

Petitioner Global Shade's Demonstratives

Global Shade Corp. v. With-U E-Commerce (Shanghai) Co., Ltd.

Case No. IPR2023-00580

U.S. Patent No. 10,669,738

June 13, 2024

Overview of the Grounds

Ground	Claims	References
1	1, 2, 4, 14	Rousselle & Tsai
2	4, 13, 14	Rousselle, Tsai, & Ohnishi
MTA	15-19	Rousselle, Tsai, Ohnishi, Hooper, & Seo



Ground 1

Claims 1, 2, 4, 14

Rousselle (Ex. 1003)

Tsai (Ex. 1005)

Claim 1: Canopy

A collapsible canopy frame, comprising:

Supporting Legs	A. at least three supporting legs,
Outer Units	B. a plurality of outer retractable units, each outer retractable unit connected between two adjacent supporting legs,
X-Shaped Rod Members	each said outer retractable unit comprises a plurality of hinged X-shaped rod members, each X-shaped rod member comprises a first eave pipe and second eave pipe hinged to one another,
Inner Units	C. a plurality of inner retractable units comprising inner ends, each inner retractable unit connected to a supporting leg,
Roof Frame	wherein said outer retractable units and said inner retractable units form a roof of said collapsible canopy frame, and

Claim 1: Center Lock

D. a central lock, comprising:

Center Top Cap	1. a center top cap,
Center Bottom Cap	2. a center bottom cap,
Center Pole	3. a center pole positioned between said center top cap and said center bottom cap,
Locked State	wherein said central lock is locked when said center pole is connected to both said center top cap and said center bottom cap, and
Unlocked State	wherein said center lock is unlocked when there is a disconnection between said center bottom cap and said center pole,

Claim 1: Center Lock

Function of Central Lock

wherein said central lock locks said collapsible canopy frame in an unfolded state when said central lock is locked and permits said collapsible canopy frame to be folded into a folded state when said central lock is unlocked,

Inner Retractable Units Connection

wherein said inner ends of said inner retractable units are connected through said central lock.

Overview of Rousselle

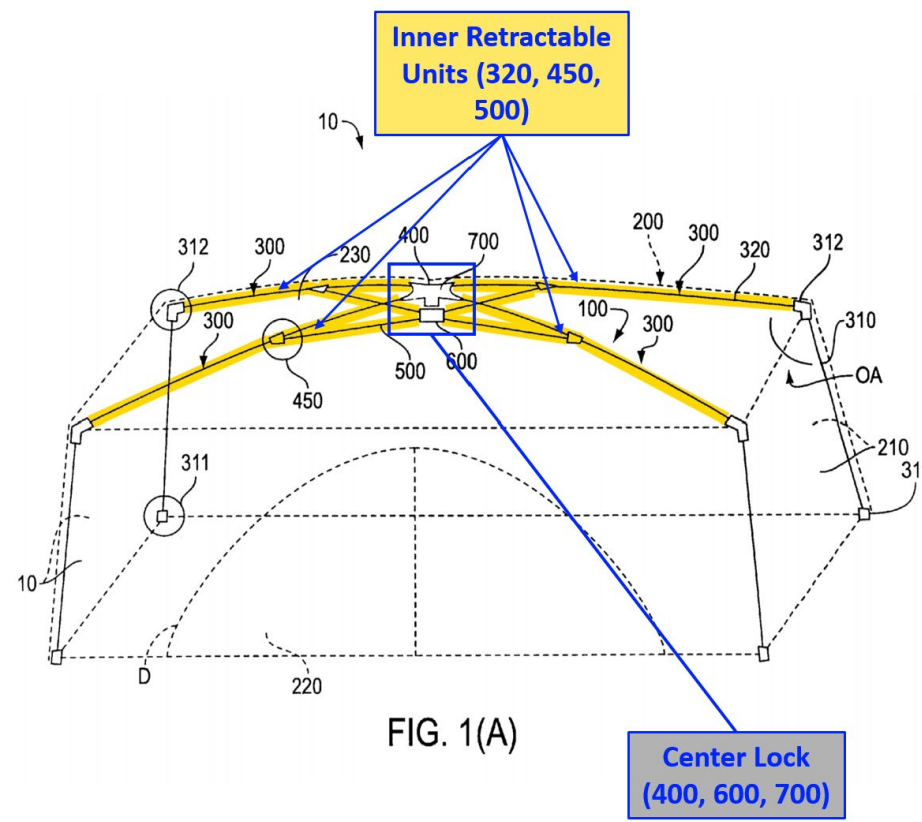


FIG. 1(A)

Ex. 1003 (Rousselle), Fig. 1(A)

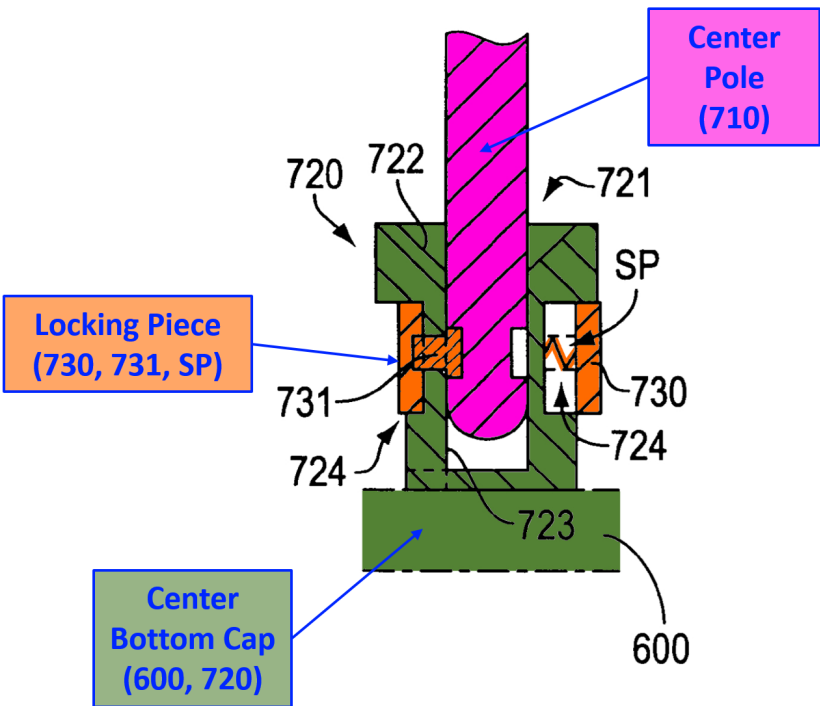


FIG. 2(A)

Ex. 1003 (Rousselle), Fig. 2(A)

Overview of Rousselle

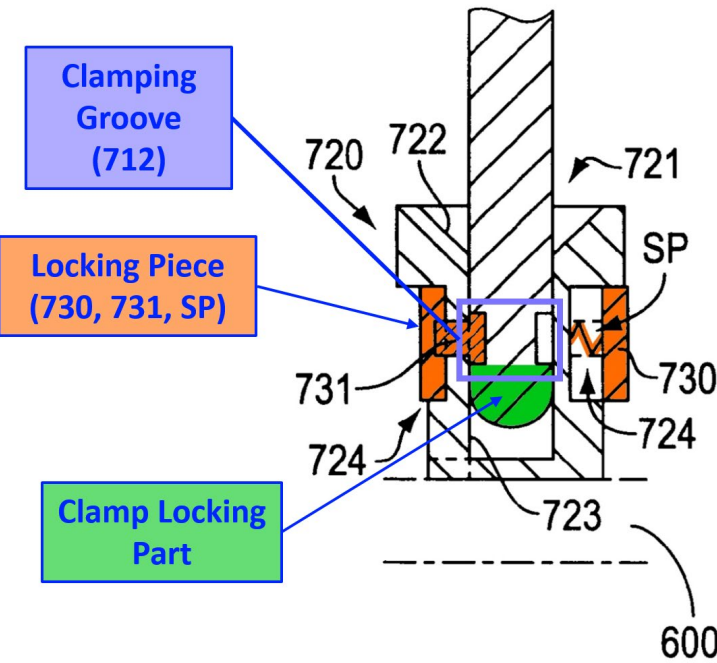


FIG. 2(A)

Ex. 1003 (Rousselle), Fig. 2(A)

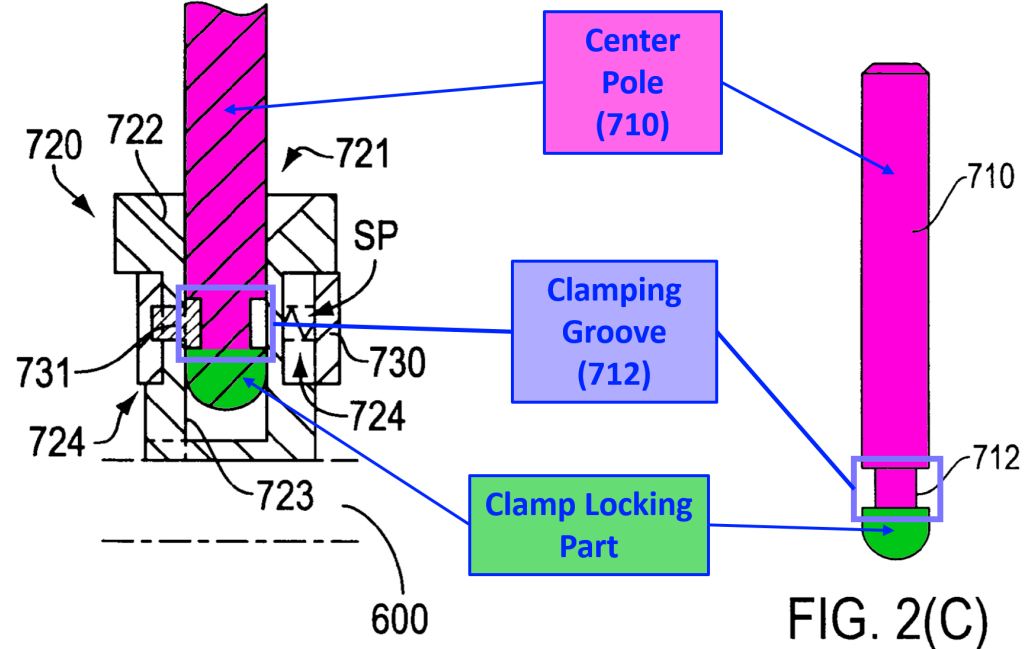
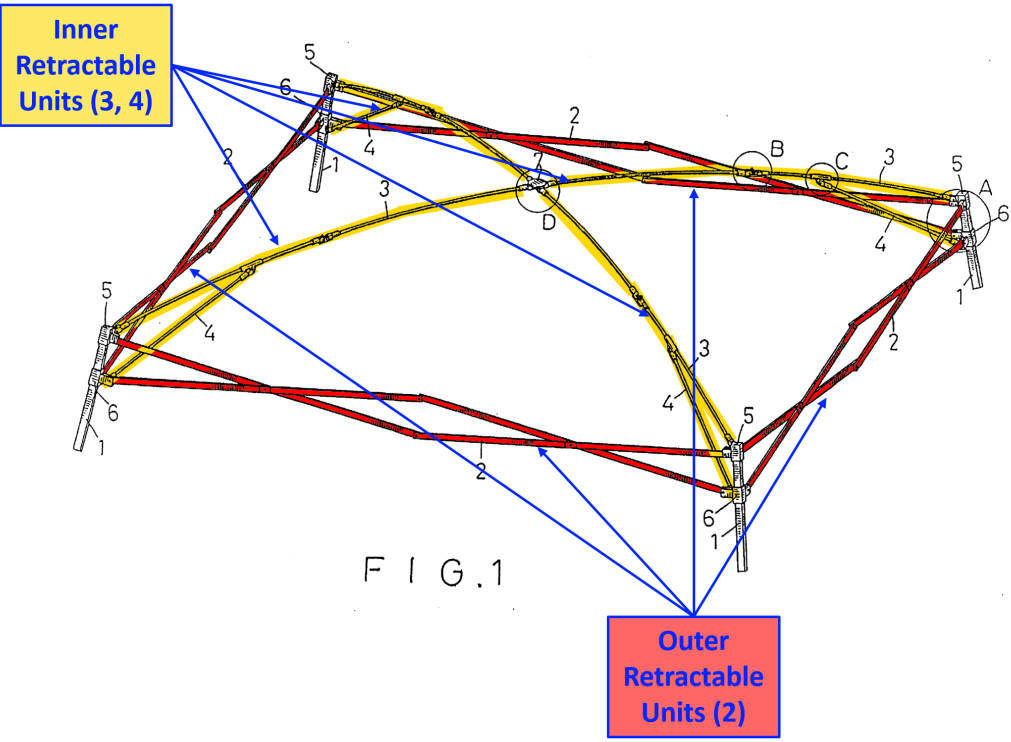


FIG. 2(A)

FIG. 2(C)

Ex. 1003 (Rousselle), Figs. 2(A), 2(C)

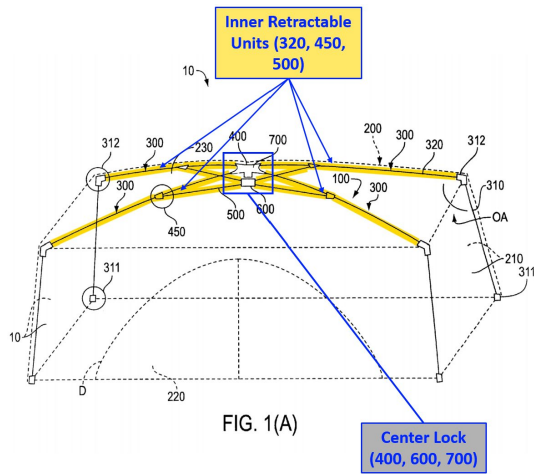
Overview of Tsai



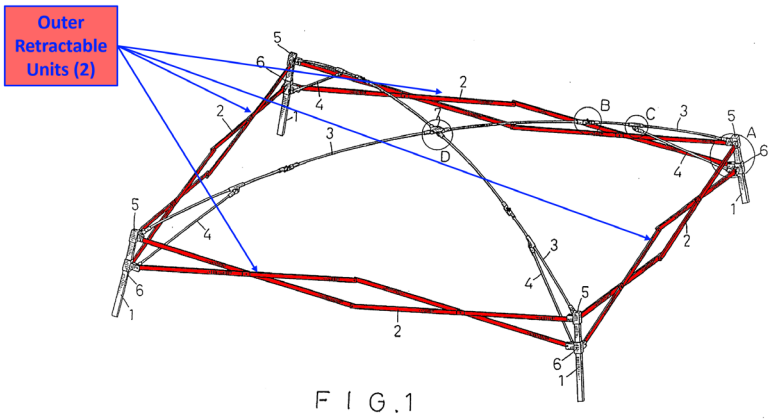
Ex. 1005 (Tsai), Fig. 1

The Two Modifications

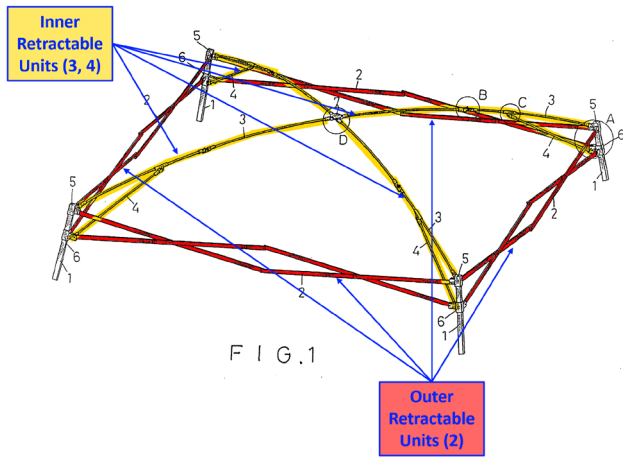
Primary
Modification



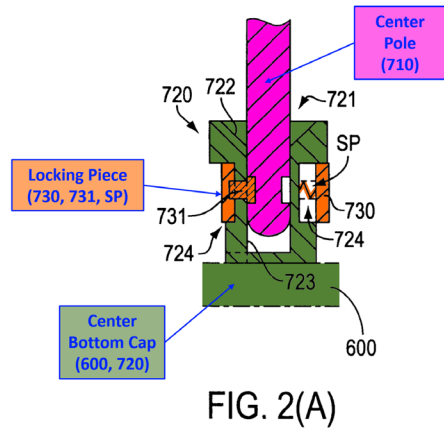
+



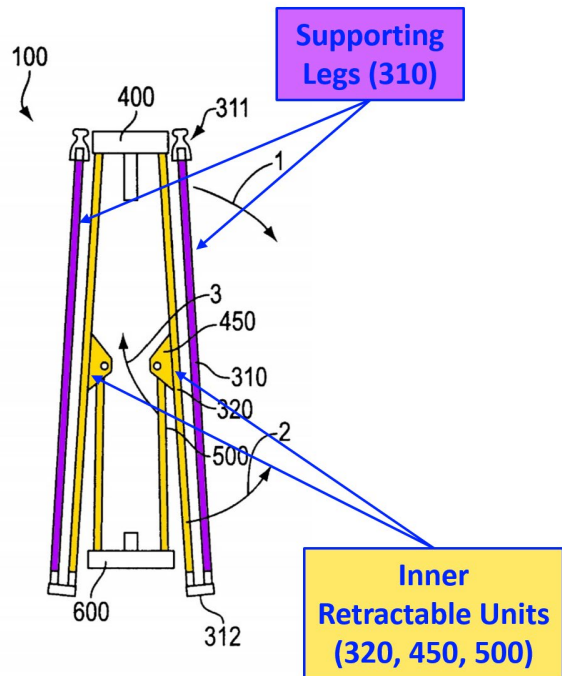
Alternative
Modification



+



The Primary Modification Is Not Inoperable



Ex. 1003 (Rousselle), Fig. 1(D)

Q: Is the inverting motion
... required by Rousselle?

...

Q: Does he teach that you
have to do it?

A: **He says you can, not you must.** ...

Q: There is nothing in Claim
1 of the '738 Patent that
requires that motion, right?

A: **Absolutely not.**

Ex. 1101 (Reffeor Depo.), 31:10-32:4
(objections omitted)

The Primary Modification Is Not Inoperable

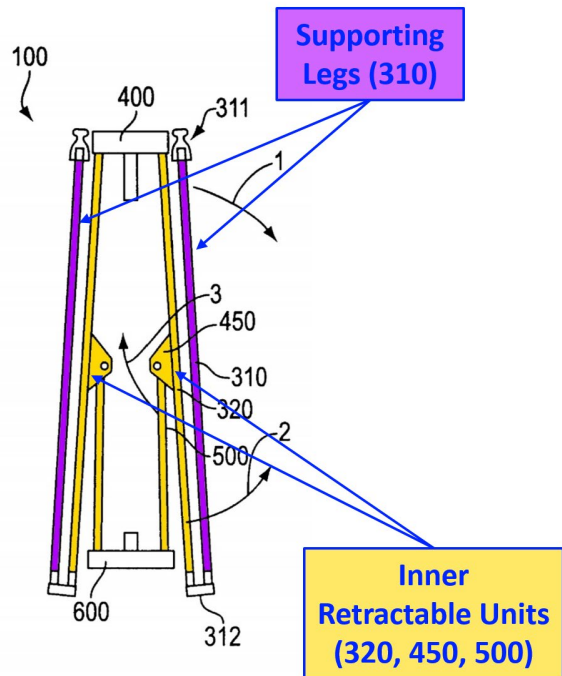


FIG. 1(D)

Ex. 1003 (Rousselle), Fig. 1(D)

"A canopy as shown in Rousselle's Figure 1(D), modified to include Tsai's outer retractable units, would still meet each limitation of challenged claim 1 in exactly the way I described ... if one simply stopped collapsing the canopy frame without inverting the legs."

Ex. 1102 (Second Stein Decl.) ¶9

Rousselle and Tsai Are Not Incompatible

Q: Could you use Rousselle's central lock in a canopy that doesn't have the same structural design as any of the embodiments disclosed in Rousselle?

A: **Yes.**

Ex. 1101 (Reffeor Depo.), 30:13-21
(objection and comment omitted)

"Rousselle makes clear that the particular methods of folding shown ... are not critical, and certainly not Rousselle's main principle of operation. ... Instead, Rousselle's focus is on the central lock ..., and the [proposed modifications] maintain the principle of operation of the central lock exactly."

Ex. 1102 (Second Stein Decl.) ¶11

Tsai Does Not Teach Away

“A reference does not teach away, however, if it merely expresses a general preference for an alternative invention but does not ‘criticize, discredit, or otherwise discourage’ investigation into the invention claimed.”

DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc., 567 F.3d 1314, 1327 (Fed. Cir. 2009)

“Just because Tsai teaches that its canopy may be unfolded by pulling outward on the legs does not discourage a skilled artisan from considering other methods. [PO’s cited disclosure] contains no indication that Tsai’s canopy could not be unfolded using a central lock like Rousselle’s.”

Ex. 1102 (Second Stein Decl.) ¶31

Tsai Does Not Teach Away

PO argues Tsai teaches away from using canopies with a center strut for two reasons:

1. Tsai allegedly suggests an extra person is sometimes needed for setup

POR, 31

but both parties recognize that Rousselle's canopy can be unfolded by a single person.

POR, 21; Ex. 1003 (Rousselle), 3:45-47, 13:59-67; Ex. 1102 (Second Stein Decl.) ¶25

2. Tsai allegedly suggests that center-strut canopies can reduce the headroom within the canopy

POR, 31

but the canopies Tsai is talking about do not have inner units that form a roof frame, unlike Tsai and Rousselle's canopies.

Pet., 22-33; Ex. 1003 (Rousselle), 6:57-64, Figs. 1(A)-1(C); Ex. 1005 (Tsai), 8:34-9:28, Fig. 1; Ex. 1102 (Second Stein Decl.) ¶26

The Alternative Modification Is Not Inoperable

PO argues Tsai's inner units are not strong enough to unfold the canopy. *But:*

POR, 36-38

"In my experience, it would have been well within the skill of a [POSITA] to select dimensions and materials for Tsai's inner retractable units that would allow for any needed flexibility while ensuring that the inner retractable units were sufficiently strong to drive unfolding of the canopy."

Ex. 1102 (Second Stein Decl.) ¶128

Q: Would you be able to make that structural member less flexible?

A: ... Of course I can make anything more rigid or less rigid. **That's what engineers do all the time.**

Ex. 1101 (Reffeor Depo.), 41:8-19
(objection and comment omitted)

A POSITA Would Have Been Motivated to Make the Alternative Modification

PO raises a laundry list of alleged issues:

1. Tsai allegedly suggests an extra person is sometimes needed for setup *but Rousselle's canopy can be unfolded by a single person.*

POR, 42; Ex. 1003 (Rousselle), 3:45-47, 13:59-67; Ex. 1102 (Second Stein Decl.) ¶125

2. Tsai allegedly suggests that unfolding the canopy is done at the legs *but Rousselle discloses central activation using a central lock.*

POR, 42-43; Ex. 1003 (Rousselle), 3:45-47, 13:22-29; Ex. 1102 (Second Stein Decl.) ¶158

3. Tsai allegedly suggests that its leg locks are preferable to previous locks *but Rousselle, which came later, discloses a new central lock.*

POR, 41-42; *compare* Ex. 1005 (Tsai) (1997) *with* Ex. 1003 (Rousselle) (2001)

A POSITA Would Have Been Motivated to Make the Alternative Modification

"[O]ne cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references."

In re Keller, 642 F.2d 413, 426 (C.C.P.A. 1981)

"As the Board properly found, one of ordinary skill would have been motivated to pursue the desirable properties taught by [one reference], even if that meant foregoing the benefit taught by [another reference]."

In re Urbanski, 809 F.3d 1237, 1243-44 (Fed. Cir. 2016)

Tsai's Leg Locks Do Not Pose a Problem

"Rousselle discloses the benefits of central locks. ... A person of ordinary skill would have understood that these benefits outweigh any possible downside of removing Tsai's leg locks."

Ex. 1102 (Second Stein Decl.) ¶27

"[C]laim 1 ... does not preclude needing to unlock other locks for the central lock to permit folding."

Institution Decision, 31



Ground 2

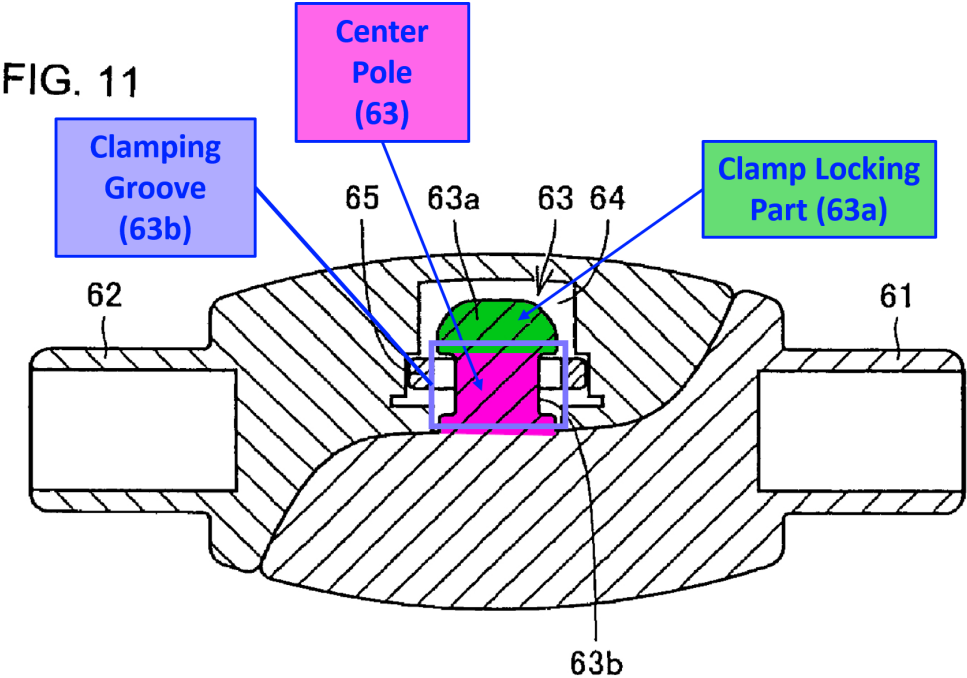
Claims 4, 13, 14

Rousselle (Ex. 1003)

Tsai (Ex. 1005)

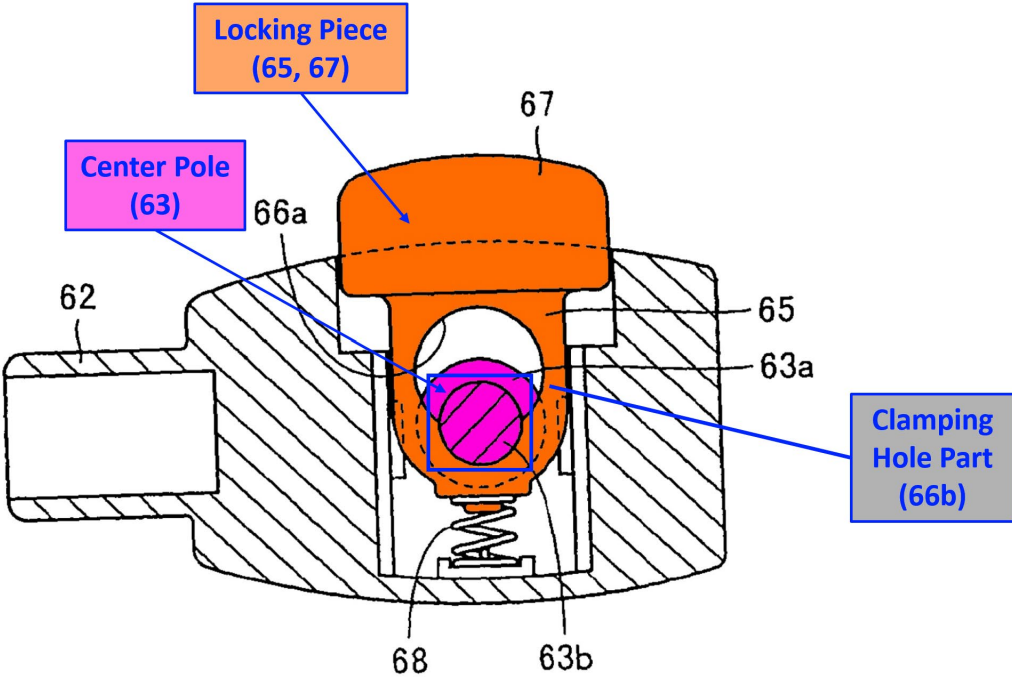
Ohnishi (Ex. 1006)

Overview of Ohnishi



Ex. 1006 (Ohnishi), Fig. 11

FIG. 9



Ex. 1006 (Ohnishi), Fig. 9

Ground 2 Is Not Disputed

Patent Owner “only notes that Ground 2 would be deficient and inoperable for the same reasons discussed with respect to Ground 1.”

POR, 57

PO makes no meaningful arguments regarding Ground 2.

See POR, 56-58; see generally Sur-Reply



PO's Motion to Amend

Revised Substitute Claims 15-19

Rousselle (Ex. 1003)

Tsai (Ex. 1005)

Ohnishi (Ex. 1006)

Hoover (Ex. 1203)

Seo (Ex. 1204)

Revised Substitute Claim 15

Claim 15 adds the following limitations to claim 1:

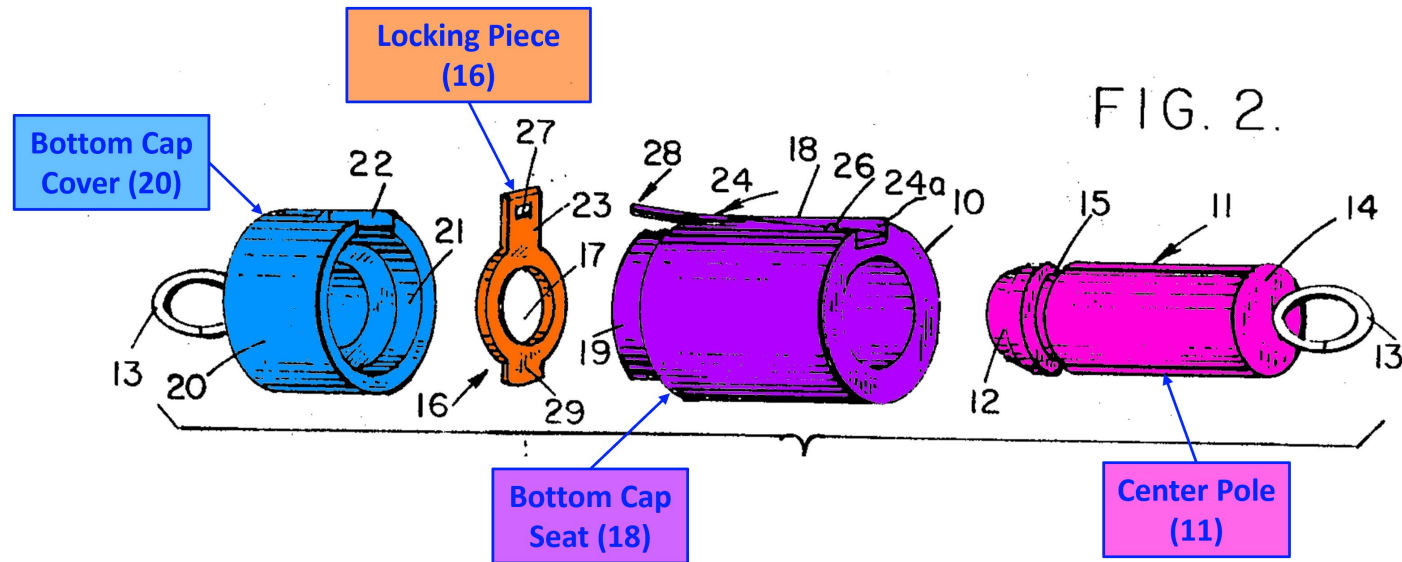
Locking Piece	<u>4. a locking piece received in said center bottom cap,</u>
Bottom Cap Seat & Bottom Cap Cover	<u>wherein said center bottom cap comprises a bottom cap seat and a bottom cap cover that are connected to one another, wherein said bottom cap seat is located between said bottom cap cover and said center top cap,</u>
Through Hole	<u>wherein said bottom cap seat is provided with a bottom cap seat through hole through which said center pole can enter,</u>
Receiving Chamber	<u>a receiving chamber is provided in said center bottom cap at a junction between said bottom cap seat and said bottom cap cover, and wherein said locking piece is located within said receiving chamber and between said bottom cap cover and said bottom cap seat;</u>

Revised Substitute Claim 15 (continued)

Claim 15 adds the following limitations to claim 1:

Connection Piece	<u>wherein a first connecting rod is hinged with a connection piece of said bottom cap seat;</u>
Unfolded State	<u>wherein said collapsible canopy frame is moved to said unfolded state by pushing said center bottom cap upwards to drive said plurality of inner retractable units outwardly, which causes said plurality of outer retractable units and said at least three supporting legs to extend outwards, until said center bottom cap is connected with said center top cap.</u>

Overview of Hoover



Ex. 1203 (Hoover), Fig. 2

Overview of Seo

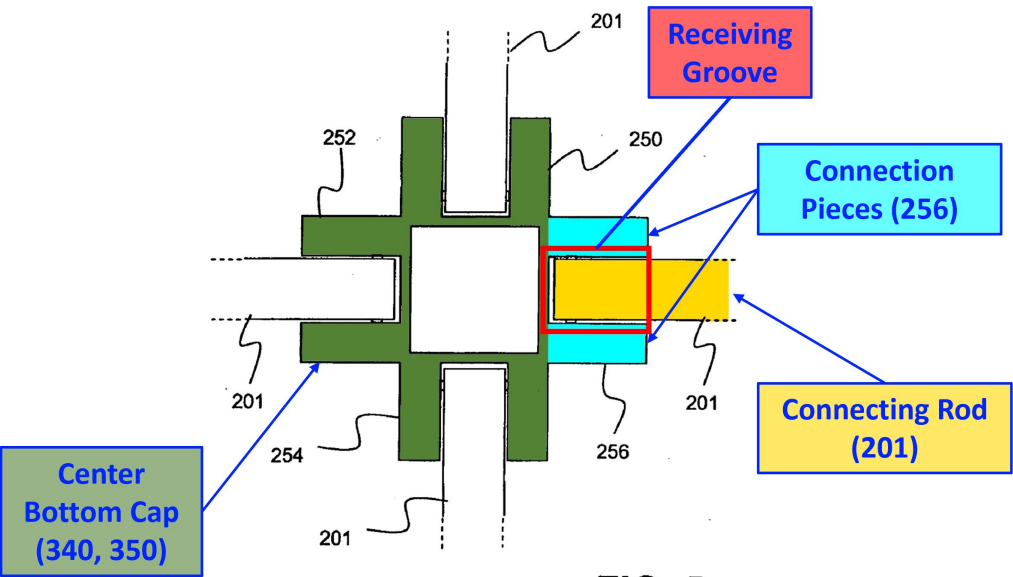


FIG. 5

Ex. 1204 (Seo), Fig. 5

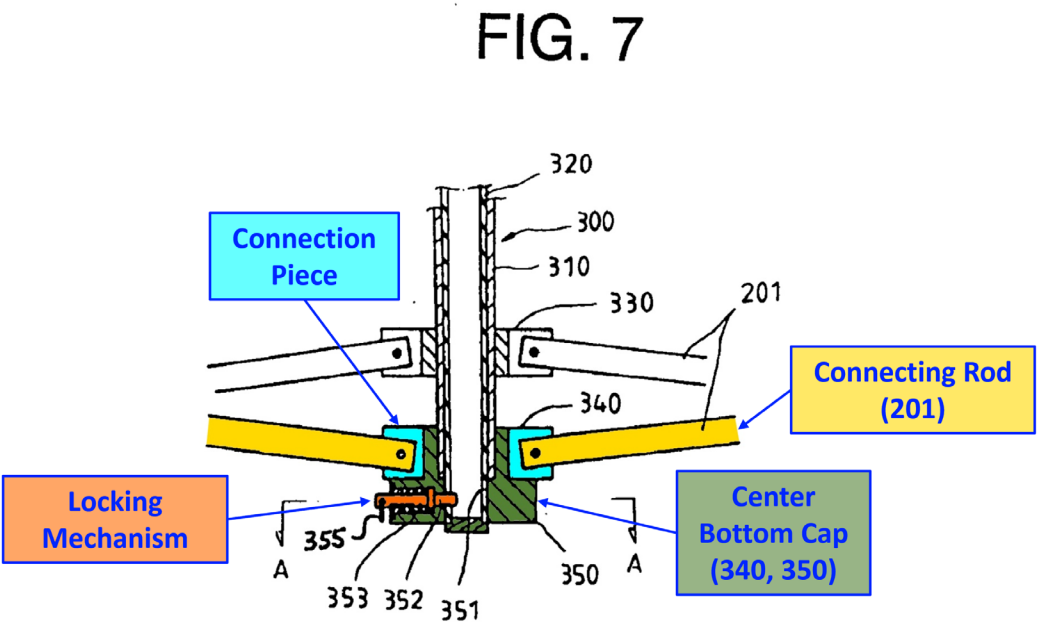


FIG. 7

Ex. 1204 (Seo), Fig. 7

Hoover Is Analogous Art: Field of Endeavor

"The field of endeavor is not limited to the specific point of novelty, the narrowest possible conception of the field, or the particular focus within a given field." "[C]ourts generally take an expansive view of what constitutes analogous art."

Netflix, Inc. v. DivX, LLC, 80 F.4th 1352, 1359 (Fed. Cir. 2023)

"Hoover relates to the same type of locking mechanism discussed in the '738 patent" and thus "is in the same field of endeavor."

Ex. 1202 (Third Stein Decl.) ¶12

Q: A jewelry clasp is a form of locking mechanism, right?

A: **It is a form of locking mechanism**

Ex. 1301 (Second Reffeor Depo.), 23:22-24:9
(objection omitted)

Hoover Is Analogous Art: Particular Problem

“[A] PHOSITA—resigned to considering art outside her field of endeavor—would thus not identify the problems so narrowly as to rule out all such art[.]”

Donner Tech., LLC v. Pro Stage Gear, LLC, 979 F.3d 1353, 1360 (Fed. Cir. 2020)

“[A] reference must be reasonably pertinent only to ‘*one or more*’ of the particular problems to which the claimed inventions relate.”

In re Asset Guard Prods., Inc., No. 2021-1902, 2022 WL 1097363, at *4 (Fed. Cir. April 13, 2022)

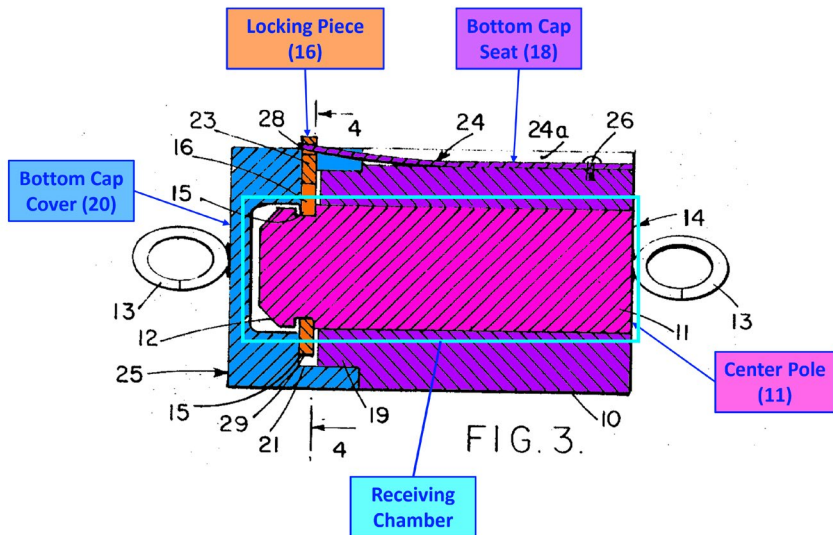
Dr. Stein testified that Hoover is relevant to the problem of easy-to-use, reliable locking mechanisms, just like the ‘738 patent.

Ex. 1202 (Third Stein Decl.) ¶12; Ex. 1001 (‘738 patent), 1:46-47

A POSITA Would Have Incorporated Hooper

Bottom Cap Seat & Bottom Cap Cover

wherein said center bottom cap comprises a bottom cap seat and a bottom cap cover that are connected to one another, wherein said bottom cap seat is located between said bottom cap cover and said center top cap,



Ex. 1203 (Hooper), Fig. 3

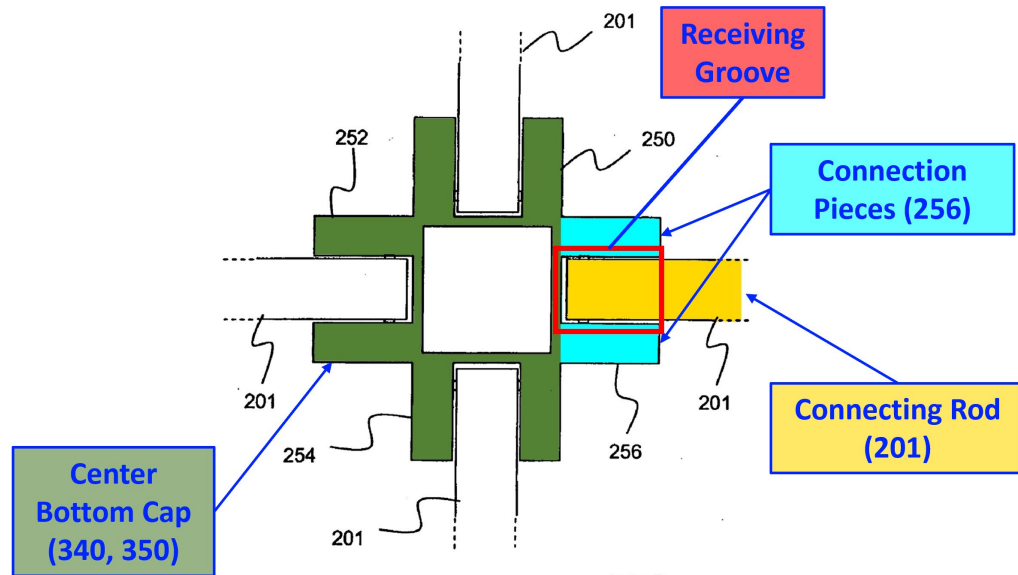
“For ease of manufacturing and maintenance, a [POSITA] would have recognized that it would be advantageous to have easy access to insert and remove the locking piece The arrangement shown in Hooper ... provides such easy access to the locking piece.”

Ex. 1202 (Third Stein Decl.) ¶15

A POSITA Would Have Incorporated Seo

Connection Piece

wherein a first connecting rod is hinged with a connection piece of said bottom cap seat;



Ex. 1204 (Seo), Fig. 5

"The hinges and connecting pieces disclosed in Seo provide a sturdy, durable, easy-to-manufacture and easy-to-maintain connection with the connecting rods."

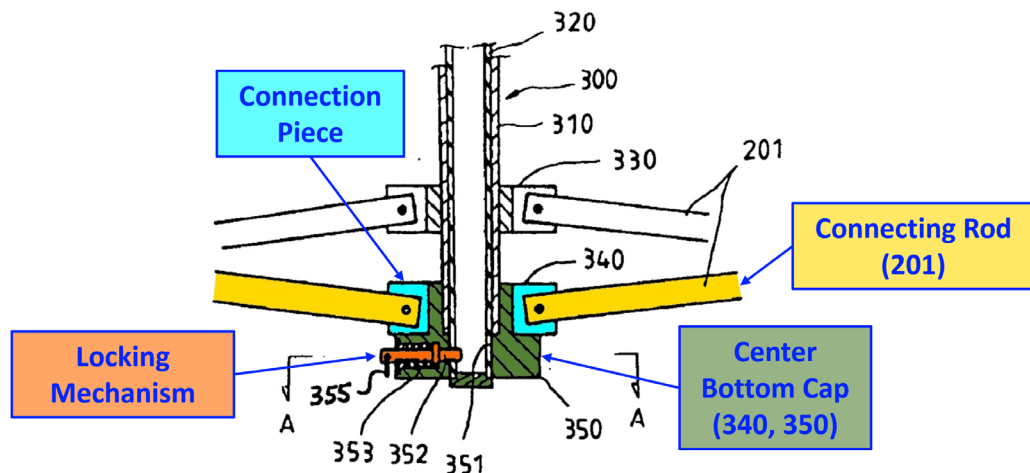
Ex. 1202 (Third Stein Decl.) ¶28

A POSITA Would Have Incorporated Seo

Connection Piece

wherein a first connecting rod is hinged with a connection piece of said bottom cap seat;

FIG. 7



Ex. 1204 (Seo), Fig. 7

"[A POSITA] would have recognized that positioning the connection point above the locking mechanism was advantageous for the user of the canopy, who would be able to operate the locking mechanism from below without the connecting rods getting in the way."

Ex. 1202 (Third Stein Decl.) ¶28

PO's Expert Did Not Fully Evaluate the MTA

Q: And you don't know whether – whether Dr. Stein identified any motivation to combine Seo with Rousselle or Tsai, right?

A: **I don't because I don't know what Dr. Stein said.**

Ex. 1301 (Second Reffeor Depo.), 32:6-12
(objection omitted)

Q: So your understanding of what petitioner has argued has come entirely from counsel providing you that information; is that correct?

A: **Yes, it has.**

Ex. 1301 (Second Reffeor Depo.), 17:3-7

Claims 16-19 Are Not Independently Disputed

Q: [Y]ou don't actually address in your declaration any of the more detailed elements of Claim 16; is that fair?

A: **I do not directly address them, no.**

Ex. 1301 (Second Reffeor Depo.), 38:14-17;
Id., 38:18-39:2 (same for claim 17)

Q: [Claims 15-17] are the only 3 claims that you address in the declaration, right?

A: To the best of my knowledge, **yes.**

Ex. 1301 (Second Reffeor Depo.), 14:1-3

PO makes no meaningful arguments regarding claims 16-19.

See MTA Reply, 11-12



Collateral Estoppel

Claims 1, 4

Collateral Estoppel: Test

Collateral estoppel applies when:

1. The issue is identical to one decided in the first action;
2. The issue was actually litigated in the first action;
3. Resolution of the issue was essential to a final judgment in the first action; and
4. The party being estopped had a full and fair opportunity to litigate the issue in the first action.

In re Freeman, 30 F.3d 1459, 1465 (Fed. Cir. 1994)

PO disputes only the first element of this test.

See POR, 64; Reply, 21 n.5; Sur-Reply, 22-24

Collateral Estoppel: Same Question of Invalidity

Collateral estoppel applies so long as any differences between the claims at issue “do not materially alter the question of invalidity.”

Ohio Willow Wood Co. v. Alps S., LLC, 735 F.3d 1333, 1342 (Fed. Cir. 2013)

“Complete identity of claims is not required to satisfy the identity-of-issues requirement for claim preclusion.”

Soverain Software LLC v. Victoria’s Secret Direct Brand Mgmt., LLC, 778 F.3d 1311, 1319 (Fed. Cir. 2015)

PO's New Arguments Cannot Create Different Questions

Petitioner argued two ways of combining Rousselle and Tsai in the prior case:

1. A POSITA would have been motivated to include Tsai's outer retractable units in Rousselle's canopy, including Rousselle's center lock.

This is the “primary modification” asserted in this case.

Ex. 1016 (Global Shade FWD), 52; Pet., 20-22

2. A POSITA would have been motivated to combine Rousselle's center lock with Tsai's canopy.

This is the “alternative modification” asserted in this case.

Global Shade Pet., 87-93; Ex. 1016 (Global Shade FWD), 66; Pet., 34-37

PO could have made its inoperability arguments in the prior case, but did not.