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SEARCH REPORT

Application Number
LH 20
LT 2020522

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	EP 1 661 841 A1 (MOAYERI) 31 May 2006 (2006-05-31) * the whole document * -----	1-3,5, 10-12, 16-20, 22,24, 27,29	INV. A43B3/00 A43B5/14 A43B7/38
X	CN 110 075 505 A (ANHUI YINGLI ENVIRONMENTAL PROTECTION TECH CO LTD) 2 August 2019 (2019-08-02) * abstract * * the whole document * -----	1-3,5, 10-12, 16-20, 22-24, 27,29	
X	US 2018/290013 A1 (STEWART) 11 October 2018 (2018-10-11) * paragraphs [0059] - [0094], [0138]; figures 1-19 * -----	1-29	
X	CN 107 136 624 A (SHENZHEN WOER HEAT-SHRINKABLE MAT CO LTD) 8 September 2017 (2017-09-08) * abstract * * the whole document * -----	1-5, 10-12, 16-22, 27,29	TECHNICAL FIELDS SEARCHED (IPC) A43B
X	US 2008/134541 A1 (BAR-HAIM ET AL.) 12 June 2008 (2008-06-12) * paragraphs [0046] - [0094]; figures 1-8 * -----	1-9,12, 13, 16-20, 27,28	

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	15 January 2021	Williams, Mark

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
O : non-written disclosure
P : intermediate document

T : theory or principle underlying the invention
E : earlier patent document, but published on, or after the filing date
D : document cited in the application
L : document cited for other reasons

& : member of the same patent family, corresponding document

EPO FORM 1503 11.08 (P04C80)

ANNEX TO THE SEARCH REPORT ON LITHUANIAN PATENT APPLICATION NO.

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

15-01-2021

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1661841 A1	31-05-2006	NONE	
CN 110075505 A	02-08-2019	NONE	
US 2018290013 A1	11-10-2018	EP 2254671 A1	01-12-2010
		US 2011092339 A1	21-04-2011
		US 2014336008 A1	13-11-2014
		US 2016074700 A1	17-03-2016
		US 2018290013 A1	11-10-2018
		US 2020147446 A1	14-05-2020
		WO 2009097589 A1	06-08-2009
CN 107136624 A	08-09-2017	NONE	
US 2008134541 A1	12-06-2008	CA 2707845 A1	12-06-2008
		EP 2089828 A2	19-08-2009
		ES 2461864 T3	21-05-2014
		PL 2089828 T3	31-07-2014
		US 2008134541 A1	12-06-2008
		US 2009234254 A1	17-09-2009
		WO 2008068738 A2	12-06-2008

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WRITTEN OPINION

File No.	Filing date *(day/month/year)*	Priority date *(day/month/year)*	Application No.
LH20	17.04.2020		LT2020522

International Patent Classification (IPC)
INV. A43B3/00 A43B5/14 A43B7/38

Applicant
Kestutis REGELSKIS

This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of the opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the application
- ☒ Box No. VIII Certain observations on the application

	Examiner
	Williams, Mark

Application number

WRITTEN OPINION

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Box No. I Basis of this opinion

1. This opinion has been established on the basis of the latest set of claims filed before the start of the search.

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the application, this opinion has been established on the basis of:

   a. type of material:

   ☐ a sequence listing

   ☐ table(s) related to the sequence listing

   b. format of material:

   ☐ on paper

   ☐ in electronic form

   c. time of filing/furnishing:

   ☐ contained in the application as filed.

   ☐ filed together with the application in electronic form.

   ☐ furnished subsequently for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

Box No. V Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	6-11, 22-24, 26, 28, 29
	No:	Claims	1-5, 12-21, 25, 27
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-29
Industrial applicability (IA)	Yes:	Claims	1-29
	No:	Claims	

2. Citations and explanations

see separate sheet

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Box No. VII Certain defects in the application

see separate sheet

Box No. VIII Certain observations on the application

see separate sheet

1 **Re Item V**

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1.1 Reference is made to the following documents:

D1	EP 1 661 841 A1 (MOAYERI) 31 May 2006 (2006-05-31)
D2	CN 110 075 505 A (ANHUI YINGLI ENVIRONMENTAL PROTECTION TECH CO LTD) 2 August 2019 (2019-08-02)
D3	US 2018/290013 A1 (STEWART) 11 October 2018 (2018-10-11)
D4	CN 107 136 624 A (SHENZHEN WOER HEAT-SHRINKABLE MAT CO LTD) 8 September 2017 (2017-09-08)
D5	US 2008/134541 A1 (BAR-HAIM ET AL.) 12 June 2008 (2008-06-12)

1.2 The claims are not clear, see Item VIII.

1.3 Furthermore, the above-mentioned lack of clarity notwithstanding, the subject-matter of independent claims 1, 2, 16 and 17 is not new, and the criteria of patentability are therefore not met.

1.3.1 With regard to claim 1, D1 discloses (see paragraphs [0007] - [0022], [0031] - [0040], claims 1, 3, 5, 19, 20 and figures 1-5, the references in parentheses applying to this document):

a method to change the dimensions of the footwear sole (method for driving a system comprising two apparatuses for lifting in order to lift both feet of a person who is going upstairs, each said apparatus comprising two surfaces for carrying and supporting, which are substantially parallel, which are arranged above each other, which are substantially equally sized, further comprising there between a lifting device the whole functioning as a lifting table driven by a driver, wherein said apparatus can reach two target positions, the first one a starting position at which surfaces are substantially on top of each other, and the second one at which said surfaces have the biggest intermediate distance, each said apparatus being part of a shoe for a foot - see claims 1, 3, 5, 19 and 20), wherein

the dimensions of the sole of the footwear, preferably its height, are changed according to the position of the sole in contact with the supporting surface (positioning said one foot on the next step by moving said foot forwardly; energizing the footwear of the other, i.e. lower, foot, to lift it over a height distance equal to one step - see steps e) and f) and refer also to steps c) and d) of claim 20), where the height of the sole of the footwear of each foot varies under the following conditions:

a) the height of the sole increases,

when the sole of the footwear is in contact with the supporting surface (when the sole of the footwear of the lower foot is in contact with the lower step, the footwear is energized in order to lift the foot over a height distance equal to said one step - see steps e), f), and c), d) of claim 20);

b) the height of the sole returns to its initial position or close to the initial position,

when the sole of the footwear no longer touches the supporting surface (energizing said one apparatus thus retracting said one apparatus to its second position - see step d) of claim 20), where

the sequence of said stages a) and b) is repeated by walking, stepping, running, climbing, pedaling, jumping with one or both feet and where the change in the height of the sole of the footwear of each foot in stages a) and b) creates an effect of upward acting escalator (positioning said one foot on said next step by moving said foot forwardly, carrying out said steps d) and e) for the other foot; and repeating said steps c) to f) for a next stair step cycle - see steps c) to f) of claim 20).

Consequently, the subject-matter of claim 1 is not new.

1.3.2 Each of documents D2 (see abstract and figures 1-5), D3 (see paragraphs [0059] - [0094], [0138] and figures 1-19) and D4 (see abstract and figures 1-3) also discloses the combination of features claimed in claim 1, so the subject-matter of claim 1 is also not new in view of each of these documents.

1.3.3 Independent claim 2 also specifies a method to change the dimensions of the footwear sole, but differs from claim 1 in that, when it is applied to a footwear sole of each foot, it creates an effect of a downward acting escalator. In D1, claim 21 specifies a method in accordance with claim 20, wherein said method is applied for going downstairs following said steps of said method (of claim 20)

"in the reversed order". In view of this, the reasoning given in section 1.3.1 above applies, mutatis mutandis, to the subject-matter of claim 12, which is therefore also considered to lack novelty in view of D1.

1.3.4 Independent claim 2 is also considered to lack novelty in view of each of documents D2, D3 and D4 (see passages and figures cited in section 1.3.2 above).

1.3.5 With regard to claim 16, D1 discloses (see paragraphs [0007] - [0022], [0031] - [0039], claims 1, 3, 5, 19, 20 and figures 1-5, the references in parentheses applying to this document):

footwear with variable sole dimensions (apparatus of figure 1 - see paragraph [0031]), comprising a footwear body and a sole attached thereto (see paragraph [0010]), having an upper part (1) of the sole and a lower part (2) of the sole, between which at least one actuator (pneumatic lifting cylinder 10 - other embodiments are shown in figures 2 and 3) is mounted to change the dimensions of the sole according to the signals received from the control electronics and power supply (see paragraph [0035]), wherein a means for detecting the position of the lower part of the sole in contact with the supporting surface is provided in the footwear (built in sensors - see paragraph [0035]) and generates, depending on said position in contact with the supporting surface, output signals transmitted via the control electronics to the actuator, which, depending on the received signals, changes the dimensions of the sole accordingly, preferably the height of the sole, in such a way that the height of the sole of the footwear of each foot includes the following stages of variation:

a) the height of the sole increases,

when the sole of the footwear is in contact with the supporting surface, and the position detecting means transmits a signal to the actuator via the control electronics, which increases the height of the sole of the footwear according to the received signal, and when the lower part of the sole is in contact with the supporting surface, the increase in the height of the sole at the same time raises the human foot upwards (when the sole of the footwear of the lower foot is in contact with the lower step, the footwear is energized in order to lift the foot over a height distance equal to said one step; programmes as applied can be programmed such that built in signals from built in sensors will be processed - see paragraphs [0035] - [0039], steps e), f), and c), d) of claim 20) and figures 1 and 5;

b) the height of the sole returns to its initial position or close to the initial position,

when the lower part of the sole of the footwear no longer touches the supporting surface, then the position detection means transmits a signal to the actuator via the control electronics, which according to the received signal returns the height of the sole of the footwear to the initial position or close to the initial position (energizing said one apparatus thus retracting said one apparatus to its second position; programmes as applied can be programmed such that built in signals from built in sensors will be processed - see paragraphs [0035] - [0039], step d) of claim 20 and figures 1 and 5),

where the change in the height of the sole of the footwear of each foot in stages a) and b) creates an effect of upward acting escalator (positioning one foot on the next step by moving said foot forwardly, carrying out said steps d) and e) of for the other foot; and repeating said steps c) to f) for a next stair step cycle - see steps c) to f) of claim 20, and also paragraphs [0037] - [0039] and figures 1 and 5).

Consequently, the subject-matter of claim 16 is not new.

1.3.6 Each of documents D2 (see abstract and figures 1-5), D3 (see paragraphs [0059] - [0094], [0138] and figures 1-19) and D4 (see abstract and figures 1-3) also discloses the combination of features claimed in claim 16, so the subject-matter of claim 16 is also not new in view of each of these documents.

1.3.7 Independent claim 17 also specifies footwear with variable sole dimensions, but differs from claim 16 in that the method for which it is adapted creates an effect of a downward acting escalator. Paragraph [0040] of D1 states:

"For those skilled in the art it will be clear that for going downstairs a suchlike method must be applied, but then in the reverse order."

In view of this, the reasoning given in section 1.3.5 above applies, mutatis mutandis, to the subject-matter of claim 17, which is therefore also considered to lack novelty in view of D1.

1.3.8 Independent claim 17 is also considered to lack novelty in view of each of documents D2, D3 and D4 (see passages and figures cited in section 1.3.6 above).

1.4 Dependent claims 3-15 and 18-29 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of novelty and/or inventive step:

- claims 3 and 18: see for example paragraph [0037] and figure 5 of D1;

- claim 4: see paragraph [0093] and figures 17-19 of D1;

- claim 5: see step c) of claim 20 and figure 5 of D1;

- claims 6-9 relate to obvious steps in the method of using the apparatus of D3 (see in particular paragraph [0138]);

- claims 10-12 each relate to one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in order to implement the methods disclosed in D1, D2 and D3;

- claim 13 is not inventive in view of the embodiment disclosed in paragraph [0093] and figures 17-19 of D1;

- claims 14 and 15: D3 discloses that upper sole 602 is translatable with respect to lower sole 604 (see paragraph [0093] and figures 17-19);

- claims 19 and 20: see for example figure 1 of D4 (contact switch 60);

- claim 21 is one of several straightforward possibilities from which the skilled person would select when implementing the footwear disclosed in D3 (see in particular paragraph [0138]);

- claims 22 to 24 relate to minor details within the normal practice of the skilled person to solve the problem of controlling footwear of the type disclosed in D3 (see in particular paragraph [0138]);

- claims 25 and 27: see paragraph [0093] and figures 17-19 of D3;

- claim 26 relates to an alternative configuration of the actuators which is considered obvious in view of paragraph [0093] of D3;

- claim 28 relates to an alternative configuration of the sole of the footwear which is considered obvious in view of paragraph [0093] of D3;

- claim 29 relates to an obvious feature for extending battery life.

2 **Re Item VII**

Certain defects in the application

2.1 The relevant background art disclosed in D1-D3 is not mentioned in the description, nor are these documents identified therein.

3 **Re Item VIII**

Certain observations on the application

3.1 The claims are not clear.

3.2 Claims 1 and 2 do not meet the requirement of clarity because the matter for which protection is sought is not clearly defined. The claims attempt to define the subject-matter in terms of the result to be achieved, which merely amounts to a statement of the underlying problem, without providing the technical features necessary for achieving this result.

3.3 Claims 16 and 17 each include the wording "...having an upper part of the sole and a lower part of the sole, between which at least one actuator is mounted to change the dimensions of the sole according to the signals received from the control electronics and power supply...".

From this claim it is unclear whether the control electronics and power supply form part of the claimed subject-matter.

3.4 Claim 21 includes the wording "...and transmit these signals according to a predetermined need to the actuators (9), which, according to the additional control signals received, adjust the lifting height and speed of the sole (6), set the inclination between the lower sole part (8) and the upper sole part (9), raise the heel area more than the rest of the foot."

From this wording it is unclear whether the actuators do all of the listed functions or merely one or more of them.

3.5 Claim 22 specifies that the uphill steepness is determined by the heart rate and the step parameters. If uphill steepness corresponds to gradient, it is unclear how these two parameters could be used to determine a value for this.