

**REMARKS**

This response is to the Office Action mailed on 02/14/2014.

**From the action:**

This is a Non-final action in response to communication filed on 1/21/2014. Claims 1-4, 9 and 10 are pending in the application. Of the above claims 4 and 10 are withdrawn from the consideration. Claims 1-3 and 9 are rejected. Claims 4 and 10 are subjected to restriction and/or election requirement. The drawings filed are objected to by the examiner.

**Applicant's response:**

Acknowledged

**From the action:**

*Notice of Pre-AIA or AIA Status*

The present application is being examined under the pre-AIA first to invent provisions.

**Applicant's response:**

Acknowledged

**From the action:**

*Election/Restrictions*

Applicant's election without traverse of Group 1 in the reply filed on 1/21/2014 is acknowledged. Applicant's oral election without traverse of Species A in a phone call on 2/6/2014 with Donald Boys (Applicant's representative) is further acknowledged.

Claims 4 and 10 are withdrawn from further consideration pursuant to 37 CFR1.142(b) as being drawn to a nonelected species, there being no allowable generic or

linking claim. Election was made **without** traverse in the phone call with Applicant's representative on 2/6/2014.

**Applicant's response:**

Applicant herein acknowledges the election without traverse and herein cancels claims 4 and 10.

**From the action:**

*Drawings*

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "a skateboard undersurface" (Claim 1, line 1), "a cantilever portion" (Claim 1, line 6), "an overall first height dimension" (Claim 1, line 3), "a clearance of a second dimension" (Claim 1, line 8), "an upper surface" (Claim 9, line 2), "an undersurface" (Claim 9, line 2), "a board mounting interface surface" (Claim 9, line 2), "a clearance" (Claim 9, line 7), etc., all must be shown/labeled or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121 (d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121 (d). If the changes are not accepted by the examiner, the applicant will

be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

**Applicant's response:**

Applicant herein amends the drawings and specification in order to overcome the objection under 37 CFR 1.83(a). No new matter is herein added by amendment.

**From the action:**

***Claim Rejections-35 USC § 112***

Claim 1 is rejected under 35 U.S. C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention. Claim 1 recites the limitation "a skateboard truck" in line 10, however the limitation was previously introduced in line 1. There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

**Applicant's response:**

Applicant herein amends claim 1 to correct "a skateboard truck" to "the skateboard truck".

**From the action**

***Claim Rejections - 35 USC § 102***

**Claims 1 and 9 are rejected under pre-AIA 35 U.S.C. 102(b) as being clearly anticipated by de Caussin et al. (US 4,155,565).**

[Claim 1] Regarding Claim 1, Caussin discloses a riser (See, e.g., Fig.1, 10+ 16+ 18) for mounting a skateboard truck (See, e.g., Fig.1, 12) to a skateboard undersurface (See, e.g., Fig.1, 14), comprising: a base portion (See, e.g., Fig.1, 10+ 16+ 18) having a board mounting interface surface (See, e.g., Fig.1), an overall first height dimension (See,

e.g., Fig.1), and two or more through-openings for fasteners (See, e.g., Fig.1) to fasten the base portion firmly to the undersurface of the skateboard (See, e.g., Fig.1 ); and a cantilever portion (See, e.g., Fig.1, 10) extending away from the base portion for a first length(See, e.g., Fig.1), the cantilever portion having a thickness less than the first height dimension (See, e.g., Fig.1), leaving a clearance (See, e.g., Fig.1) of a second dimension between the cantilever portion and the skateboard undersurface as mounted to the skateboard undersurface (See, e.g., Fig.1, 12); and a pattern of holes (See, e.g., Fig.1) through the cantilever portion for mounting a skateboard truck (See, e.g., Fig.1, 12) to the riser on a side of the riser away from the skateboard undersurface (See, e.g., Fig.1).

**[Claim 9]** Regarding Claim 9, Caussin discloses a skateboard (See, e.g., Fig.1, 14) comprising: an upper surface and an undersurface (See, e.g., Fig.1); two risers (See, e.g., Fig.1, 10+ 16+ 18) each having a base portion (See, e.g., Fig.1, 10+ 16+ 18) having a board mounting interface surface (See, e.g., Fig.1), an overall first height dimension (See, e.g., Fig.1), and two or more through-openings for fasteners (See, e.g., Fig.1) to fasten the base portion firmly to the undersurface of the skateboard (See, e.g., Fig.1, 12), and a cantilever portion (See, e.g., Fig.1, 10) extending away from the base portion for a first length (See, e.g., Fig.1), the cantilever portion having a thickness less than the first height dimension (See, e.g., Fig.1), leaving a clearance (See, e.g., Fig.1) of a second dimension between the cantilever portion and the skateboard undersurface as mounted to the skateboard undersurface (See, e.g., Fig.1); and a skateboard truck (See, e.g., Fig.1, 12) mounted to each of the risers on the cantilever portion of each riser (See, e.g., Fig.1, 12); such that weight applied to the upper surface causes the cantilever portions to flex, providing thereby relative movement between the skateboard trucks and the undersurface (See, e.g., Fig.1, 1-3; Col.3).

**From the action**

***Claim Rejections - 35 USC § 103***

**Claims 2 and 3 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over de Caussin et al.**

[**Claims 2/3**] Regarding Claims 2 and 3, Caussin fails to explicitly teach wherein the riser of claim 1 made from a polymer material (Claim 2) or a metal (Claim 3).

However, it would have been obvious to one with ordinary skill, in the art at the time of the invention, to modify the risers of Caussin to use a polymer or metal material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. MPEP 2144.07 (citing: *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960)). Moreover, use of plastic/metal would have been desirable because it provides added protection to the risers while still being a cheap and resilient material. Moreover, the modification is obvious as no more than the use of familiar elements according to known methods in a manner that achieves predictable results. (See, e.g., *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398,416 (2007)).

**Applicant's response:**

Applicant herein amends independent claims to specifically recite that the cantilevered portion is integrally formed with the base portion and has a dimension less than a dimension of the base portion and the base portion mounts directly to the undersurface of the skateboard. Applicant also adds by amendment a slot machined horizontally within and through the base portion extending more than half way into the cantilevered portion allowing insertion of one of a plurality of differing materials controlling reinforcement of spring resistant properties of the cantilevered portion.

Applicant points out that, unlike the art of de Caussin, applicant's riser is one integral part with the cantilevered portion integral and extending from the base portion and the base portion is mounted directly to the undersurface of the skateboard. Applicant's cantilevered portion, as claimed has a dimension less than an overall dimension of the base portion causing a gap between the undersurface of the board and the cantilevered portion. Applicant argues that the art of de Caussin teaches a riser having a uniform dimension. One end portion of the riser is mounted to a pad 16 which is then mounted to the undersurface of a skateboard. The pad 16 is interpreted by the

Examiner as part of the riser which is an error. Applicant argues that the pad 16 of de Caussin compromises the spring ability of the riser as weight is applied to the skateboard in a jump, for example, the pad would give way (compress) which would counteract the spring action intended by the extension.

Applicant provides a single integrally formed riser with the cantilevered portion extending from a base portion, said base portion having a larger dimension than the cantilevered portion, thereby providing spring action from a secure base. The art of de Caussin specifically recites in col. 3, ll. 11-18:

*In the practice of the present invention the commonality to all of the embodiments is the combination of the angled leaf spring 10 and the truck assembly 12. The leaf spring 10 is fixedly attached to a skateboard 14 through an intervening pad member 16. In all of the embodiments the pad member 16 is caused to move in a fore and aft direction thereby changing the fulcrum point 18 of the leaf spring 10.*

Applicant argues that applicant does not teach and claim a leaf spring, as in the art of de Caussin. Applicant's riser is modified, as taught and claimed, to extend from a sturdy base portion in order to accommodate the vigorous use including jumps, tricks and strong impacts implemented by modern skateboarding. Applicant argues that the pad 16 is moved (see Figs. 2-3) in order to provide more or less spring action depending on the weight of the rider. Applicant clearly teaches and claims a single riser with a base and a cantilevered portion. The antiquated art of de Caussin (1978) does not consider a spring as claimed, as evidenced by the angled fulcrum in the leaf spring causing a severe point of weakness when used for jumping, etc..

Further, applicant herein amends the riser to incorporate a slot bored within the riser extending from the base portion at least half way into the cantilevered portion allowing spring resistance to be controlled by selection of a material inserted within the riser. The art of de Caussin must remount the pad moving bolts, etc. in order to adjust the spring. Applicant argues the physical spring properties of applicant's riser, as claimed,

cannot be reproduced with the leaf spring + pad of de Caussin. Applicant points out that element 18 is the spring fulcrum and fails to read on applicant's base portion, as taught and claimed.

Applicant believes claims 1 and 9, as amended, are clearly patentable over the art of de Caussin. Claims 2-3 are patentable on their own merits, or at least as depended from a patentable claim.

### Summary

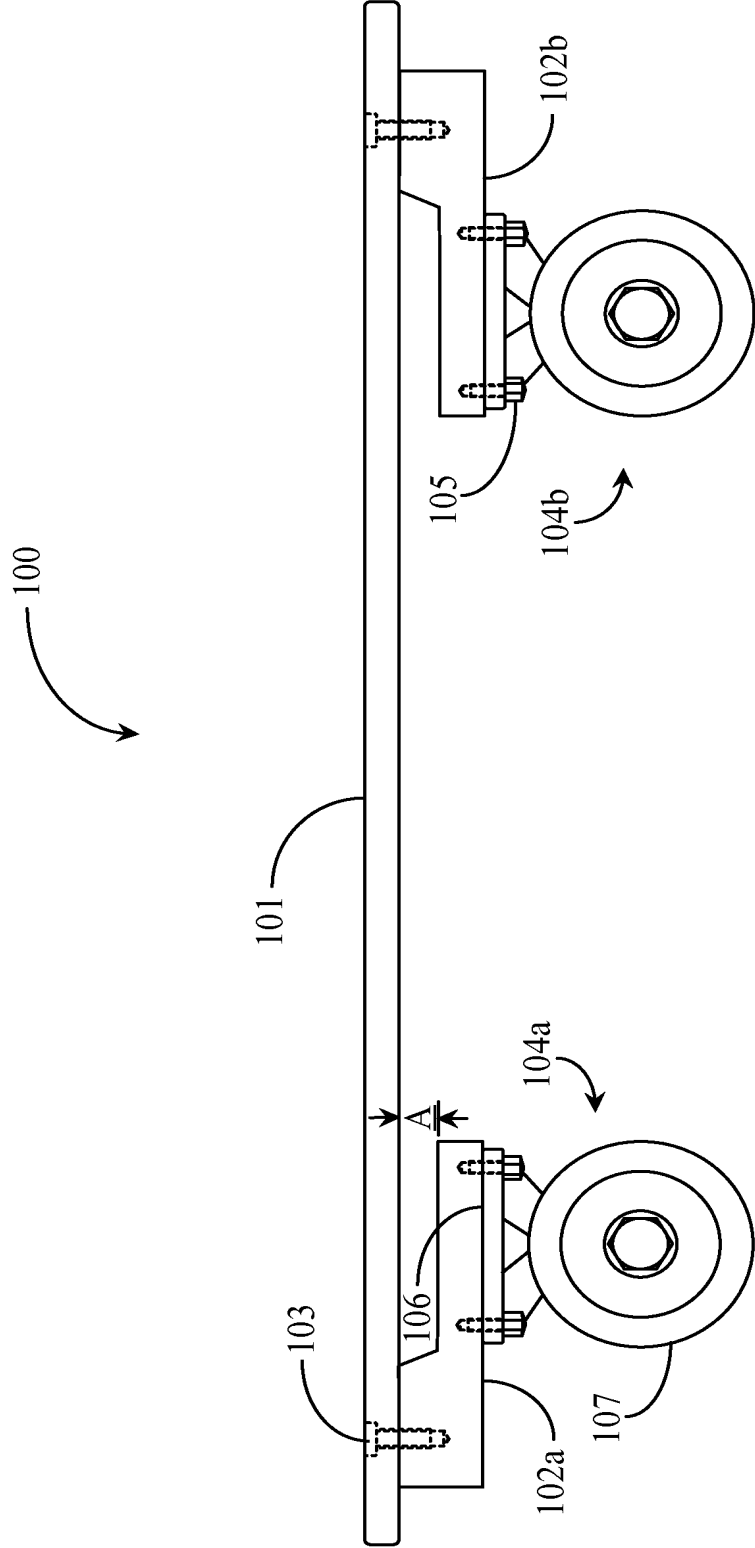
As all of the claims, as amended and argued above, have been shown to be patentable over the art presented by the Examiner, applicant respectfully requests reconsideration and the case be passed quickly to issue.

If any fees are due beyond fees paid with this amendment, authorization is made to deduct those fees from deposit account 50-0534. If any time extension is needed beyond any extension requested with this amendment, such extension is hereby requested.

Respectfully Submitted  
Lucien Theodore Fehn

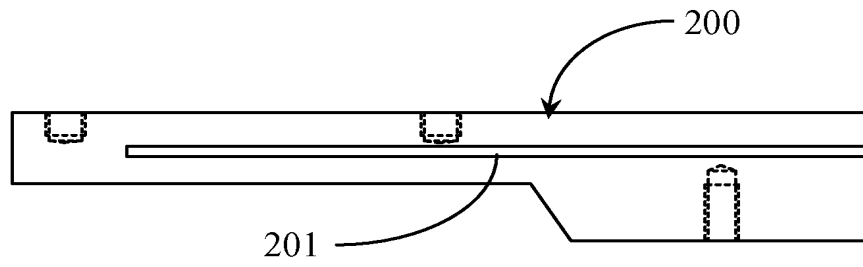
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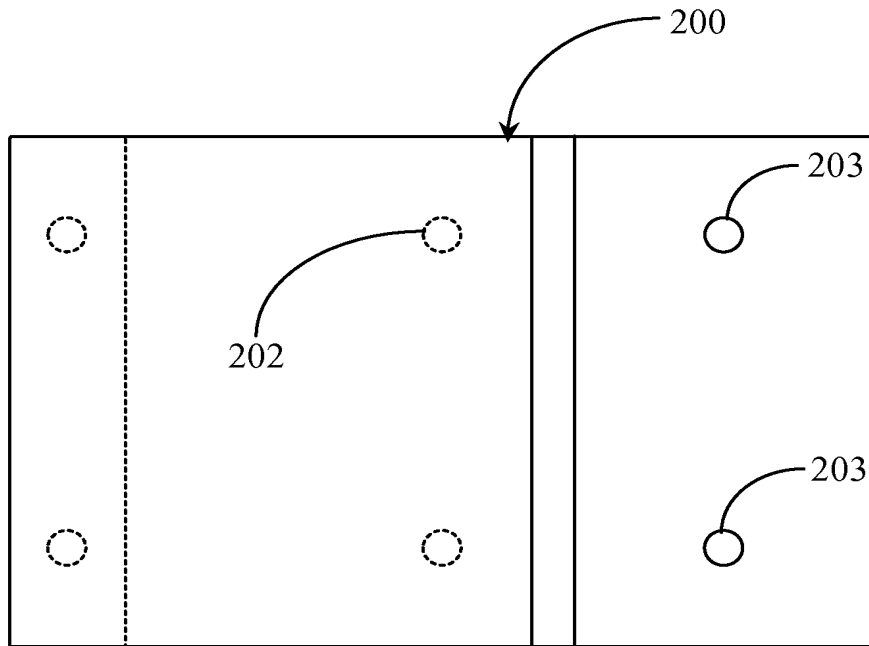


**Fig. 1**

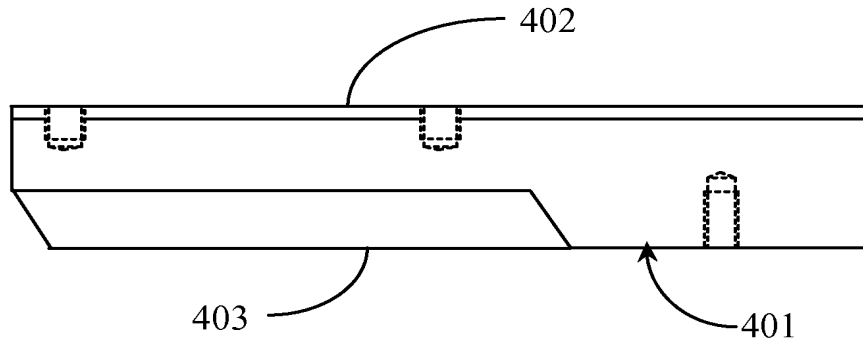




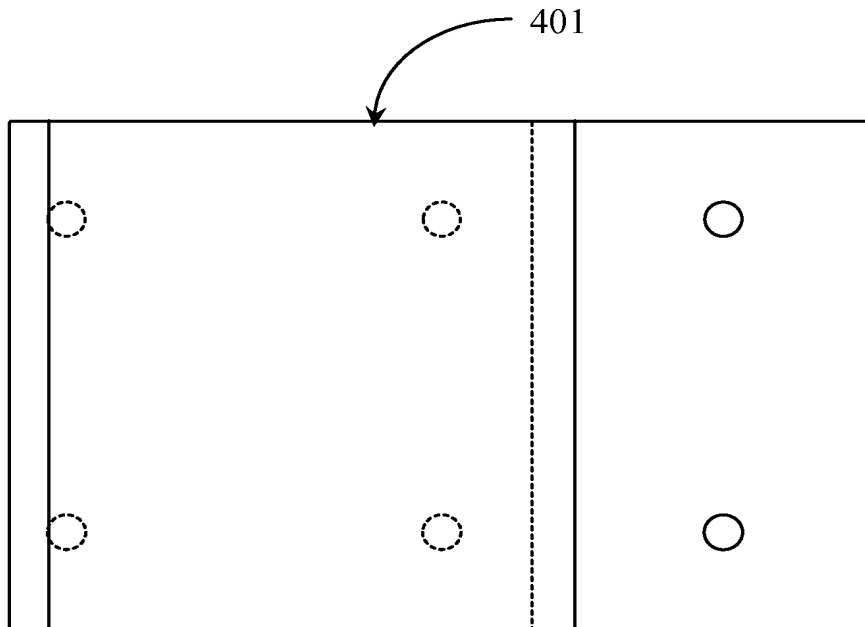
**Fig. 2**



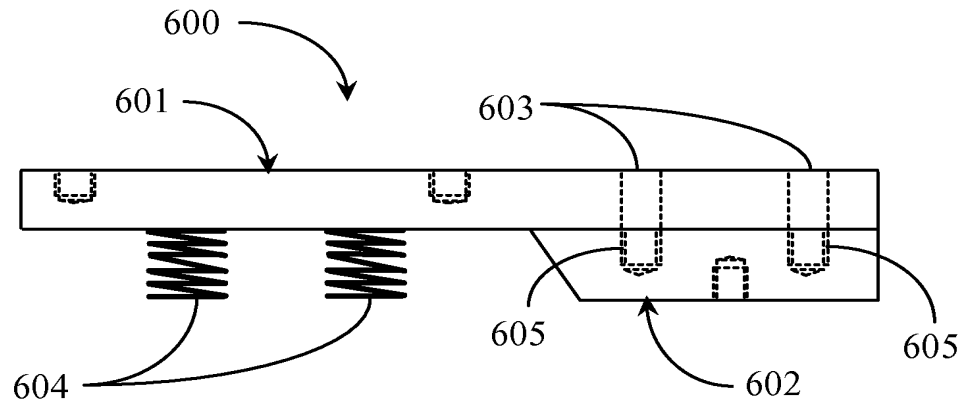
**Fig. 3**



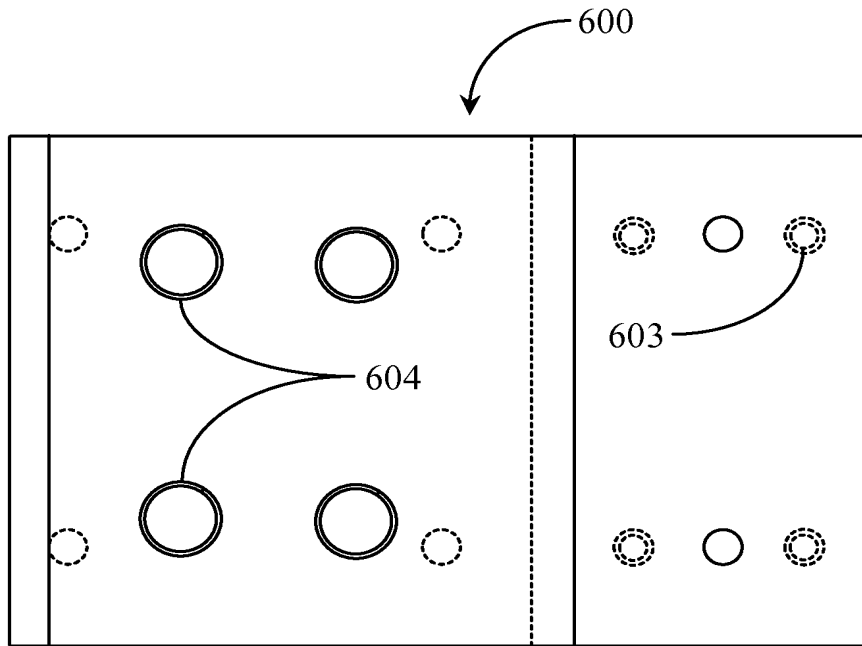
*Fig. 4*



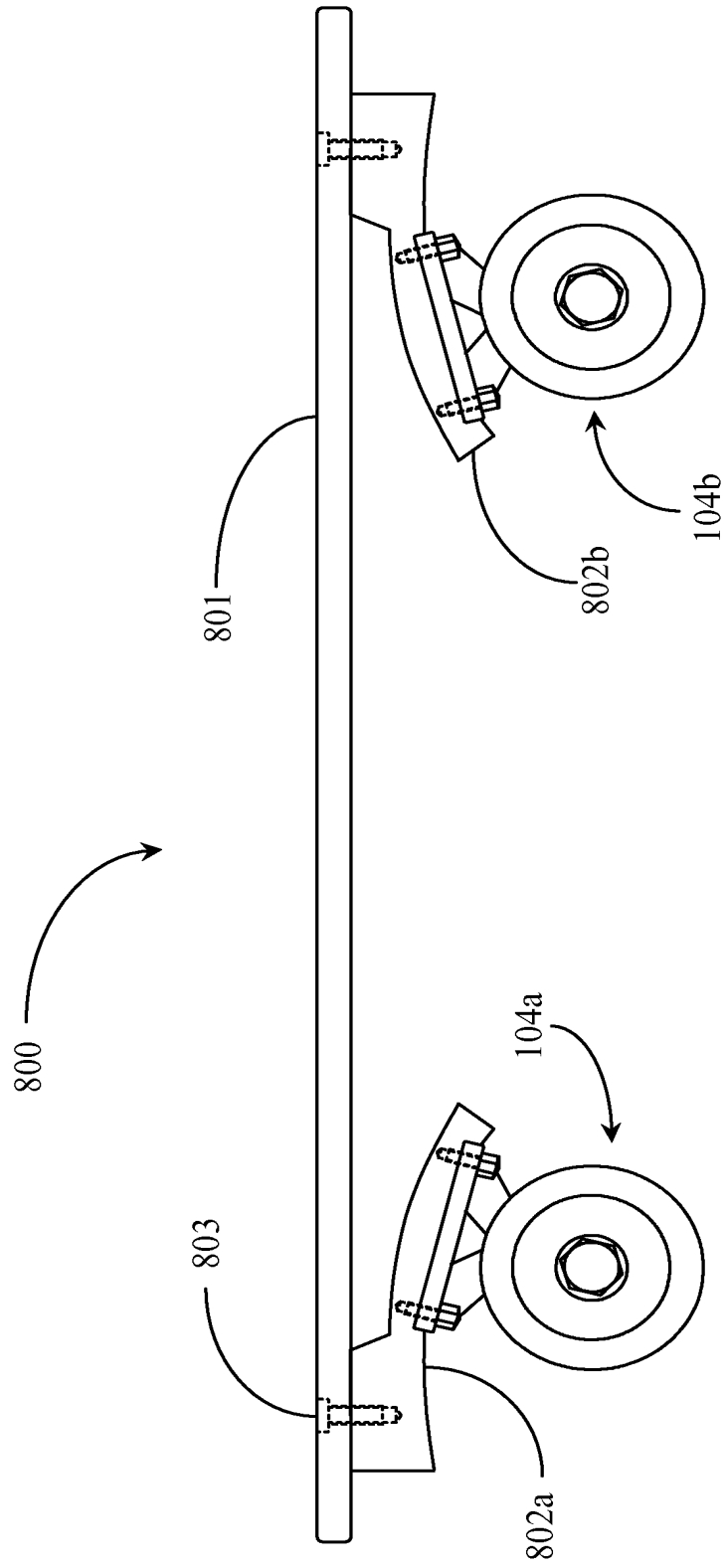
*Fig. 5*



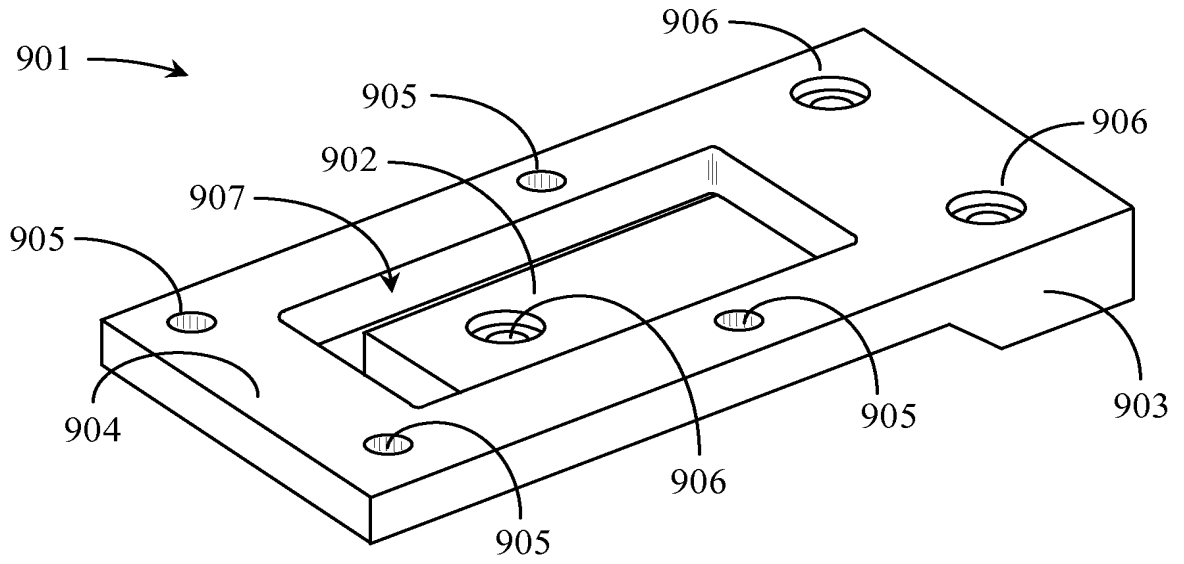
**Fig. 6**



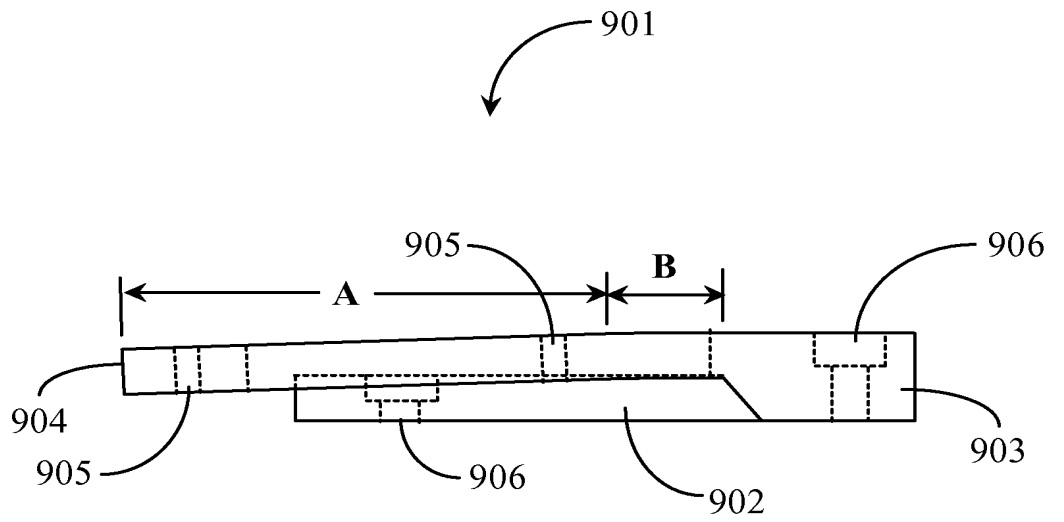
**Fig. 7**



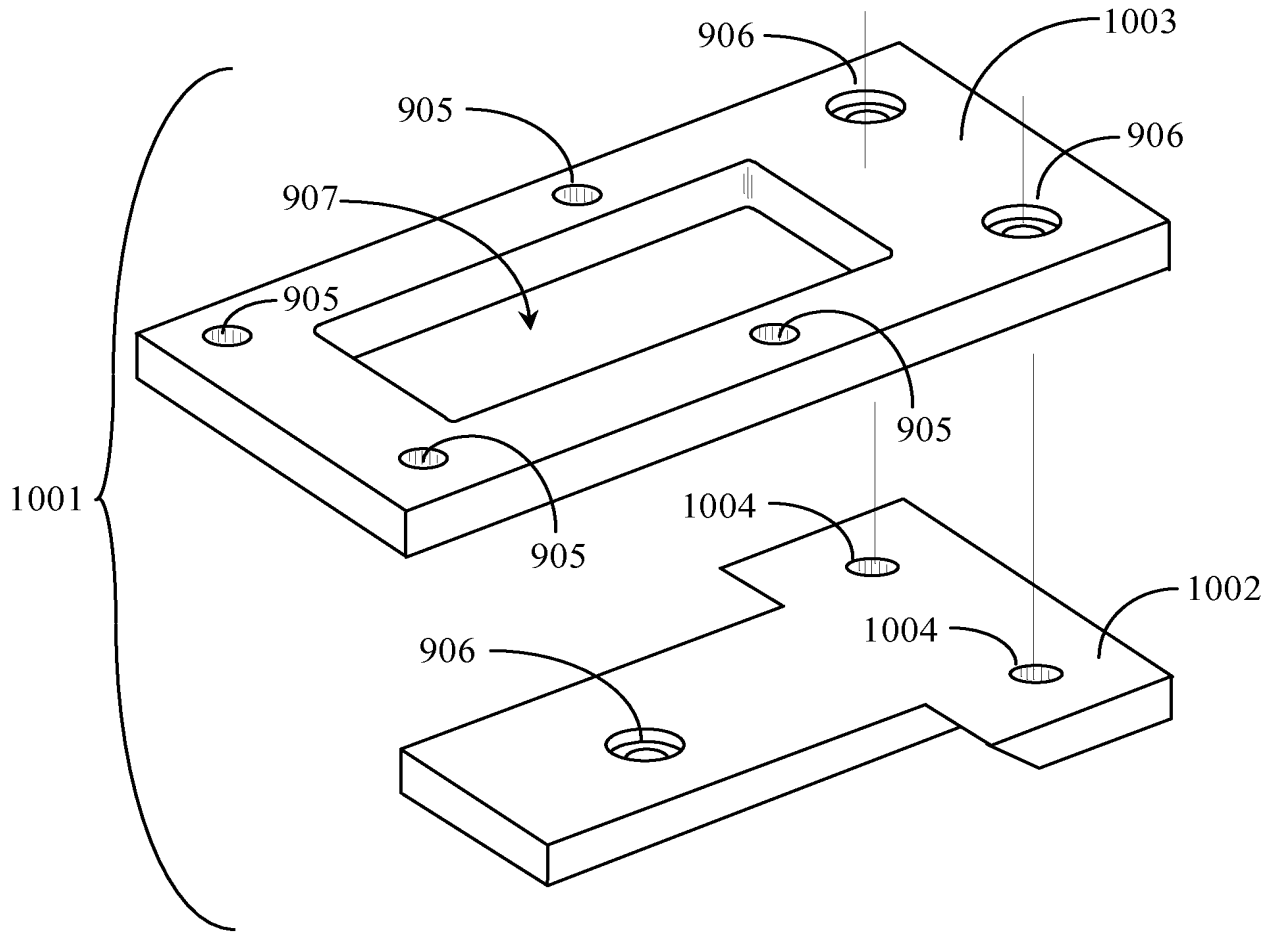
*Fig. 8*



**Fig. 9a**



**Fig. 9b**



**Fig. 10**

## SPRING RESISTANT RISER SYSTEM

### CROSS-REFERENCE TO RELATED DOCUMENTS

5           The present application claims priority to the provisional patent application 61/422,798 filed on 12/14/2010, and all disclosure of the priority application is incorporated at least by reference.

### BACKGROUND OF THE INVENTION

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#### 1. Field of the Invention

The present invention is in the field of recreational and sports equipment and accessories and pertains particularly to methods and apparatus for adding spring resistance between a skateboard and a truck assembly.

15

#### 2. Discussion of the State of the Art

20           The art of skateboarding is practiced both as a recreational activity and as a serious sport. Typical skateboard tricks include various jumps, rail slides, and other acrobatic tricks involving a rider and the skateboard. When a skater rides a skateboard the natural momentum of the board, for example, at the beginning of a jump, is leveraged to keep the board in motion at the rider's feet. The truck assemblies of the board suffer some shock at especially heavy landings, and such landings can damage the board or the trucks, and may injure the rider because of a lack of or insufficient level of shock-absorbing properties in the truck assemblies of the board.

25

Therefore, what is clearly needed is a method and apparatus that provides resilient resistance between the truck assemblies and the board of the skateboard. Such a method and apparatus will enable softer landings and more leverage of board momentum in performing acrobatic tricks.

## SUMMARY OF THE INVENTION

5 In one embodiment of the present invention a riser for mounting a skateboard  
truck to a skateboard undersurface is provided, comprising a base portion having a board  
mounting interface surface, an overall first height dimension, and two or more through-  
openings for fasteners to fasten the base portion firmly to the undersurface of the  
skateboard, and a cantilever portion extending away from the base portion for a first  
length, the cantilever portion having a thickness less than the first height dimension,  
10 leaving a clearance of a second dimension between the cantilever portion and the  
skateboard undersurface as mounted to the skateboard undersurface, and a pattern of  
holes through the cantilever portion for mounting a skateboard truck to the riser on a side  
of the riser away from the skateboard undersurface.

15 In one embodiment the riser is made of a polymer material and in another of a  
metal.

20 In an alternative embodiment the riser further comprises an extension of the base  
portion for a second length in the direction of the cantilever, extending the board  
mounting interface below the cantilever portion by the second length, the extension of the  
base portion having a width less than the width of the cantilever portion with a third  
through-opening for an additional fastener to fasten the base portion to the skateboard  
undersurface, and an opening in the cantilever portion of a width and length greater than  
the width and second length of the base extension, such that the extension of the base  
portion does not prevent the cantilever portion from flexing toward the skateboard  
undersurface.

25 In another aspect of the invention a method for mounting a skateboard truck to a  
skateboard undersurface to provide shock resiliency is provided, comprising the steps of  
(a) providing two risers each having a base portion having a board mounting interface  
surface, an overall first height dimension, and two or more through-openings for fasteners  
to fasten the base portion firmly to the undersurface of the skateboard, and a cantilever



portion extending away from the base portion for a first length, the cantilever portion having a thickness less than the first height dimension, leaving a clearance of a second dimension between the cantilever portion and the skateboard undersurface as mounted to the skateboard undersurface; (b) mounting the risers in separate positions to the undersurface of a skateboard by fasteners through the through-openings; and (c) mounting a skateboard truck to each of the risers on the cantilever portion of each riser.

In one embodiment of the method the risers are made from a polymer material, and in another embodiment from metal. In an alternative embodiment of the method there is an extension of the base portion for a second length in the direction of the cantilever, extending the board mounting interface below the cantilever portion by the second length, the extension of the base portion having a width less than the width of the cantilever portion with a third through-opening for an additional fastener to fasten the base portion to the skateboard undersurface, and an opening in the cantilever portion of a width and length greater than the width and second length of the base extension, such that the extension of the base portion does not prevent the cantilever portion from flexing toward the skateboard undersurface.

In yet another aspect of the invention a skateboard is provided comprising an upper surface and an undersurface, two risers each having a base portion having a board mounting interface surface, an overall first height dimension, and two or more through-openings for fasteners to fasten the base portion firmly to the undersurface of the skateboard, and a cantilever portion extending away from the base portion for a first length, the cantilever portion having a thickness less than the first height dimension, leaving a clearance of a second dimension between the cantilever portion and the skateboard undersurface as mounted to the skateboard undersurface, and a skateboard truck mounted to each of the risers on the cantilever portion of each riser, such that weight applied to the upper surface causes the cantilever portions to flex, providing thereby relative movement between the skateboard trucks and the undersurface.

In one embodiment the skateboard further comprises an extension of the base portion of each riser for a second length in the direction of the cantilever, extending the

board mounting interface below the cantilever portion by the second length, the extension of the base portion having a width less than the width of the cantilever portion with a third through-opening for an additional fastener to fasten the base portion to the skateboard undersurface, and an opening in the cantilever portion of each riser of a width and length greater than the width and second length of the base extension, such that the extension of the base portion does not prevent the cantilever portion from flexing toward the skateboard undersurface.

#### BRIEF DESCRIPTION OF THE DRAWING FIGURES

Fig. 1 is an elevation view of a skateboard with riser parts according to an embodiment of the present invention.

Fig. 2 is a side view of a riser part with a slot for spring steel re-enforcement.

Fig. 3 is a bottom view of the riser part of Fig. 3.

Fig. 4 is a side view of a riser part re-enforced with rubber and spring steel

Fig. 5 is a bottom view of the riser part of Fig. 4.

Fig. 6 is a side view of a riser part assembly re-enforced with springs.

Fig. 7 is a bottom view of the riser part assembly of Fig. 6.

Fig. 8 is an elevation view of a skateboard with bowed riser parts according to an embodiment of the present invention.

Fig. 9a is a perspective view of a riser having a stabilizer portion in addition to the base portion and a cantilevered portion.

Fig. 9b illustrates the riser of Fig. 9a in side elevation with the cantilever portion flexed.

Fig. 10 illustrates an alternative embodiment for providing a riser with a stabilizer portion.

## DETAILED DESCRIPTION

The inventor provides a skateboard with resilient riser parts having spring-like action installed between the board and truck assemblies of the board. The present invention is described in enabling detail below using examples which may describe more than one relevant embodiment falling within the scope of the present invention.

Referring now to Fig. 1, a skateboard 100 is illustrated in elevation view. Skateboard 100 includes a board 101 manufactured of typical materials used in skateboard manufacture. Intermediate riser parts 102a and 102b (one per end) are provided in between board 101 and standard truck assemblies 104a and 104b.

Riser parts 102a and 102b may be manufactured of a resilient polymer or other material having spring-resistant properties. In a preferred embodiment each riser part 102a, and 102b is formed having a base portion that is mounted directly to board 101 using bolts 103, and a cantilevered portion that extends longitudinally toward the center portion of board 101. It is not required that the cantilevered extension extend toward the center, as the mounting to the board might be adjusted accordingly so that the extension could be away from center, but the present arrangement is sufficient to explain the invention.

The cantilevered portion of riser part 102a and 102b leaves a gap A between the underside of board 101 and the upper surface of the cantilever arm of each riser part. The length and/or the thickness of the cantilevered portion of the riser part can be controlled in manufacturing to increase or decrease the spring resistance of the cantilever arm.

Standard truck assemblies 104a and 104b are mounted directly to the cantilevered arms of riser parts 102a and 102b via bolts 105 through openings provided in assembly truck bases 106. A user riding skateboard 100 benefits by added shock absorption properties provided by the spring resilience of the cantilevered riser parts 102a and 102b. Likewise, natural board momentum, such as at the beginning of a vertical jump, is significantly increased by virtue of riser parts 102a and 102b flexibility and spring

resistance properties, much in the manner that a diver might manipulate a springboard when diving.

Referring now to Fig. 2, a riser part 200 is illustrated in side view. Riser part 200 is similar in material and construction to riser parts 102a and 102b of Fig. 1. An exception is that riser part 202 has a slot 201 machined horizontally through the base portion of riser 202 and extending substantially into the cantilevered portion of the riser part. Slot 201 has a width suitable for insertion of a piece of spring steel used to re-enforce the spring resistant properties of the cantilever portion of the riser part. In this embodiment the riser may be manufactured of a polymer material, for example, such as by molding, and the spring rate of the cantilever portion may be controlled by the thickness and the nature of the material, such as tempered steel, that may be inserted into slot 201.

Referring now to Fig. 3, riser part 200 is illustrated in bottom view. Riser part 200 in this embodiment is mounted to the underside of a skateboard using two threaded holes 203 as described further above with respect to riser parts 102a and 102b. A standard truck assembly such as assembly 104a of Fig. 1 mounts directly to the cantilevered arm of riser part 200 using threaded openings 202. It is noted herein that in all embodiments threaded inserts such as helicoils might be provided in place of finished tapped holes.

Referring now to Fig. 4, a riser part 401 is illustrated in side view in this example. Like all of the riser parts previously described, riser part 401 has a base portion and an extended cantilevered portion. In this embodiment a piece of spring steel 402 is mounted to the surface of riser part 401 that interfaces with a standard truck assembly. This version is an alternative to the slotted version described in Fig. 2.

In one embodiment of the present invention, a piece of stiff rubber 403 or similar resilient material may be provided to fill the gap between the board and the cantilevered portion of riser part 401. The rubber insert may be glued or mounted directly to the underside of the board. Rubber 403 may be used to re-enforce spring resistance in addition to or in place of the spring steel. Openings may be provided through the spring

steel plate 402 to facilitate truck assembly mounting of a standard truck assembly.

Referring now to Fig. 5, riser part 401 is illustrated in bottom view showing truck mount openings (backside) and board-mount openings.

Referring now to Fig. 6, a riser part assembly 600 is illustrated in side view.

5 Riser part 600 is an assembly in this embodiment including a base part 602 mounted to a cantilever arm 601. Openings 603 are provided through cantilever part 601 matching threaded holes 605 in base portion 602 so cantilever 601 may be bolted to base portion 602. In one embodiment part 602 may be provided in other ways to mate with cantilever portion 601 without using bolts or screws to assemble the riser.

10 In this example, riser assembly 600 may further include steel springs 604 placed in the gap between the riser assembly cantilevered arm and the underside of the skateboard to increase the spring rate if desired.

Referring now to Fig. 7, assembly 600 is illustrated in bottom view showing four springs 604 and four openings 603 provided to assemble the two pieces, base 602 and  
15 cantilevered arm 601 together.

Referring now to Fig. 8, a skateboard 800 is illustrated in elevation view. Skateboard 800 has specially formed riser parts 802a and 802b. In this example, riser parts 802a and 802b are shaped or formed to arc away from the underside of the board 801 when mounted at their base portions using bolts 803. The arcing of the cantilevered  
20 portions of risers 802a and 802b provides reinforcement to the spring resistant properties of the cantilevers. The standard truck assemblies 104a and 104b are mounted to the cantilever arms as described further above although some machining for clearance and for surface to surface mating might be performed before mounting the truck assemblies to the cantilevered arms. This embodiment may be practiced with or without a spring steel  
25 insert or side plate. In this embodiment the shape or physical form of the riser part is altered to increase to property of spring resistance.

Fig. 9a is a perspective view of a riser 901 having a stabilizer portion 902 in addition to the base portion 903 and the cantilevered portion 904. In some severe use cases, wherein experienced and talented riders do complicated maneuvers with a

skateboard with risers according to embodiments of this invention, it has been discovered by the inventors that heavy torsional loads, that is, loads that tend to cause the riser to rotate in the plane of the board, tend to cause the two fasteners that secure the riser to the board (see Fig. 1 bolts 103) to loosen somewhat, allowing some unwanted movement of the riser relative to the board.

In the riser embodiment illustrated in Fig. 9a a rectangular opening 907 is provided through the cantilever portion 904 of the riser, and an extension 902 of the base portion is provided extending above the cantilever portion (the riser is shown here inverted from its use orientation). Extension 902 is of a width to fit within the width of opening 907, so when the cantilever portion bends, the extension 902 of the base portion does not interfere with its movement. Further a third counter-bored hole 906 is provided through extension 902 of the base portion, providing now three fastening points for the riser to the board, the three points in a triangular pattern. Fastening the riser to the board at the three points provides a much more secure resistance to rotational movement of the riser relative to the board in severe operation. Holes 905 in a rectangular pattern are for mounting the truck to the riser, as in embodiments described above.

Fig. 9b is a side elevation view of riser 901 of Fig. 9a with the cantilever portion shown flexed several degrees, as might be the case in use under substantial vertical loading by a rider. It should be noted that the region of cantilever portion 904 over dimension A will stay substantially straight, rather than curved as flexure occurs, because the truck will be bolted to the cantilever portion through holes 905. Flexure will occur over the region denoted by dimension B. It should be noted as well that in this version the base portion 903, the cantilever portion 904 and the base extension 902 are all of a single piece. This may be accomplished, for example, in any one of several ways. In one case the riser is manufactured from a single rectangular block beginning with the overall length, height and width of the riser, by machining away portions to provide the final shape shown, and then tempering, heat treating or flame treating the machined riser to provide suitable flexure properties. In some cases, depending on material and

dimensions, no such after-treatment will be needed. In another case the riser may be cast or molded, and suitable after-treatments may be accomplished to temper the shaped riser.

Fig. 10a is an exploded perspective view of a riser assembly 1001 having a base portion 1002 and a cantilever portion 1003 which are each machined from separate flat blanks. Portion 1003 has the same holes 905 and 906 as shown in Fig. 9a, and base portion 1002 has a counter-bored hole 906 and through-holes 1004 that align with counter-bored holes 906 in portion 1003. This version has an advantage in machining cost, and when assembled has the same shape and function as riser 901 shown in Fig. 9a.

It will be apparent to one with skill in the art that the skateboard riser system of the invention may be provided using some combination or all of the features described above and components without departing from the spirit and scope of the present invention. It will also be apparent to the skilled artisan that the embodiments described above are specific examples of a single broader invention, which may have greater scope than any of the singular descriptions taught. There may be many alterations made in the descriptions without departing from the spirit and scope of the present invention. The scope of the invention is limited only by the claims which follow.

Claims:

1. A riser for mounting a skateboard truck to a skateboard undersurface, comprising:  
a base portion having a board mounting interface surface, an overall first height  
5 dimension, and two or more through-openings for fasteners to fasten the base portion  
firmly to the undersurface of the skateboard; and

a cantilever portion extending away from the base portion for a first length, the  
cantilever portion having a thickness less than the first height dimension, leaving a  
clearance of a second dimension between the cantilever portion and the skateboard  
10 undersurface as mounted to the skateboard undersurface; and

a pattern of holes through the cantilever portion for mounting a skateboard truck  
to the riser on a side of the riser away from the skateboard undersurface.

2. The riser of claim 1 made from a polymer material.

3. The riser of claim 1 made from a metal.

4. The riser of claim 1 further comprising an extension of the base portion for a second  
length in the direction of the cantilever, extending the board mounting interface below the  
20 cantilever portion by the second length, the extension of the base portion having a width  
less than the width of the cantilever portion with a third through-opening for an additional  
fastener to fasten the base portion to the skateboard undersurface; and

an opening in the cantilever portion of a width and length greater than the width  
and second length of the base extension, such that the extension of the base portion does  
25 not prevent the cantilever portion from flexing toward the skateboard undersurface.

5. A method for mounting a skateboard truck to a skateboard undersurface to provide  
shock resiliency, comprising the steps of:



(a) providing two risers each having a base portion having a board mounting interface surface, an overall first height dimension, and two or more through-openings for fasteners to fasten the base portion firmly to the undersurface of the skateboard, and a cantilever portion extending away from the base portion for a first length, the cantilever portion having a thickness less than the first height dimension, leaving a clearance of a second dimension between the cantilever portion and the skateboard undersurface as mounted to the skateboard undersurface;

(b) mounting the risers in separate positions to the undersurface of a skateboard by fasteners through the through-openings; and

(c) mounting a skateboard truck to each of the risers on the cantilever portion of each riser.

6. The method of claim 5 wherein the risers are made from a polymer material.

7. The method of claim 5 wherein the risers are made from a metal.

8. The method of claim 5 further comprising an extension of the base portion for a second length in the direction of the cantilever, extending the board mounting interface below the cantilever portion by the second length, the extension of the base portion having a width less than the width of the cantilever portion with a third through-opening for an additional fastener to fasten the base portion to the skateboard undersurface; and an opening in the cantilever portion of a width and length greater than the width and second length of the base extension, such that the extension of the base portion does not prevent the cantilever portion from flexing toward the skateboard undersurface.

9. A skateboard comprising:

an upper surface and an undersurface;

two risers each having a base portion having a board mounting interface surface, an overall first height dimension, and two or more through-openings for fasteners to

fasten the base portion firmly to the undersurface of the skateboard, and a cantilever portion extending away from the base portion for a first length, the cantilever portion having a thickness less than the first height dimension, leaving a clearance of a second dimension between the cantilever portion and the skateboard undersurface as mounted to the skateboard undersurface; and

5 a skateboard truck mounted to each of the risers on the cantilever portion of each riser;

such that weight applied to the upper surface causes the cantilever portions to flex, providing thereby relative movement between the skateboard trucks and the undersurface.

10 10. The skateboard of claim 9 further comprising an extension of the base portion of each riser for a second length in the direction of the cantilever, extending the board mounting interface below the cantilever portion by the second length, the extension of the base portion having a width less than the width of the cantilever portion with a third through-opening for an additional fastener to fasten the base portion to the skateboard undersurface; and

15 an opening in the cantilever portion of each riser of a width and length greater than the width and second length of the base extension, such that the extension of the base portion does not prevent the cantilever portion from flexing toward the skateboard undersurface.

**ABSTRACT**

A riser for mounting a skateboard truck to a skateboard undersurface has a base portion having a board mounting interface surface, an overall first height dimension, and two or more through-openings for fasteners to fasten the base portion firmly to the undersurface of the skateboard, and a cantilever portion extending away from the base portion for a first length, the cantilever portion having a thickness less than the first height dimension, leaving a clearance of a second dimension between the cantilever portion and the skateboard undersurface as mounted to the skateboard undersurface, and a pattern of holes through the cantilever portion for mounting a skateboard truck to the riser on a side of the riser away from the skateboard undersurface.