

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Skywalker Holdings, LLC
Petitioner

v.

Board & Batten International Inc.
Patent Owner

Patent No. 7,854,687
Issued: December. 21, 2010
Filed: December 9, 2004

Title: TRAMPOLINE AND ENCLOSURE SYSTEM

Inter Partes Review No. IPR2023-00350

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 7,854,687**

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I. INTRODUCTION

Skywalker Holdings, LLC (“Petitioner”) petitions for *Inter Partes* Review of claims 1-8 of U.S. Patent No. 7,854,687 (“the ’687 Patent”).

The ’687 Patent claims a standard backyard trampoline that includes an enclosure system. The purported novelty of the enclosure system is its ability to resiliently deform when a jumper impacts the safety enclosure.

Prior to the 2003 effective filing date of the ’687 Patent, enclosure systems were commonly used on trampolines. Additionally, by 1998, resiliently deformable enclosure systems were known. Because all the limitations recited in the claims of the ’687 Patent were taught long before the 2003 effective filing date, none of the claims are patentable.

II. INTER PARTES REVIEW COMPLIANCE

A. Grounds for Standing under 37 C.F.R. § 42.104(a)

Petitioner certifies that the ’687 Patent is available for *inter partes* review and that Petitioner is not barred or estopped from requesting *inter partes* review challenging the claims of the ’687 Patent on the grounds identified in this petition.

B. Mandatory Notices under 37 C.F.R. § 42.8(b)

The real party-in-interest of this petition is Skywalker Holdings, LLC.

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The '687 Patent is the subject of the following proceeding:

- *Board & Batten International Inc. v. Skywalker Holdings, LLC DBA Skywalker Trampolines*, 4:22-cv-00975 (E.D. Tex.).

III. RELEVANT INFORMATION CONCERNING THE '687 PATENT

A. Effective Filing Date

The '687 Patent claims priority to New Zealand Patent Application 530271 (the "Priority Application") which was filed on December 19, 2003. The effective filing date of the '687 Patent is therefore December 19, 2003.

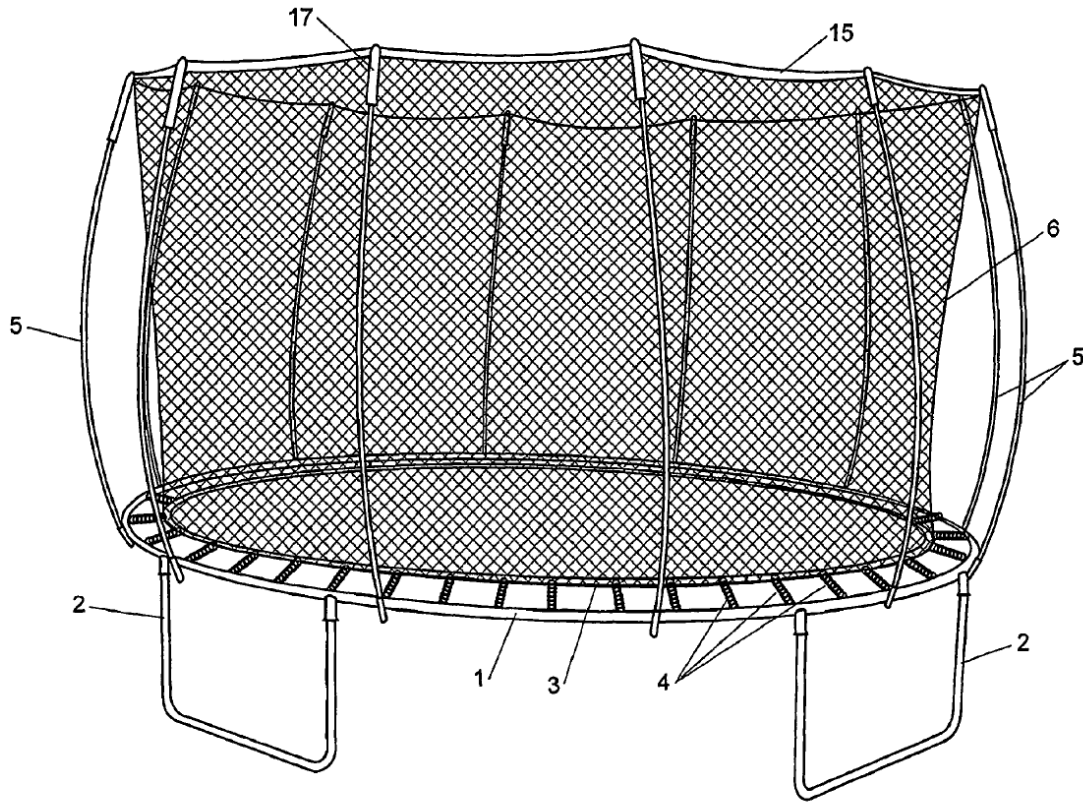
B. Level of Ordinary Skill

In view of the many prior art references that are directed to trampolines having enclosures, a person having ordinary skill in the art in the field of the '687 Patent in 2003 (a "PHOSITA") would have been very familiar with trampolines having enclosures.¹

C. Overview of the '687 Patent

The '687 Patent, which is titled "Trampoline and Enclosure System," describes a standard backyard trampoline that includes an enclosure system as depicted in Figure 1 reproduced below.

¹ See, e.g., EX1002-1010.

**FIGURE 1**

This trampoline includes a “peripheral frame 1 supported by legs 2” and a “flexible mat 3 on which users may bounce [and which] is held in tension within the frame 1 by springs 4.”² This type of “modern trampoline” was invented by George Nissen in the 1930s.³

² EX1001 at Col. 3, lines 23-29.

³ See EX1011.

The purported novelty of the '687 Patent is the design of the enclosure system, and particularly the use of resiliently deformable “enclosure rods 5 [that] support the net 6 above the mat.”⁴ Additionally, as shown in Figure 1, the enclosure rods 5 are angled outwardly but pulled inwardly by the top of the net 6 to pre-tension the rods:

[T]he enclosure rods are preferably retained by the trampoline frame at their lower ends so that *in the natural rest state of the enclosure rods*, when connected only at their lower ends to the frame of the trampoline and before fitting of the barrier net, *the enclosure rods will extend at an angle away from the mat of the trampoline as shown*. Thus, when the net is fitted to connect the upper ends of the enclosure rods, or some other flexible connecting element which connects the upper ends of the enclosure rods is fitted, *this will draw the upper ends of the enclosure rods away from their natural state of rest and towards the center of the mat, to the position generally as shown in FIG. 1, to pre-tension the enclosure rods*.⁵

These enclosure rods 5 are referred to as enclosure support members in the claims.

Due to its design, the enclosure system has “a high degree of flexibility or deformability.”⁶ As shown in Figure 4 reproduced below, “when an average sized

⁴ See EX1001 at Col. 3, lines 37-53.

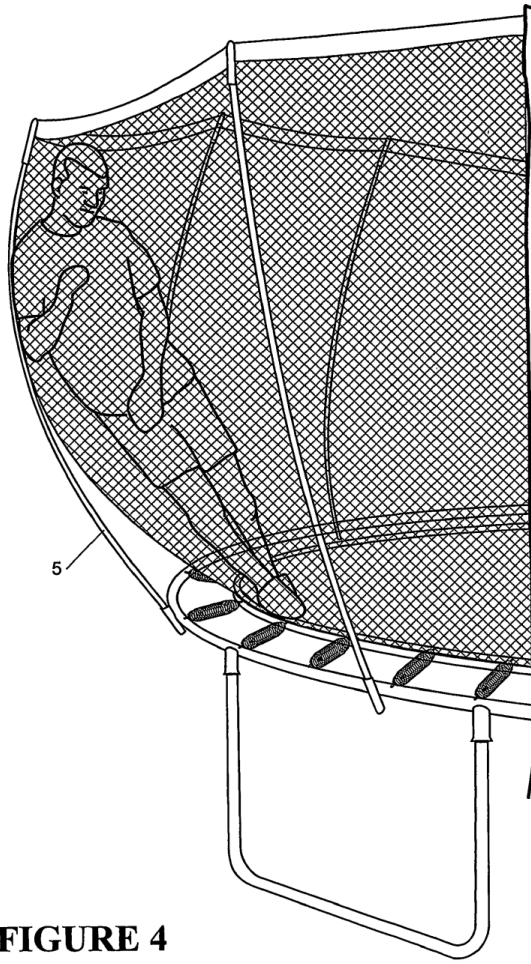
⁵ EX1001 at Col. 4, lines 24-44.

⁶ EX1001 at Col. 5, lines 9-10.

or weight user hits the enclosure so that the enclosure deforms ..., the impact energy absorbed by the enclosure will gently rebound the user back onto the trampoline mat.”⁷ Additionally, “when the enclosure is impacted by a user on one side causing the barrier on that side of the enclosure to deform away from the mat as shown in FIG. 4 for example or more, the enclosure support members and barrier on the opposite side of the enclosure will be deformed inwardly towards the center of the mat.”⁸

⁷ EX1001 at Col. 5, lines 15-18.

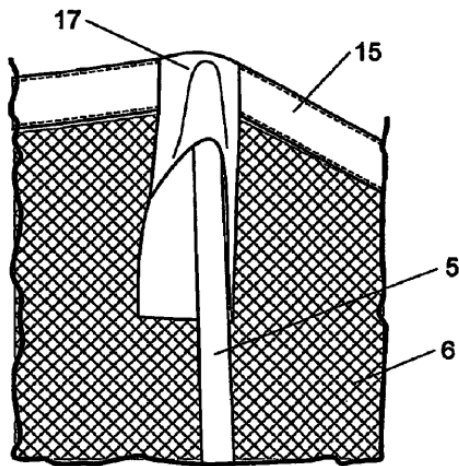
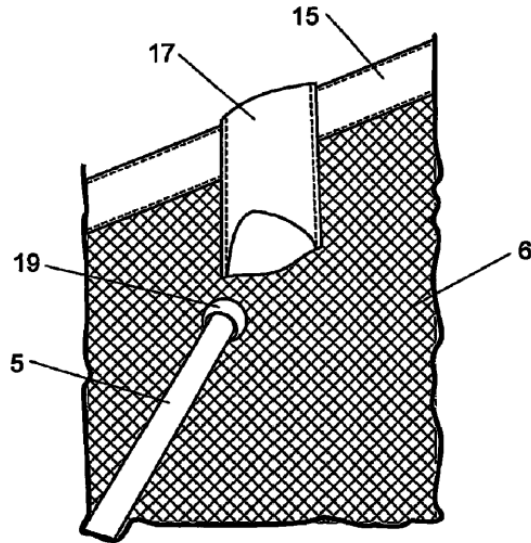
⁸ EX1001 at Col. 5, lines 23-28.

**FIGURE 4**

As best shown in Figure 1, the “enclosure rods 5 are coupled to ... the upper peripheral part of the net 6 at or towards the upper ends of the enclosure rods.”⁹ This coupling could be accomplished using pockets 17 that are sewn into the upper peripheral part of the net 6 or “band 15” as shown in Figures 5 and 6 reproduced below.¹⁰

⁹ EX1001 at Col. 3, lines 54-58.

¹⁰ EX1001 at Col. 5, lines 38-40.

**FIGURE 5****FIGURE 6**

This band 15 “couples the upper ends of all of the enclosure rods 5. The rods are coupled so that they are bowed or drawn away from their natural state of rest (when connected only at their lower ends to the frame of the trampoline) and towards the center of the mat.”¹¹

D. The Priority Application

The Priority Application (New Zealand Patent Application 530271) identifies the field of invention of the '687 Patent as “an enclosure for a trampoline that

¹¹ EX1001 at Col. 4, lines 49-53.

provides a rebounding surface in addition to the trampoline surface.”¹² In other words, the net forms a rebounding surface.

The Priority Application also provides the following background to the invention:

Enclosures have been developed and sold to contribute to the safety of conventional trampolines. ... These enclosures are primarily designed as a safety device to prevent users falling from the trampoline. They are not suitable for users to deliberately bounce against them for play purposes. The enclosures are generally fairly rigid in nature, and especially the upright poles 1. Should a user deliberately jump into the enclosure, they could hit a rigid pole 1 and/or the outer horizontal frame that supports the trampoline mat. Both types of contact could result in injury to the user.¹³

This petition will show that it was known to configure the enclosure system to provide a rebounding surface more than six years before the effective filing date of the '687 Patent.

¹² EX1012 at pg. 169.

¹³ EX1012 at pg. 169.

E. The '687 Patent's Prosecution History

U.S. Patent No. 6,053,845 to Publicover ("Publicover") (EX1002) was considered during prosecution of the '687 Patent. However, as will become apparent in this petition, the examiner could not have possibly considered the entirety of Publicover's disclosure in determining to grant the '687 Patent.

In an office action mailed December 28, 2009, the examiner rejected then-pending claims 1-3, 5-8, 13-15, 17-21 and 23 as being anticipated by Publicover but also found claims 11 and 12 allowable.¹⁴ Those claims 11 and 12 became claims 1 and 2 in the '687 Patent.¹⁵

The examiner provided no explanation for why these claims were patentable in view of Publicover while the remaining claims were anticipated by Publicover. However, a comparison between anticipated claim 1 and allowed claim 11 reveals that the examiner's findings must have been based on the concluding clause of claim 11 which reads: "so that when impacted by a user against the barrier on one side of the enclosure causing the barrier and enclosure support members on that side of the enclosure to resiliently deform away from the mat, the enclosure support members

¹⁴ EX1012 at pg. 37.

¹⁵ EX1012 at pg. 18.

and barrier on the opposite side of the enclosure will be resiliently deformed towards the center of the mat.”¹⁶ This concluding clause can be diagrammed as follows:

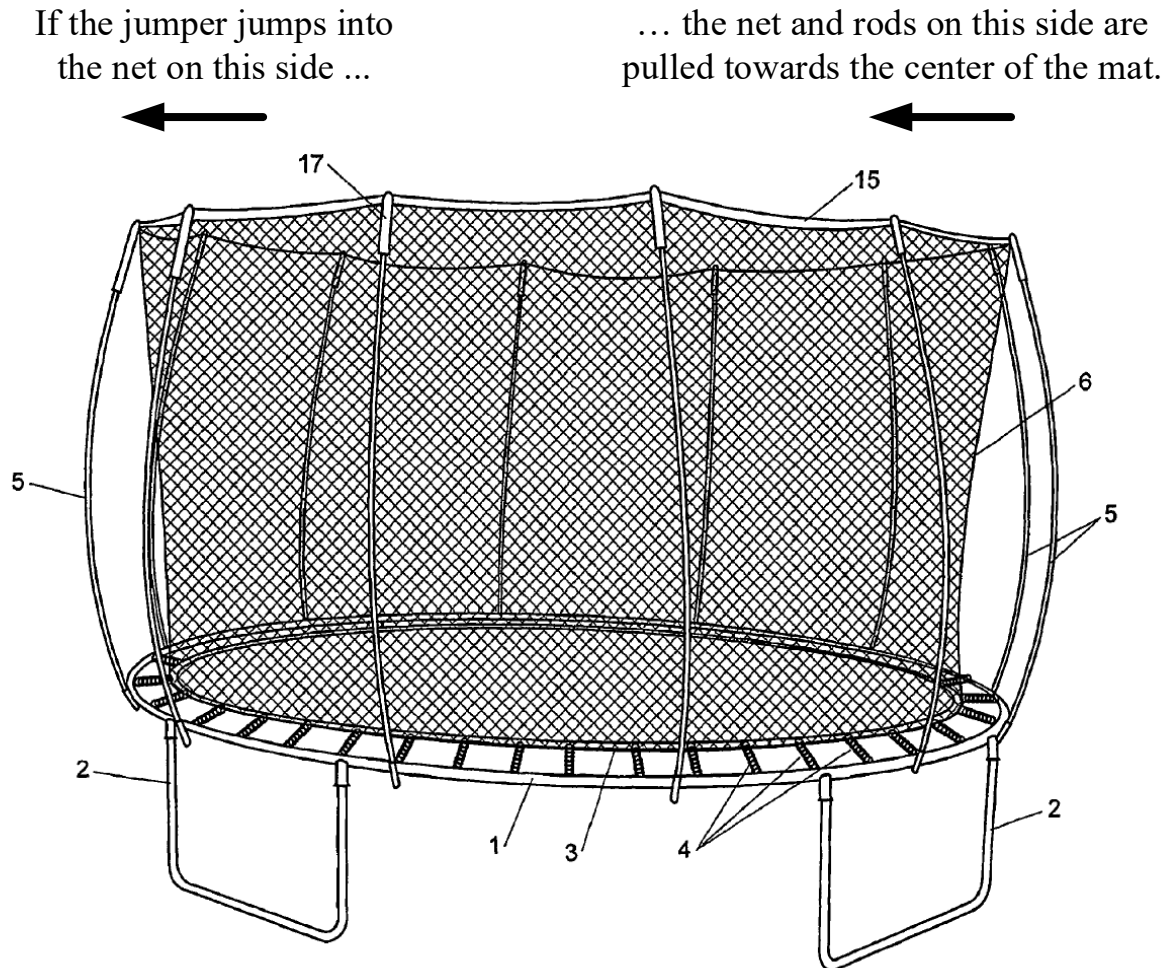


FIGURE 1

The only other possible reason why the examiner found claim 1 anticipated and claim 11 allowable is claim 11’s requirement that the enclosure support

¹⁶ See EX1012 at pgs. 42-45 (showing claims 1 and 11 as examined).

members “are connected to the barrier net only at or near an upper peripheral part of the barrier” because anticipated claim 1 omitted “only” from this limitation.

Therefore, the question to be answered in this petition is whether a trampoline was patentable in 2003 because it included an enclosure that is configured “so that when impacted by a user against the barrier on one side of the enclosure causing the barrier and enclosure support members on that side of the enclosure to resiliently deform away from the mat, the enclosure support members and barrier on the opposite side of the enclosure will be resiliently deformed towards the center of the mat.”

F. Claim Construction

Claims in an IPR are construed according to their ordinary and customary meaning in light of the specification and file history of the patent in which the claims appear. The claims of the '687 Patent are easily understood and do not include any terms that require special construction, at least for purposes of this Petition.

One possible ambiguity in the claim language is the requirement that the enclosure support members are connected “to the frame of the trampoline.”¹⁷ The

¹⁷ EX1001, Claims 1 and 3.

'687 Patent describes the frame 1 as being separate from the legs 2.¹⁸ Because the legs are separate from the frame, the claims would be properly construed as requiring the enclosure support members to be connected to the frame but not the legs. However, for purposes of this Petition, it does not matter whether the claims are interpreted as encompassing trampolines where the enclosure support members are connected to the legs given that the prior art clearly teaches this.

Another possible ambiguity in the claim language is the recitation that “in their natural rest state the enclosure support members extend away from the mat.”¹⁹ Under the plain meaning, this limitation could be met by any vertically oriented enclosure support member given that the distance between the mat and the enclosure support member increases towards the top of the enclosure support member (i.e., as the enclosure support members extend above the mat, they naturally extend away from the mat). However, Petitioner believes that the better interpretation may be that the enclosure support members are angled outwardly relative to the frame and are therefore oriented away from the mat. Again, however, for purposes of this Petition, it does not matter how this limitation is construed because the prior art

¹⁸ EX1001 at Col. 3, lines 23-24 (“[T]he trampoline shown comprises a peripheral frame 1 supported by legs 2.”).

¹⁹ EX1001, Claim 1.

teaches that the enclosure support members can be at any orientation including outward orientations.

Accordingly, the plain and ordinary meaning can be applied to each claim term.

IV. OVERVIEW OF THE PRIOR ART

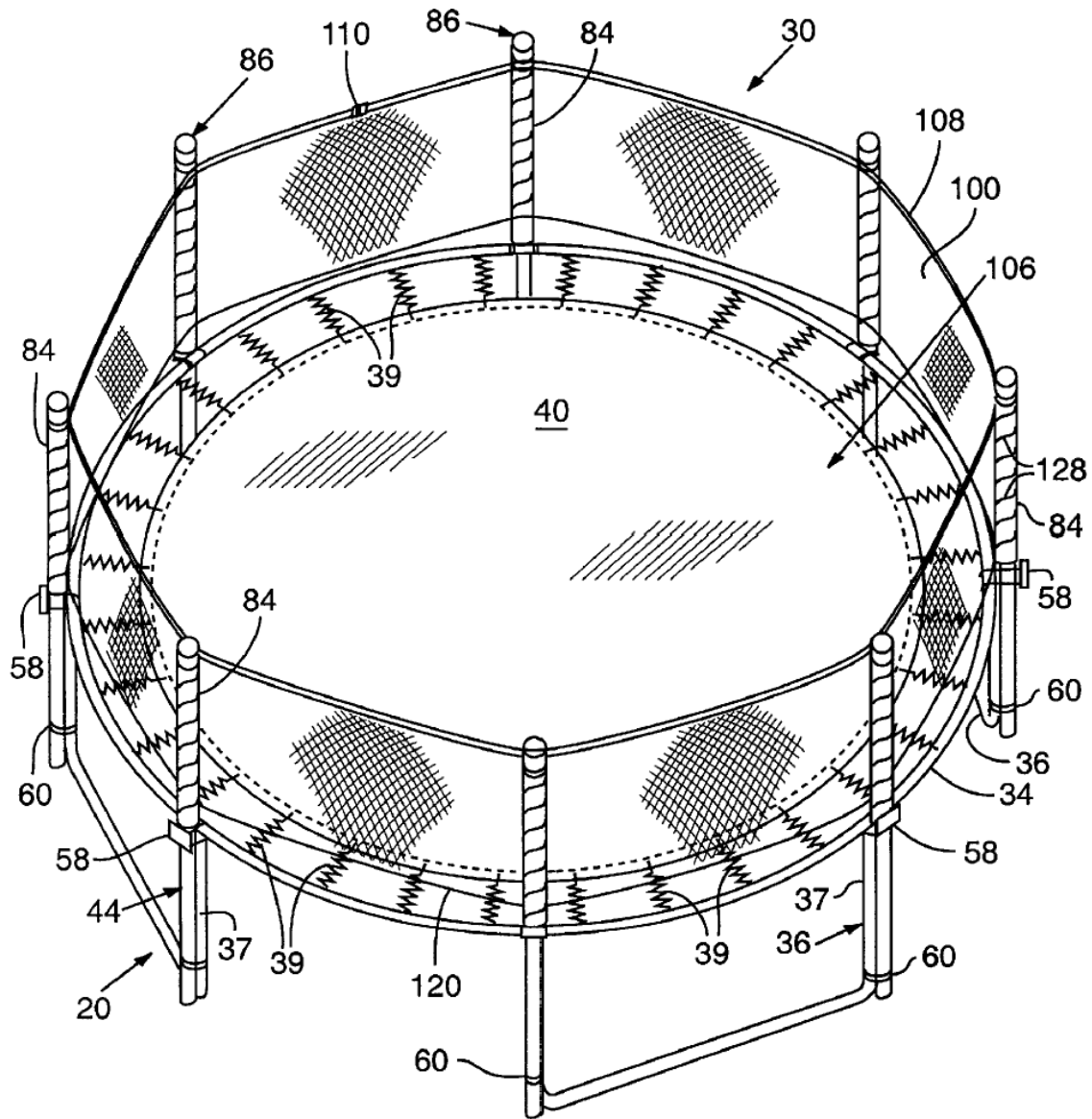
A. Publicover (EX1002)

Publicover was filed on June 19, 1998 and granted on April 25, 2000, more than three years before the effective filing date of the '687 Patent, and therefore qualifies as prior art under pre-AIA 35 U.S.C. 102(a) and (b). Publicover also claims priority to three provisional applications, the earliest of which was filed on June 20, 1997.

Like the '687 Patent, Publicover is directed to trampolines with enclosures.²⁰ One embodiment of Publicover's disclosure is represented in Figure 1 reproduced below.

²⁰ EX1002, title.

FIG. 1



Of critical importance, Publicover's enclosure "serves as more than a passive safety restraint, but rather forms another rebounding surface."²¹ Publicover describes:

²¹ EX1002 at Col. 10, lines 42-44.

When a person jumps from the trampoline surface 40 and [h]its the wall 100 of the enclosure, the wall moves a short distance in the direction of the force applied by the user and thereby absorbs energy and cushions the shock. The tops of all the posts 44 in the illustrated embodiment – because they are linked together at the top by the top line 108 – flex toward the impacted portion of the wall panel.²²

Publicover also emphasizes:

In order to provide the above-described spring effect, the posts 44 should not be rigid. The posts should be sufficiently strong that impacts by trampoline users will not permanently bend the poles. But, the posts 44 should be able to flex to some extent when a trampoline user impacts the wall 100.²³

Although Publicover depicts and describes embodiments where the posts are made of steel, Publicover teaches that they may be made of “PVC, plastic, fiberglass, graphite, carbon fiber, Kevlar, etc. ... if they have appropriate strength and flexibility characteristics” and to “tailor the flexibility, elasticity, and strength of the resultant system as desired.”²⁴

Publicover further describes the enclosure as follows:

²² EX1002 at Col. 9, lines 7-13.

²³ EX1002 at Col. 9, lines 52-56.

²⁴ EX1002 at Col. 9, lines 58-63.

One novel aspect of the preferred embodiment is the provision of a safety fence support employing poles whose tops are linked by a resilient, rather than a rigid, member. Such an arrangement permits constrained movement of each pole, better absorbing impact to or near the pole. *Moreover, the resilient linking of poles allows a neighborhood of plural poles (commonly all of the poles) to absorb energy from a jumper's impact anywhere against the safety fence. The subsequent release of this energy from the flexed poles helps propel the jumper back onto the trampoline surface.* (A cushioning foam sheath can be provided around each of the uprights to enhance the foregoing effects.)²⁵

(It will be recognized that the illustrated fence responds to such mid-span horizontal impacts in a manner different than prior art safety fences. *In particular, the tops of the posts flex downwardly towards each other and towards the area of impact (just like loading a bow for shooting arrows, as noted earlier).* This effect makes it possible for the fence system to conserve more of the impact force energy in the posts, enabling the system more efficiently to recycle this energy back into the impacting body for the purpose of returning it to the trampoline surface. Top line 108 serves as the primary mechanism for transferring such loads between the posts. The freedom of motion afforded by line 108 enables the net to more completely conform to the surface of an

²⁵ EX1002 at Col. 1, lines 48-59.

impacting body, distributing the forces of impact over a larger surface area on the body, thereby reducing the likelihood of injury.)²⁶

B. Coan (EX1003)

U.S. Patent No. 5,941,798 to Coan (“Coan”) (EX1003) was filed on October 8, 1998 and granted on August 24, 1999 and therefore qualifies as prior art under pre-AIA 35 U.S.C. 102(a) and (b). Coan is directed to a safety net for trampolines.²⁷ An example of Coan’s safety net (or enclosure) is shown in Figure 1 reproduced below.

²⁶ EX1002 at Col. 10, line 58 – Col. 11, line 6 (emphasis added).

²⁷ EX1003, title.

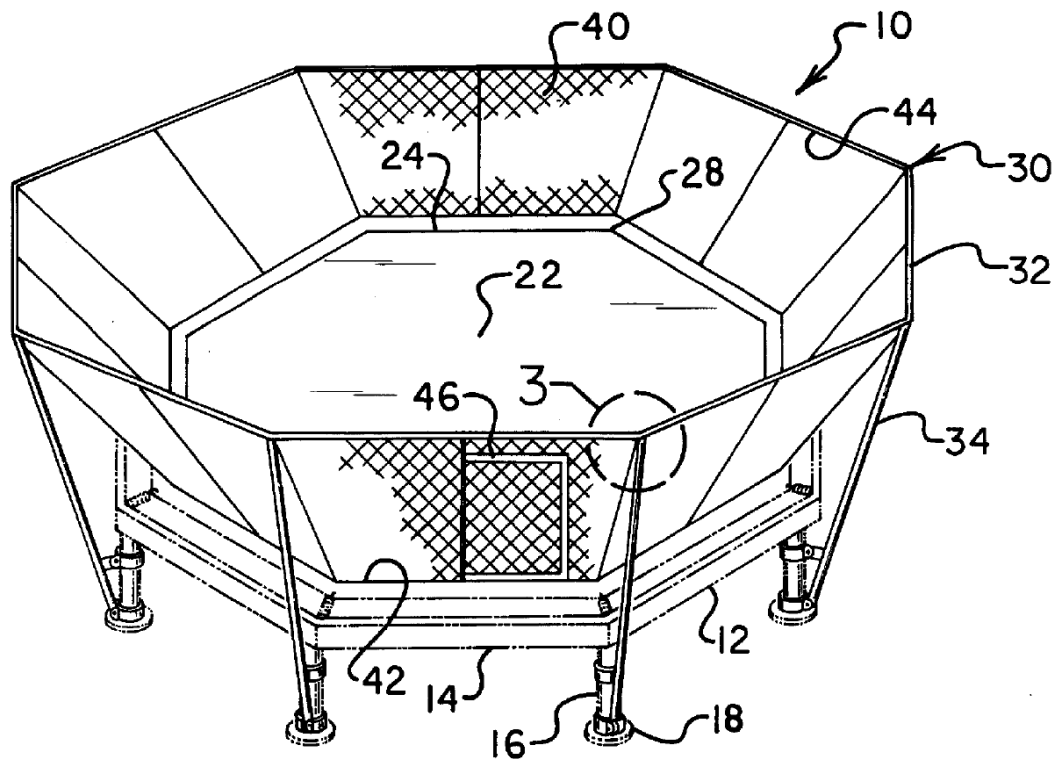


FIG. 1

Of primary relevance to this petition, Coan's enclosure includes supports 34 (or posts/rods) that are angled outwardly relative to the mat.²⁸ For example, these supports 34 may be "between a 60-75 degree angle with respect to the horizontal."²⁹

Notably, in Coan's figures, the net is connected to the supports 34 only at the top of the supports.

²⁸ See EX1003 at Col. 1, line 45 – Col. 2, line 20.

²⁹ EX1003 at Col. 4, lines 53-54.

C. Tencom (EX1014)

Tencom is a capture obtained by The Wayback Machine of <http://www.tencom.com:80/> and <http://www.tencom.com:80/process.htm> in December 1998. Tencom is relied upon only to show that pultrusion was a known process for manufacturing fiberglass rods before the effective filing date of the '687 Patent.

V. REASONS FOR REQUESTED RELIEF

Petitioner demonstrates below that the Challenged Claims are unpatentable under the following grounds:

- Claims 1-8 are anticipated by Publicover (EX1002).
- Claims 3 and 4 are obvious in view of Publicover (EX1002) and Coan (EX1003).
- Claims 2 and 4 are obvious in view of Publicover (EX1002) and Tencom (EX1014)

A. Claims Anticipated By Publicover (EX1002)

Each of the following claims is anticipated under pre-AIA 35 U.S.C. § 102(a) and (b) by Publicover. If Publicover were determined to not expressly or inherently teach any limitation in the following claims, the respective claim could alternatively be found obvious under pre-AIA 35 U.S.C. § 103 in view of Publicover.

1. Claim 1

a. *Preamble*

The preamble of claim 1 recites “A trampoline and enclosure system comprising:”

Publicover’s title is “Trampoline Or The Like With Enclosure.”

b. *a trampoline comprising a flexible mat and a plurality of coil springs holding the mat in tension within a peripheral frame of the trampoline which surrounds the mat*

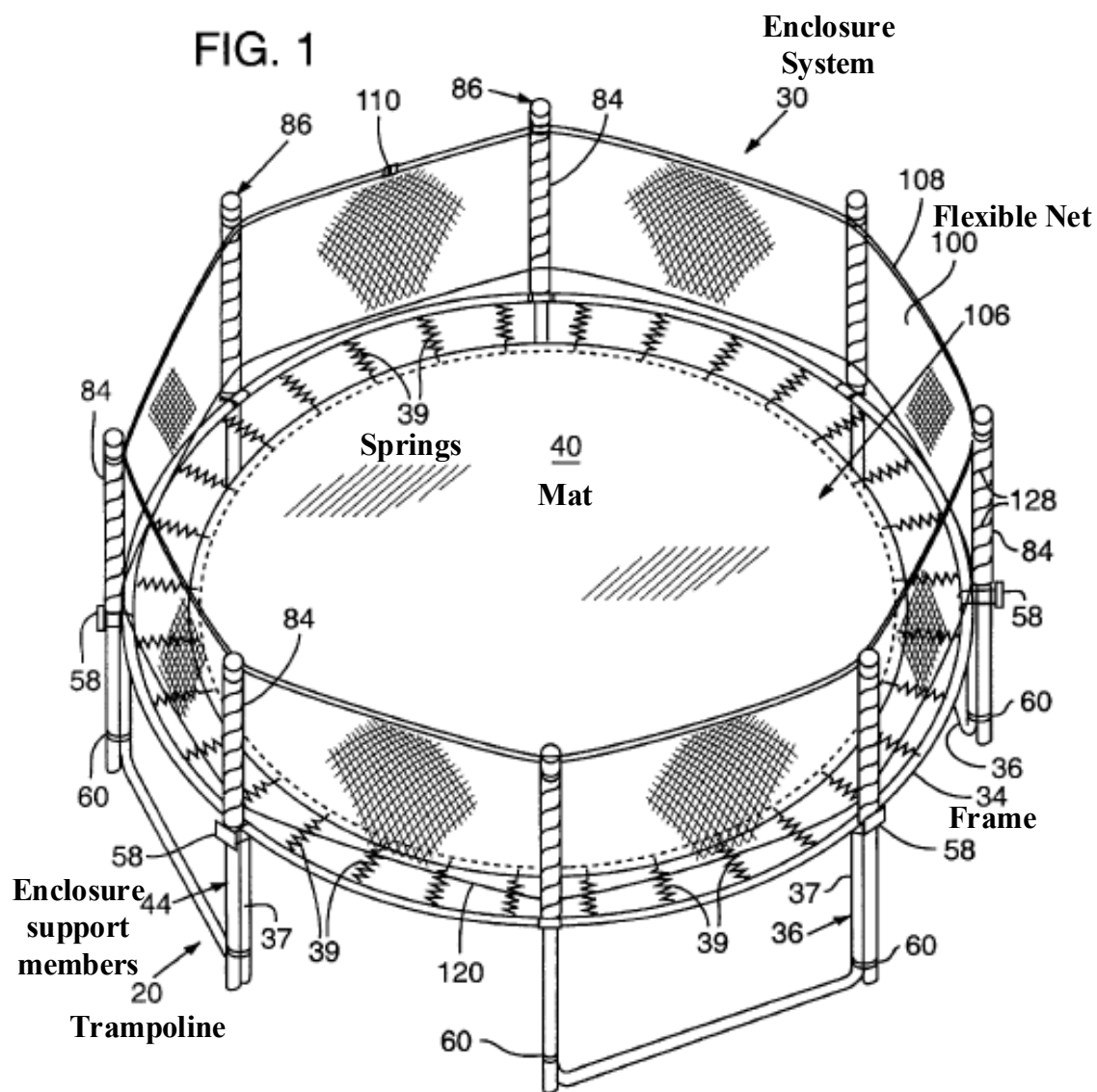
Publicover teaches a trampoline (“trampoline 20”³⁰) comprising a flexible mat (“fabric 40”³¹) and a plurality of coil springs (“spring members 39”³²) holding the mat in tension within a peripheral frame (“frame 34”³³) of the trampoline which surrounds the mat as annotated below.

³⁰ EX1002 at Col. 3, line 4.

³¹ EX1002 at Col. 3, line 24.

³² EX1002 at Col. 3, line 23.

³³ EX1002 at Col. 3, line 24.



- c. *an enclosure system comprising a barrier of a flexible net material surrounding the mat above the mat and having a lower peripheral part coupled directly or indirectly to a periphery of the mat*

Publicover teaches an enclosure system (“enclosure system 30”³⁴) comprising a barrier of a flexible net material (“wall 100 of a flexible material”³⁵) surrounding the mat above the mat as annotated above. Publicover describes that this “wall 100 of flexible material is suspended between the posts 44 to define a chamber 106 above the rebounding surface 40.”³⁶ Wall 100 may be made of “woven netting.”³⁷

Figure 1 represents an embodiment where “the fence [or wall] 100 [is] beyond the extent of the rebounding surface”³⁸ and connected to the frame 34 via webbing 120.³⁹ This “webbing 120 can be woven through a series of openings 104 near the bottom edge 102 of the wall material.”⁴⁰ However, “[i]n an alternative arrangement,

³⁴ EX1002 at Col. 3, lines 29-30.

³⁵ EX1002 at Col. 5, line 32.

³⁶ EX1002 at Col. 5, lines 32-34.

³⁷ EX1002 at Col. 5, line 40.

³⁸ EX1002 at Col. 7, lines 20-21.

³⁹ EX1002 at Col. 6, lines 48-56.

⁴⁰ EX1002 at Col. 6, lines 61-63.

the fence is arranged to encompass a smaller area. In such an embodiment, the netting can be secured to the edge of the rebounding surface [40], as by weaving the webbing 120 through eyes or loops 123 along the margin of the rebounding surface (to which the springs 39 attach), or to the inner ends of springs.”⁴¹ Therefore, Publicover teaches that the lower peripheral part of the net can be coupled directly or indirectly to the periphery of the mat.

- d. *a plurality of resiliently flexible generally upright enclosure support members outside of the barrier relative to the mat and which are connected at or towards the lower ends of the enclosure support members to the frame of the trampoline and which are connected to the barrier net only at or near an upper peripheral part of the barrier to hold the net in tension above the mat*

Publicover’s enclosure system includes a plurality of resiliently flexible generally upright enclosure support members (“posts 44”⁴²) outside of the barrier relative to the mat as annotated above. Publicover emphasizes that “posts 44 should not be rigid” and “should be able to flex to some extent when a trampoline user impacts the wall 100.”⁴³

⁴¹ EX1002 at Col. 7, lines 23-29.

⁴² EX1002 at Col. 5, line 33.

⁴³ EX1002 at Col. 9, lines 52-56.

“Each post 44 is secured to a vertical section 37 of one of the legs 36 [of the frame 34].”⁴⁴ Although this limitation of claim 1 requires that the enclosure support members are coupled to the frame rather than to the legs, Publicover teaches alternative embodiments in which “the fence poles can be coupled to the frame or leg of the trampoline.”⁴⁵

In the depicted embodiments, Publicover’s net is connected along the length of the post 44. However, Publicover teaches that the enclosure support members can be connected to the net “only at or near an upper peripheral part” of the net. “In some embodiments, the netting is not be [sic] affixed to the support posts 44 *except at their tops*. Instead, the netting extends down from the top line 108, and is secured only to the periphery of the rebounding surface 40.”⁴⁶

Publicover teaches that the posts 44 hold the net in tension above the mat. “A generally cylindrical wall 100 of a flexible material is suspended between the posts 44 to define a chamber.”⁴⁷ “A support system is provided to hold the wall 100 in place. At the top, a flexible line 108 extends post-to-post near the top of the chamber

⁴⁴ EX1002 at Col. 3, lines 32-34.

⁴⁵ EX1002 at Col. 12, lines 22-23; *see also* Col. 12, lines 33-35.

⁴⁶ EX1002 at Col. 7, lines 29-33 (emphasis added).

⁴⁷ EX1002 at Col. 5, lines 32-34.

106 [defined by the net].”⁴⁸ “The line 108 is made of ... nylon webbing.”⁴⁹ “Another novel aspect of the preferred embodiment is the use of a controllable tensioning member on the member(s) linking the pole tops. One embodiment employs nylon webbing for the resilient linking member. A buckle joins two ends of the webbing and permits the webbing's length--and thus tension--to be varied. *By varying this tension, the dynamic characteristics of the safety fence can be tailored as desired.*”⁵⁰

- e. *which enclosure support members are also connected together at or towards the upper ends of the enclosure support members to draw the upper ends of the enclosure support members away from their natural rest state and towards the center of the mat, so that when impacted by a user against the barrier on one side of the enclosure causing the barrier and enclosure support members on that side of the enclosure to resiliently deform away from the mat, the enclosure support members and barrier on the opposite side of the enclosure will be resiliently deformed towards the center of the mat*

Publicover's posts 44 are connected together at the tops of the posts by a line 108 as is clearly shown in Figure 1. This line 108 draws the posts 44 away from their natural rest state and towards the center of the mat. “The tubular springs (posts)

⁴⁸ EX1002 at Col. 5, line 66 – Col. 6, line 1.

⁴⁹ EX1002 at Col. 6, lines 7-8.

⁵⁰ EX1002 at Col. 1, lines 60-67 (emphasis added).

can be loaded by tightening line 108, pulling the tops of the tubular springs downwardly and inwardly.”⁵¹

Publicover teaches that, when a jumper jumps into the enclosure, the enclosure will react in the same manner as recited in this limitation of claim 1.

When a person jumps from the trampoline surface 40 and [h]its the wall 100 of the enclosure, ***the wall moves a short distance in the direction of the force*** applied by the user and thereby absorbs energy and cushions the shock. The tops of ***all*** the posts 44 in the illustrated embodiment – because they are linked together at the top by the top line 108 – ***flex toward the impacted portion of the wall panel.***⁵²

The person jumping from the trampoline surface 40 into the wall 100 will naturally be jumping away from the mat given that the wall 100 surrounds the mat. Therefore, when the wall moves in the direction of the jumper’s force, this movement constitutes “resiliently deform[ing] away from the mat” as recited in this limitation. Similarly, because all the posts 44 flex toward the impacted portion of the wall, the posts 44 opposite the impact “will be resiliently deformed towards the center of the mat” as recited in this limitation.

⁵¹ EX1002 at Col. 9, lines 37-39.

⁵² EX1002 at Col. 9, lines 7-13 (emphasis added).

Publiccover specifically requires posts that are capable of deforming in the exact manner required in this limitation of claim 1.

In embodiments in which the bottom of the netting is attached to the periphery of the flexible rebounding surface 40, the system can be conceptualized as an arrangement of upright long tubular springs attached to a diaphragm that helps disperse, absorb, and re-cycle impact forces directed at the poles and the net. The diaphragm also transfers these forces to the support system that maintains the diaphragm's elevation. The tubular springs (posts) can be loaded by tightening line 108, pulling the tops of the tubular springs downwardly and inwardly. Such arrangement makes the system tighter/less flexible, so that impact forces from a focused strike point transfer more quickly to the entire system than would be the case if the top line were loosened. If the line is loosened, the tubular springs are unloaded and are provided more space to flex, thus delaying transfer time and making any impact with the net feel softer--an arrangement generally preferable for light individuals. Loading the tubular springs (posts) in this way works on the same principle as loading a bow for the purpose of shooting arrows. If the posts begin to fatigue over time, the top line 108 can be tightened to compensate for this increased flexibility (and the net adjusted or trimmed as necessary).

In order to provide the above-described spring effect, the posts 44 should not be rigid. The posts should be sufficiently strong that impacts by trampoline users will not permanently bend the poles. But, the posts 44 should be able to flex to some extent when a trampoline user impacts the wall 100. For ease of construction and low cost, the

illustrated posts 44 are made of tubular steel. Other materials, such as PVC, plastic, fiberglass, graphite, carbon fiber, Kevlar, etc., can be used if they have appropriate strength and flexibility characteristics. The particular material(s) can be selected to tailor the flexibility, elasticity, and strength of the resultant system as desired.⁵³

2. Claim 2

Claim 2 recites: A trampoline and enclosure system according to claim 1, wherein the enclosure support members are pultruded fiberglass rods.

Publicover teaches that the posts 44 can be made of fiberglass. “For ease of construction and low cost, the illustrated posts 44 are made of tubular steel. Other materials, such as PVC, plastic, *fiberglass*, graphite, carbon fiber, Kevlar, etc., can be used if they have appropriate strength and flexibility characteristics.”⁵⁴

Pultrusion is a process for manufacturing fiber-reinforced plastics with constant cross-section.⁵⁵ The pultrusion process was commonly used to make pultruded fiberglass rods prior to the effective filing date of the '687 Patent.⁵⁶

⁵³ EX1002 at Col. 9, lines 30-63.

⁵⁴ EX1002 at Col. 9, lines 57-61 (emphasis added).

⁵⁵ See EX1013.

⁵⁶ See EX1014.

Therefore, Publicover at least inherently teaches that the fiberglass posts 44 are pultruded fiberglass rods.

3. Claim 3

a. *Preamble*

The preamble of claim 3 recites “A trampoline and enclosure system comprising:”

Publicover’s title is “Trampoline Or The Like With Enclosure.”

- b. *a trampoline comprising a flexible mat and a plurality of coil springs holding the mat in tension within a peripheral frame of the trampoline which surrounds the mat*

This limitation is the same as in claim 1 and is taught as described in Section V.A.1.b above.

- c. *an enclosure system comprising a barrier of a flexible net material surrounding the mat above the mat and having a lower peripheral part coupled directly or indirectly to a periphery of the mat*

This limitation is the same as in claim 1 and is taught as described in Section V.A.1.c above.

- d. *a plurality of resiliently flexible generally upright enclosure support members outside of the barrier relative to the mat and which are connected at or towards the lower ends of the enclosure support members to the frame of the trampoline so that in their natural rest state the enclosure support members extend away from the mat, and which are connected to the barrier net only at or near an upper peripheral part of the barrier to hold the net in tension above the mat*

This limitation is the same as in claim 1 but also includes “so that in their natural rest state the enclosure support members extend away from the mat.” The language common to claims 1 and 3 is taught as described in Section V.A.1.d above.

Publicover teaches that the “posts can be mounted so that they extend upwardly from a trampoline frame.”⁵⁷ Publicover does not require the posts to be perfectly vertical. If the posts were oriented to any extent, such as 1°, away from the vertical, they would necessarily extend away from the mat in their natural rest state. In this sense, Publicover inherently teaches that the posts 44 extend away from the mat in their natural rest state.

Furthermore, Publicover teaches the use of an “inclined support post”⁵⁸ and that “myriad variations in pole placement and orientation” are permitted.⁵⁹

⁵⁷ EX1002 at Col. 11, lines 65-66.

⁵⁸ EX1002 at Col. 12, lines 54-56.

⁵⁹ EX1002 at Col. 12, lines 59-60.

Accordingly, Publicover expressly teaches that the posts can be oriented in myriad ways, including away from the mat, in their natural rest state.

Importantly, Publicover also teaches that the posts 44 are drawn inwardly and downwardly from their natural rest state. “The tubular springs (posts) can be loaded by tightening line 108, pulling the tops of the tubular springs downwardly and inwardly.”⁶⁰ Therefore, relative to their state when loaded, the posts 44 extend away from the mat when in their natural rest state.

Finally, the clause “so that in their natural rest state the enclosure support members extend away from the mat” has little significance. From the ’687 Patent’s specification, this clause is presumably intended to mean that the enclosure support members are mounted to the frame so that their orientation is outward relative to the frame and therefore away from the mat. There is no description as to what angle is sufficiently “away from the mat.” Arguably, a perfectly vertical enclosure support member would extend away from the mat given that the distance from the enclosure support member and the mat increases towards the top of the enclosure support member. It appears that the significance of this limitation is that the outward orientation allows the enclosure support members to be pulled inwardly to tension them. In other words, the enclosure support members extend away from the mat in

⁶⁰ EX1002 at Col. 9, lines 37-39.

their natural rest state so that they will be held in tension when connected to the net.

Publicover clearly teaches this.⁶¹

- e. *which enclosure support members are also connected together at or towards the upper ends of the enclosure support member to draw the upper ends of the enclosure support members away from their natural rest state and towards the center of the mat, so that when impacted by a user against the barrier on one side of the enclosure causing the barrier and enclosure support member on that side of the enclosure to resiliently deform away from the mat, the enclosure support members and barrier on the opposite side of the enclosure will be resiliently deformed towards the center of the mat*

This limitation is the same as in claim 1 and is therefore taught as described in Section V.A.1.e above.

4. Claim 4

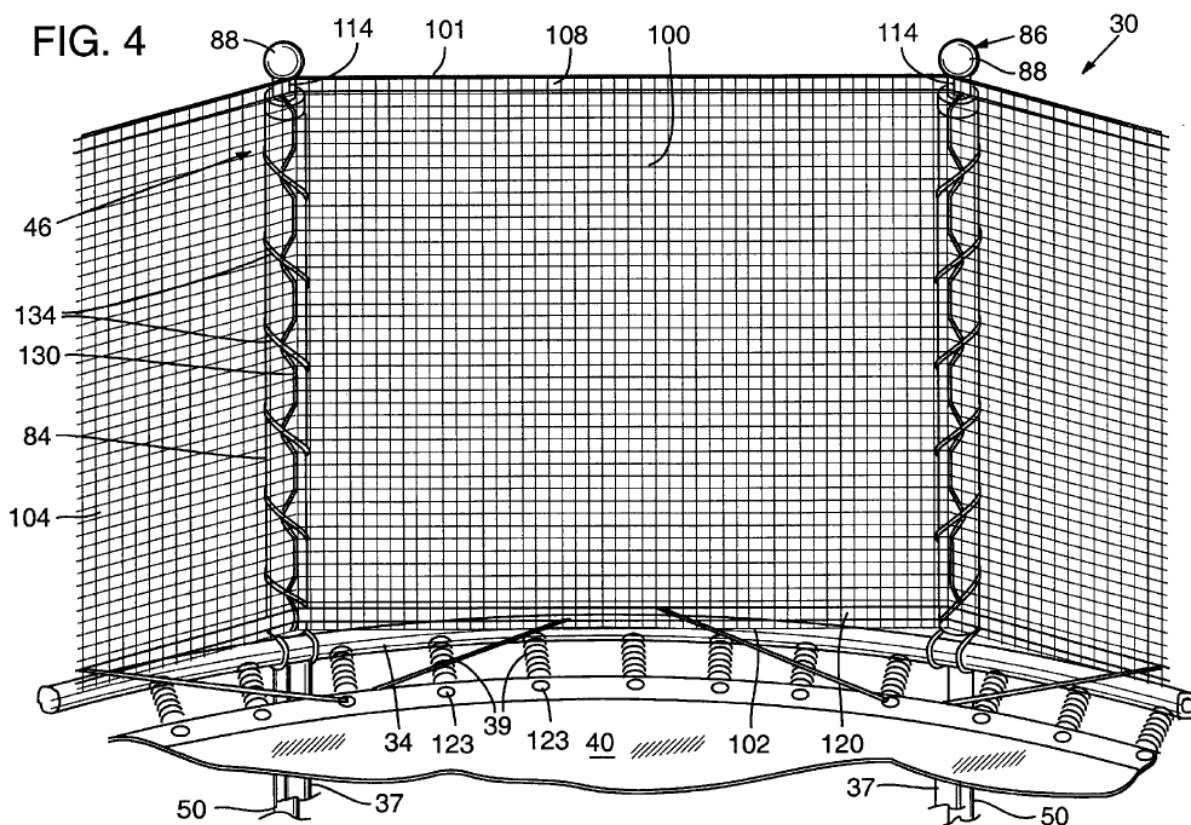
Claim 4 recites: A trampoline and enclosure system according to claim 3, wherein the enclosure support members are pultruded fibreglass rods. This limitation is the same as in claim 2 and is therefore taught as described in Section V.A.2 above.

⁶¹ EX1002 at Col. 9, lines 37-39.

5. Claim 5

Claim 5 recites: A trampoline and enclosure system according to claim 1 wherein the enclosure support members are connected together at or towards their upper ends by an upper peripheral part of the barrier.

Publicover teaches that “[e]ach pair of adjacent posts 44 is coupled by a reach of the line 108.”⁶² As shown in Figure 4 reproduced below, line 108 forms an upper peripheral part of the barrier/net.



⁶² EX1002 at Col. 6, lines 1-2.

Although not required by claim 5, Publicover even teaches that “the fence can be sewn to provide tubular vertical pockets into which the posts 44 are simply received.”⁶³ This is precisely the type of connection the ’687 Patent illustrates and describes.⁶⁴

6. Claim 6

Claim 6 recites: A trampoline and enclosure system according to claim 1 wherein the enclosure support members are connected together at or towards their upper ends by a flexible connecting element.

Publicover teaches that “[e]ach pair of adjacent posts 44 is coupled by a reach of the line 108.”⁶⁵ Publicover also teaches that “the line 108, although flexible, is only somewhat elastic.”⁶⁶ The line 108 is therefore a flexible connecting element that connects the posts 44 together.

⁶³ EX1002 at Col. 11, lines 46-48.

⁶⁴ *See* EX1001, Figs. 5-6.

⁶⁵ EX1002 at Col. 6, lines 1-2.

⁶⁶ EX1002 at Col. 6, lines 2-3.

7. Claim 7

Claim 7 recites: A trampoline and enclosure system according to claim 6 wherein said flexible connecting element is fixed to or integral with the barrier at or towards an upper peripheral part of the barrier.

Publicover teaches:

The wall 100 is secured to the upper line 108 along portions thereof extending between the posts 44. This can be accomplished in a variety of ways. When using mesh-like plastic safety fence having numerous openings 104, it is most convenient to weave the upper line 108 through a series of openings 104 near the top edge 101 of the wall 100. This arrangement is shown in FIG. 5. The weaving can skip a few openings 104 opposite each of the end caps 88 to reduce stresses at points where the top line 108 extends from the fencing to a post 44.⁶⁷

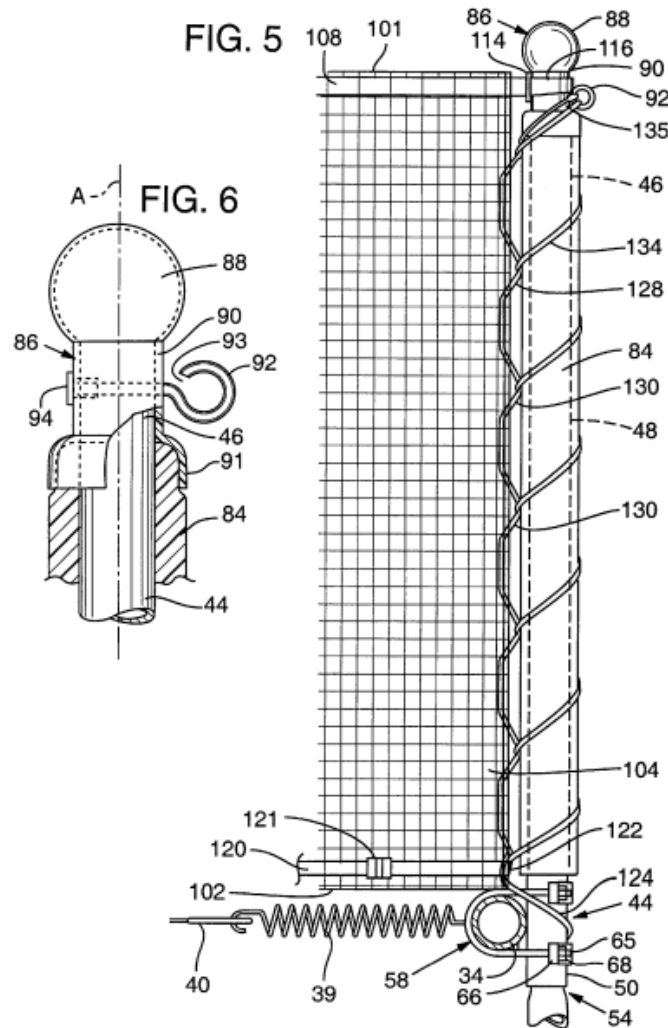
Accordingly, Publicover's line 108 can be fixed to or integral with the barrier (wall 100) at the top of the barrier via weaving.

8. Claim 8

Claim 8 recites: A trampoline and enclosure system according to claim 1 wherein the enclosure support members are connected to the frame of the trampoline below the surface of the mat.

⁶⁷ EX1002 at Col. 6, lines 38-47.

Publicover teaches “the fence poles can be coupled to the frame or leg of the trampoline.”⁶⁸ Also, Publicover’s Figure 5, reproduced below, shows an example where this coupling (e.g., via nut 68) is below the surface of the mat (fabric 40).



⁶⁸ EX1002 at Col. 12, lines 22-23; *see also* Col. 12, lines 33-35.

B. Claims That Are Obvious In View Of Publicover (EX1002) And Coan (EX1003)

Each of the following claims is obvious under pre-AIA 35 U.S.C. § 103 in view of Publicover and Coan.

1. Claim 3

Publicover can be relied upon as teaching each of the limitations of claim 3 as described in Section V.A.3.d above.

If Publicover is determined not to teach “so that in their natural rest state the enclosure support members extend away from the mat,” Coan can be relied upon as teaching this limitation.

As represented in Figure 1 reproduced below, Coan discloses a net for a trampoline (“trampoline net assembly 30”⁶⁹) that uses outwardly oriented “supports 34”⁷⁰ to support the net from the legs (or “stanchions 16”⁷¹) of the trampoline. Coan specifically states that the net, and therefore the supports 34, are oriented at a “60-75 degree angle with respect to the horizontal.”⁷²

⁶⁹ EX1003 at Col. 4, line 32.

⁷⁰ EX1003 at Col. 4, lines 39-40.

⁷¹ EX1003 at Col. 4, line 13.

⁷² EX1003 at Col. 4, lines 53-54.

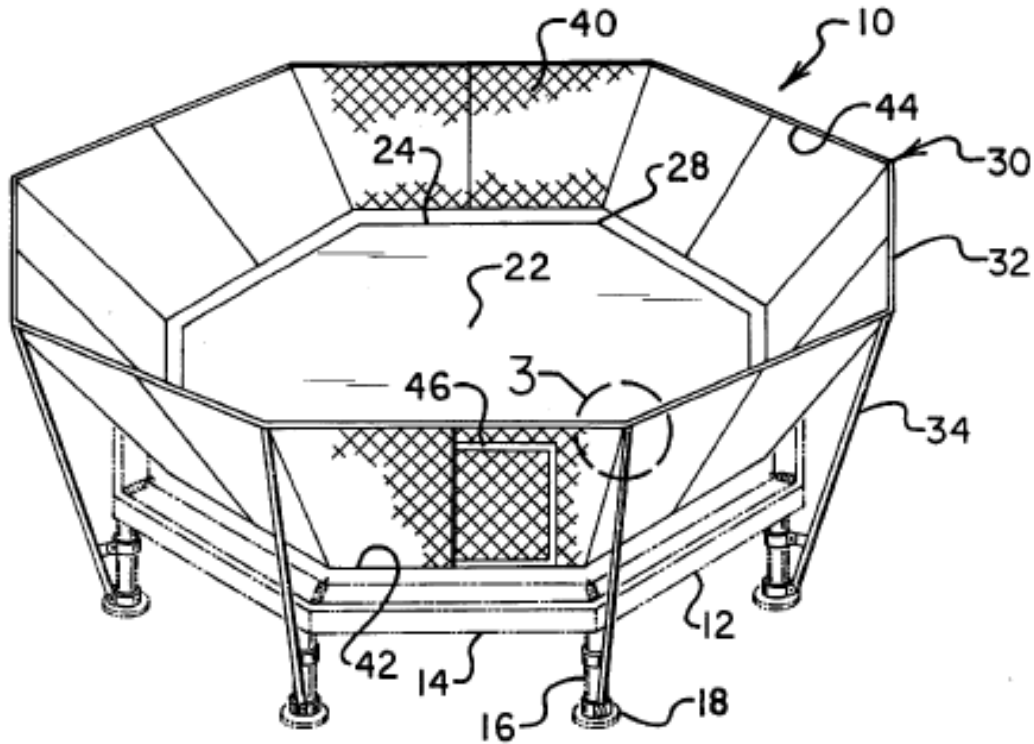


FIG. 1

Coan establishes that it was known to couple enclosure support members to a trampoline “so that in their natural rest state the enclosure support members extend away from the mat” before the effective filing date of the ’687 Patent. It would have been obvious to apply this knowledge to Publicover’s teachings for at least the reason that Publicover’s own disclosure admits that “myriad variations in pole placement and orientation” are permitted.⁷³ Therefore, even under the old teaching-suggestion-motivation test, claim 3 is obvious.

⁷³ EX1002 at Col. 12, lines 59-60.

2. Claim 4

Claim 4 is obvious under 35 U.S.C. § 103 in view of Publicover and Coan for the reasons given in Sections V.B.1 and V.A.2 above.

C. Claims That Are Obvious In View Of Publicover (EX1002) And Tencom (EX1014)

Each of the following claims is obvious under pre-AIA 35 U.S.C. § 103 in view of Publicover and Tencom.

1. Claim 2

Publicover can be relied upon as teaching each of the limitations of claim 2 as described in Sections V.A.1 and V.A.2 above.

If Publicover is determined not to teach fiberglass rods that are “pultruded,” Tencom can be relied upon as teaching fiberglass rods that are pultruded. Given that Publicover teaches that posts 44 could be made of fiberglass and that pultrusion was a known process for producing fiberglass products, it would have been obvious to use pultrusion to manufacture Publicover’s fiberglass posts 44. “[I]f a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique

is obvious unless its actual application is beyond that person's skill.”⁷⁴ There is no reason to believe that it would have been beyond the skill of a PHOSITA to use a widely known technique for producing fiberglass posts to manufacture fiberglass posts for a trampoline net.

2. Claim 4

Claim 4 is obvious in view of Publicover and Tencom for the same reasons given immediately above.

VI. CONCLUSION

For the foregoing reasons, Petitioner respectfully requests cancellation of claims 1-8.

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⁷⁴ KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 401, 127 S. Ct. 1727, 1731, 167 L. Ed. 2d 705 (2007).

CERTIFICATION UNDER 37 C.F.R. § 42.24

Pursuant to 37 C.F.R. § 42.24(d), the undersigned certifies that the word count for the foregoing Petition for *Inter Partes* Review totals 6267 words.

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CERTIFICATION OF SERVICE

Pursuant to 37 C.F.R. §§ 42.6(e) and 42.105(b), the undersigned certifies that this Petition for *Inter Partes* Review and all exhibits were mailed to Patent Owner at the following correspondence address of record:

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