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(12) United States Patent
Romera Carrion**(10) Patent No.: US 9,055,819 B2**
(45) Date of Patent: Jun. 16, 2015**(54) PIANO SEAT WITH AUTOMATIC HEIGHT ADJUSTMENT**USPC 248/421, 157, 588; 297/338, 339,
297/344.17, 344.16, 344.15
See application file for complete search history.**(75) Inventor: Antonio Raul Romera Carrion,**
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patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.**(21) Appl. No.: 14/119,525****(22) PCT Filed: Jun. 6, 2012****(86) PCT No.: PCT/ES2012/070419**§ 371 (c)(1),
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CPC . **A47C 3/20** (2013.01); **B60N 2/162** (2013.01);
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B60N 2/502; **B60N 2/505**; **B60N 2/525**;
B60N 2/52**(56)****References Cited****U.S. PATENT DOCUMENTS**4,108,416 A 8/1978 Nagase et al.
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Piano seat that has a structure for raising and lowering that is formed by two pairs of "L" section profiles arranged in a facing manner, two at the bottom and two at the top, which are connected together by individual pairs of scissor-type mechanisms, or assemblies in the form of an "X", which are articulated and arranged in a facing manner, and also by a series of transverse bars, there being, at the end of the scissor-type mechanism, articulations connecting to the upper and lower profiles, which are stationary and movable, these latter running via oblong slots in the upper and lower "L" profiles; the entire assembly is moved by gas springs actuated by actuators, which results in a seat that is noiseless when adjusted and used, which requires no effort on the part of the user, is easy and convenient to use and also to assemble, and which has no rebound effect and is rigid and robust.

4 Claims, 3 Drawing Sheets