents are cited in shortened form, the rules set out in the Guidelines B-X, 9.1 should be followed.

VIII. Other requests

This section may be used for example to request oral proceedings or a file inspection.

IX. Evidence

Published documents cited as evidence (e.g. patent specifications) must be entered under “Publications” in the spaces provided – preferably in order of importance. They should be cited in the manner described in Guidelines B-X, 9.1.
Opponents should also indicate the parts of the document on which the opposition is based (this information has to be given anyway in the statement of facts and arguments – see notes to Section VII above).
Other evidence (e.g. witnesses, affidavits, company brochures, test or expert reports) must be cited under “Other evidence” (for public prior use: place, time, nature – see Guidelines G-IV, 7.2; D-IV, 1.2.2.1(v); for witnesses: first name and last name, full address, relationship to opponent, etc.). If there is not enough room, the evidence can simply be listed, with an indication of where in the statement of grounds the relevant particulars appear (e.g. “Witness ..., page 5”).

Documents cited by a party to opposition proceedings must be filed (including publications already cited in the European patent specification) with the notice of opposition or other written submission. This will avoid an invitation from the EPO for subsequent filing thereof. If they are neither enclosed nor filed in due time on invitation, the EPO may ignore any arguments based on them (Rule 83 EPC).

X. Payment of opposition fee

The opposition fee must be paid within the opposition period. Notice of opposition is not deemed to have been filed until the opposition fee has been paid (Art. 99(1) EPC). With regard to what constitutes the date to be considered as the date on which payment is made, see Article 7 of the Rules relating to Fees and the guidance on payment methods in the Official Journal.

XI. List of documents enclosed

Please indicate which documents are enclosed by crossing the relevant box.

XII. Signature

If the opponent is a legal person and the notice of opposition is not signed by the representative, it must be signed:

(a) either by a person entitled to sign under the law or the opponent’s statute, articles of association or the like, with an **indication of the capacity of the person doing so**, e.g. Geschäftsführer, Prokurist, Handlungsbevollmächtigter; chairman, director, company secretary; directeur, fondé de pouvoir (Art. 133(1) EPC), in which case no authorisation need be filed;

(b) or by another employee of the opponent, provided the latter’s principal place of business is in a contracting state (Art. 133(3), first sentence; Rule 152(1) EPC), in which case an authorisation must be filed.

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Notice of opposition to a European patent

I. Patent opposed

Patent No.

Application No.

Date of mention of the grant in the European Patent Bulletin (Art. 97(3), Art. 99(1) EPC)

Title of the invention

II. Proprietor of the patent
first named in the patent specification

Opponent's or representative's reference
(max. 15 keystrokes)

III. Opponent

Name

Address

State of residence or of principal place of business

Nationality

Telephone/Fax

Multiple opponents
(see additional sheet)

IV. Authorisation

1. Representative
(name only one representative or name of association of representatives to whom notification is to be made)

Address of place of business

Telephone/Fax

Additional representative(s)
on additional sheet/see authorisation

Opponent's reference

2. Name(s) of employee(s) of the opponent authorised to act in these opposition proceedings under Art. 133(3) EPC

Authorisation(s) to 1./2.

- not considered necessary ☐
- has/have been registered under No. ☐
- is/are enclosed ☐

V. Opposition is filed against

- the patent as a whole ☐
- claim(s) No(s)

VI. Grounds for opposition:

Opposition is based on the following grounds:

(a) the subject-matter of the European patent opposed is not patentable (Art. 100(a) EPC) because:

- it is not new (Art. 52(1); Art. 54 EPC) ☐
- it does not involve an inventive step (Art. 52(1); Art. 56 EPC) ☐
- patentability is excluded on other grounds, i.e. Article ☐ Art.

(b) the patent opposed does not disclose the invention in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art (Art. 100(b) EPC; see Art. 83 EPC). ☐

(c) the subject-matter of the patent opposed extends beyond the content of the application/of the earlier application as filed (Art. 100(c) EPC, see Art. 123(2) EPC). ☐

VII. Facts (Rule 76(2)(c) EPC) presented in support of the opposition are submitted herewith on a separate sheet (annex 1) ☒

VIII. Other requests:

Opponent's reference

IX. Evidence presented

Evidence is enclosed ☐

will be filed at a later date ☐

A. Publications:

1

Particular relevance (page, column, line, fig.):

2

Particular relevance (page, column, line, fig.):

3

Particular relevance (page, column, line, fig.):

4

Particular relevance (page, column, line, fig.):

5

Particular relevance (page, column, line, fig.):

6

Particular relevance (page, column, line, fig.):

Continued on additional sheet ☐

B. Other evidence

Continued on additional sheet ☐

Opponent's reference

PLEASE DO NOT USE

X. Payment of the opposition fee is made

- as indicated in the enclosed voucher for payment of fees and costs (EPO Form 1010) ☐
- via EPO Online Services ☐

XI. List of documents

Enclosure No.

0 Form for notice of opposition ☒

1 Facts (see VII.) ☒

2 Copies of documents presented as evidence (see IX.)

a Publications ☐

b Other documents ☐

3 Signed authorisation(s) (see IV.) ☐

4 Voucher for payment of fees and costs (see X.) ☐

5 Additional sheet(s) ☐ Number of sheets

6 Other ☐

Please specify here:

XII. Signature of opponent or representative

Place

Date

Signature

Name (block capitals)

In case of legal persons, signatory's position within company

Opponent's reference