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On behalf of **Lumi Legend Corporation**

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LUMI LEGEND CORPORATION,
Petitioner

v.

MANEHU PRODUCT ALLIANCE, LLC,
Patent Owner

PGR2024-00014
Patent No. 11,781,703

**PETITION FOR POST GRANT REVIEW OF
U.S. PATENT NO. 11,781,703**

TABLE OF CONTENTS

Page No.

I.	MANDATORY NOTICES, GROUNDS FOR STANDING, AND FEE PAYMENT	1
A.	Real Party-In-Interest (37 C.F.R. §42.8(b)(1))	1
B.	Related Matters (37 C.F.R. §42.8(b)(2)).....	1
C.	Lead and Backup Counsel (37 C.F.R. §42.8(b)(3))	2
D.	Service Information (37 C.F.R. §42.8(b)(4))	3
E.	Grounds for Standing (37 C.F.R. §42.204).....	3
F.	Time for Filing (37 C.F.R. §42.202).....	3
G.	Payment of Fees (37 C.F.R. §42.15(a))	3
II.	INTRODUCTION	3
III.	THE '703 PATENT	7
A.	Prosecution History	9
B.	Priority	10
IV.	THE '703 PATENT IS ELIGIBLE FOR PGR	14
A.	The Figures and Description Corresponding to the Challenged Claims Were Not Added Until the 2017 CIP Application	17
B.	The Pre-AIA Applications Do Not Support the Actuator Assembly Movement and Positioning Features Recited in Claims 8 and 26.....	20

TABLE OF CONTENTS
(cont'd)

	Page No.
C. The Pre-AIA Applications Do Not Support the “Spaced Vertically Apart” and “Vertically Between” Features Recited in Claims 14 and 25	23
D. AIA Applicability	27
V. LEVEL OF ORDINARY SKILL	27
VI. CLAIM CONSTRUCTION	28
A. “at least a portion of the motorized actuator assembly moves toward and past a portion of the lower arm when the arm assembly moves toward the raised configuration”	28
B. “wherein the portion of the motorized actuator assembly moves away from and is vertically spaced apart from the lower arm when the arm assembly is in the lowered configuration”	31
VII. PRECISE RELIEF REQUESTED AND GROUNDS RAISED.....	34
A. Statutory Grounds for Cancellation	34
B. Status of References as Prior Art	35
1. Clary Prior Art Status.....	36
2. Juan Prior Art Status	36
3. Pankros Prior Art Status.....	42
4. Tsuji Prior Art Status	49
5. Xu Prior Art Status.....	50

TABLE OF CONTENTS

(*cont'd*)

	Page No.
VIII. GROUND 1: CLAIM 36 LACKS WRITTEN DESCRIPTION SUPPORT	50
IX. GROUND 2: CLAIM 36 IS INDEFINITE	54
X. GROUND 3: CLARY ANTICIPATES CLAIMS 33-36.....	56
A. Disclosure of Clary.....	56
B. Clary Anticipates Claim 33	59
1. Preamble.....	60
2. Limitation 33[a]: “a support bracket configured to couple to a wall;”	60
3. Limitation 33[b]: “a display bracket configured to hold a television”	61
4. Limitation 33[c]: “an arm assembly pivotally coupled to the support bracket and movable between a raised configuration to position the display bracket at a raised position and a lowered configuration to position the display bracket at a lowered position”	63
5. Limitation 33[c][i]: “wherein the arm assembly includes an upper arm and a lower arm”	68
6. Limitation 33[d]: “a motorized actuator assembly having a support bracket end rotatably coupled to the support bracket and a display bracket end rotatably coupled to the arm assembly”	70

TABLE OF CONTENTS

(*cont'd*)

	Page No.
7. Limitation 33[d][i]: “wherein at least a portion of the motorized actuator assembly moves toward and past a portion of the lower arm when the arm assembly moves toward the raised configuration.”	73
C. Clary Anticipates Claim 34	79
D. Clary Anticipates Claim 35	82
E. Clary Anticipates Claim 36	87
XI. GROUND 4: CLARY IN VIEW OF TSUJI AND THE GENERAL KNOWLEDGE OF A POSITA RENDERS OBVIOUS CLAIMS 33-36	91
A. Disclosure of Tsuji	91
B. Clary Combined With Tsuji and the General Knowledge of a POSITA Renders Obvious Claims 33 and 34	92
C. Clary Combined With Tsuji and the General Knowledge of a POSITA Renders Obvious Claim 35	100
D. Clary Combined With Tsuji and the General Knowledge of a POSITA Renders Obvious Claim 36	106
XII. GROUND 5: PANKROS ANTICIPATES CLAIMS 33-36	110
A. Disclosure of Pankros	110
B. Pankros Anticipates Claim 33	113
1. Preamble	114
2. Limitation 33[a]: “a support bracket configured to couple to a wall;”	114

TABLE OF CONTENTS
(cont'd)

	Page No.
3. Limitation 33[b]: “a display bracket configured to hold a television”	115
4. Limitation 33[c]: “an arm assembly pivotally coupled to the support bracket and movable between a raised configuration to position the display bracket at a raised position and a lowered configuration to position the display bracket at a lowered position”	118
5. Limitation 33[c][i]: “wherein the arm assembly includes an upper arm and a lower arm”	123
6. Limitation 33[d]: “a motorized actuator assembly having a support bracket end rotatably coupled to the support bracket and a display bracket end rotatably coupled to the arm assembly”	124
7. Limitation 33[d][i]: “wherein at least a portion of the motorized actuator assembly moves toward and past a portion of the lower arm when the arm assembly moves toward the raised configuration.”	127
C. Pankros Anticipates Claim 34	131
D. Pankros Anticipates Claim 35	134
E. Pankros Anticipates Claim 36	141
XIII. GROUND 6: PANKROS IN VIEW OF CLARY AND THE GENERAL KNOWLEDGE OF A POSITA RENDERS OBVIOUS CLAIMS 33-36	145
A. Pankros Combined With Clary and the General Knowledge of a POSITA Renders Obvious Claims 33 and 34	145

TABLE OF CONTENTS
(cont'd)

	Page No.
B. Pankros Combined With Clary and the General Knowledge of a POSITA Renders Obvious Claim 35	148
C. Pankros Combined With Clary and the General Knowledge of a POSITA Renders Obvious Claim 36	153
XIV. SECONDARY CONSIDERATIONS	156
XV. THE BOARD SHOULD NOT EXERCISE DISCRETION TO DENY INSTITUTION	156
A. Board Should Not Decline Institution Pursuant to 35 U.S.C. § 325(d)	156
B. Board Should Not Decline Institution Pursuant to 35 U.S.C. § 324(a).....	157
XVI. CONCLUSION.....	157

TABLE OF AUTHORITIES

Page No(s).

<i>Ariad Pharmaceuticals, Inc. v. Eli Lilly and Co.</i> , 598 F.3d at 1344 (Fed. Cir. 2010)	50
<i>CKNAPP Sales Inc., d/b/a VIVO v. Manehu Product Alliance, LLC d/b/a MantelMount</i> , No. 1:23-CV-16181-JFK (N.D. Ill. November 21, 2023)	1
<i>In re Gosteli</i> , 872 F.2d at 1010-11(Fed. Cir. 2014)	17
<i>Grunenthal GmbH v. Antecip Bioventures II LLC</i> , PGR2018-00001, Paper 17 (May 1, 2018)	14
<i>Interval Licensing LLC v. AOL</i> , 766 F.3d 1364 (Fed. Cir. 2014)	54
<i>Leapfrog Enters. Inc. v. Fisher-Price, Inc.</i> , 485 F.3d 1157 (Fed. Cir. 2007)	156
<i>LizardTech, Inc. v. Earth Res. Mapping, Inc.</i> , 424 F.3d 1336 (Fed Cir. 2005)	15
<i>Lockwood v. American Airlines, Inc.</i> , 107 F.3d at 1572 (Fed.Cir.1997)	15
<i>Nautilus, Inc. v. Biosig Instruments, Inc.</i> , 572 U.S. 898 (2014).....	54
<i>Newell Cos., Inc. v. Kenney Mfg. Co.</i> , 864 F.2d 757 (Fed. Cir. 1988)	156
<i>In re Nilssen</i> , 851 F.2d 1401 (Fed. Cir. 1988)	36
<i>Nippon Suisan Kaisha Ltd. v. Pronova Biopharma Norge AS</i> , PGR2017-00033, Paper 37 (January 16, 2019).....	54

TABLE OF AUTHORITIES (*cont'd*)

	Page No(s).
<i>In re Packard</i> , 751 F.3d 1307(Fed.Cir. 2014)	54
<i>Phillips v. AWH Corp.</i> , 415 F.3d 1303 (Fed. Cir. 2005) (en banc)	28
<i>PowerOasis, Inc. v. T-Mobile USA, Inc.</i> , 522 F.3d 1299 (Fed. Cir. 2008)	14, 17, 18
<i>Sexing Technologies</i> , PGR2015-00017, Paper 8	27
<i>Turbocare Div. of Demag Delaval Turbomachinery Corp. v. General Elec. Co.</i> , 264 F.3d 1111 (Fed. Cir. 2001)	50
<i>Unwired Planet, LLC v. Google Inc.</i> , 841 F.3d 995 (Fed. Cir. 2016)	35

OTHER AUTHORITIES

35 U.S.C. § 102	<i>passim</i>
35 U.S.C. § 103	34
35 U.S.C. § 112	34, 50
35 U.S.C. § 324	157
35 U.S.C. § 325	156
37 C.F.R. § 42.8	1, 2, 3
37 C.F.R. § 42.15	3
37 C.F.R. § 42.100	28

TABLE OF AUTHORITIES
(*cont'd*)

	Page No(s).
37 C.F.R. § 42.200	28
37 C.F.R. § 42.202	3
37 C.F.R. § 42.204	3
AIA.....	<i>passim</i>
Leahy-Smith America Invents Act	14

LIST OF EXHIBITS

Exhibit No.	Description
1001	U.S. Patent No. 11,781,703 to Massey
1002	Excerpts of Prosecution History of Application No. 17/959,202
1003	Declaration of John D. Pratt
1004	U.S. Patent Pub. No. US 2008/0237424 to Clary (“Clary”)
1005	U.S. Patent Pub. No. US 2012/0061543 to Juan (“Juan”)
1006	U.S. Patent Pub. No. US 2012/0033371 to Pankros et al. (“Pankros”)
1007	U.S. Provisional App. No. 61/381,298 to Juan (“Juan Provisional”)
1008	U.S. Provisional App. No. 61/370,945 to Pankros (“Pankros Provisional”)
1009	U.S. Provisional App. No. 61/396,850 to Massey
1010	U.S. Patent Application No. 13/118,297 to Massey
1011	U.S. Patent Application No. 15/489,596 to Massey
1012	U.S. Provisional App. No. 61/913,195 to Massey
1013	U.S. Patent Application No. 14/563,842 to Massey
1014	Curriculum Vitae of Dr. John D Pratt
1015	Certified English Translation of Japanese Patent Publication No. 2009-14047A to Tsuji (“Tsuji”)
1016	Japanese Patent Publication No. 2009-14047A to Tsuji
1017	Certified English Translation of Chinese Patent Publication No. 100411567C to Xu (“Xu”)
1018	Chinese Patent Publication No. 100411567C to Xu

Lumi Legend Corporation (“Petitioner”) requests post grant review (“PGR”) of claims 33-36 (“the challenged claims”) of U.S. Patent No. 11,781,703 (“the ’703 patent,” EX1001) assigned to Manehu Product Alliance, LLC (“Patent Owner”). For the reasons below, the challenged claims should be found unpatentable and cancelled.

**I. MANDATORY NOTICES, GROUNDS FOR STANDING,
AND FEE PAYMENT**

Pursuant to 37 C.F.R. §42.8(a), the mandatory notices identified in 37 C.F.R. § 42.8(b) are provided below as part of this Petition.

A. Real Party-In-Interest (37 C.F.R. §42.8(b)(1))

Petitioner identifies Lumi Legend Corporation as the real party in interest. Lumi Legend Corporation’s address is 22nd Floor, Building 1, Lisi Plaza, HuiFeng East Road, Shounan Subdistrict, YinZhou District, Ningbo, Zhejiang, China 315100. Lumi Legend Group Company is a parent company of Lumi Legend Corporation.

B. Related Matters (37 C.F.R. §42.8(b)(2))

The ’703 patent is the subject of a pending declaratory judgment action filed by CKNAPP Sales Inc., d/b/a VIVO in the Northern District of Illinois Eastern Division. *CKNAPP Sales Inc., d/b/a VIVO v. Manehu Product Alliance, LLC d/b/a MantelMount*, No. 1:23-CV-16181-JFK (N.D. Ill. November 21, 2023). Petitioner is not a party to this district court action.

According to the file history of the '703 patent, it relates to several patents and/or patent applications. The '703 patent purports to be a continuation of U.S. Application No. 16/924,551, filed on July 9, 2020 which issued as U.S. Patent No. 11,460,145, which is a continuation of application No. 16/370,854, filed on March 29, 2019 which was abandoned, which is a continuation of application No. 15/489,596, filed on April 17, 2017 which issued as U.S. Patent No. 10,281,080, which is a continuation-in-part of application No. 14/563,842, filed on December 8, 2014 which issued as U.S. Patent No. 9,625,091, and a continuation-in-part of application No. 14/229,780, filed on March 28, 2014 which issued as U.S. Patent No. 9,876,984, which is a continuation of application No. 13/118,297, filed on May 27, 2011 which issued as U.S. Patent No. 8,724,037.

C. Lead and Backup Counsel (37 C.F.R. §42.8(b)(3))

Petitioner provides the following designation of counsel, all of whom are included in Customer No. 20,995 identified in Petitioner's Power of Attorney.

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D. Service Information (37 C.F.R. §42.8(b)(4))

Please direct all correspondence to lead counsel and back-up counsel at the addresses shown above. Petitioner also consents to electronic service by email to BoxLumi98@knobbe.com.

E. Grounds for Standing (37 C.F.R. §42.204)

Petitioner certifies that the '703 patent is available for PGR and Petitioner is not barred or estopped from requesting PGR on the identified grounds.

As discussed below, the '703 patent is eligible for PGR because it has at least one claim that is not entitled to a pre-AIA filing date.

F. Time for Filing (37 C.F.R. §42.202)

The '703 patent issued on October 10, 2023. This Petition is being timely filed no later than the date that is nine months after the date of the grant of the '703 patent.

G. Payment of Fees (37 C.F.R. §42.15(a))

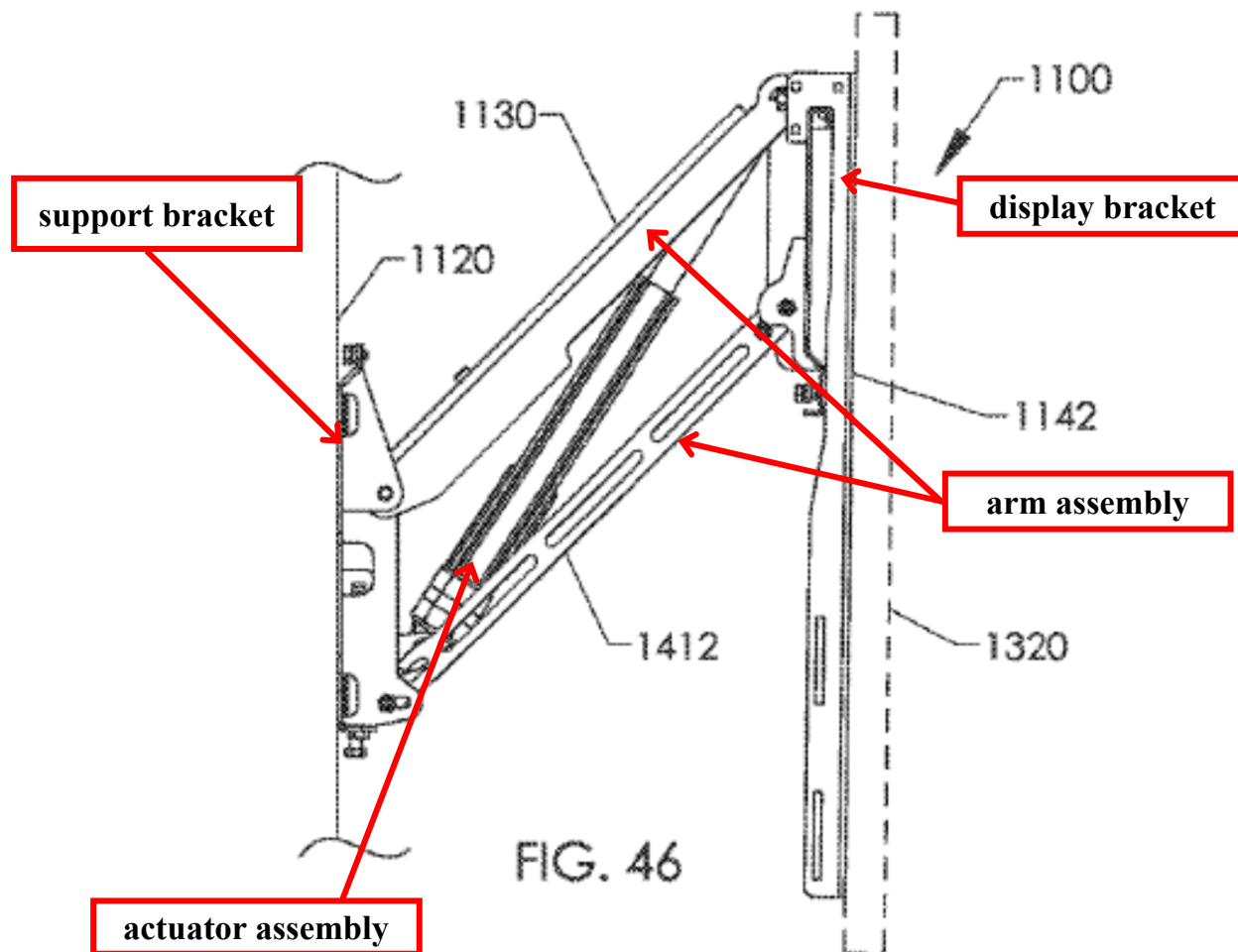
The PTO is authorized to charge any fees due during this proceeding to Deposit Account No. 11-1410. Review of 4 claims is requested. Payment for any additional fees due may be charged to the above-referenced Deposit Account.

II. INTRODUCTION

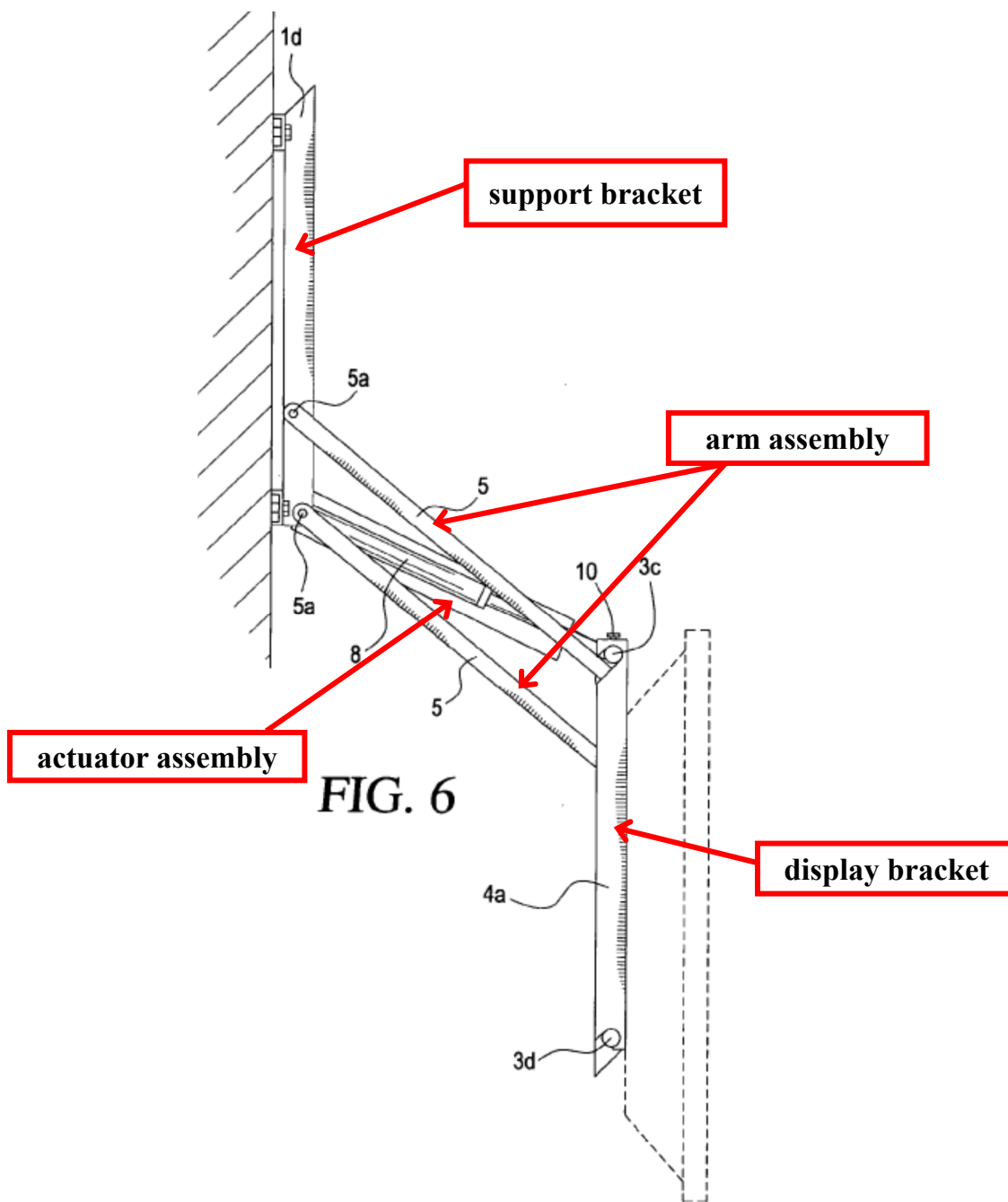
The '703 patent claims are directed to television mounting systems with four primary elements:

- a support bracket;
- a display bracket;
- an arm assembly; and
- a motorized actuator assembly.

Figures 41–55 from the '703 patent show a representative television mounting system. The relevant mounting system with these basic elements labeled is shown below (Figure 46).



These are common elements that were ubiquitous in television mounts before the alleged invention, as shown in Figure 6 of Clary below. Further, television mounting systems with the same features were used prior to the '703 patent for the same application of raising and lowering a television. Pankros and Tsuji are additional examples of prior art with this same television mount arrangement.



Apart from these basic components of an actuated television mount, the challenged claims recite only functional language, including “wherein at least a

portion of the motorized actuator assembly **moves toward and past a portion** of the lower arm when the arm assembly moves toward the raised configuration.” The ’703 patent specification fails to explain how these claimed functions occur in the disclosed embodiments. However, to the extent this functional language is somehow supported by the ’703 patent figures, it is similarly disclosed by the figures of the prior art references.

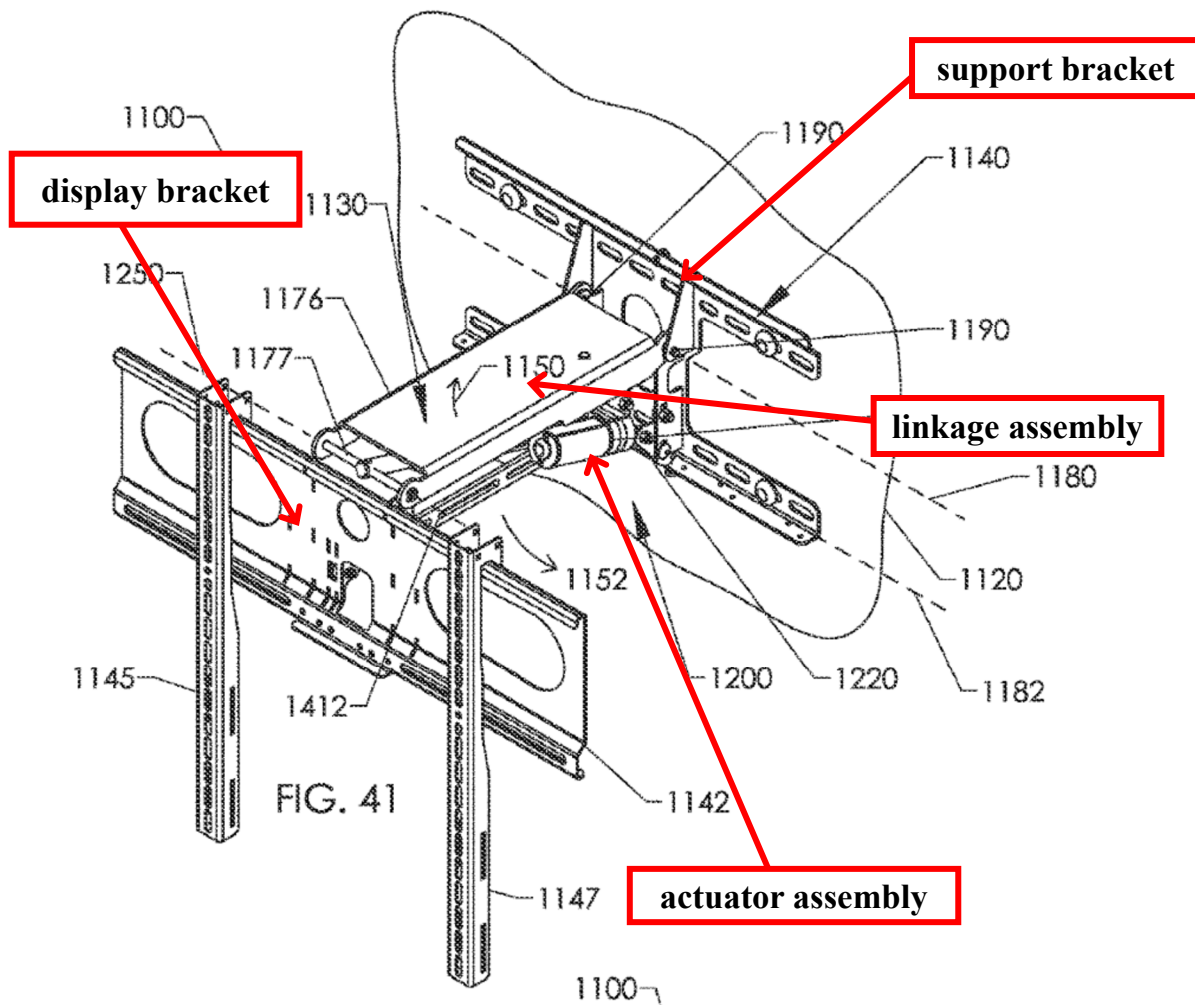
The challenged ’703 patent claims are anticipated by and would have been obvious in view of the prior art. Thus, the Board should cancel the challenged claims.

III. THE ’703 PATENT

The ’703 patent relates to mounting systems for mounting objects such as televisions to walls or structures. EX1001 at 1:30-33. In the relevant embodiments, the ’703 patent describes television mounting systems with a support bracket that mounts to the wall, a display bracket that connects to a television, and a linkage assembly between the brackets. EX1001 at 17:23–41, Figs. 41-55. The linkage assembly 1130 can be “rotatably coupled to the support and display brackets 1140, 1142 and can swing upwardly [] or downwardly” to move the television display up and down. *Id.* The linkage assembly 1130 can include a “main member or upper link 1176 [] and a lower link 1412.” *Id.* at 17:42–51. In some embodiments, the mounting system has an actuator assembly 1200 which can include a linear actuator

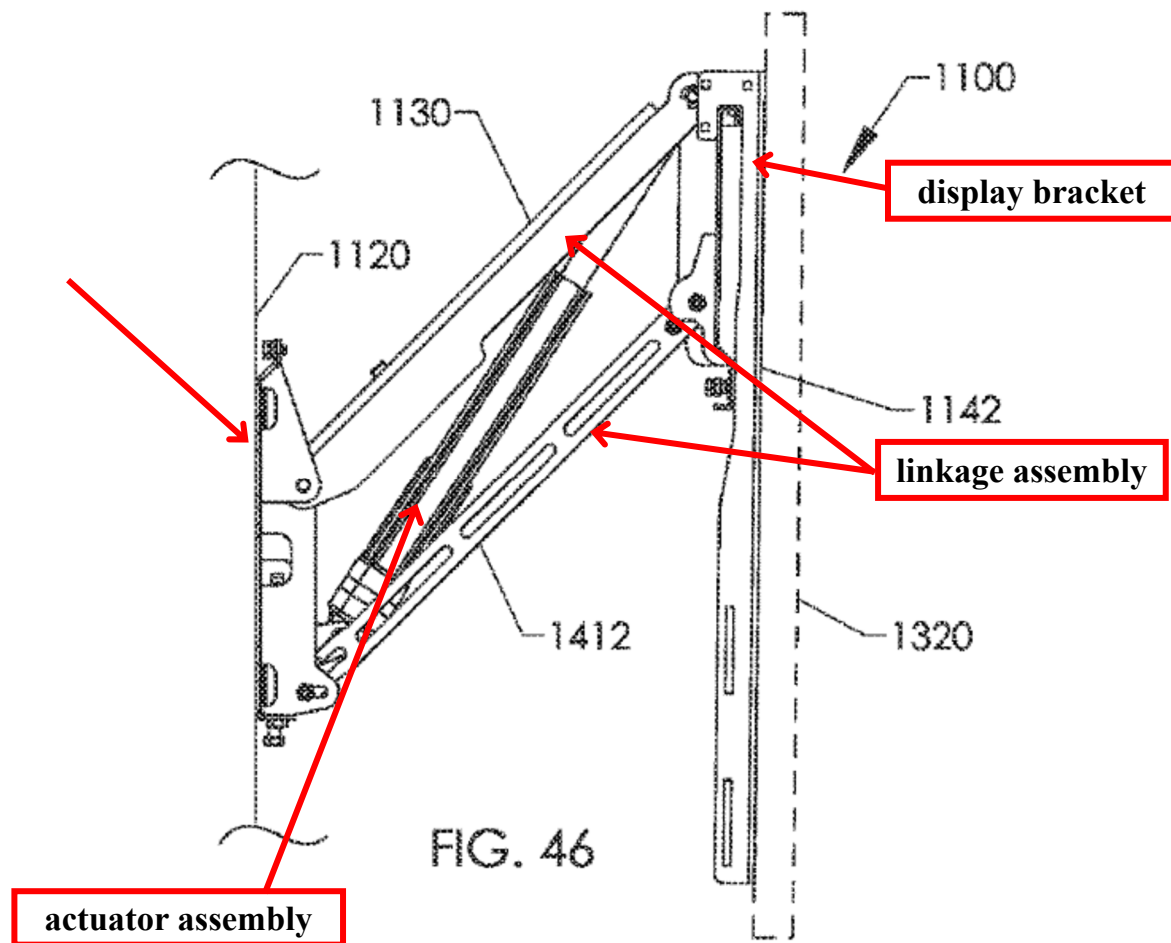
1218 and a motor 1244. *Id.* at 17:55–67. The linear actuator can be rotatably coupled to the support bracket 1140 and the display bracket 1142. *Id.*

Figure 41 of the '703 patent is annotated below with relevant labels from the specification.



EX1001, Fig. 41(annotated).

Figure 46 below shows a side view of the disclosed mounting system with the various elements annotated.



EX1001 at Fig. 46 (annotated).

A. Prosecution History

The Examiner issued two office actions during prosecution. In the first office action dated February 17, 2023, the Examiner issued a species election/restriction requirement, requiring the applicant to elect a single disclosed species for prosecution on the merits. EX1002 at 15. In an April 24, 2023 response, the applicant elected Species 6 (Figures 41-55) without traverse. *Id.* at 29. Applicant

stated that the pending claims, including the challenged claims, are readable on Species 6 (Figures 41-55) and should be examined together. *Id.*

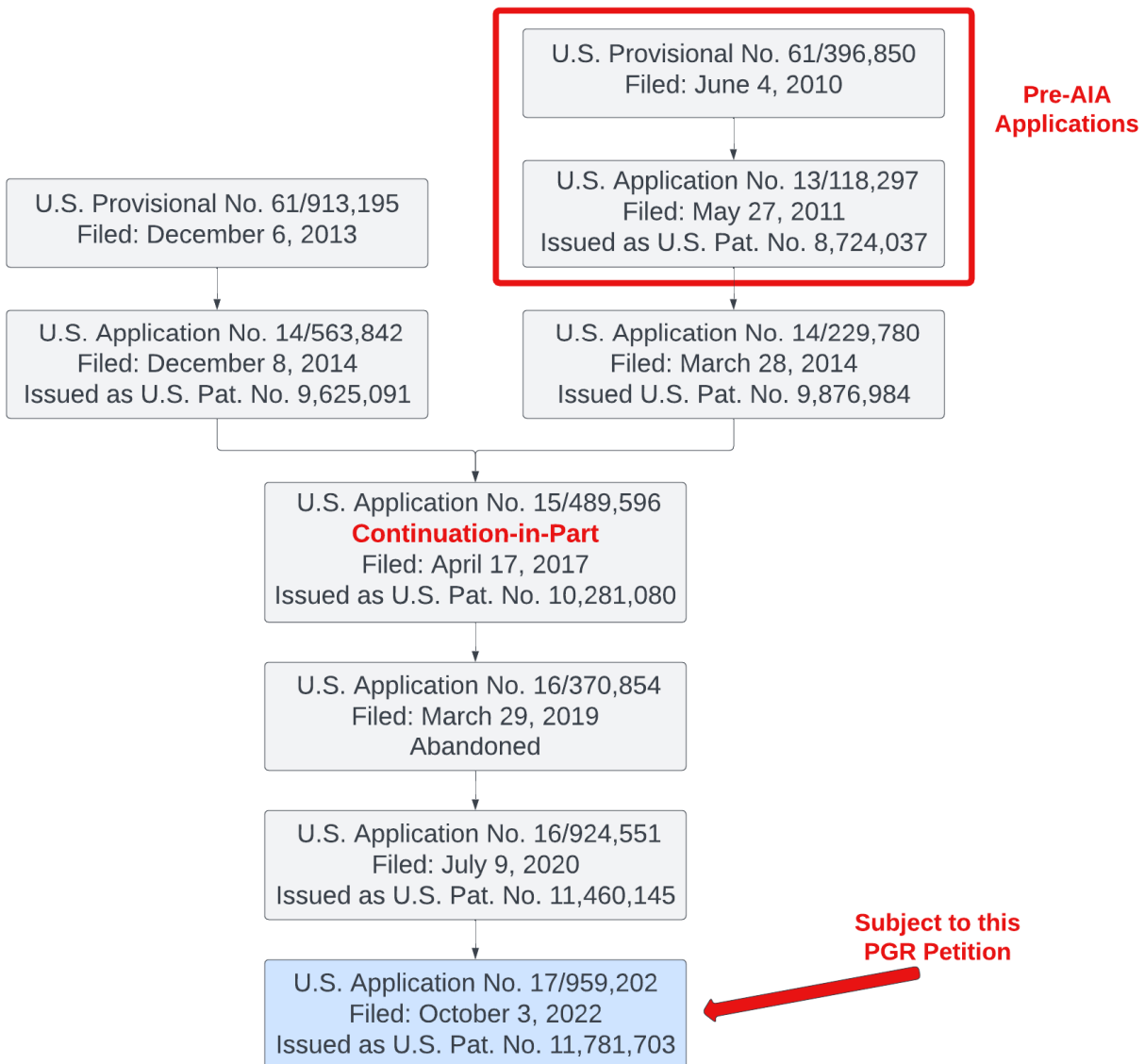
In the second office action dated June 8, 2023, the Examiner rejected some non-challenged claims for informalities but indicated that the challenged claims were allowable without amendment. *Id.* at 34-35. Thus, the challenged claims were allowed by the Examiner without any substantive amendments to those claims. In fact, the only amendment made to any of the challenged claims was to fix a typo (“arm”) in issued claim 34. *Id.* at 46.

In the Notice of Allowance dated August 31, 2023, the Examiner stated that the “restriction requirement is hereby withdrawn as to any claim that requires all the limitations of an allowable claim.” EX1002 at 54.

B. Priority

The ’703 patent is a continuation of U.S. Application No. 16/924,551, filed on July 9, 2020, which is a continuation of application No. 16/370,854, filed on March 29, 2019, which is a continuation of application No. 15/489,596, filed on April 17, 2017, which is a **continuation-in-part** of application No. 14/563,842, filed on December 8, 2014, and a **continuation-in-part** of application No. 14/229,780, filed on March 28, 2014, which is a continuation of application No. 13/118,297, filed on May 27, 2011. Below is an illustration of the purported priority chain. EX1001 at 1.

PGR Petition – Patent 11,781,703
Lumi Legend v. Manchu Product Alliance



The challenged claims are not entitled to priority or an effective filing date before the '596 CIP Application. The earliest provisional application No. 61/396,850 does not mention or disclose an actuator, among other limitations of the

challenged claims. *See* EX1009; EX1003 ¶¶ 29-30. Thus, it fails to provide support for the challenged claims and cannot serve as priority for the challenged claims. *Id.*

Application No. 13/118,297, filed on May 27, 2011, was the first claimed priority document to include disclosure of a mounting system that includes an actuator. EX1010. However, the disclosure of an actuator in the '297 application is limited to only a single figure showing a system with an actuator (Figure 28) and a single sentence that states an actuator raises and lowers the television. *Id.* at 18 (Fig. 28) and 37-38. The '297 application fails to disclose the claimed configuration and movement of an actuator assembly relative to other parts of the claimed mounting system. EX1003 ¶ 31. For example, claim 33 recites “a motorized actuator assembly having a support bracket end rotatably couple to the support bracket and a display bracket end rotatably couple to the arm assembly.” The '297 application does not describe the structure of an actuator assembly, nor does it disclose how the actuator 730 is coupled to the mounting system or arm assembly. *Id.* Challenged claim 33 also recites “wherein at least a portion of the motorized actuator assembly moves toward and past a portion of the lower arm when the arm assembly moves toward the raised configuration.” The '297 application fails to disclose or describe any movement of the actuator assembly relative to other parts of the mounting system. In fact, the term “actuator assembly” cannot be found in the '297 application. The only figure showing an actuator (Figure 28) is not described as any

specific position and there is no description of an arm assembly with the actuator 730 in a raised configuration or a lowered configuration. EX1010; EX1003 ¶ 31. As such, the '297 application fails to disclose at least the movement of the actuator assembly as well as any raised or lowered configurations. *Id.* Thus, the challenged claims are not entitled to the filing date of the '297 application.

Provisional Application 61/913,195 and Application No. 14/563,842 have the same minimal disclosure of an actuator as the '297 application. *See* EX1012 and EX1013. Thus, the challenged claims are not entitled to the priority date of these applications for the same reasons provided above. EX1003 ¶ 32.

As explained in the previous section, the applicant of the '703 patent made it clear during prosecution that the disclosure corresponding to the challenged claims was not added to the priority chain until Application No. 15/489,596 (“the '596 CIP Application”) was filed on April 17, 2017. EX1003 ¶ 33. The previous priority applications did not include the species 6 (Figures 41-55) elected by the applicant during prosecution of the '703 patent. The applicant admitted that the challenged claims correspond to these new Figures 41-55. EX1002 at 29. The elected species figures and pages of new description relating to those new embodiments directed to the actuator assembly were not included in any priority application until the '596 CIP Application was filed on April 17, 2017. EX1003 ¶ 33.

Moreover, for all the reasons provided in the next section (Section IV), the '703 patent is subject to the first inventor to file provisions of the AIA and is not entitled to an effective filing date prior to March 16, 2013. This further confirms that the '703 patent's claims have an earliest possible effective filing date of April 17, 2017.

Therefore, the earliest effective filing/priority date for the challenged claims of the '703 patent is April 17, 2017. However, the prior art applied in this Petition also qualifies as prior art to the earlier related applications such as the '297 Application which was filed on May 27, 2011.

IV. THE '703 PATENT IS ELIGIBLE FOR PGR

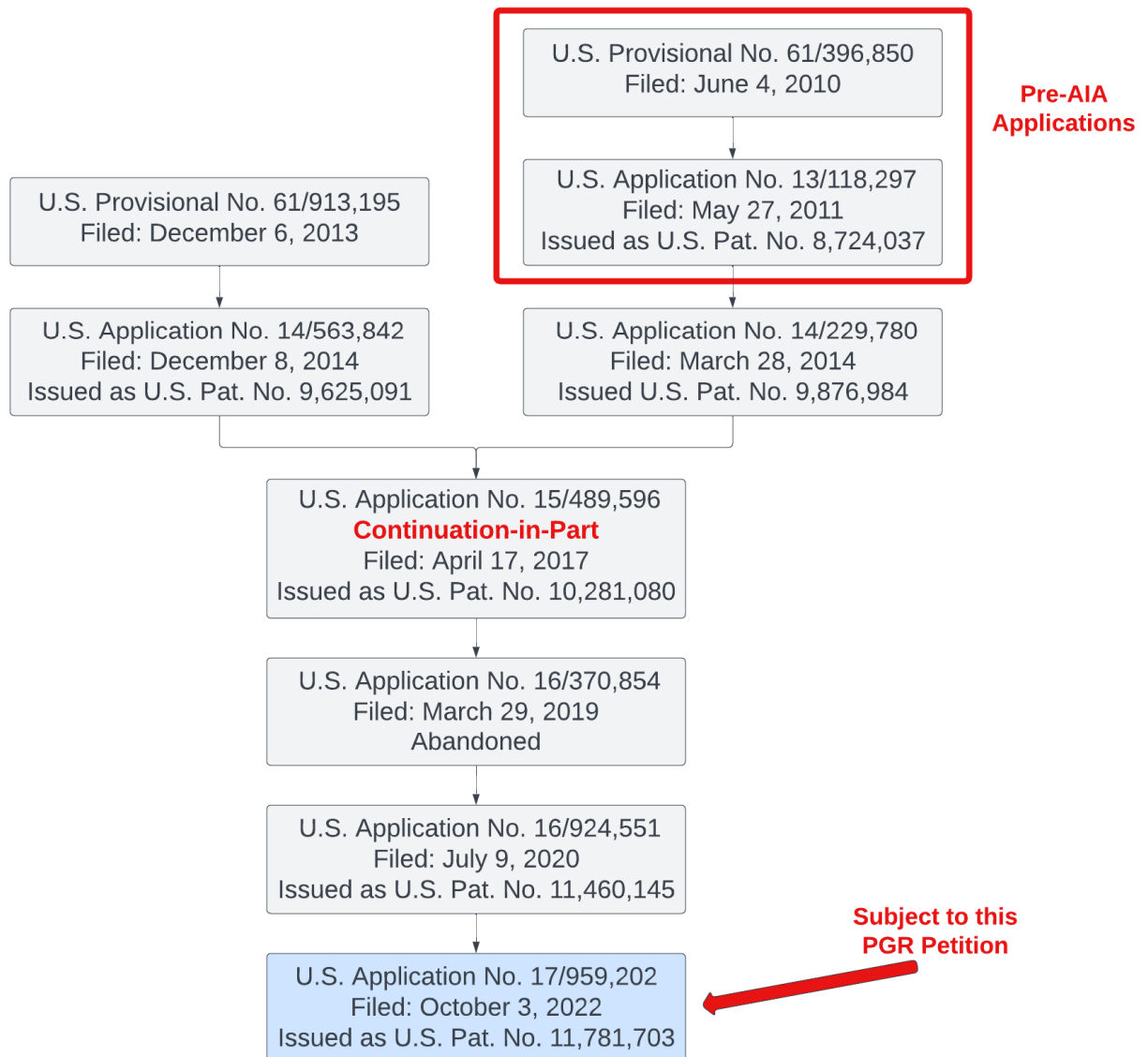
The PGR provisions of the Leahy-Smith America Invents Act ("AIA") apply to patents subject to the first inventor to file provisions of the AIA, i.e., patents having at least one claim with an effective filing date on or after March 16, 2013. *Grunenthal GmbH v. Antecip Bioventures II LLC*, PGR2018-00001, Paper 17 at 9-10 (May 1, 2018). A claim is entitled to the benefit of the filing date of an earlier application if the subject matter of the claim is disclosed in the earlier application in accordance with the written description requirement. *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1306 (Fed. Cir. 2008).

To comply with the written description requirement, the specification or earlier-filed application "must describe the invention sufficiently to convey to a

person of skill in the art that the patentee had possession of the claimed invention at the time of the application.” *LizardTech, Inc. v. Earth Res. Mapping, Inc.*, 424 F.3d 1336, 1345 (Fed Cir. 2005). Whether the added subject matter is an obvious variant of the disclosed subject matter is irrelevant. *Lockwood*, 107 F.3d at 1572.

The '703 patent relates to several patents and/or patent applications, as shown in the purported priority chain illustrated below:

PGR Petition – Patent 11,781,703
Lumi Legend v. Manchu Product Alliance



As the above chart shows, the '703 patent relates to two pre-AIA applications filed before March 16, 2013, namely U.S. Provisional Application 61/396,850 ("the '850 Provisional," EX1009) and U.S. Patent Application No. 13/118,297 ("the '297 Application," EX1010).

The '703 patent is eligible for PGR because it has at least one claim that is not entitled to the filing date of either the '850 Provisional or the '297 Application (“the pre-AIA applications”). As specific examples, at least claims 8, 14, 25, and 26 of the '703 patent include subject matter that is not disclosed in the pre-AIA applications, as explained below. Thus, these claims are not entitled to the filing date of either of the pre-AIA applications and thus are not entitled to a pre-March 16, 2013 filing date. *PowerOasis, Inc.*, 522 F.3d at 1306; *In re Gosteli*, 872 F.2d at 1010-11. (EX1003 ¶ 36.) Accordingly, the '703 patent is eligible for PGR.

A. The Figures and Description Corresponding to the Challenged Claims Were Not Added Until the 2017 CIP Application

All the claims of the '703 patent include an “actuator assembly” that moves in specific ways relative to the linkage arm assembly. EX1001 at 22:51—26:53. Neither of the pre-AIA applications provide support for the claimed configurations and movements of the actuator assembly. The '850 Provisional does not even mention an actuator or actuator assembly, let alone how it would be used in the mounting system. EX1009. Rather, the '850 Provisional merely discloses manually operated mounting system with linkages (2, 4) and a counterbalance system (8), without any actuator or actuator assembly. EX1009 at 4-5, 7-9; EX1003 ¶ 37.

The other pre-AIA application, the '297 Application, also fails to support the claimed actuator assembly features. EX1003 ¶¶ 38-39. The '297 Application does not refer to an “actuator assembly” and includes only a single reference to a

“motorized actuator 730.” EX1010 at 37. The ’297 Application also includes a single figure (Figure 28) identifying a motorized actuator 730 within a mounting system. EX1010 at 18. But the ’297 Application fails to provide any support relating to the specific claimed actuator assembly coupling configurations or movement relative to the other portions of the mounting system, as described in further detail below.

The ’703 patent claims priority to the ’596 CIP Application, which was filed on April 17, 2017 and included at least 15 new figures relating to a television mounting system with an actuator assembly and the relative movement of the actuator assembly in various different positions. EX1011 at 69-83. These new figures include Figures 41-55. The ’596 CIP Application also added many new pages of description, corresponding to the new actuator assembly figures. EX1011 at [0136]-[0150]. Because the ’703 patent claims priority to a CIP filed after the pre-AIA applications, there is no presumption that the ’703 patent claims are entitled to an effective filing date earlier than the CIP application (April 17, 2017). *PowerOasis, Inc. v. T-Mobile USA, Inc.*, 522 F.3d 1299, 1303-1305 (Fed. Cir. 2008). Also, if Patent Owner alleges that the ’703 patent is not eligible for PGR, then the burden of proof should rest on Patent Owner to prove that all the ’703 patent claims are entitled to an effective filing date before the CIP filing date. *Id.* As discussed in the following sections, Patent Owner cannot meet this burden.

Moreover, the Examiner repeatedly notified the applicant during prosecution of the '703 patent that the application was being examined under the first inventor to file provisions of the AIA. *See* EX1002 at 15, 34, 54 (see example below).

Notice of Pre-AIA or AIA Status

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

The applicant did not dispute these AIA notices and the application proceeded to allowance and issuance under the provisions of the AIA. *Id.*

The applicant also admitted during prosecution of the '703 patent that the claims correspond to the newly added CIP Figures 41-55, as explained above in Section III. EX1002 at 29. The applicant stated that the pending claims, many of which issued without amendment, are readable on Species 6 (CIP Figures 41-55). *Id.*

Therefore, the earliest potential support for the '703 patent claims was added to the priority chain in an April 2017 CIP application, including more than fifteen new figures and several pages of new disclosure relating to embodiments having an actuator assembly. EX1003 ¶ 40.

B. The Pre-AIA Applications Do Not Support the Actuator Assembly Movement and Positioning Features Recited in Claims 8 and 26

Claim 8 of the '703 patent recites “wherein at least a portion of the motorized actuator assembly moves forwardly past a portion of the lower arm in a direction toward the display bracket when the linkage assembly moves toward a raised configuration, wherein the portion of the motorized actuator assembly is positioned vertically between the upper arm and the lower arm when the linkage assembly is in a lowered configuration”

Claim 26 of the '703 patent recites “a motorized actuator assembly having a portion that moves outwardly past a side of a lower arm of the arm assembly in a direction away from the support bracket while the display bracket moves to a raised position”

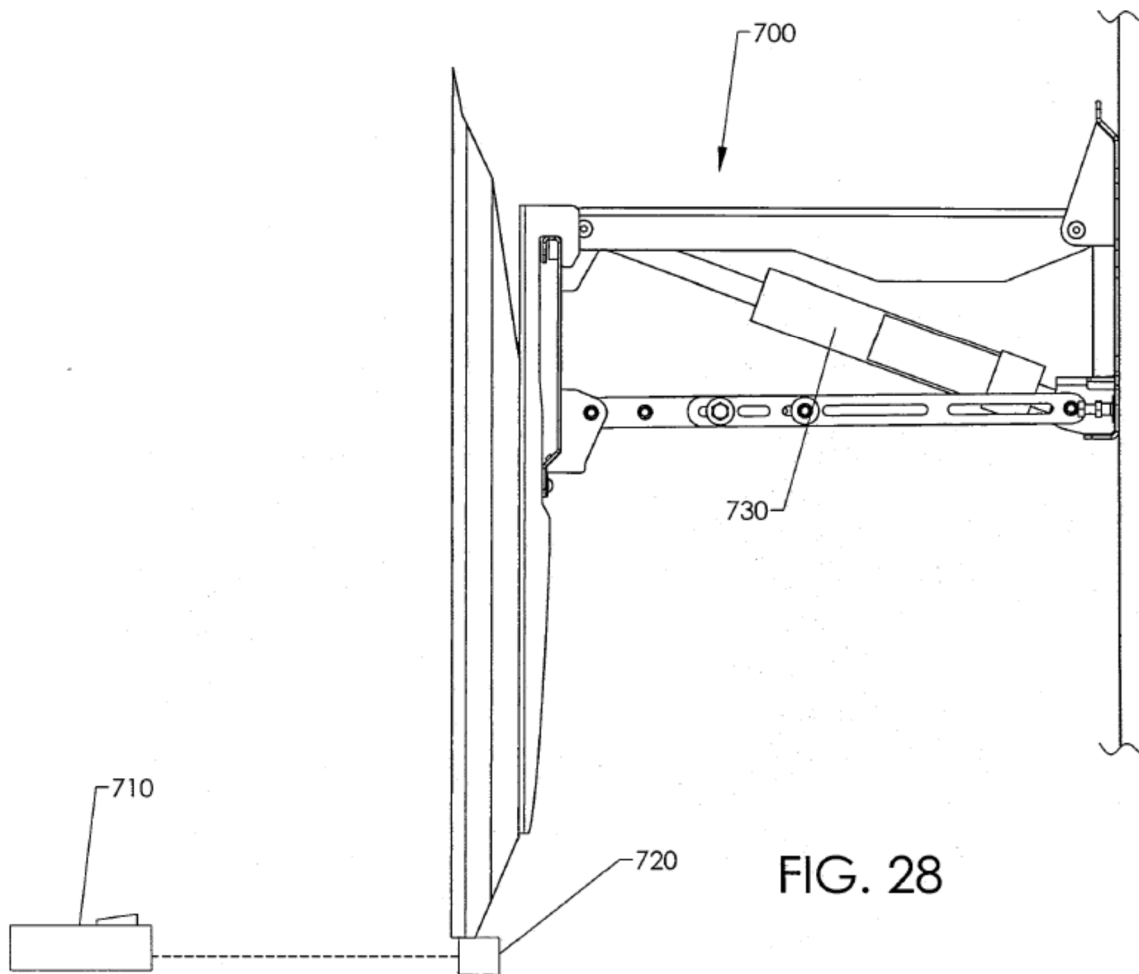
As explained in the previous section, the '850 Provisional does not disclose an actuator assembly or a television mounting system with an actuator. Thus, it provides no support for these claim features. EX1003 ¶¶ 41-43.

The '297 Application also fails to support these claim features. It does not refer to an “actuator assembly” and includes only a **single** mention of the word “actuator” in a single sentence, namely a “motorized actuator 730 raises and lowers the television.” EX1010 at 37. The '297 specification fails to describe any specific movement of actuator 730, much less movement of specific portions of the actuator assembly relative to the linkage arms or brackets. *Id.*; EX1003 ¶ 44. The

specification does not say anything about position of the actuator 730 within the system or how it is coupled to the other parts of the system. *Id.* Instead, the '297 Application merely states that there is a motorized actuator 730 and then moves on to use the rest of the three paragraphs relating to Figure 28 to describe the electronic controlling and programming of the mounting system. EX1010 at 37-38. There is no description of any portion of the actuator assembly, let alone a portion that moves forwardly or outwardly past a lower arm. EX1003 ¶ 44.

The only figure in the '297 Application that includes an actuator (Figure 28) does not illustrate movement, nor does it correspond to a raised configuration or a lowered configuration, as shown below. EX1010 at 18. Although the position or configuration of the system in Figure 28 is not described, it is very different from Figures 19 and 23 which purport to show the raised (stowed) and lowered configurations of different mounting system embodiments. EX1010 at 12 and 14. Thus, a POSITA would have understood that Figure 28 shows neither the lowered position nor the raised position. EX1003 ¶ 45. There is no identification of any portion of the actuator assembly that might have the claimed movement forwardly or outwardly past a lower arm when moving toward the raised or lowered configuration. *Id.* This single Figure 28 in the '297 Application is in stark contrast to the numerous figures added in the '596 Application which were undoubtedly

added in 2017 to show the movement and relative position of an actuator assembly in more than seven different positions. EX1011 at 69-76; EX1003 ¶ 45.



Therefore, the '297 Application's single figure identifying an actuator 730 and its single high-level mention of an actuator in the specification do not support the specific actuator assembly movement and positioning features recited in claims 8 and 26. EX1003 ¶ 46.

C. The Pre-AIA Applications Do Not Support the “Spaced Vertically Apart” and “Vertically Between” Features Recited in Claims 14 and 25

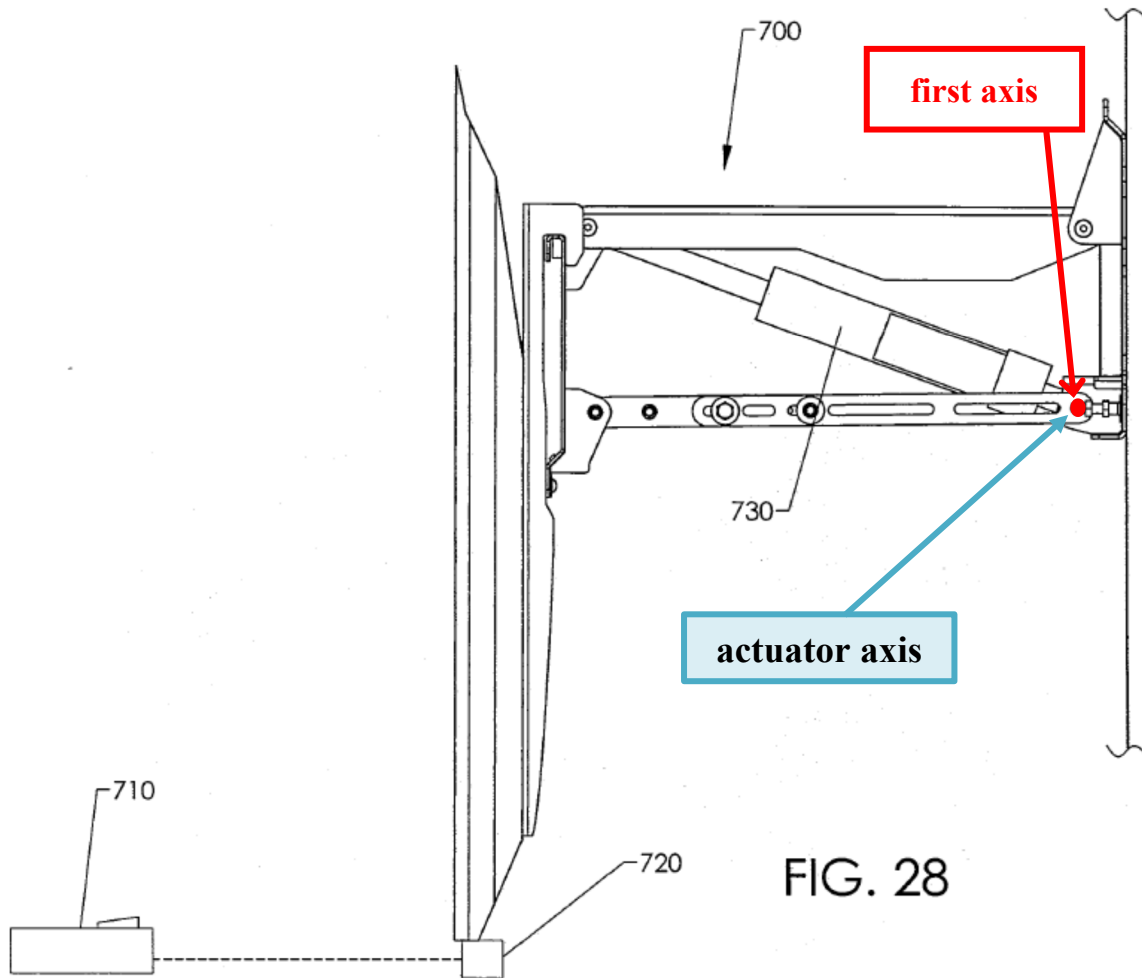
Claim 14 recites “wherein the lower arm is rotatable about a first axis of rotation and a second axis of rotation, wherein the motorized actuator assembly is rotatable about an actuator axis of rotation relative to the support bracket, wherein the **actuator axis of rotation is spaced vertically apart from the first axis of rotation.**”

Claim 25 recites “further comprising a pivot rotatably coupling an end of the motorized actuator assembly to the support bracket, wherein the **pivot is positioned vertically between upper and lower support bracket pivots** about which components of the linkage assembly rotate relative to the support bracket when the support bracket is coupled to a vertical wall.”

As explained in the previous section, the ’850 Provisional provides no support for an actuator assembly or these claim features. EX1003 ¶¶ 47-49.

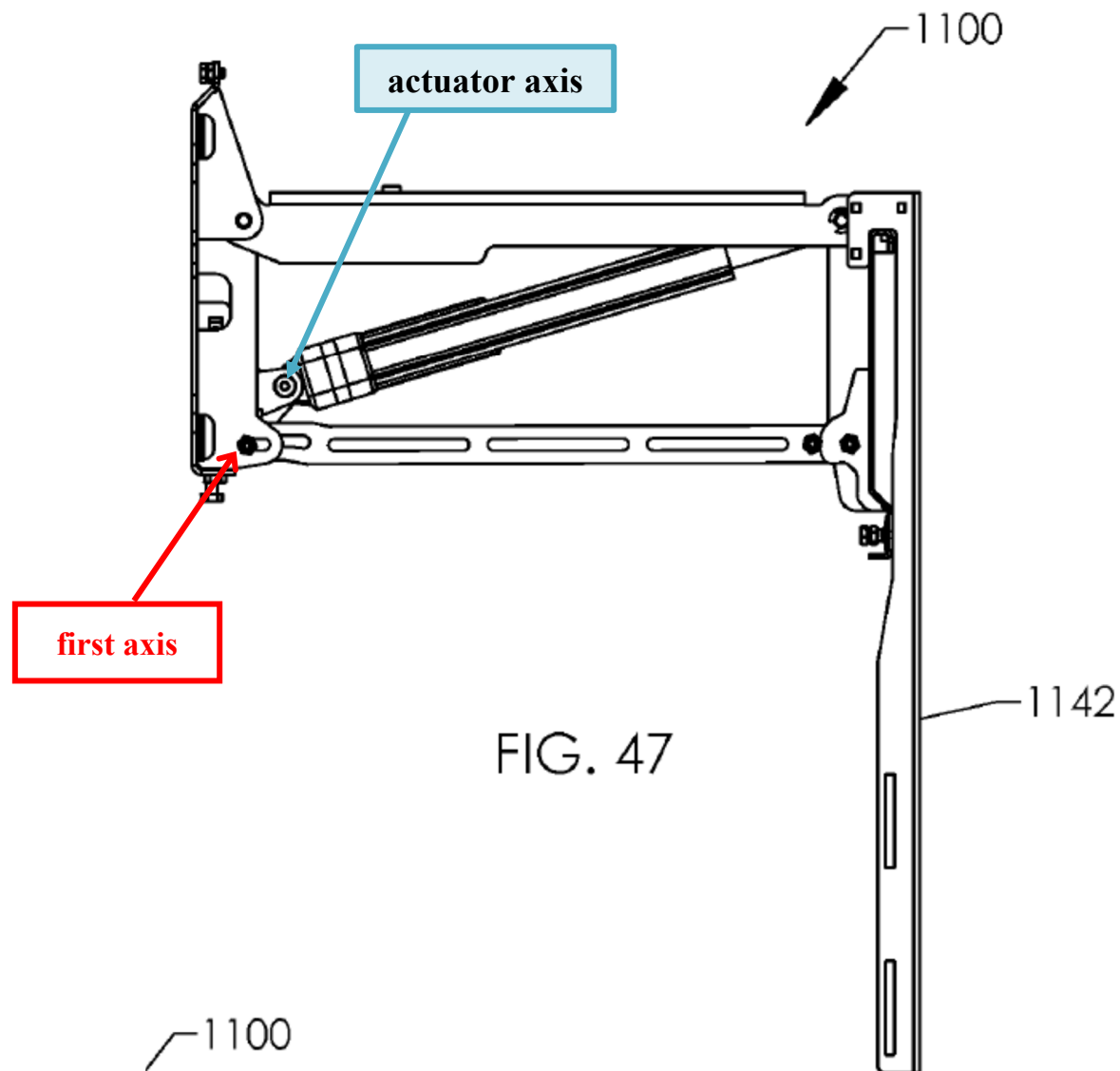
The ’297 Application also fails to support these claim features. EX1003 ¶ 50-51. As discussed in the previous section, the ’297 Application includes only a **single** reference to an actuator and does not say anything about position of the actuator 730 within the system or how it is coupled to the other parts of the system. EX1010 at 37. The ’297 Application does not describe any actuator axis or pivot. EX1003 ¶ 50-51. There is no written description of any portion of the actuator assembly, let alone a portion that is rotatably coupled to the mounting system. *Id.*

Figure 28 of the '297 Application also fails to support these actuator axis/pivot positioning features. EX1010 at 18. Claims 14 and 25 recite that the actuator axis/pivot is “spaced vertically apart from the first axis” and “positioned vertically between upper and lower support bracket pivots.” In contrast, Figure 28 shows a rotatable coupling axis of the actuator 730 to the support bracket that is **aligned** with the lower arm’s first axis of rotation, **not spaced apart**. EX1003 ¶ 51. Figure 28’s actuator pivot is **aligned** with the lower support bracket pivot, **not positioned vertically between the upper and lower support bracket pivots**, as shown in Figure 28 below. *Id.* Thus, the '297 Application teaches the opposite of the actuator axis/pivot features in claims 14 and 25. *Id.* The '297 Application has no other disclosure relating to the axis or rotation of an actuator assembly. *Id.* For at least these reasons, the disclosure of the '297 Application fails to meet the written description requirements for claims 14 and 25. *Id.*



EX1010 at 18 (Figure 28); EX1003 ¶ 52.

In contrast, the later filed '596 CIP Application of 2017 includes several figures in which the actuator axis/pivot appears to be spaced apart vertically from the lower arm's first axis of rotation, as shown below. EX1003 ¶ 53.



EX1011 at 71 (Figure 47).

Thus, support for a vertically spaced actuator axis was not added until the '596 CIP Application in 2017 with its more than 30 new figures and many pages of new matter. EX1003 ¶ 54; EX1011 at 28-42.

Therefore, neither of the two pre-AIA applications convey to a POSITA that the named inventor had possession of the actuator assembly features recited in claims 8, 14, 25 and 26 at the relevant time. EX1003 ¶ 55.

D. AIA Applicability

The '703 patent is eligible for PGR. As discussed above, at least claims 8, 14, 25 and 26 of the '703 patent include subject matter not disclosed by an application filed before March 16, 2013. Therefore, every claim of the '703 patent is subject to the first-to-file provisions of AIA 35 U.S.C. § 102(a). *See Inguran, LLC d/b/a/ Sexing Technologies*, PGR2015-00017, Paper 8 (Institution Decision) at 9-11.

V. LEVEL OF ORDINARY SKILL

The invention of the '703 patent relates to mounting systems, including adjustable mounting systems for mounting objects to structures. EX1001 at 1:30–33. A hypothetical person of ordinary skill (“POSITA”) would have had at least a bachelor's degree in mechanical engineering, electrical engineering, or similar technical degree and at least 2 years of experience in the field of mechanical design or relevant product design experience. EX1003 ¶¶ 56-58. For individuals with different educational backgrounds, a person could still be of ordinary skill in the art provided that person's additional experience compensates for any differences in that person's education as stated above. *Id.*

This Petition does not turn on this specific definition. The claims are anticipated and would have been obvious from the perspective of any reasonable definition of a POSITA. *Id.*

VI. CLAIM CONSTRUCTION

For the purposes of this PGR, the Board construes the claims “using the same claim construction standard that would be used” in district court. 37 C.F.R. § 42.100. In a post grant review, claims are construed in accordance with the ordinary and customary meaning. 37 C.F.R. § 42.200(b). In the case that “the specification . . . reveal[s] a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess . . . the inventor’s lexicography governs.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (en banc).

A. “at least a portion of the motorized actuator assembly moves toward and past a portion of the lower arm when the arm assembly moves toward the raised configuration”

Claim 33 recites “wherein at least a portion of the motorized actuator assembly moves toward and past a portion of the lower arm when the arm assembly moves toward the raised configuration.”

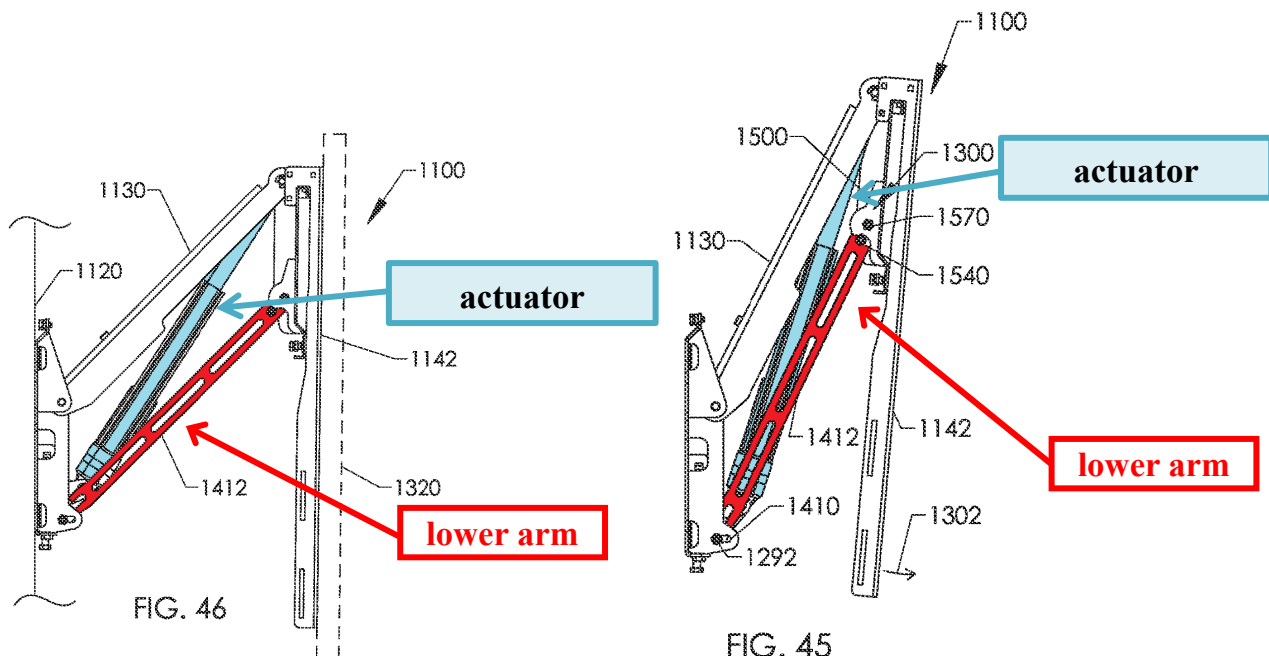
The ’703 patent does not provide any description of such movement of the actuator assembly during raising. *See* EX1001; EX1003 ¶¶ 59-61. Nor does it describe how the actuator assembly can move toward and past a portion of the lower arm. This relative movement of parts is only mentioned in the claims. *Id.* However,

Figures 41–48 provide some illustration of the movement of a mounting system embodiment, including the actuator assembly 1200 from the lowered position to the raised position. EX1001 at Figs. 41-48; EX1003 ¶ 61.

During prosecution of the '703 patent, Patent Owner asserted that issued claim 33 (pending claim 59) and all the challenged claims are readable on Figures 41–55. EX1002 at 29. Thus, according to Patent Owner, the mounting system embodiment shown in Figures 41–55 is covered by the challenged claims and includes the “moves toward and past a portion” limitation.

As illustrated in annotated Figures 45 and 46 below, the actuator assembly and the lower arm move relative to one another as the arm assembly moves toward the raised configuration. EX1003 at ¶¶ 62-63. Figures 41–48 suggest that the actuator assembly rotates upward in a direction away from the lower arm, but the lower arm also rotates upward in a direction toward the actuator assembly as they move toward the raised position. *Id.* Although the actuator assembly might be moving in a direction away from the lower arm (not toward) when the arm assembly is being raised, there is relative movement between the lower arm and actuator assembly that causes the lower arm and a portion of the actuator assembly to get closer to one another and move past one another. *Id.* In this manner, the actuator assembly moves relative to and *gets closer to* the lower arm as the arm assembly move toward the raised configuration. *Id.* Thus, the “moves toward and past”

language of this limitation must include relative movement of the lower arm and actuator assembly in which the lower arm moves toward and past at least a portion of the motorized actuator assembly, even if the actuator assembly is moving in a direction away from the lower arm, as illustrated in Figures 41–48. *Id.* A POSITA would have understood that the claimed movement is not limited to movement of the portion of the actuator assembly in a forward/downward direction toward the first arm, but rather it includes movement of the lower arm toward the actuator assembly which causes these parts to get closer and pass one another. *Id.* Thus, this limitation should be construed as including systems wherein at least a portion of the motorized actuator assembly gets closer to and past a portion of the lower arm when the arm assembly moves toward the raised configuration. *Id.*



As described herein, the claims are unpatentable as anticipated and/or obvious under any reasonable construction of this term. EX1003 ¶ 64.

B. “wherein the portion of the motorized actuator assembly moves away from and is vertically spaced apart from the lower arm when the arm assembly is in the lowered configuration”

Dependent claim 34 recites “wherein the portion of the motorized actuator assembly moves away from and is vertically spaced apart from the lower arm when the arm assembly is in the lowered configuration.”

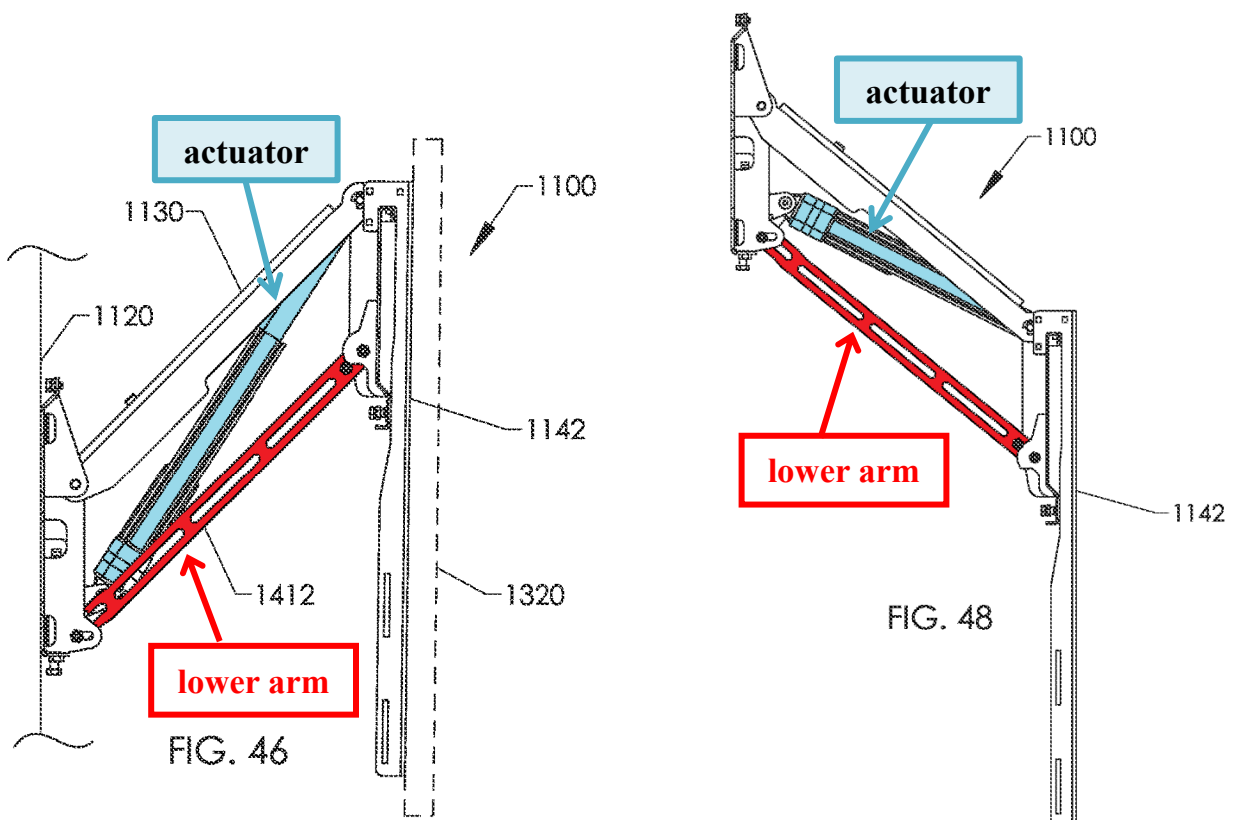
Similar to the limitation in the previous section, the ’703 patent does not describe this claimed movement of the actuator assembly when the arm assembly is in the lowered configuration. EX1003 at ¶¶ 65-66. In fact, a POSITA would have understood that there can be no movement of the actuator assembly or the lower arm “when the arm assembly is in the lowered configuration.” *Id.* The components of the system would not be moving when in the lowered configuration. *Id.* Nor does the specification describe how a portion of the actuator assembly can move away from the lower arm when in the lowered configuration. *Id.*; EX1001. This language and movement are only mentioned in the claims. However, Figures 41–48 provide some illustration of the movement of a relevant mounting system embodiment, including the actuator assembly 1200 from the raised position to the lowered position. EX1003 ¶ 66.

As explained in the previous section, during prosecution of the '703 patent, Patent Owner asserted that issued claim 33 (pending claim 59) and all the challenged claims are “readable on Species 6” which corresponds to Figures 41–55. EX1002 at 29.

As illustrated in annotated Figures 46 and 48 below, the actuator assembly and the lower arm move relative to one another as the arm assembly moves toward the lowered configuration. EX1003, ¶ 67. Figures 41–48 suggest that the actuator assembly rotates downward in a direction toward the lower arm, but the lower arm also rotates downward in a direction away from the actuator assembly. *Id.* Although the actuator assembly might be moving in a direction that is toward the lower arm (not away from it) when the arm assembly is being lowered, there is relative movement between the lower arm and actuator assembly that causes the lower arm and the portion of the actuator assembly to get further from one another. *Id.* In this manner, the actuator assembly gets further away from the lower arm as the arm assembly moves toward the lowered configuration. *Id.* Thus, the “moves away from” language of this limitation must include relative movement of the lower arm and actuator assembly in which the lower arm gets further away from at least a portion of the motorized actuator assembly, as illustrated in Figures 41–48. *Id.* The claimed movement is not limited to movement of the portion of the actuator assembly in an upward direction away from the lower arm, but rather it includes

movement of the lower arm away from the actuator assembly which causes relative movement between these parts, causing the portion of the actuator assembly to get further away from the lower arm, as illustrated in the figures. *Id.*; EX1001 at Figs. 41-48.

Thus, this limitation should be construed to include systems wherein the portion of the motorized actuator assembly gets further away from (or is further away from) and is vertically spaced apart from the lower arm when the arm assembly is in the lowered configuration. EX1003 ¶¶ 68-69.



As described herein, the claims are unpatentable as anticipated and obvious under any reasonable construction of this term. *Id.*

VII. PRECISE RELIEF REQUESTED AND GROUNDS RAISED

A. Statutory Grounds for Cancellation

Petitioner requests review and cancellation of claims 33–36 (“challenged claims”) of the ’703 patent as unpatentable. EX1003 ¶ 70.

PGR is requested for the following grounds of unpatentability:

Ground 1: Claim 36 is unpatentable under AIA 35 U.S.C. § 112(a) as failing to satisfy the written description requirement.

Ground 2: Claim 36 is unpatentable under AIA 35 U.S.C. § 112(b) as failing to particularly point out and distinctly claim the subject matter which the named inventor regards as the invention.

Ground 3: Claims 33–36 are unpatentable under AIA 35 U.S.C. § 102(a) as being anticipated by Clary.

Ground 4: Claims 33–36 are unpatentable as obvious under AIA 35 U.S.C. § 103 over Clary in view of Tsuji and the general knowledge of a POSITA.

Ground 5: Claims 33–36 are unpatentable under AIA 35 U.S.C. § 102(a) as being anticipated by Pankros.

Ground 6: Claims 33–36 are unpatentable as obvious under AIA 35 U.S.C. § 103 over Pankros in view of Clary and the general knowledge of a POSITA.

The '703 patent issued from an application filed October 3, 2022, which claims priority through a number of applications back to provisional applications filed in 2010 and 2013. EX1001 at 1:6-27. As explained above in Sections III and IV, the challenged claims of the '703 patent are subject to the first-to-file provisions of the AIA.

The Petition is supported by the expert declaration of John D. Pratt, EX1003 at ¶¶ 1-211.

B. Status of References as Prior Art

The following references are prior art to the challenged claims:

Ex.	Reference	Date	Art Type
1004	Clary	Published: October 2, 2008	§102(a)(1)
1005	Juan	Published: March 15, 2012	§102(a)(1)
1006	Pankros	Published: February 9, 2012	§102(a)(1)
1015	Tsuji	Published: January 22, 2009	§102(a)(1)
1017	Xu	Published August 20, 2008	§102(a)(1)

These references constitute analogous art because they are from the same field of endeavor as the '703 patent, e.g. mounting systems for televisions or other objects. *Unwired Planet, LLC v. Google Inc.*, 841 F.3d 995, 1000 (Fed. Cir. 2016). They are also reasonably pertinent to a particular problem with which the inventor was

involved, e.g., automatically raising and lowering a television or other object. A POSITA is presumed to have been aware of such analogous references. *In re Nilssen*, 851 F.2d 1401, 1403 (Fed. Cir. 1988). The significantly overlapping features between the references listed above and the '703 patent provides further evidence that these references are analogous art and highly relevant for a POSITA. EX1003 ¶ 71.

1. Clary Prior Art Status

Clary (EX1004) published on October 2, 2008 and is prior art under AIA provision 35 U.S.C. § 102(a)(1) because it published before the earliest effective filing date of the '703 patent. EX1004 at 1; EX1003 ¶¶ 72-73.

As explained above in Section III.B, the earliest effective filing date for the '703 patent is April 17, 2017. However, even if the '703 patent were entitled to an earlier priority date of the related applications, such as the '297 application (May 27, 2011), Clary would still qualify as prior art because it published long before May 27, 2011. EX1001 at 1; EX1004 at 1.

2. Juan Prior Art Status

Juan (EX1005) was published March 15, 2012 and is prior art under post-AIA 35 U.S.C. § 102(a)(1) because it was published before the earliest filing date of the '703 patent. EX1005 at 1.

As explained above in Section III.B, the earliest effective filing date for the '703 patent is April 17, 2017. However, even if the '703 patent were entitled to an earlier priority date, such as the '297 application (May 27, 2011), Juan would still qualify as prior art under post-AIA 35 U.S.C. § 102(a)(2) because it published on March 15, 2012 and claims priority to U.S. provisional 61/381,298 ("Juan Provisional" EX1007) filed September 9, 2010. EX1005 at 1; EX1003 ¶¶ 81-82.

The Juan Provisional provides the same relevant disclosure as Juan, as shown in the examples below with parallel citations to EX1005 and EX1007. EX1003 ¶ 83-84. Many figures are analogous between these applications. *Id.* For example, Juan Figure 8 and the Juan Provisional's "First Embodiment" figure include the features of the challenged claims. EX1005 at 9 (Fig. 8); EX1007 at 12 (First Embodiment Figure). EX1003 ¶¶ 83-87.

Juan, Fig. 8

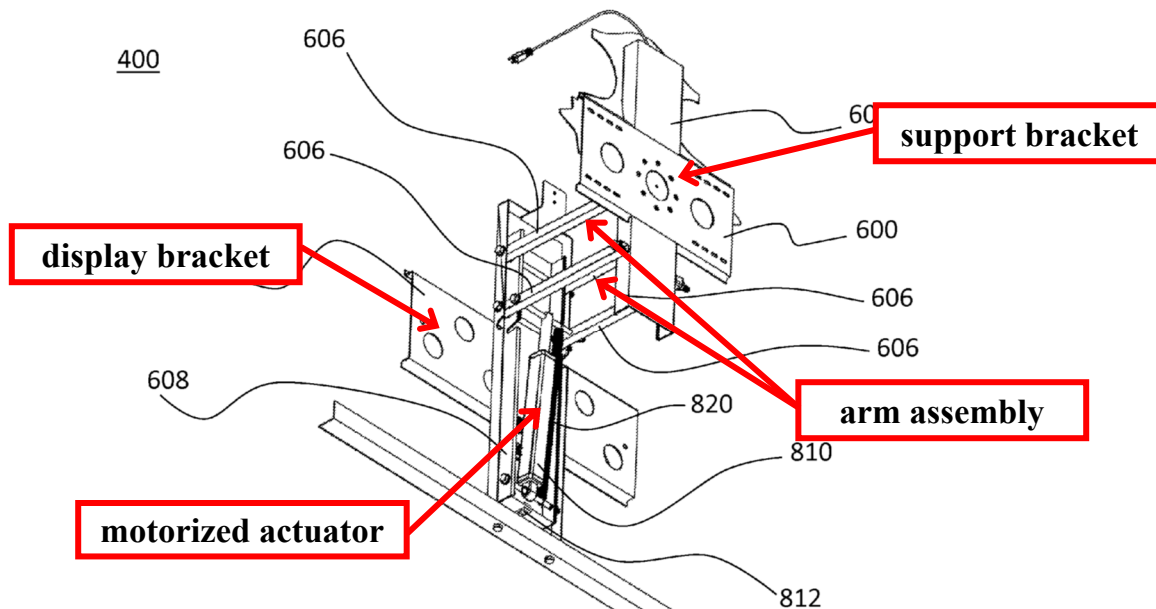
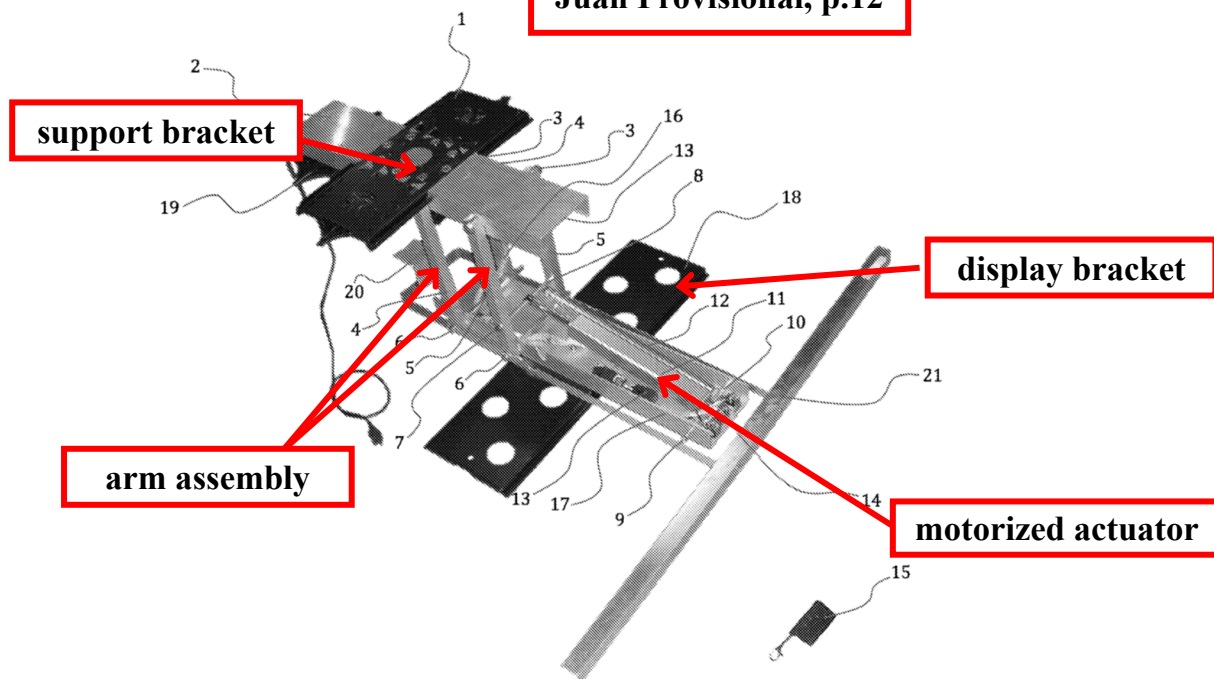


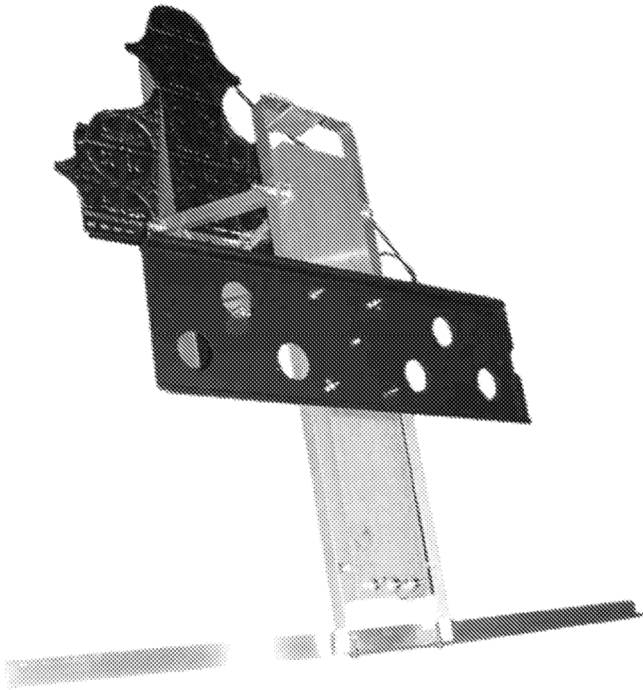
FIG. 8

Detailed Description – First Embodiment – Figs.

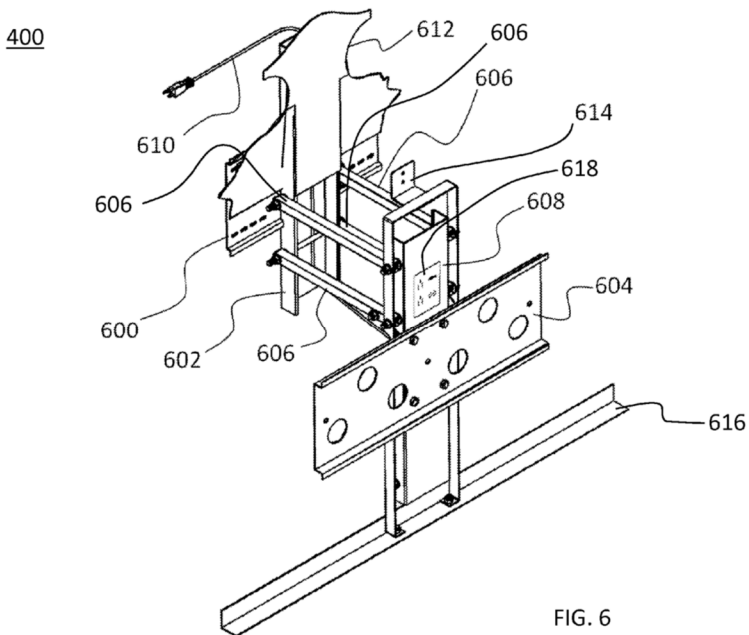
Juan Provisional, p.12



Juan's Figure 6 corresponds to Juan Provisional's Figure 3. EX1005 at 7 (Fig. 6); EX1007 at 9 (Fig. 3).

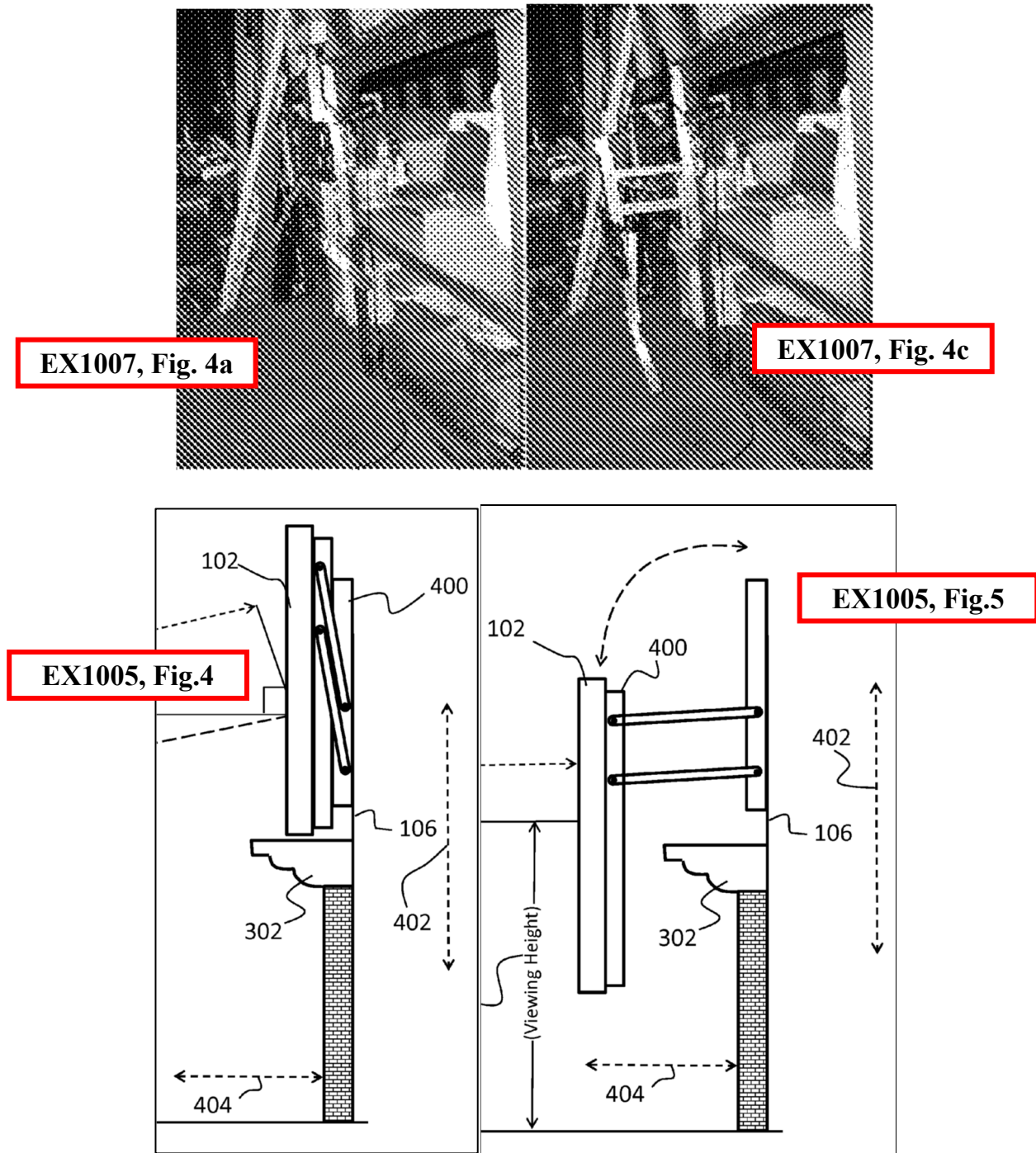


EX1007, Fig. 3



EX1005, Fig.6

Figures 4 and 5 of Juan also correspond to Figures 4a and 4c of Juan Provisional, showing the movement of the linkage arms. EX1005 at 5-6 (Figs. 4 and 5); EX1007 at 9 (Figs 4a and 4c).



The Juan Provisional provides support¹ for at least Juan’s published Claim 1, as shown in the table below. *See* EX1005 at 21 (Claim 1); EX1007 at 6-7. Thus, Juan is entitled to Juan Provisional’s priority date of September 9, 2010. EX1003 ¶ 88.

Published Claim 1 (EX1005 at 21)	Provisional Support (EX1007 at 6-7)
A display mount comprising:	“an adjustable display mount comprises” p.6, ¶4.
a mounting plate for mounting with a surface;	“a wall-mounting plate” p.6, ¶4, p.7, ¶1.
a front mount formed to attach with a flat-panel display; and	“a display mounting plate” p.6, ¶4, p.7 , ¶1.
a swing out apparatus pivotally connected between the mounting plate and the front mount,	“a parallelogrammic structure” p.6, ¶4; First Embodiment Figure (4) and (5), p.12-13; “Bolts used to fasten parallelogrammic structure which serve as axis of rotation for parallelogrammic components” p.12-13, First Embodiment Figure (3), (6).
the swing out apparatus formed to swing the front mount between a retracted position and an extended	“A display mount enables a mounted display to move downwards while

¹ A showing that the Juan Provisional supports one of Juan’s claims is not necessary but Petitioner makes such a showing out of an abundance of caution.

Published Claim 1 (EX1005 at 21)	Provisional Support (EX1007 at 6-7)
position, such that motion movement from the retracted to extended position moves the front mount out and down.”	simultaneously moving the display away from the mounting point” p.7, ¶3.

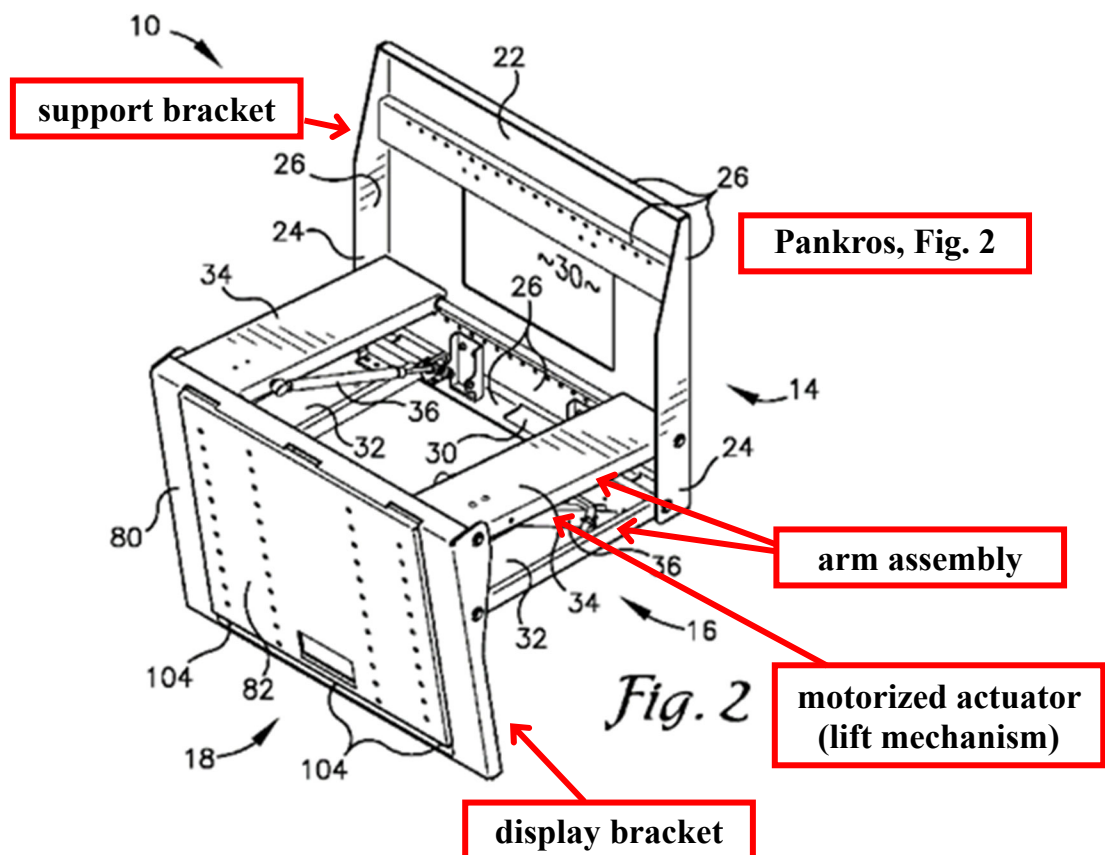
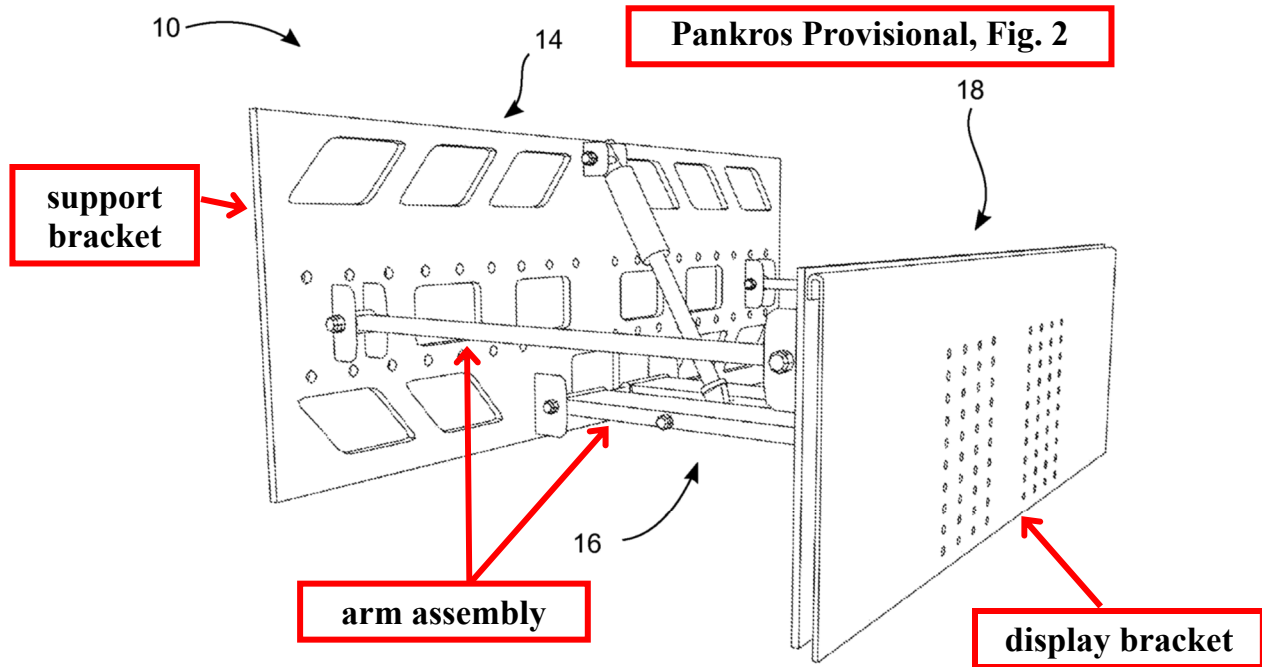
3. Pankros Prior Art Status

Pankros (EX1006) was published February 9, 2012 and is prior art under post-AIA 35 U.S.C. § 102(a)(1) because it was published before the earliest filing date of the '703 patent. EX1006 at 1.

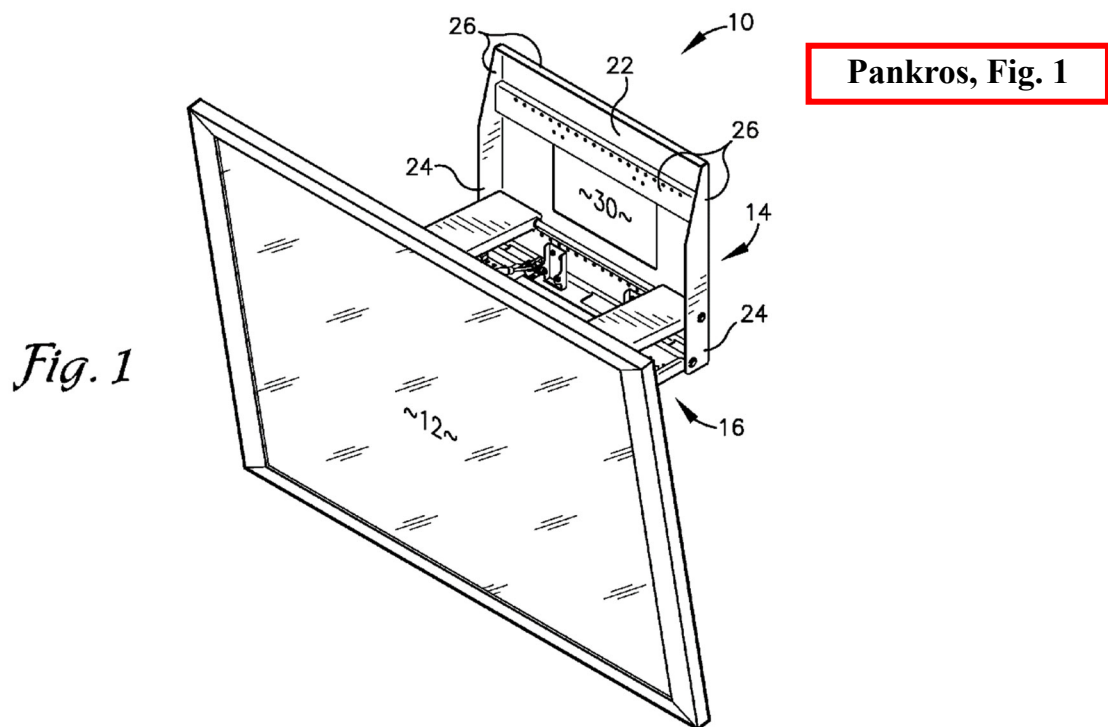
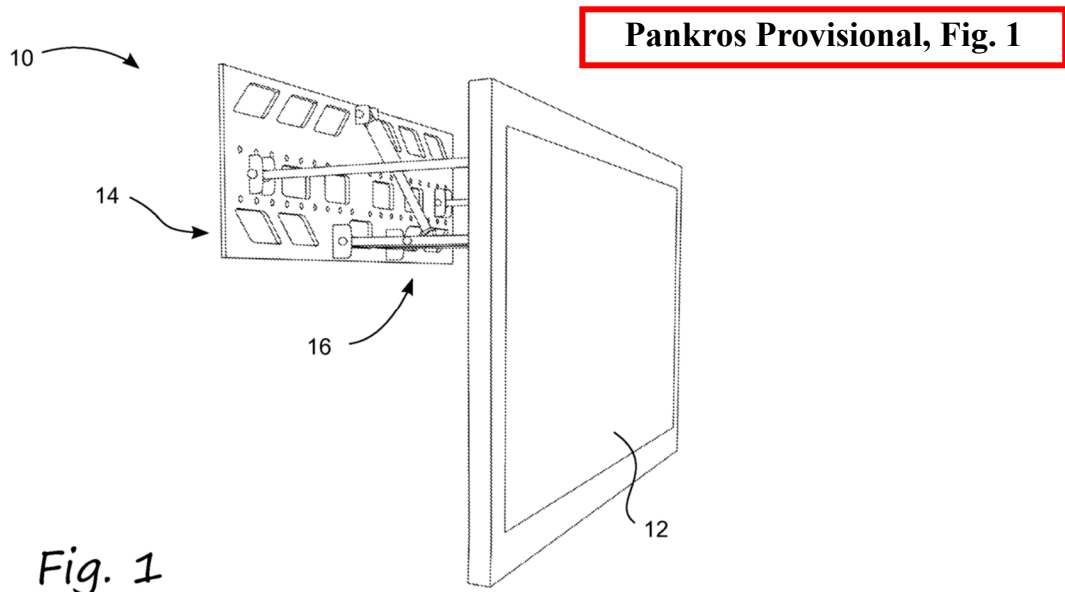
Even if the '703 patent were entitled to an earlier priority date of the related applications, such as the '297 application (May 27, 2011), Pankros would still be prior art under post-AIA 35 U.S.C. § 102(a)(2) because it published on February 9, 2012 and claims priority to U.S. provisional 61/370,945 (“Pankros Provisional” EX1008) filed August 5, 2010. EX1006 at 1; EX1003 ¶¶ 74-75.

The Pankros Provisional provides the same relevant disclosure as Pankros, as shown in the examples below with parallel citations to EX1006 and EX1008. EX1003 ¶ 76.

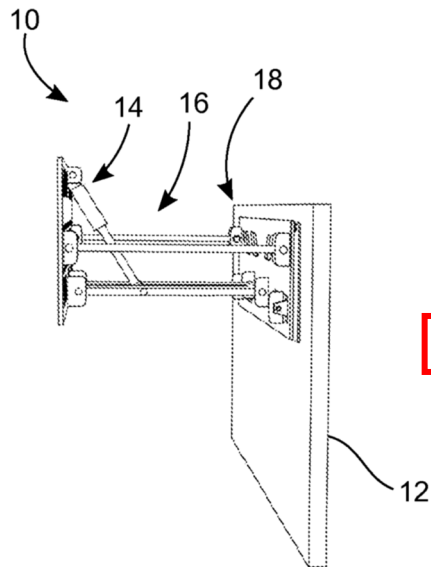
Many figures are analogous between these applications, including Pankros Figure 2 and the Pankros Provisional’s Figure 2 which include the features of the challenged claims and Pankros’ published claims. EX1003 ¶¶ 76-79.



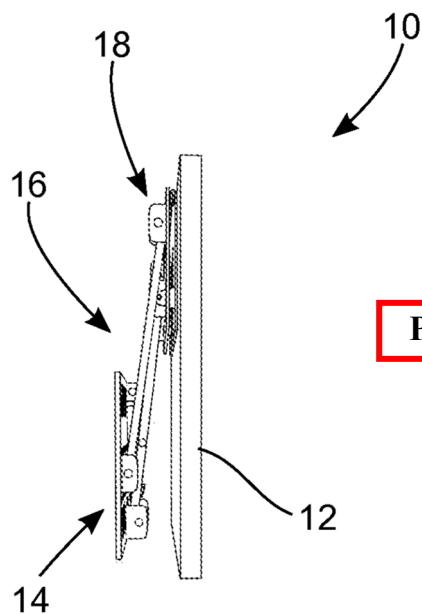
Pankros' Figure 1 also corresponds to Pankros Provisional's Figure 1, as shown below. EX1006 at 2 (Fig. 1); EX1008 at 12 (Fig. 1).



Pankros's Figures 12 and 13 correspond to Pankros Provisional's Figures 9 and 11. EX1006 at 7 (Figs. 12 and 13); EX1008 at 16 (Figs. 9 and 11).



Pankros Provisional, Fig. 9



Pankros Provisional, Figs. 11

Pankros, Figs. 12 and 13

Fig. 12

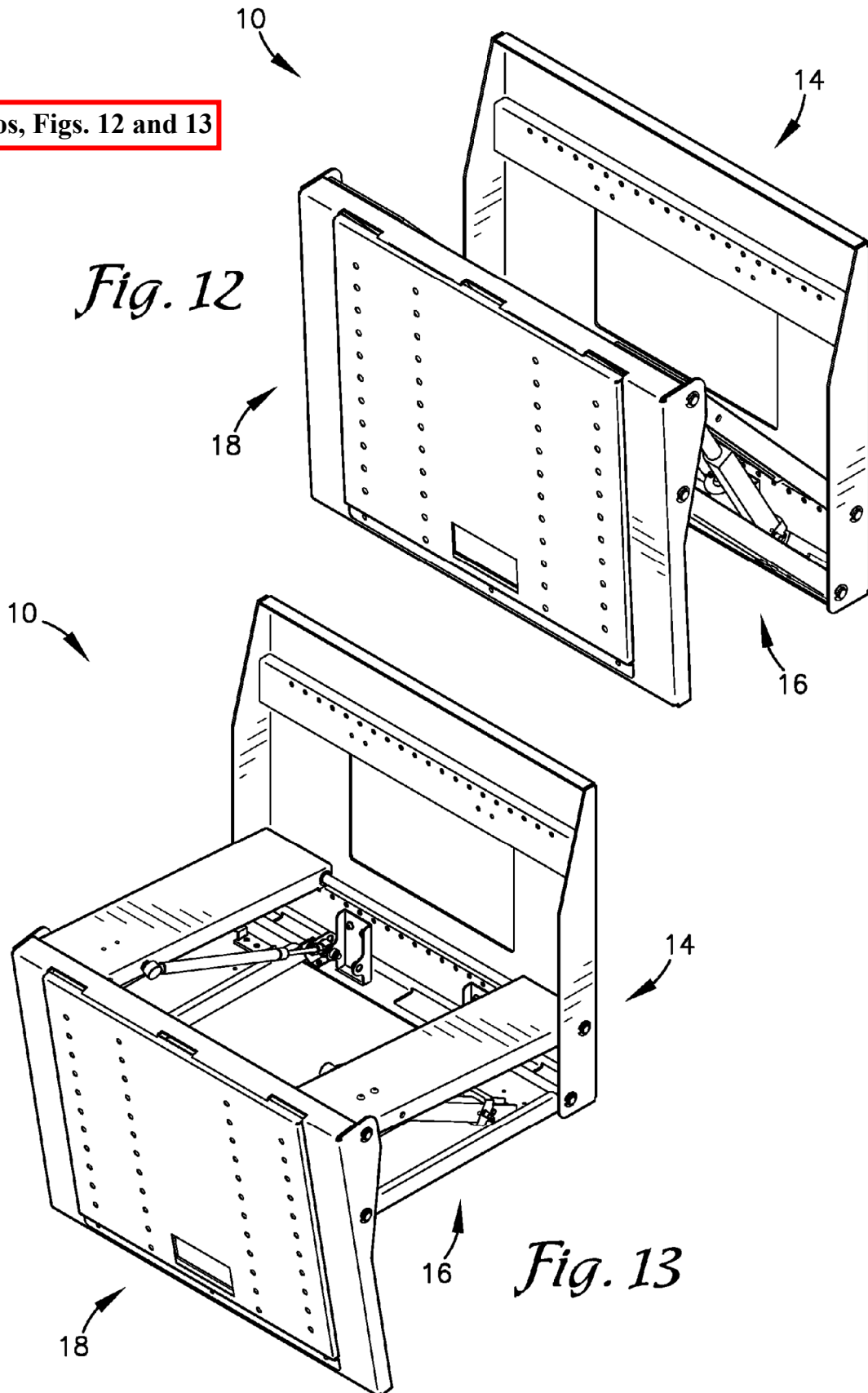


Fig. 13

The Pankros Provisional provides support² for at least Pankros’ published Claim 1, as shown in the table below. *See* EX1006 at 7, Claim 1; EX1008 at [0004]-[0009], [0013]-[0018], and [0025]. Thus, Pankros is entitled to Pankros Provisional’s priority date of August 5, 2010. EX1006 at 1; EX1003 ¶ 80.

Published Claim 1 (EX1006)	Provisional Support (EX1008 at p.1-7)
A display mount apparatus comprising:	“the present invention provides a flat-panel display mount” [0004]
a wall mount;	“the wall mount 14” [0010]
a support mechanism including—	“the support mechanism 16 ... includes a lower support arm 28, an upper support arm 30.” [0014]
an upper support arm rotatably connected to the wall mount about a substantially horizontal axis at a proximal end of the upper support arm,	“The upper support arm 30 includes a proximal attachment point 42 at a proximal end of the upper support arm 30 ... Each upper support arm 30 is pivotally connected at the proximal attachment point 42.” [0016]

² A showing that the Pankros Provisional supports one of Pankros’s claims is not necessary under USPTO guidance indicating that *Dynamic Drinkware* does not apply to post-AIA cases. Nevertheless, Petitioner makes such a showing out of an abundance of caution.

Published Claim 1 (EX1006)	Provisional Support (EX1008 at p.1-7)
a lower support arm rotatably connected to the wall mount about a substantially horizontal axis at a proximal end of the lower support arm,	“The lower support arm 28 includes a proximal attachment point 34 at a proximal end of the lower support arm 28... Each lower support arm 28 is pivotally connected at the proximal attachment point 34.” [0015]
a lift mechanism connected at the first end to the upper support arm and connected at a second end to the wall mount; and	“the lift mechanism 32 connects the support mechanism 16 to an attachment feature 22 of the wall mount 14 and [a] first attachment point 50 connects the lift mechanism 32 to an attachment feature 22 of the wall mount 14 ... and the second attachment point 52 connects the lift mechanism 32 to the support mechanism 16.” [0017]
a display support rotatably connected to a distal end of the upper support arm about a substantially horizontal axis and rotatably connected to a distal end of the lower support arm about a substantially horizontal axis,	“the display mount 18 provides a secure attachment point for the display 12 and broadly includes a main body 58, an upper support arm attachment point 60, a lower support arm attachment point 62” [0018]; “each upper support arm 30 is pivotally connected at the distal attachment point 44 to the display mount 18” [0016]; [0015].

Published Claim 1 (EX1006)	Provisional Support (EX1008 at p.1-7)
wherein the display support is operable to move from a retracted position to an extended position	“The display mounting apparatus 10 may be extended to lower the display 12 to use the display at a comfortable viewing height and may be retracted when the display 12 is not in use.” [0025]
and wherein the display support is operable to support a display weighing 11.3 kg or more.	“Display mounts for computer monitors have allowed some degree of height adjustment, but none are suitable for displays that weigh more than approximately 25 – 30 pounds.” [0003]; “The present invention solves the above-described problems” [0004]

4. Tsuji Prior Art Status

Tsuji (EX1015) published on January 22, 2009 and is prior art under AIA provision 35 U.S.C. § 102(a)(1) because it published before the earliest effective filing date of the '703 patent. EX1015 at 1.

Even if the '703 patent were entitled to an earlier priority date of the related applications, Tsuji would still qualify as prior art because it published long before any related application was filed. EX1001 at 1; EX1017 at 1; EX1003 ¶¶ 89-90.

5. Xu Prior Art Status

Xu (EX1017) published on August 20, 2008 and is prior art under AIA provision 35 U.S.C. § 102(a)(1) because it published before the earliest effective filing date of the '703 patent. EX1017 at 1.

Even if the '703 patent were entitled to an earlier priority date of the related applications, Xu would still qualify as prior art because it published long before any related application was filed. EX1001 at 1; EX1017 at 1; EX1003 ¶¶ 91-92.

VIII. GROUND 1: CLAIM 36 LACKS WRITTEN DESCRIPTION SUPPORT

A patent specification must “contain a written description of the invention.” 35 U.S.C. § 112(a); *Ariad*, 598 F.3d at 1344 (citing pre-AIA 35 U.S.C. § 112 ¶1). The written description requirement serves “to ensure that the patent applicant was in full possession of the claimed subject matter on the application filing date.” *Turbocare Div. of Demag Delaval Turbomachinery Corp. v. General Elec. Co.*, 264 F.3d 1111, 1118 (Fed. Cir. 2001).

To comply with the written description requirement of § 112, the claimed invention must be sufficiently described in the specification to convey to a POSITA that the named inventor(s) had possession of the claimed invention at the time the application was filed. *See supra* Section IV.

Claim 36 includes features not disclosed in the specification such that a POSITA would not have understood that the named inventor had possession of the

claimed invention at the time the '703 patent was filed (October 3, 2022), or at the time of the earliest effective filing date for claim 36. EX1003 ¶¶ 93-95.

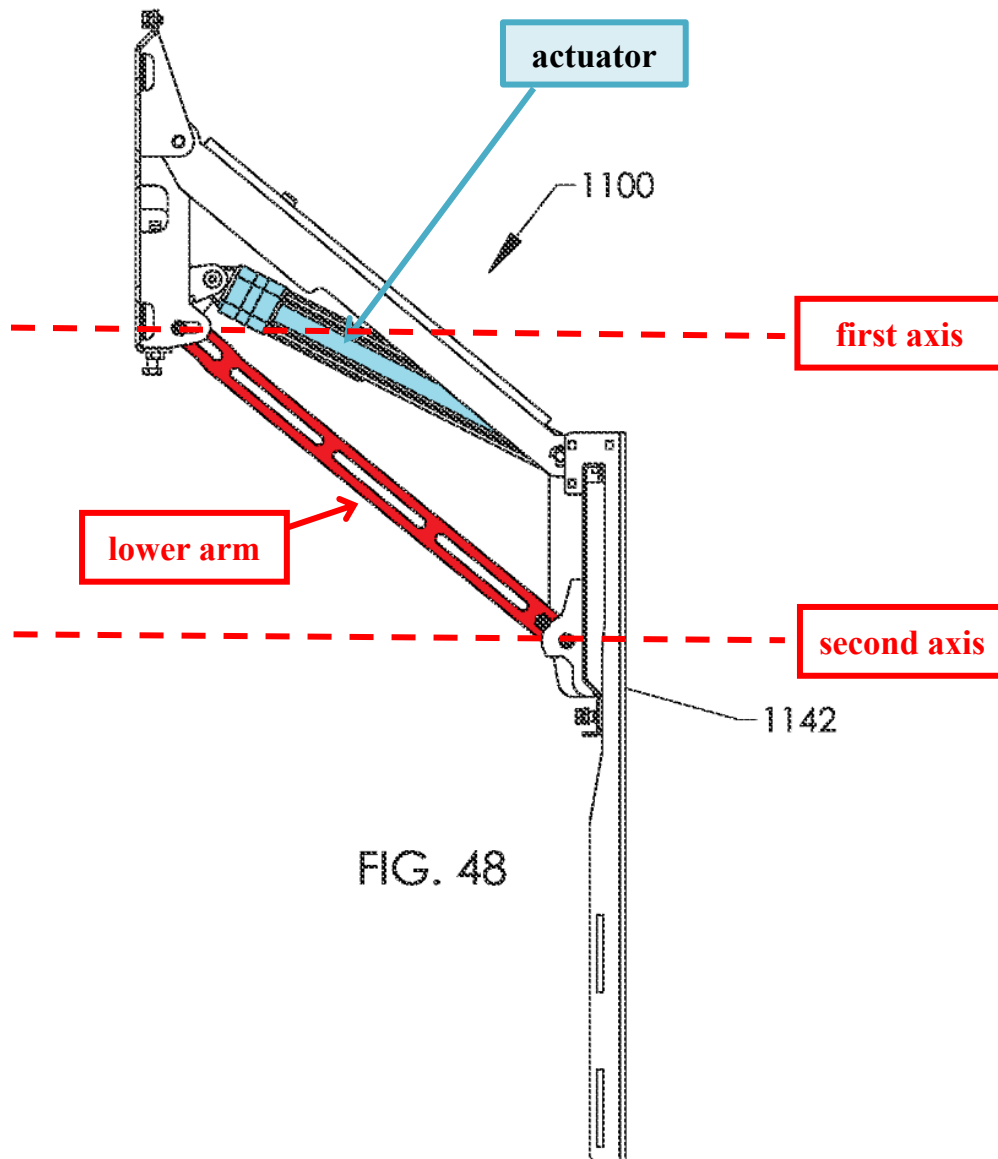
Claim 36 of the '703 patent depends from claim 35 and recites “wherein the first axis of rotation and the second axis of rotation are spaced apart from and located **below an extendable actuator** of the motorized actuator assembly when the arm assembly is in the lowered configuration.” EX1001 at 55 (emphasis added).

A POSITA would not have understood that the named inventor had possession of the claimed invention including such “below an extendable actuator” features because the specification of the '703 patent and all of its priority applications do not describe or otherwise support these features. EX1003 ¶ 95. As discussed above in Sections III and IV, the pre-CIP applications of the priority chain fail to describe or support an actuator assembly or its specific positioning in a lowered configuration. Moreover, the pre-CIP applications fail to mention or describe any extendable actuator as part of the motorized actuator assembly. EX1003 ¶ 95. The pre-CIP applications do not show how an extendable actuator (undisclosed) could possibly be positioned in a lowered configuration such that the first and second axes of rotation of the lower arm are spaced apart from and located below the extendable actuator of the motorized actuator assembly. *Id.* Thus, none of these pre-CIP applications convey to a POSITA that the named inventor had possession of the

“below an extendable actuator” feature in the context of claim 36 at the relevant time. *Id.*

The post-CIP applications and the '703 patent specification itself also fail to provide written description for the “below an extendable actuator” feature. EX1003 ¶ 96. The specification for these applications does not mention or describe an “extendable actuator,” much less an extendable actuator that is part of a motorized actuator assembly. *Id.* Not only do the post-CIP specifications fail to explain what the extendable actuator is, but they fail to describe any mounting system embodiment in which the first and second axes could be spaced apart from and located **below an extendable actuator** in the lowered configuration. *Id.*

The figures of the post-CIP applications confirm that an inventor was not in possession of these features. *Id.* at ¶ 97. For example, Figure 48 illustrates the lowest/lowered configuration of mounting system corresponding to the challenged claims. *Id.* As shown in the annotated Figure 48 below, it is unclear how an extendable actuator (undisclosed) could be spaced apart from and located above the first and second axes of the lower arm. *Id.* As shown in the figure, the actuator described in the specification is not spaced apart from nor above the first and second axes of the lower arm. *Id.*



Figures 62 and 67 also illustrate mounting systems in a lowered configuration, but they fail to provide written description support for the “below an extendable actuator” features for the same reasons as Figure 48. *Id.* ¶ 98.

Nothing in the four corners of the specifications of the ’703 patent and its priority applications demonstrates that the named inventor was in possession of the “below an extendable actuator” feature along with the other claim features

associated with the actuator as recited in claim 36. *Id.* Therefore, a POSITA would not have understood that the named inventor had possession of the subject matter set forth in claim 36. *Id.*

IX. GROUND 2: CLAIM 36 IS INDEFINITE

“[A] patent’s claims, viewed in light of the specification and prosecution history, [must] inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instr., Inc.*, 572 U.S. 898, 901 (2014). The requirement is aimed at providing the public with clear notice about what is being claimed. *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370 (Fed. Cir. 2014) (quoting *Nautilus*, 572 U.S. at 909). Even if the Board were to apply the pre-*Nautilus* standard (the *In re Packard* standard), where a claim is held to be indefinite when it contains words or phrases whose meaning is unclear in describing the claimed invention, the result would have been the same because, as discussed below, the claims include words or phrases whose meaning is unclear. *See Nippon Suisan Kaisha Ltd. v. Pronova Biopharma Norge AS*, PGR2017-00033, Paper 37 at 11-12, 14 (January 16, 2019).

Claim 36 of the ’703 patent fails to provide such notice as it does not inform a POSITA about the scope of the claimed extendable actuator features. EX1003 ¶¶ 99-100. For example, the claim language, specification, and file history do not provide any guidance as to the meaning or bounds of the claimed first and second

axes being “spaced apart from and located below an extendable actuator of the motorized actuator assembly when the arm assembly is in the lowered configuration.” *Id.* As explained in the previous section, claim 36 recites a position of an “extendable actuator” without providing any clarity as to what the extendable actuator is or how it can have the claimed position spaced apart and above the first and second axes. *Id.*

Other than using the term “extendable actuator,” claim 36 and the claims it depends from do not sufficiently describe what is meant by a “extendable actuator” of the actuator assembly and how it can be positioned above the first and second axes. EX1003 ¶ 101. Nor does the specification provide the requisite clarity. *Id.*

The ’703 patent specification fails to provide clarity for the “extendable actuator” and the “spaced apart and below” feature. EX1003 ¶ 102. The specification does not even mention or describe an “extendable actuator,” much less an extendable actuator that is part of a motorized actuator assembly. *Id.* Moreover, the specification fails to describe any example of mounting system embodiment in which the first and second axes could be spaced apart from and located **below the actuator** in the lowered configuration. *Id.* Nor does any portion of the specification provide any details that would inform a POSITA with reasonable certainty as to the scope of the “extendable actuator” of the actuator assembly or its position relative to the lower arm. *Id.* As shown in the previous section, the figures of the ’703 patent

do not provide any clarity regarding the scope of the “extendable actuator” or the claimed spaced position relative to the lower arm. *Id.* Although the specification describes an actuator assembly 1200 that can have multiple parts, it does not say anything about an extendable actuator, nor does it explain or show how any of the actuator assembly parts could be positioned above the first and second axes in the lowered configuration. EX1001 at 17:55-67; EX1003 ¶ 102.

The file history of the ’703 patent (and its relevant parent applications) also fails to provide any assistance in ascertaining what is meant by the claimed “extendable actuator” features. *See generally* EX1002; EX1003 ¶ 103.

Accordingly, for at least these reasons, claim 36 is indefinite because when viewed in light of the specification and prosecution history, it does not inform a POSITA about the scope of the claimed “extendable actuator” or its spaced apart position with reasonable certainty. *Id.*

X. GROUND 3: CLARY ANTICIPATES CLAIMS 33-36

A. Disclosure of Clary

Clary is listed on the face of the ’703 patent but was not used by the Examiner during prosecution. Clary discloses a wall affixed vertically articulated flat panel display mount. EX1004 at [0012]. The display mount includes a first frame assembly 1, a second frame assembly 3, and two pairs of horizontally spaced parallel links 5 which connect the first and second frame assemblies. *Id.* at [0012]-[0015].

The first frame assembly 1 is configured to be secured to a wall 2. *Id.* The second frame assembly 3 is configured to be attached to a flat panel display 4. *Id.* The pairs of horizontally spaced parallel links 5 are pivotally connected to the first and second frame assemblies such that the display can be moved away from the wall to a lower position while being maintained in a vertical orientation relative to the wall. *Id.*

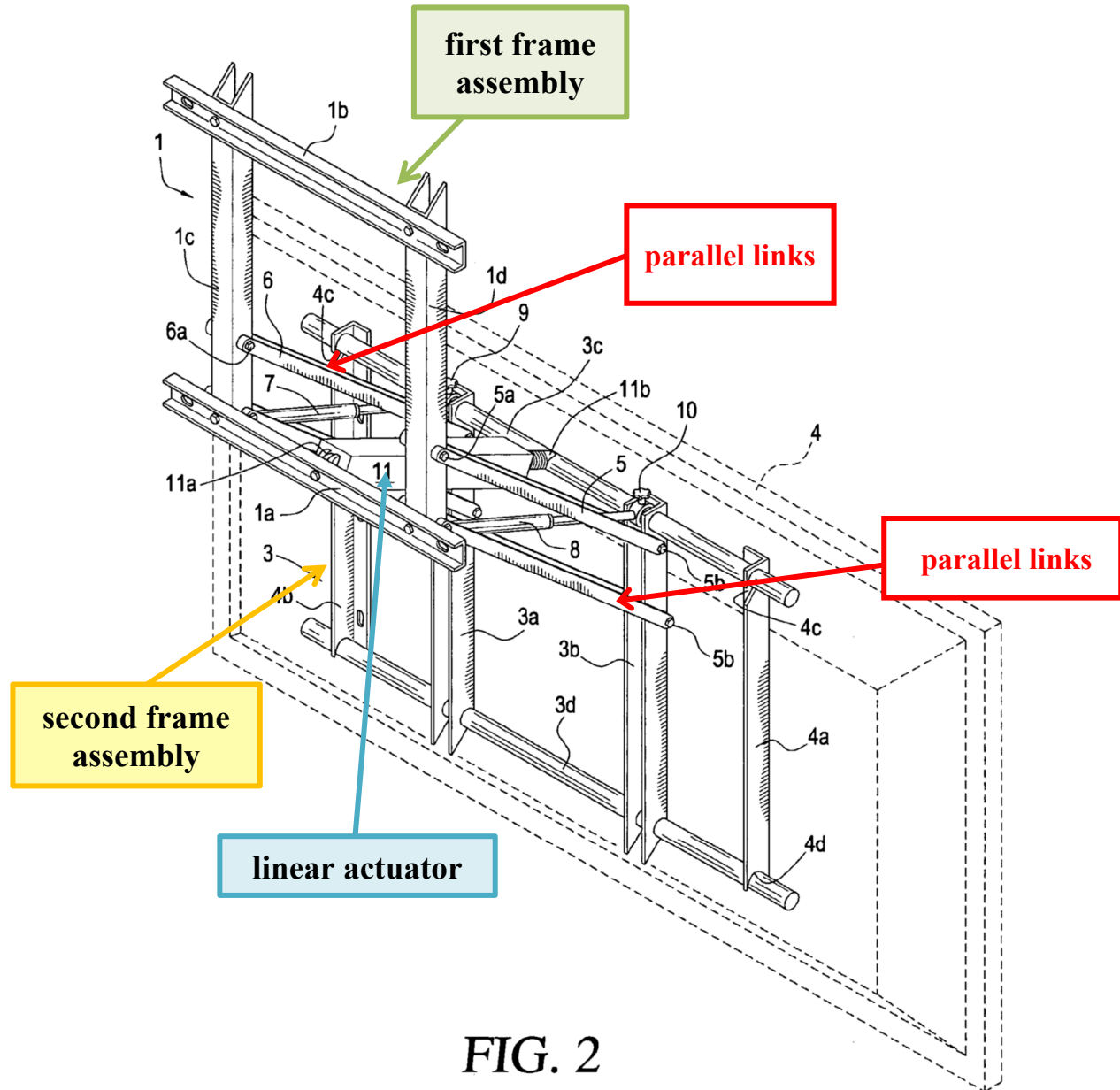
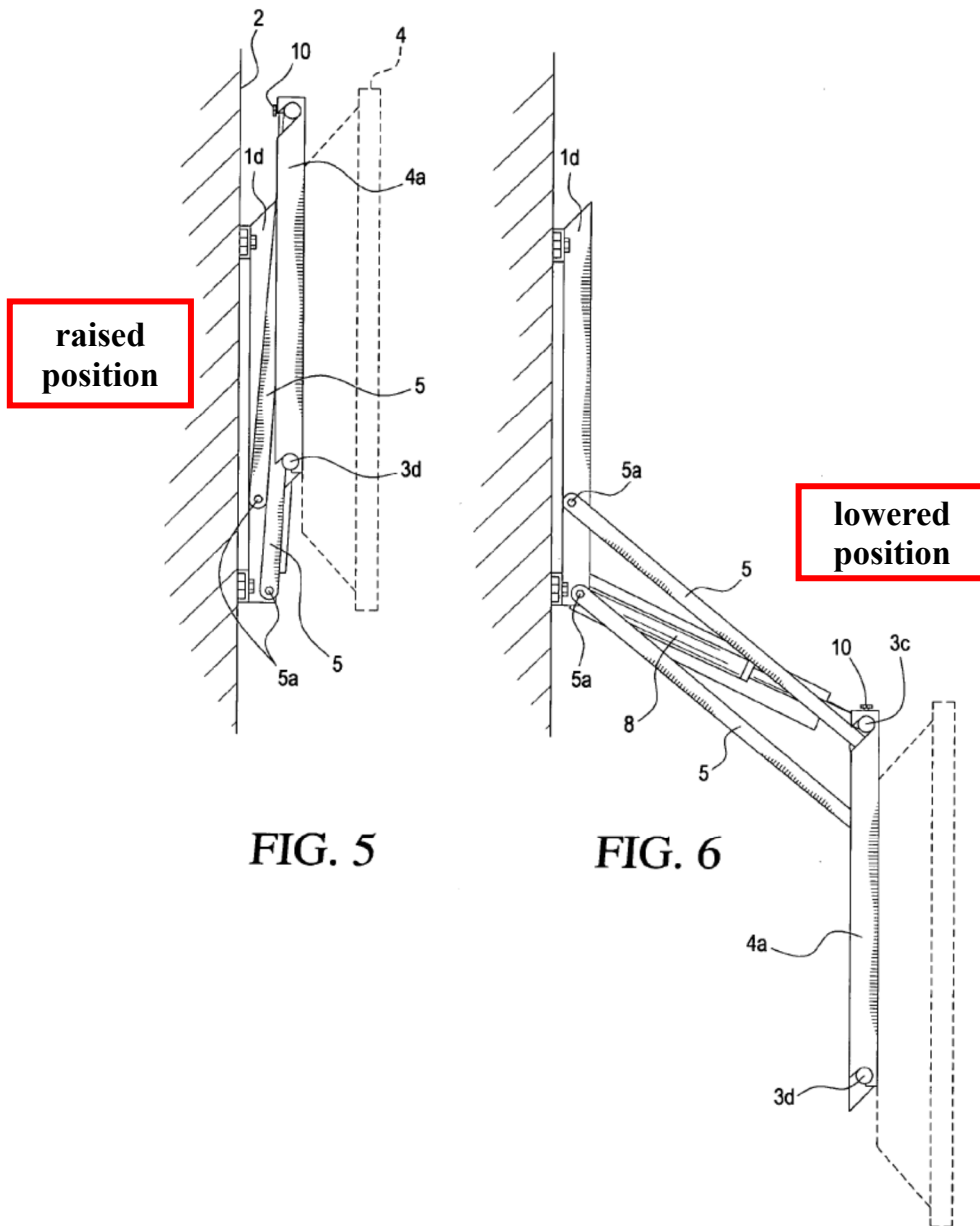


FIG. 2

Clary also discloses a linear actuator 11 that allows for automatic lowering and lifting of the display. *Id.* at, [0005], Figures 5 and 6.



B. Clary Anticipates Claim 33

Clary discloses a television mounting system with every element of claim 33.

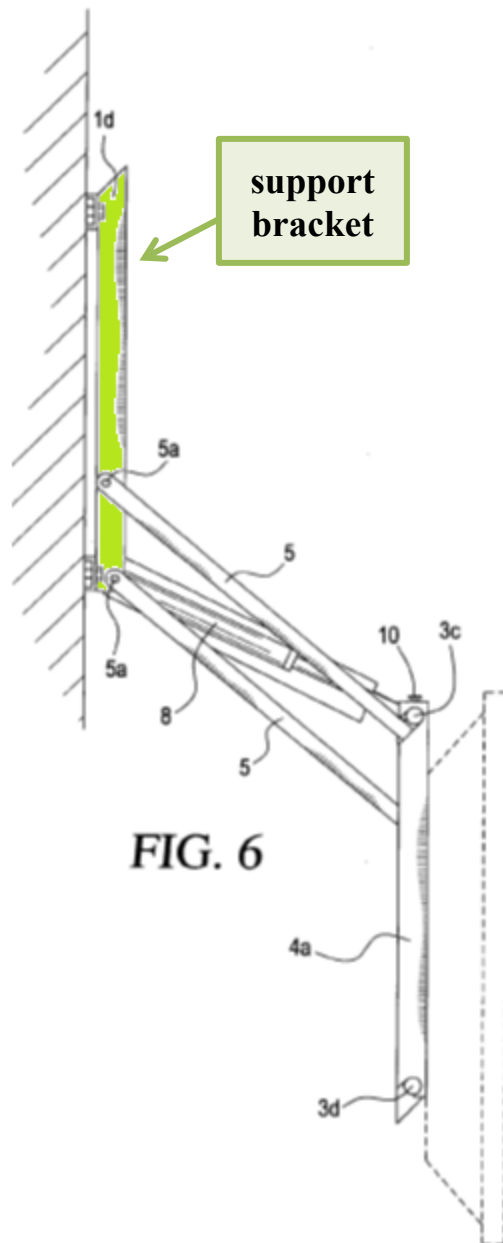
EX1003 at ¶¶ 104-106.

1. Preamble

To the extent the preamble is limiting, Clary discloses such a television mounting system. Clary discloses a “wall affixed vertically articulated flat panel display mount.” EX1004 at Abstract, [0002] and Claim 1.

2. Limitation 33[a]: “a support bracket configured to couple to a wall;”

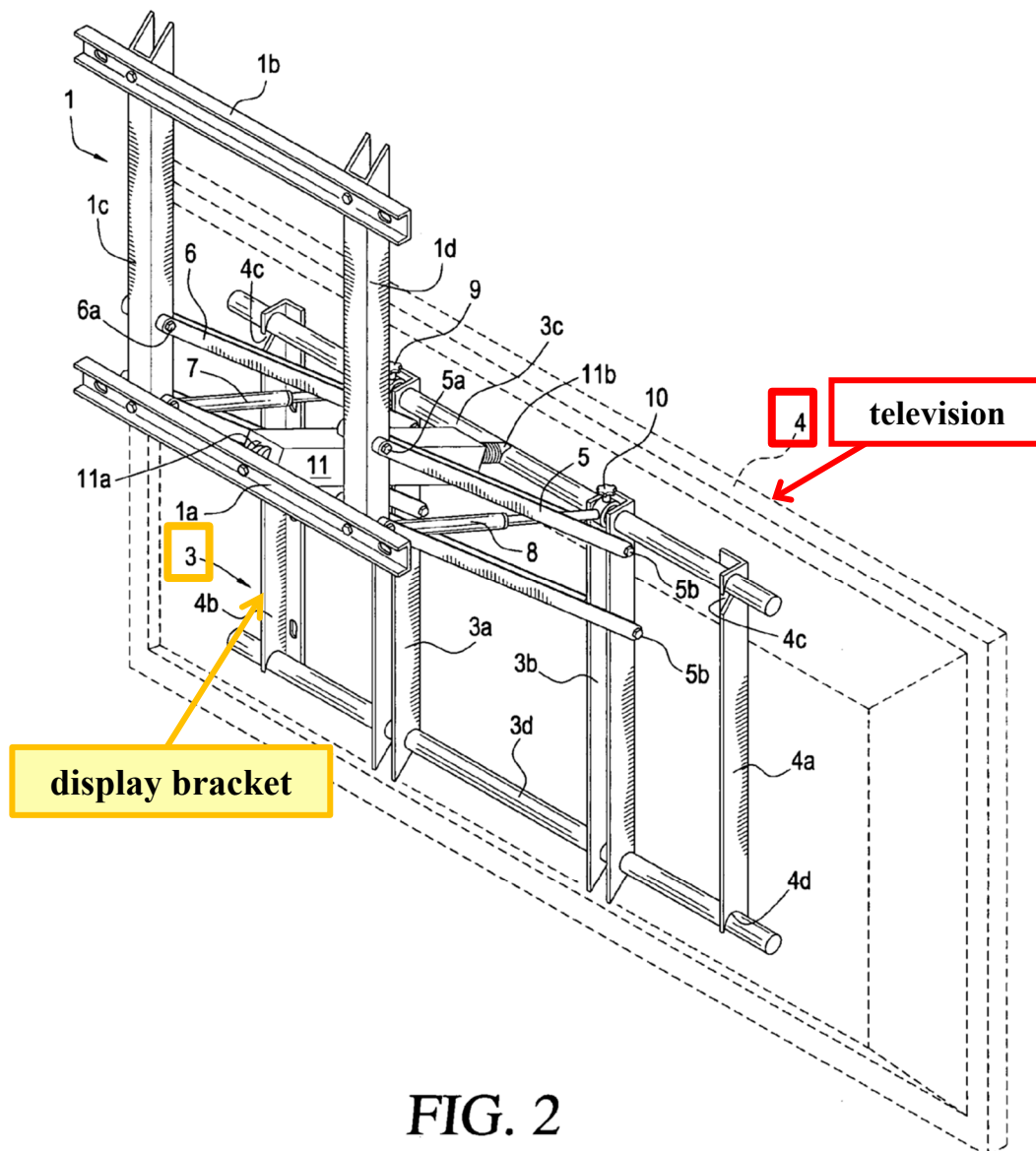
Clary discloses this limitation, as shown below in Figure 6. For example, Clary discloses a wall frame or first frame assembly 1. *See* EX1004 at [0012], [0018] (“the wall frame 1”); EX1003 ¶¶ 107-108.



3. **Limitation 33[b]: “a display bracket configured to hold a television”**

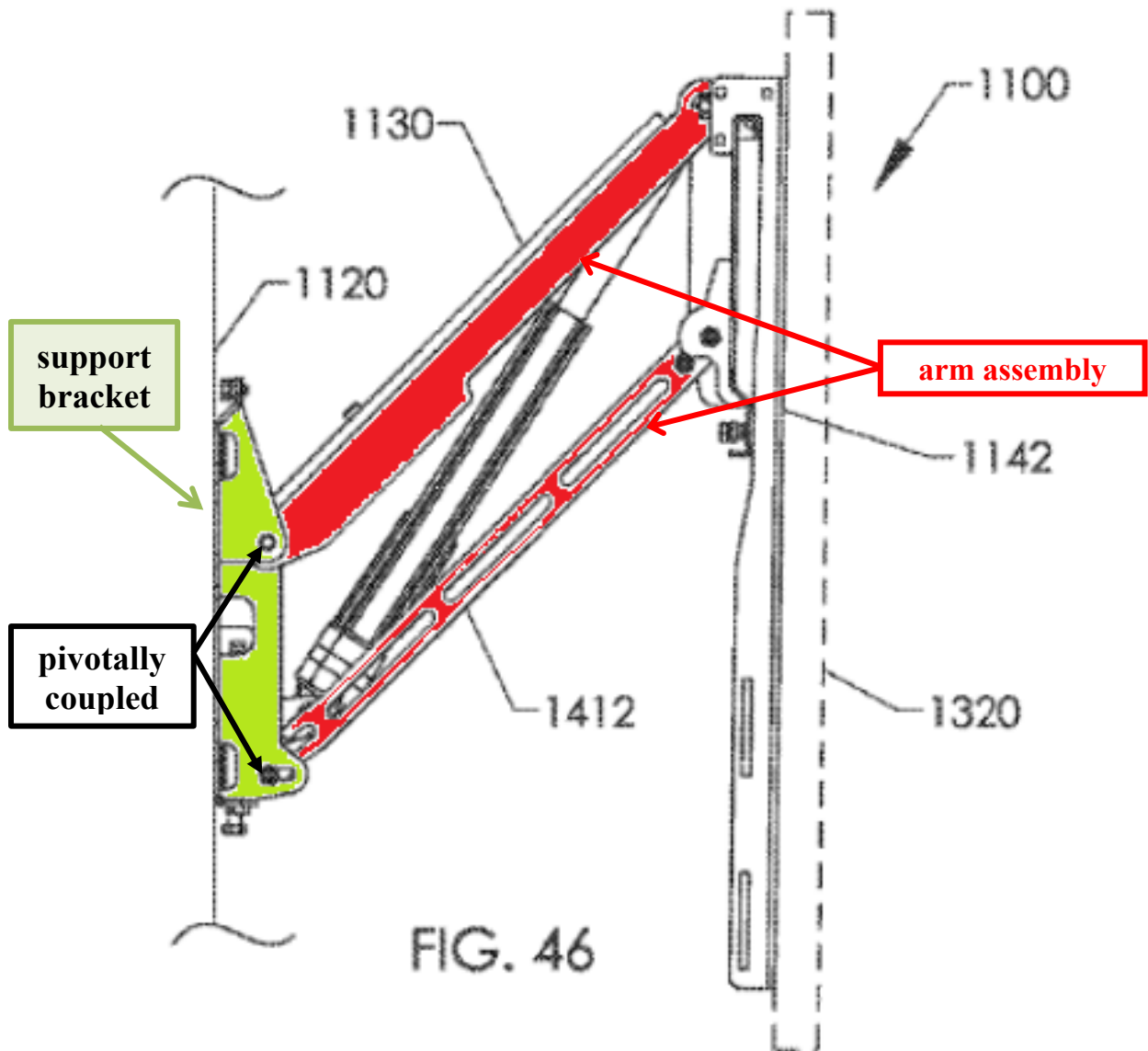
Clary also discloses this limitation, for example the display bracket (second frame assembly 3) is configured to hold a television (flat panel display), as shown

in the annotated Figure 2 below. EX1004 at [0012] (“a second frame assembly 3 operatively connected to the back of a flat panel display 4”), [0014], Fig. 2 (annotated); EX1003 ¶109.

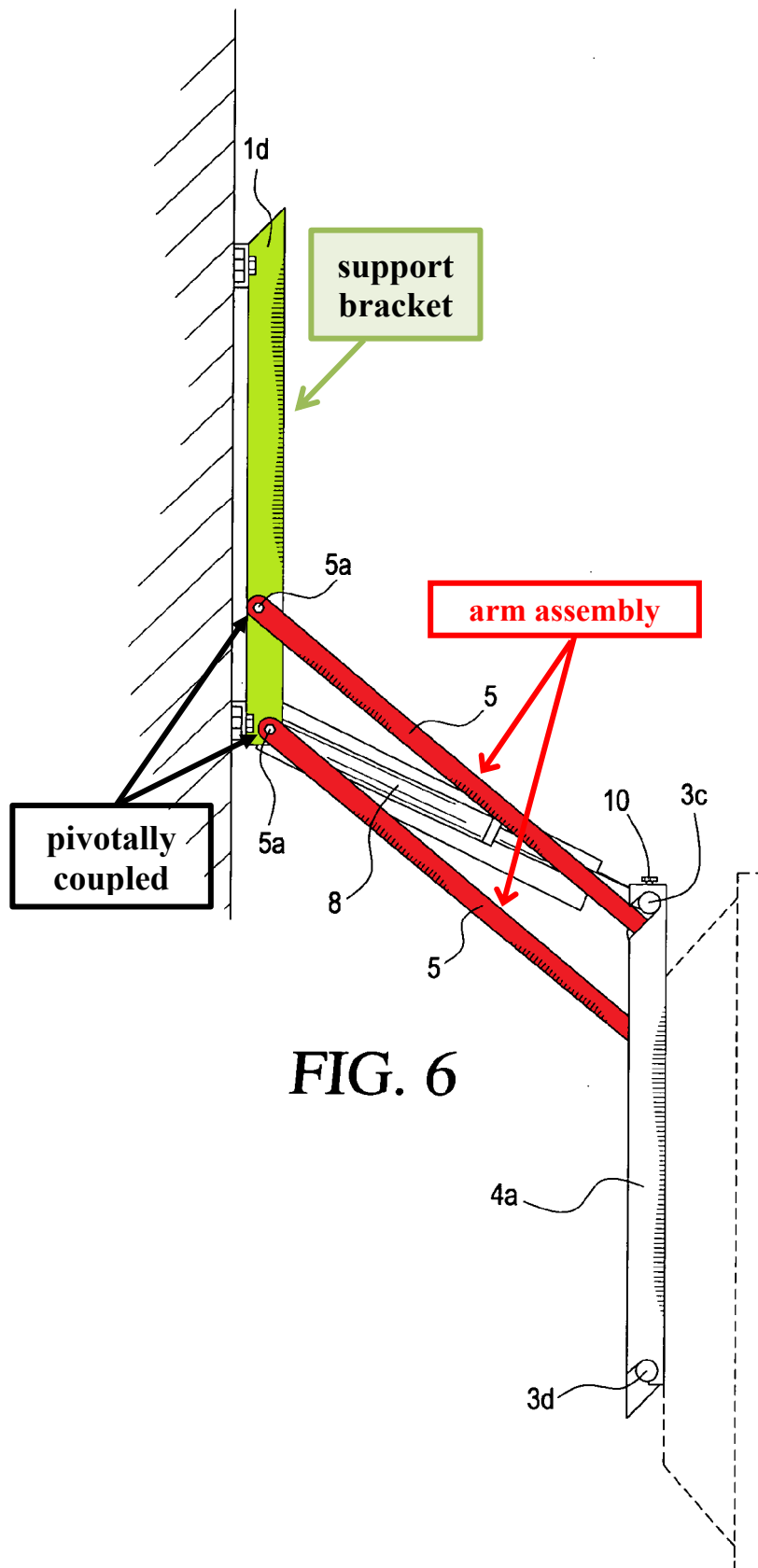


4. **Limitation 33[c]: “an arm assembly pivotally coupled to the support bracket and movable between a raised configuration to position the display bracket at a raised position and a lowered configuration to position the display bracket at a lowered position”**

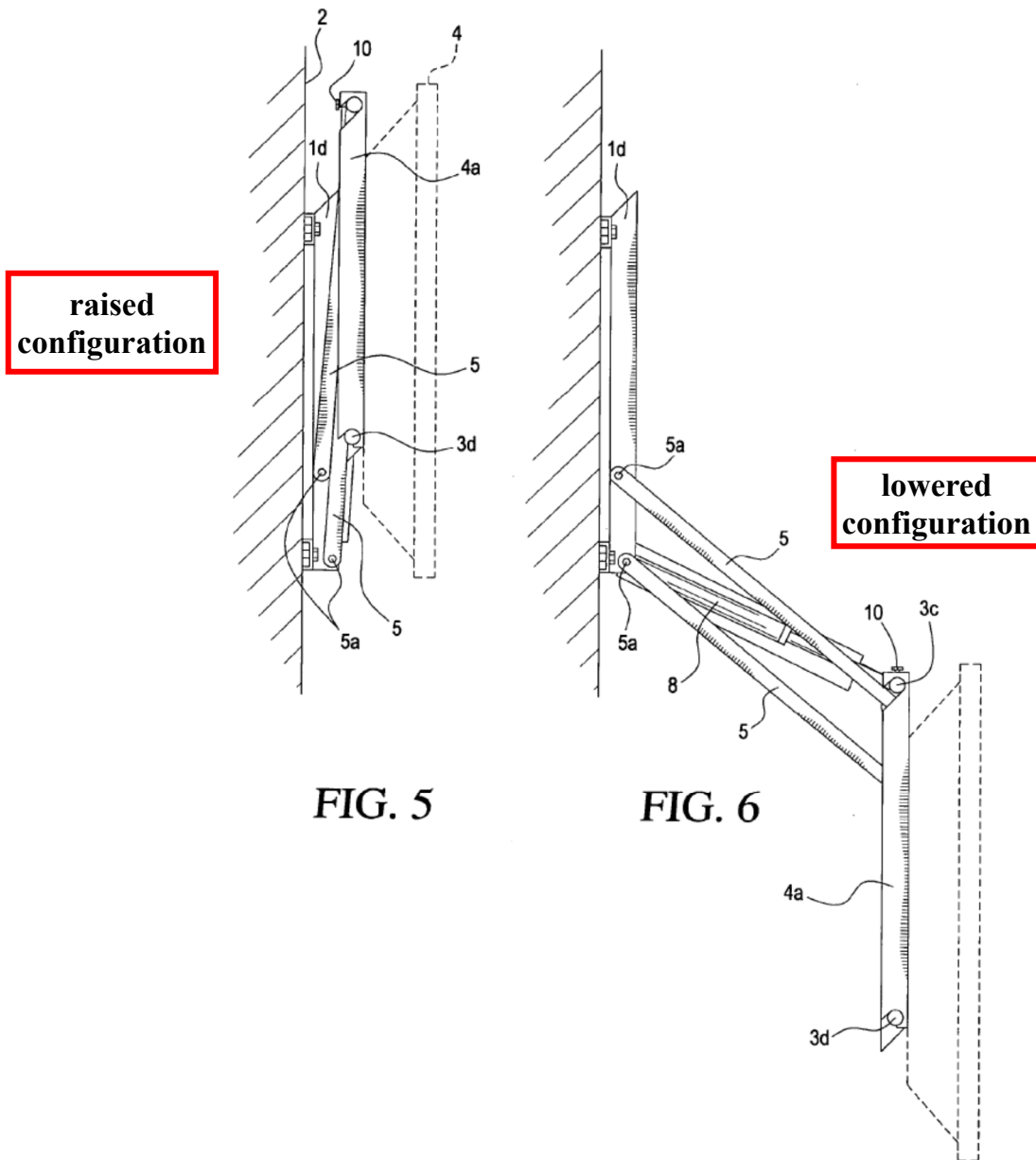
The '703 patent specification does not use the term “arm assembly,” but it does disclose a linkage assembly 1130 that is pivotably coupled to the support bracket at support pivots on the support bracket 1140. EX1001 at 17:42-54. As shown in annotated Figure 46 below, the arm/linkage assembly is movable to position the display bracket in different configurations. EX1001 at 1:64-2:1, 17:23-31, Figs. 43-46. Clary discloses this limitation. EX1003 ¶ 110.



Like the assembly of the '703 patent, Clary discloses an arm assembly (including arms 5 and 6) that is pivotally coupled to the support bracket, as shown in annotated Figure 6 below. EX1004 at [0015], Fig. 6 (annotated); EX1003 ¶ 111.



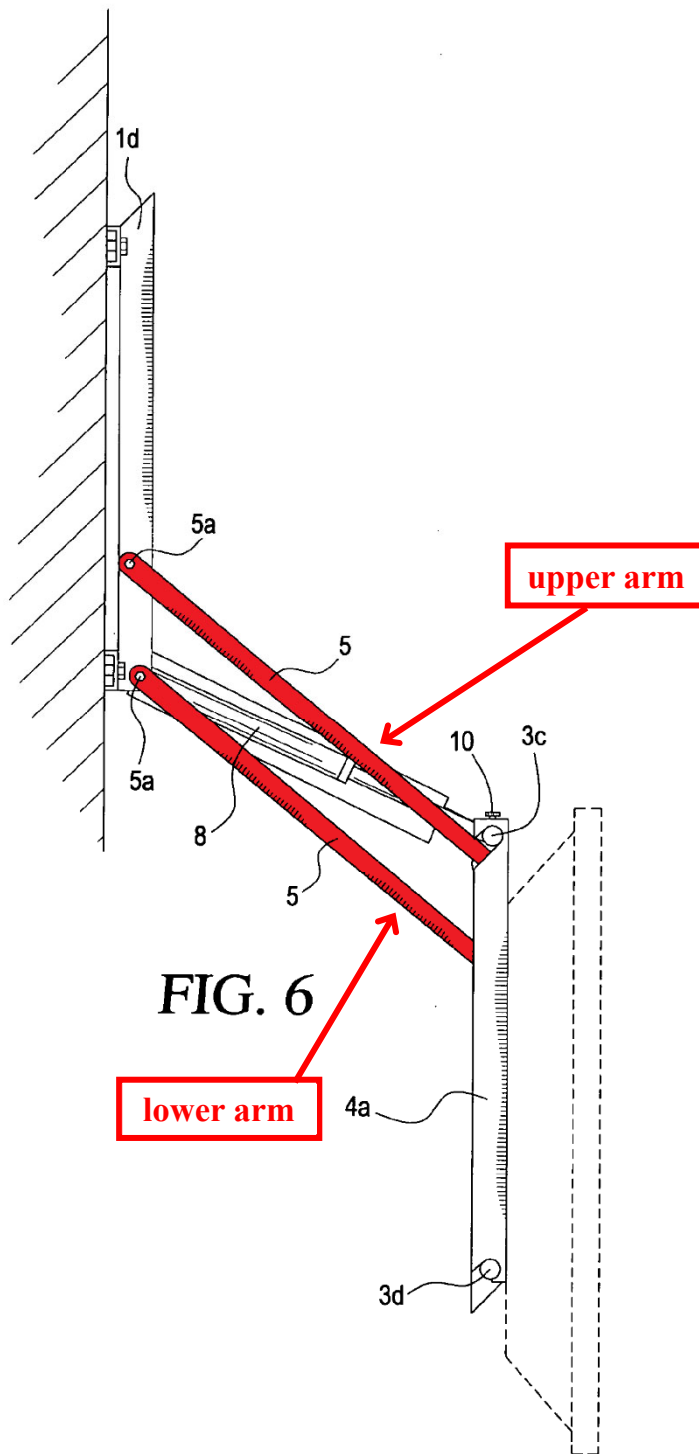
Clary's linkage assembly is also movable between a raised configuration to position the display bracket at a raised position and a lowered configuration to position the display bracket at a lowered position. EX1004 at [0014] and [0018]. With Clary's pivotally connected arm assembly, "the flat panel display frame is provided with a vertical mobility whereby it can travel from a raised position flat against the wall frame 1 . . . to a lowered position back flat against the wall 2 below the wall frame 1," as shown in annotated Figs. 5 and 6 below. EX1004 at [0018], Figs. 5 and 6; EX1003 ¶ 112.



Thus, Clary discloses this limitation. EX1003, ¶ 113.

5. **Limitation 33[c][i]: “wherein the arm assembly includes an upper arm and a lower arm”**

Clary discloses this limitation. For example, the parallel links 5, 6 of the arm assembly include an upper arm and a lower arm. EX1004 at [0015], Fig. 6 (annotated); EX1003 ¶ 114.



6. **Limitation 33[d]: “a motorized actuator assembly having a support bracket end rotatably coupled to the support bracket and a display bracket end rotatably coupled to the arm assembly”**

Clary discloses this limitation. EX1003 ¶ 115. Clary’s motorized actuator assembly, including linear actuator 11, has a support bracket end that is pivotally/rotatably coupled to the support bracket (wall channel 1a), as shown in annotated Figure 4 below. EX1004 at [0017]. Clary’s actuator assembly also has a display bracket end (tube 3c) which is threaded to engage with the linear actuator 11 to provide linear actuation and relative movement of the actuator 11 and the tube 3c. *Id.*; EX1003 ¶ 115. The display bracket end of the actuator assembly is rotatably coupled to the arm assembly 5 and 6, as shown in annotated Figure 4 below. EX1004 at [0016]. The display bracket end of Clary’s actuator assembly is rotatably coupled to the arm assembly 5 and 6 so that the actuator can articulate the arm assembly and the display mount. *Id.*

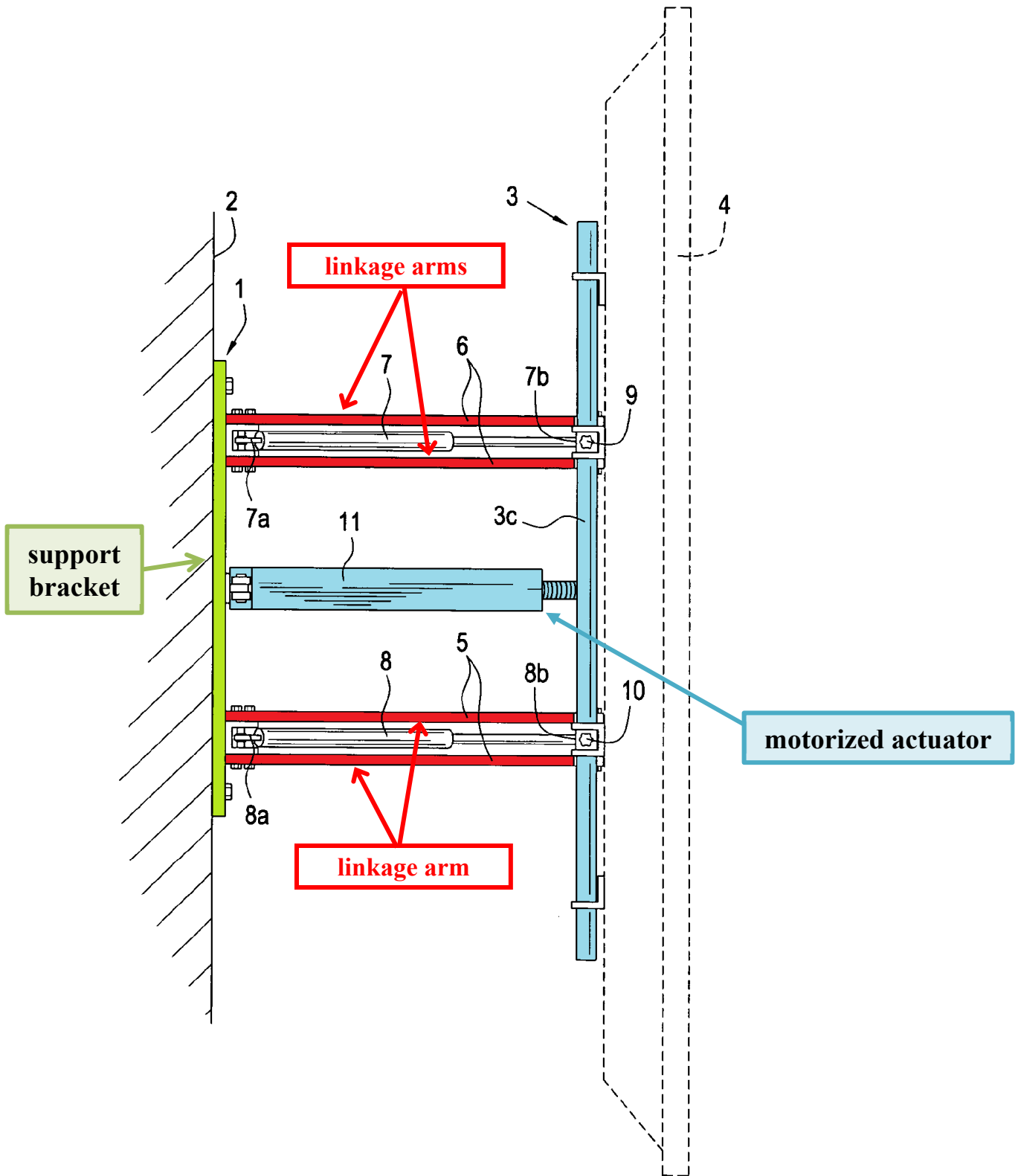


FIG. 4

Clary's actuator assembly includes the tube 3c which has a threaded interface with the linear actuator to provide linear movement as the threaded portion of the tube 3c moves into and out of the actuator 11. EX1003 ¶ 116. Tube 3c includes a necessary part of the linear actuator 11. *Id.* As part of the actuator assembly, tube 3c is directly coupled to the arm assembly, similar to the '703 patent embodiment shown in Figure 41 which has a tube (pivot 1177) that rotatably couples the actuator assembly with the display bracket and arm assembly. *Id.* However, even if Clary's actuator assembly is somehow not directly coupled to the arm assembly, the actuator assembly 11 is at least indirectly coupled to the arm assembly via the tube 3c and channels 3a and 3b. *Id.* This limitation merely states that the actuator assembly has "a display bracket end rotatably coupled to the arm assembly." It does not require that the actuator assembly be directly contacting or directly coupled to the arm assembly, and a POSITA would have understood that direct contact between the actuator assembly and the arm assembly is not required. *Id.* Thus, a POSITA would have understood that Clary's coupling between the actuator assembly and the arm assembly satisfies this limitation. *Id.*

Although Clary does not use the word "motorized" to describe its actuator, a POSITA would have understood that Clary's actuator is motorized. EX1003 ¶ 117. Clary discloses that the actuator may be controlled by a remote. EX1004 at [0017]; EX1003 ¶ 117. Clary also discloses that the "linear drive can also be provided

between the first and second frame assemblies to allow for automatic lowering and lifting of the flat panel display.” EX1004 at [0005]. A POSITA would have known that such a remote-controlled automatic actuator would include a motor which is in communication with the remote. EX1003 ¶ 117.

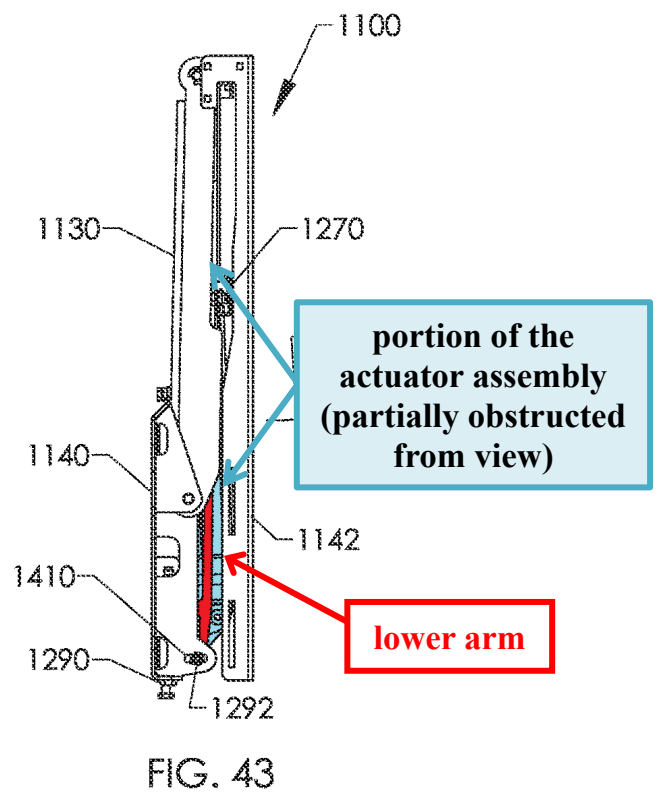
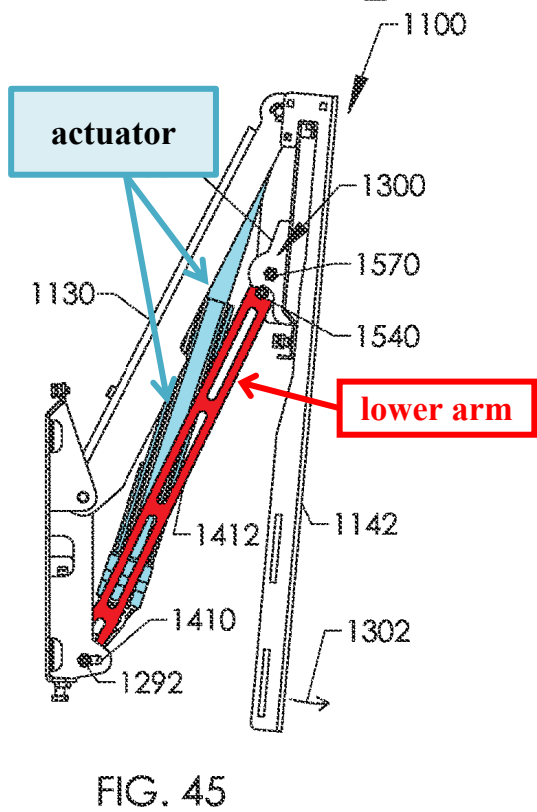
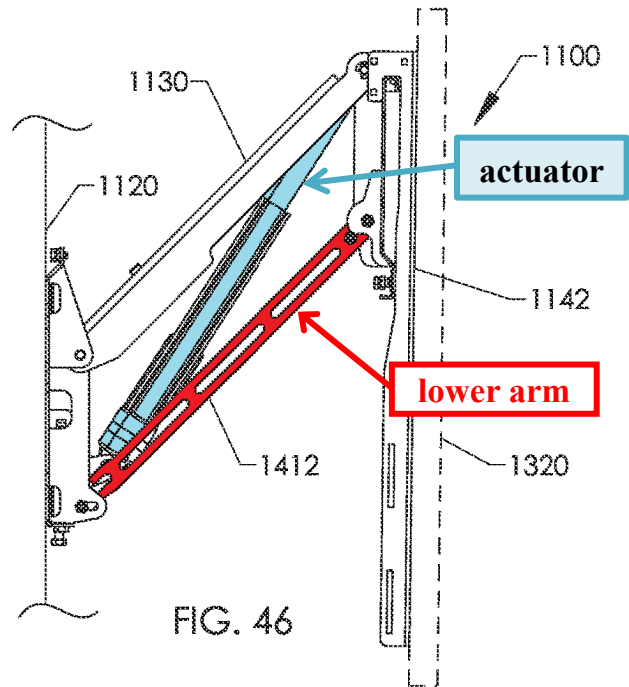
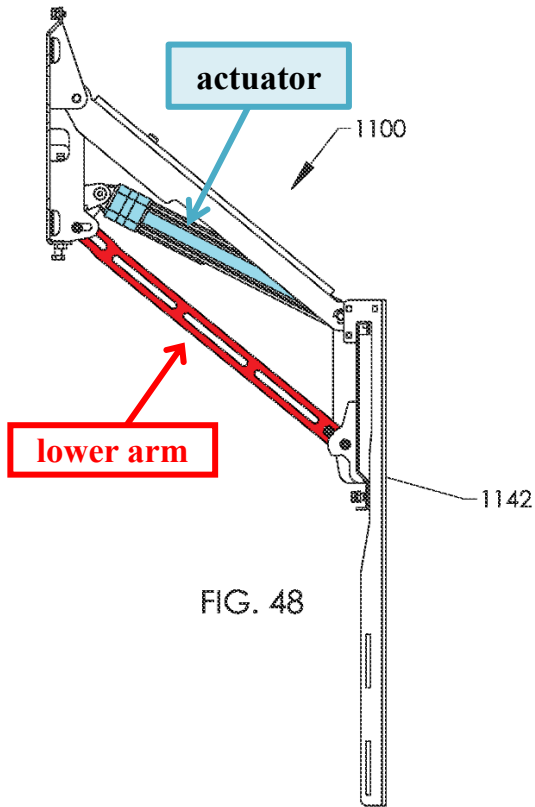
Thus, Clary discloses this limitation. *Id.*

7. **Limitation 33[d][i]: “wherein at least a portion of the motorized actuator assembly moves toward and past a portion of the lower arm when the arm assembly moves toward the raised configuration.”**

Clary discloses this limitation. EX1003 ¶ 118. For example, Clary discloses an actuator assembly (including linear actuator 11 and threaded tube 3c) that moves relative to the arm assembly when the arm assembly moves toward the raised position, as shown in Figures 5 and 6. Similar to the relevant embodiment of the ’703 patent (Figures 41–48), at least a portion of Clary’s actuator assembly moves relative to the lower arm in a manner that causes the portion of the actuator assembly to get closer to and past a portion of the lower arm when the arm assembly moves toward the raised configuration. EX1003 ¶ 118; EX1001 at Figs 45-46; EX1004 at Figs. 5-6.

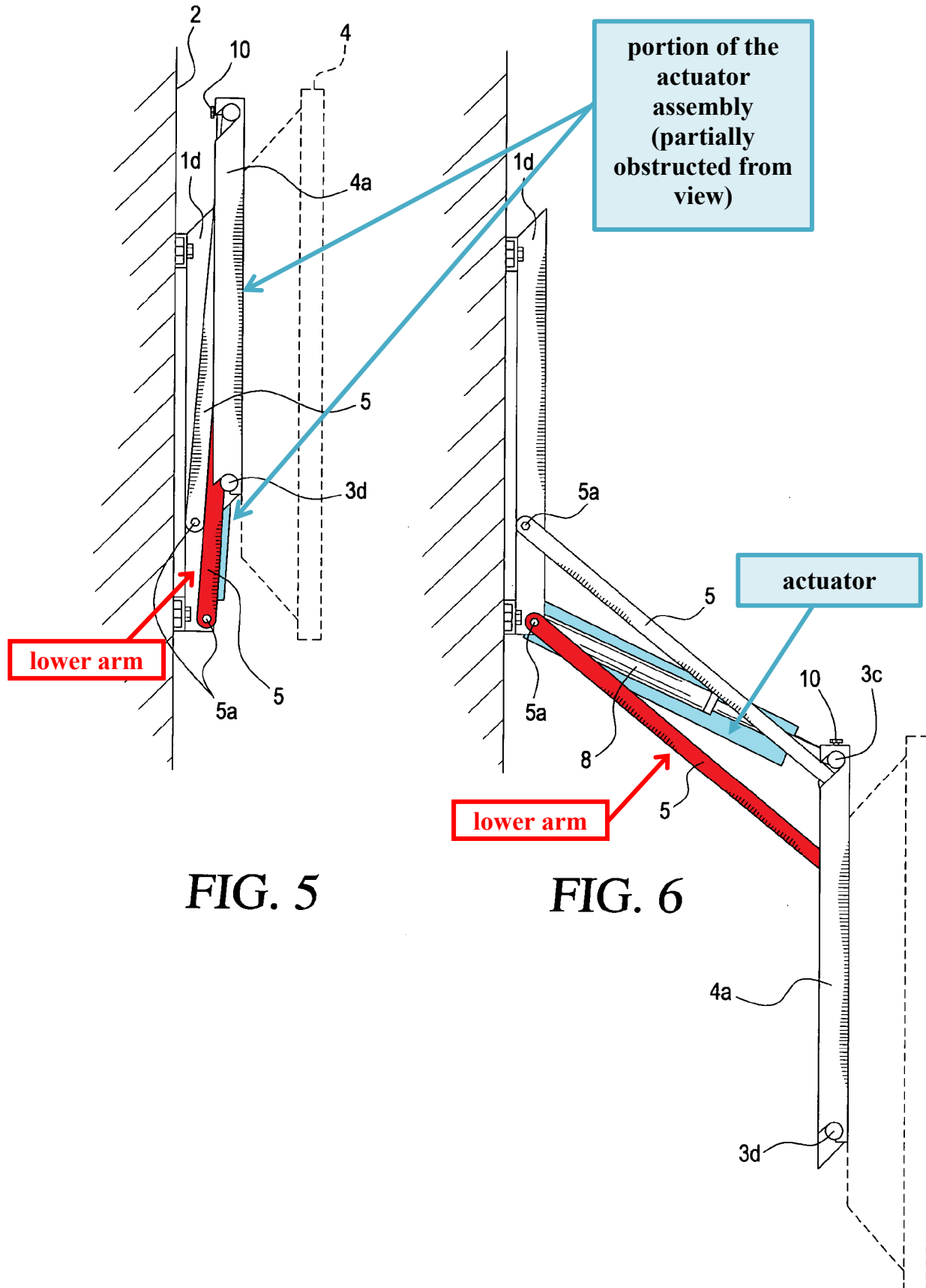
During prosecution of the ’703 patent, Patent Owner confirmed that the embodiment of Figures 41-48 is covered by the challenged claims and includes an actuator assembly configuration that satisfies this limitation. EX1002 at 29. This embodiment of the ’703 patent includes an actuator assembly 1200 and arm

assembly that provide relative movement of the lower arm 1412 toward and past a portion of the motorized actuator assembly 1200 when the arm assembly moves toward the raised configuration, as shown below in annotated Figures 43, 45, 46 and 48. EX1003 ¶ 119. In this manner, a portion of the actuator assembly gets closer to and past a portion of the lower arm when the arm assembly moves toward the raised position. *Id.* These figures illustrate positions of the arm assembly and actuator assembly as the arm assembly moves from the lowered configuration to the raised configuration. *Id.*



Although the '703 patent actuator assembly 1200 continuously rotates upward (counter-clockwise) in a direction that is away from the lower arm 1412 when the arm assembly moves toward the raised configuration, there is relative movement of these parts toward and past one another when viewed from the side. EX1003 ¶ 120-121. Thus, there is relative movement of a portion of each of these parts (actuator assembly and lower arm) toward and past one another when the arm assembly moves toward the raised configuration, as shown in the figures above. *Id.*

Similar to the arm assembly and actuator assembly of the '703 patent, there is relative movement of Clary's lower arm toward and past a portion of the actuator assembly when the assembly moves from the lowered configuration to the raised configuration. *Id.* Clary has the same arm assembly configuration and actuator movement as this embodiment of the '703 patent, as shown below in annotated Figures 5 and 6. *Id.*



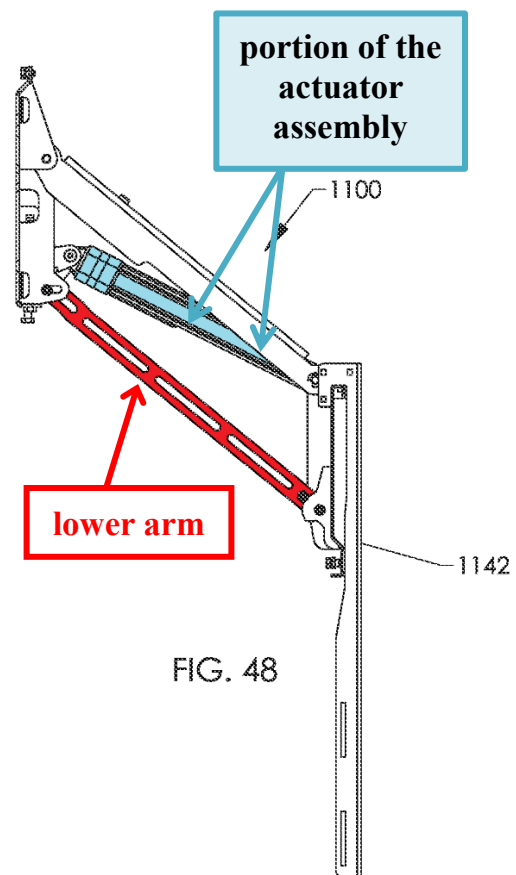
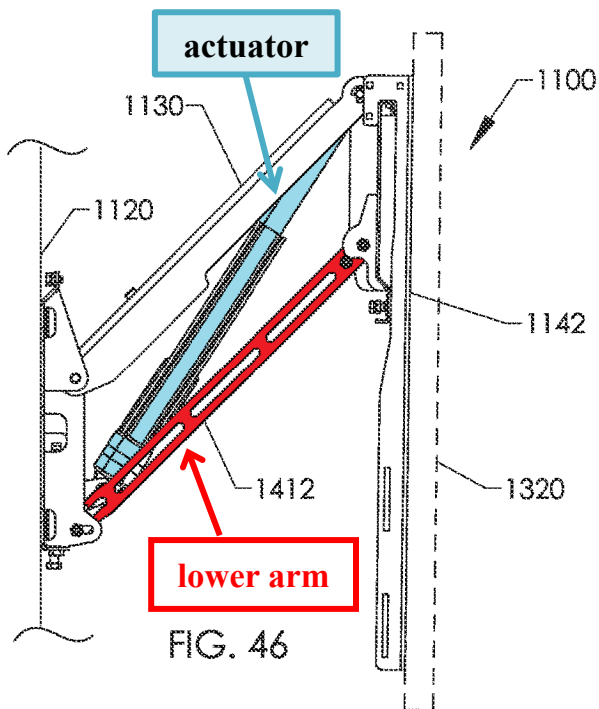
Clary's mounting system includes an actuator assembly and arm assembly that provide relative movement of the lower arm 5 toward and past a portion of the motorized actuator 11 when the arm assembly moves toward the raised configuration. EX1003 ¶ 122. Figure 6 shows the arm assembly in the lowered configuration and Figure 5 shows the arm assembly in the raised configuration. EX1004 at [0018]. These figures illustrate the movement of the arm assembly and actuator assembly from the lowered configuration (Fig. 6) to the raised configuration (Fig. 5). EX1003 ¶ 122. As the arm assembly moves upward toward the raised configuration, the actuator 11 and lower arm 5 both rotate counter-clockwise, but they move relative to one another such that they get closer to and pass one another when viewed from the side. *Id.* During this movement, at least a portion of Clary's actuator 11 gets closer to and past at least a portion of the lower arm 5 such that the view of the actuator 11 is largely obstructed by the lower arm 5 in the raised position, as shown in Figures 5 and 6 above. EX1004 at Fig. 5. Clary's movement and configuration is the same as the relevant embodiment (Figures 41-48) of the '703 patent, wherein the relative movement of the actuator and lower arm cause at least a portion of the actuator assembly to get closer to and past a portion of the lower arm when the arm assembly moves toward the raised configuration. EX1003 ¶¶ 122-123.

Thus, Clary satisfies this limitation. *Id.*

C. Clary Anticipates Claim 34

Claim 34 depends from claim 33 and recites “wherein the portion of the motorized actuator assembly moves away from and is vertically spaced apart from the lower arm when the arm assembly is in the lowered configuration.” Clary discloses this limitation. EX1003 ¶¶ 124-127.

As discussed above in Section VI.B, the “moves away from” language of this limitation must include relative movement of the lower arm and the portion of the actuator assembly in which the lower arm moves away from the portion of the actuator assembly, as the arm assembly approaches the lowered configuration. The claimed movement is not limited to movement of the portion of the actuator assembly in an upward direction away from the first arm, but rather it includes movement of the lower arm away from the actuator assembly which causes relative movement between these parts, causing the portion of the actuator assembly to get further away from the lower arm, as illustrated in annotated Figures 46 and 48 below. EX1003 ¶ 125. The figures show that the portion of the actuator assembly gets further away from and vertically spaced apart from the lower arm 1412 when the arm assembly is in the lowered configuration of Figure 48. *Id.*



Similar to the relevant embodiment of the '703 patent, in Clary's system the portion of the motorized actuator assembly gets further away from and vertically spaced apart from the lower arm when the arm assembly is move to the lowered configuration, as shown in annotated Figures 5 and 6 below. EX1004 at Figs. 5-6; EX1003 ¶ 126-127. As illustrated in Figure 6, most of the actuator assembly gets further from and is vertically spaced apart from the lower arm 5 in the lowered configuration. *Id.*

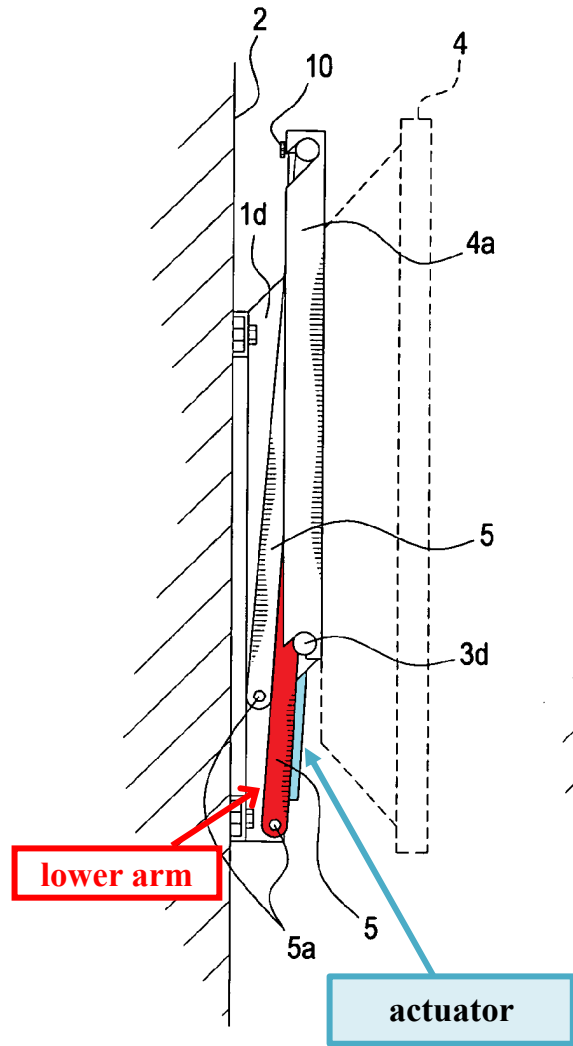


FIG. 5

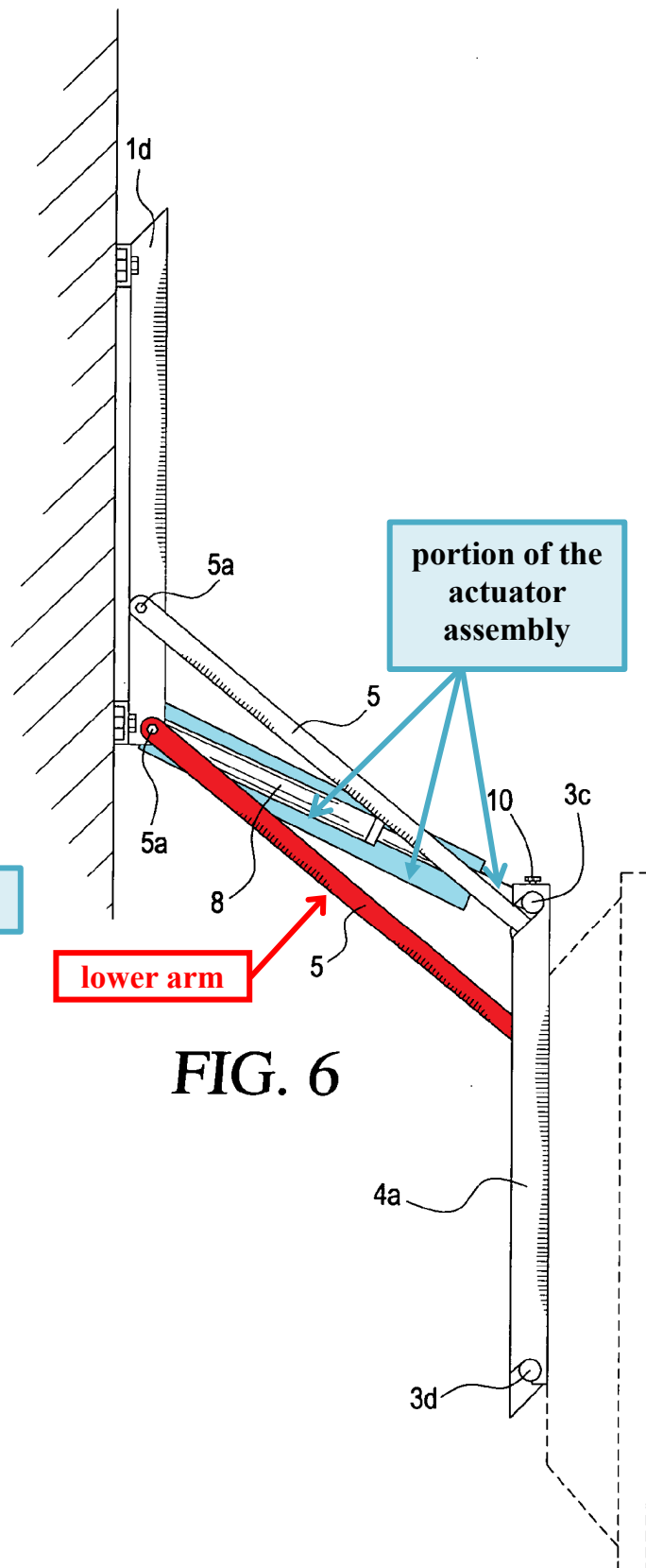


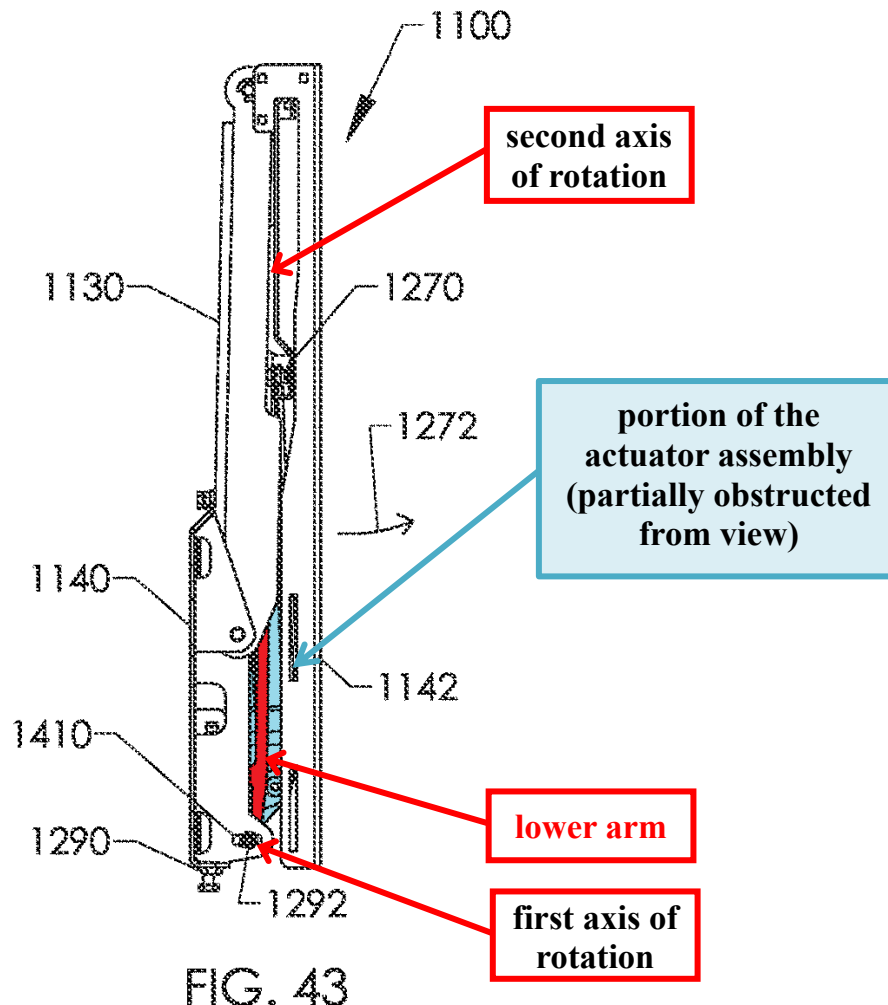
FIG. 6

Thus, Clary satisfies this limitation at least because it has the same configuration and movement as the relevant '703 patent embodiment when moved to the lowered configuration. *Id.*

D. Clary Anticipates Claim 35

Claim 35 depends from claim 33 and recites “wherein the lower arm extends between a first axis of rotation and a second axis of rotation, wherein the portion of the motorized actuator assembly is positioned forward of the first axis of rotation and the second axis of rotation when the arm assembly is at the raised configuration.”

According to Patent Owner’s statements during prosecution, the embodiment of Figure 43 of the '703 patent provides an example of this limitation in the raised configuration, as shown below. EX1002 at 29.



Similar to the '703 patent, Clary discloses this limitation, as shown in Clary Figure 5. EX1004 at Fig. 5; EX1003 ¶¶ 128-129. Clary shows that the portion of the actuator assembly has moved past part of the lower arm, such that side view of the actuator is largely obstructed by the lower arm and display bracket. EX1004 at Fig. 5. The lower arm 5 has the first and second axes of rotation at its ends and the portion of the actuator is positioned forward of these axes in the raised configuration shown below. EX1003 ¶ 129. Thus, to the extent Figure 43 of the '703 patent shows

an embodiment that satisfies this limitation, as asserted by Patent Owner during prosecution, then Clary's similar configuration and Figure 5 also discloses a configuration that satisfies this limitation. *Id.*

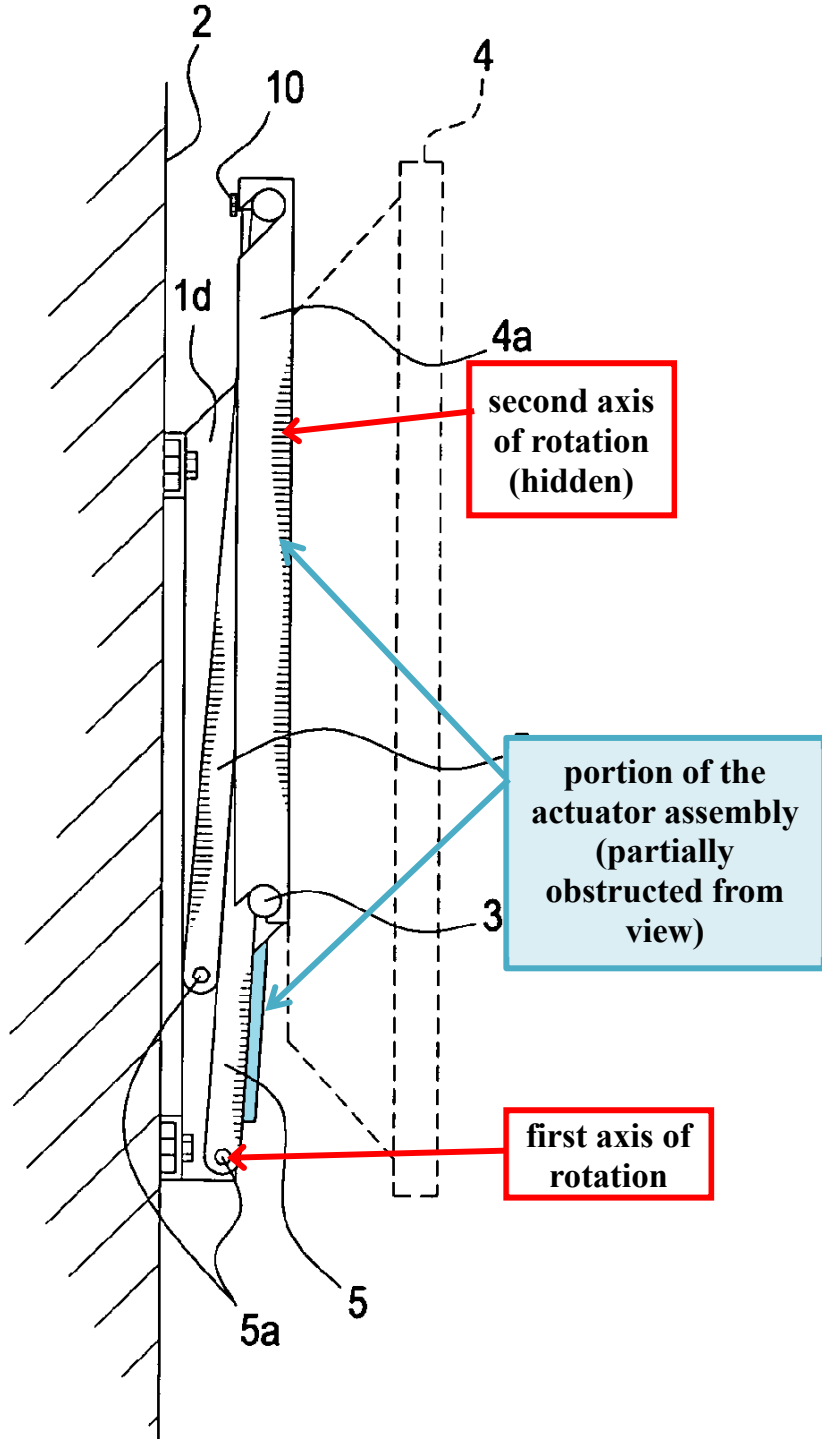
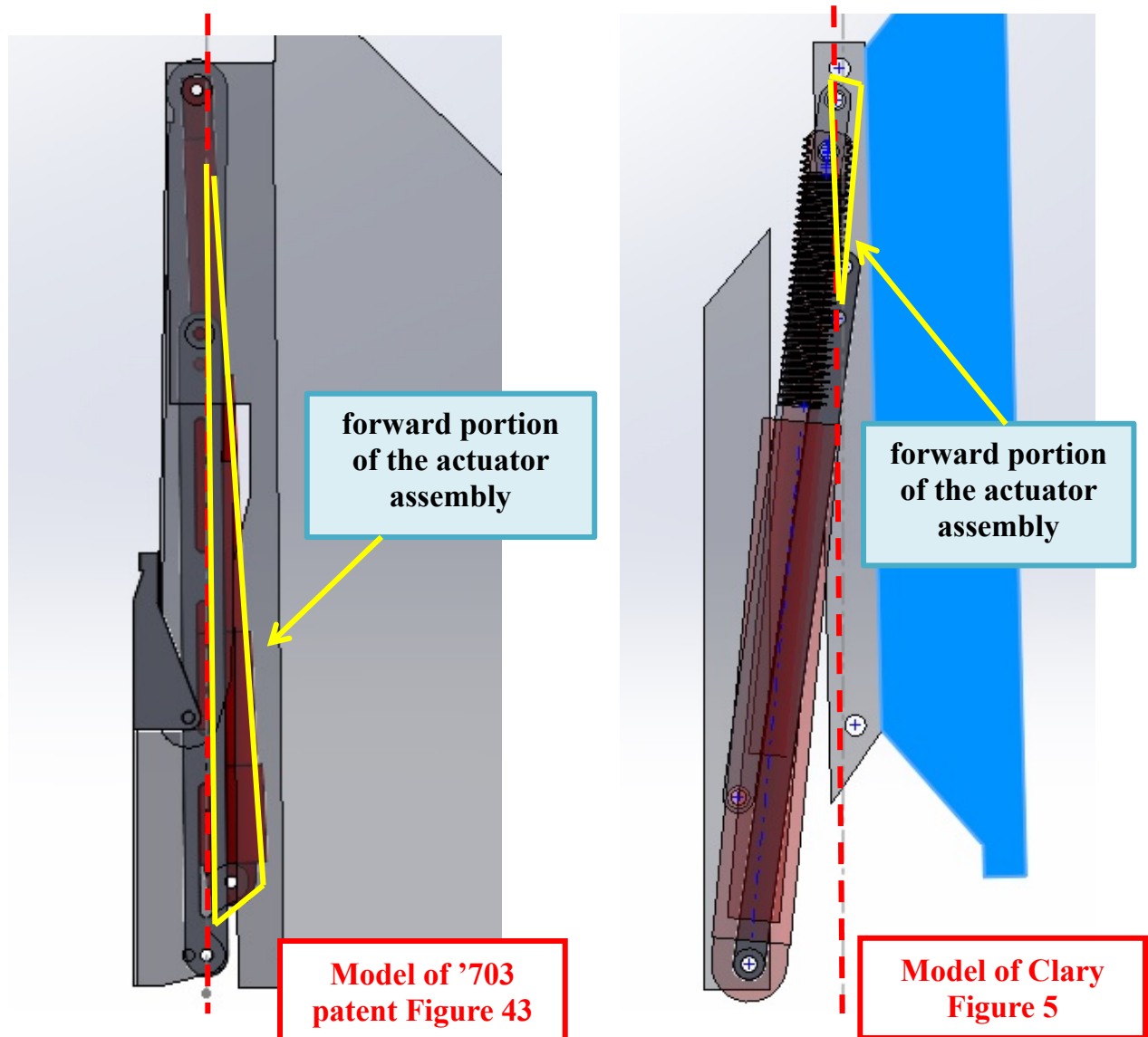


FIG. 5

That Clary discloses this embodiment is also confirmed by creating a model to analyze of the system shown in Clary Figure 5 compared to the relevant Figure 43 of the '703 patent. EX1003 ¶¶ 129-130. For example, Dr. Pratt created models of these figures with visibility through the display bracket and linkage arms such that the position of the actuator is visible relative to the lower arm's first and second axes of rotation, as shown below in the figures of the models. *Id.* These models have the same configuration and relative dimensions as the Clary and patent figures, but the visibility of the parts has been changed. *Id.* As shown in these figures, to the extent the '703 patent discloses this limitation, Clary also discloses at least the portion of the actuator assembly positioned forward (to the right) of the first axis and the second axis when the arm assembly is at the raised configuration. *Id.*



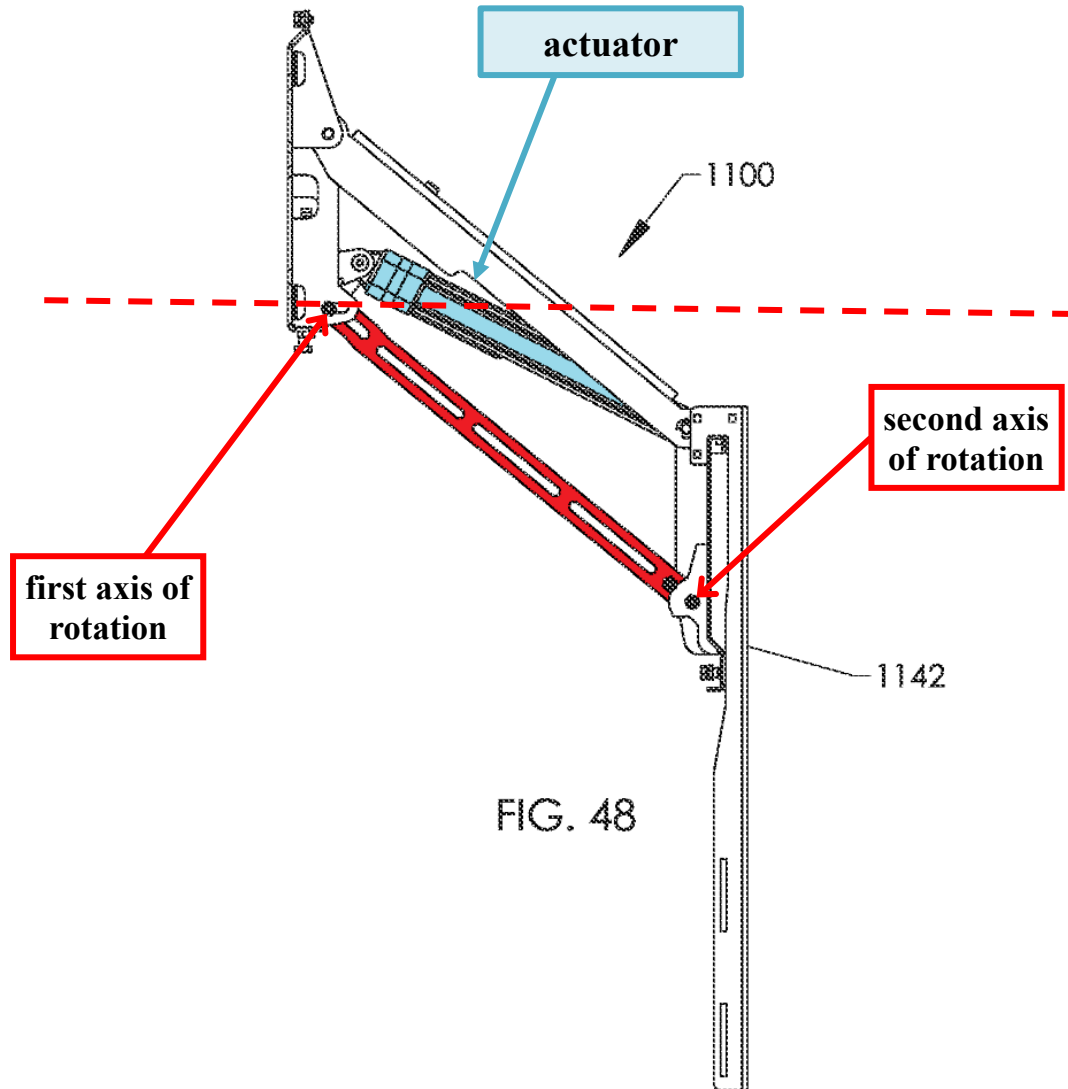
Thus, Clary discloses this limitation. *Id.*

E. Clary Anticipates Claim 36

Claim 36 depends from claim 35 and recites “wherein the first axis of rotation and the second axis of rotation are spaced apart from and located below an extendable actuator of the motorized actuator assembly when the arm assembly is in the lowered configuration.” As discussed above, claim 36 lacks written description

support and is indefinite. However, to the extent this claim is somehow supported and not indefinite, its features would be disclosed by Clary. EX1003 ¶¶ 131-133.

To the extent the '703 patent discloses this limitation, Clary discloses the same configuration and thus would disclose this limitation. *Id.* As shown in annotated Figure 48 below, the relevant embodiment of the '703 patent has a lowered configuration in which the first axis and second axis are spaced apart from and located below only a small portion of the actuator. *Id.*



Similarly, Clary's display mounting system has a lower arm with a first axis of rotation 5a and second axis of rotation 5b, as shown below. EX1003 ¶ 133. These axes of rotation are spaced apart from and located below a similarly small portion of the actuator assembly when the arm assembly is in the lowered configuration, as shown below in Fig. 2. EX1004 at Fig. 2; EX1003 ¶ 133. Thus, if the '703 patent embodiment discloses this limitation with an extendable actuator above the first and second axes, then Clary's same configuration also discloses this limitation. *Id.*



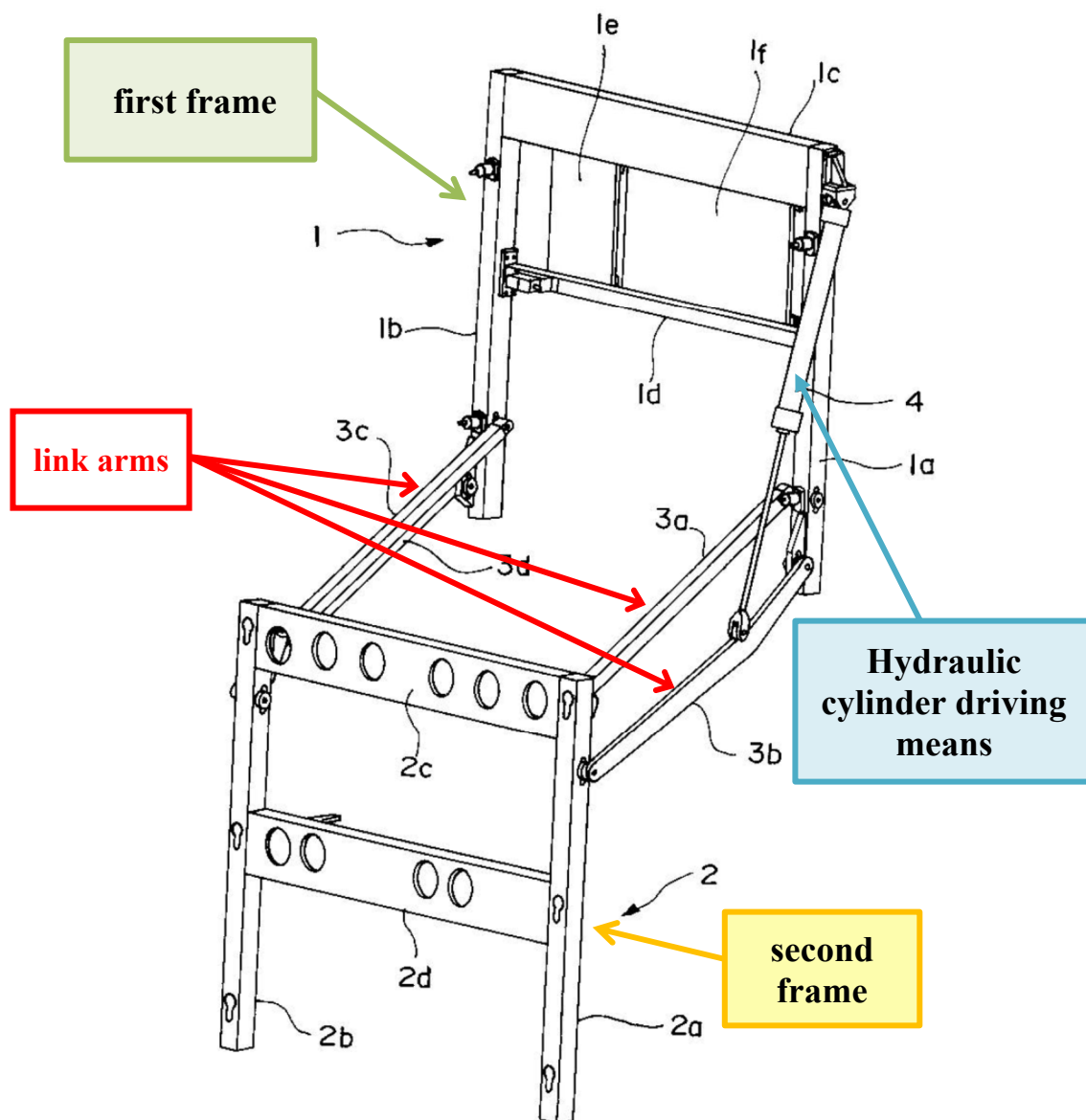
Thus, Clary discloses this limitation if it is somehow supported and not indefinite. *Id.*

**XI. GROUND 4: CLARY IN VIEW OF TSUJI AND THE
GENERAL KNOWLEDGE OF A POSITA RENDERS
OBVIOUS CLAIMS 33-36**

A. Disclosure of Tsuji

Tsuji relates to a support device for mounting a flat screen television. EX1015 at [0001], Fig. 1. Annotated Figure 1 below shows a system with a first frame 1 attached to a vertical structure and a second frame 2 to support the display. *Id.* at [0015]-[0018]. Linkage arms 3a-3d are rotatably supported by the first frame and coupled to the second frame. *Id.* at [0018]-[0020]. The system includes a motorized hydraulic cylinder 4 connected to the first frame 1 and the link arm 3b to drive movement of the linkage arms. *Id.* at [0022]-[0023], [0037], Figs. 1-4. The cylinder 4 is driven to extend the support device to a deployed state in which the frame 2 is lowered and upward to a raised position. *Id.*

[Fig. 1]



B. Clary Combined With Tsuji and the General Knowledge of a POSITA Renders Obvious Claims 33 and 34

As described above in Ground 3, Clary discloses all the limitations of claims 33 and 34. To the extent Clary somehow fails to disclose specific configuration features, including that the actuator assembly is motorized or that it is rotatably

coupled to the arm assembly, these limitations were well known to a POSITA and would have been obvious. EX1003 ¶¶ 134-145.

To the extent Clary somehow fails to disclose a **motorized** actuator assembly, it would have been obvious to use a motorized linear actuator for the linear actuator 11 disclosed in Clary. EX1003 ¶ 136. A POSITA would have understood that Clary's remote-controlled actuator already includes a motor to power the actuator. *Id.* This would also be an obvious feature for an actuator in a mounting system as part of a POSITA's general knowledge. *Id.*

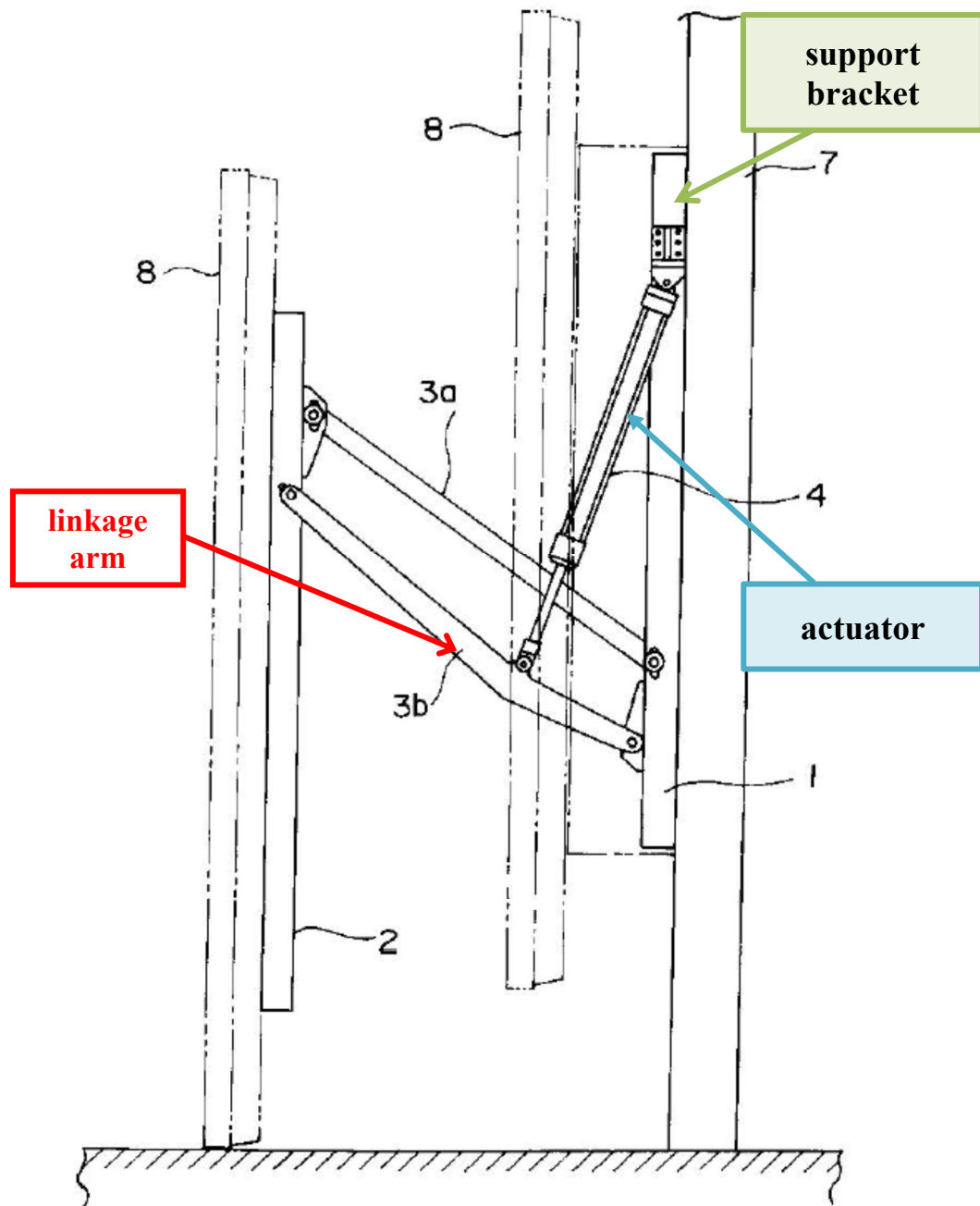
Motorized actuators were commonly used in mounting systems, including television mounting systems. EX1003 ¶ 137. For example, Tsuji discloses a motorized hydraulic cylinder 4 that is motor driven. EX1015 at [0037]. Juan also discloses a linear actuator 810 powered by an electric motor. EX1005 at [0070]. Pankros and Xu also use a motor to power a linear actuator. EX1006 at Claim 4; EX1017 at 7. A POSITA would have understood that using a motorized actuator is a mere design choice and was the most common option for actuators in this context. EX1003 ¶ 137. Because motorized actuators were commonly used in mounting systems and other similar systems, a POSITA also would have reasonably expected success in using such an actuator in the Clary system. *Id.* Moreover, a POSITA would have been motivated to use a motorized actuator to provide automatic control of the step system via a remote. *Id.* Thus, a POSITA would have known that Clary's

linear actuator 11 is motorized, and it would have also been obvious to use a motorized actuator as a common actuator used in television mounting systems. *Id.*

To the extent Clary somehow fails to disclose the actuator assembly having a display bracket end **rotatably coupled to the arm assembly**, it would have been obvious to rotatably couple Clary's actuator assembly directly to one of the arms of the arm assembly. EX1003 ¶ 138. As discussed above in Ground 3, limitation 33[d] does not require **direct** coupling of the actuator assembly to the arm assembly. However, even if the claim was somehow construed to require such direct connection, it would have been obvious for a POSITA to modify Clary such that the actuator assembly is directly coupled to an arm of the arm assembly. *Id.*

It was within the general knowledge of a POSITA to directly couple an end of the actuator assembly to the arm assembly. EX1003 ¶ 139. For example, Tsuji discloses an actuator assembly 4 that is directly rotatably coupled at one end to a linkage arm 3b and to the support bracket 1 at the other end, as shown below in annotated Figure 4. EX1015 at [0022]-[0023]. Directly rotatably coupling Clary's actuator assembly to an arm of the arm assembly would have been obvious in view of Tsuji. EX1003 ¶ 139.

[Fig. 4]



Juan also discloses a mounting system with a motorized actuator assembly which is attached to the arms of the arm assembly, as shown below. EX1005 at

[0066], Fig. 8 (annotated); EX1007 at 12-13 (First Embodiment Figure, Element 13, Element 16); EX1003 ¶ 140.

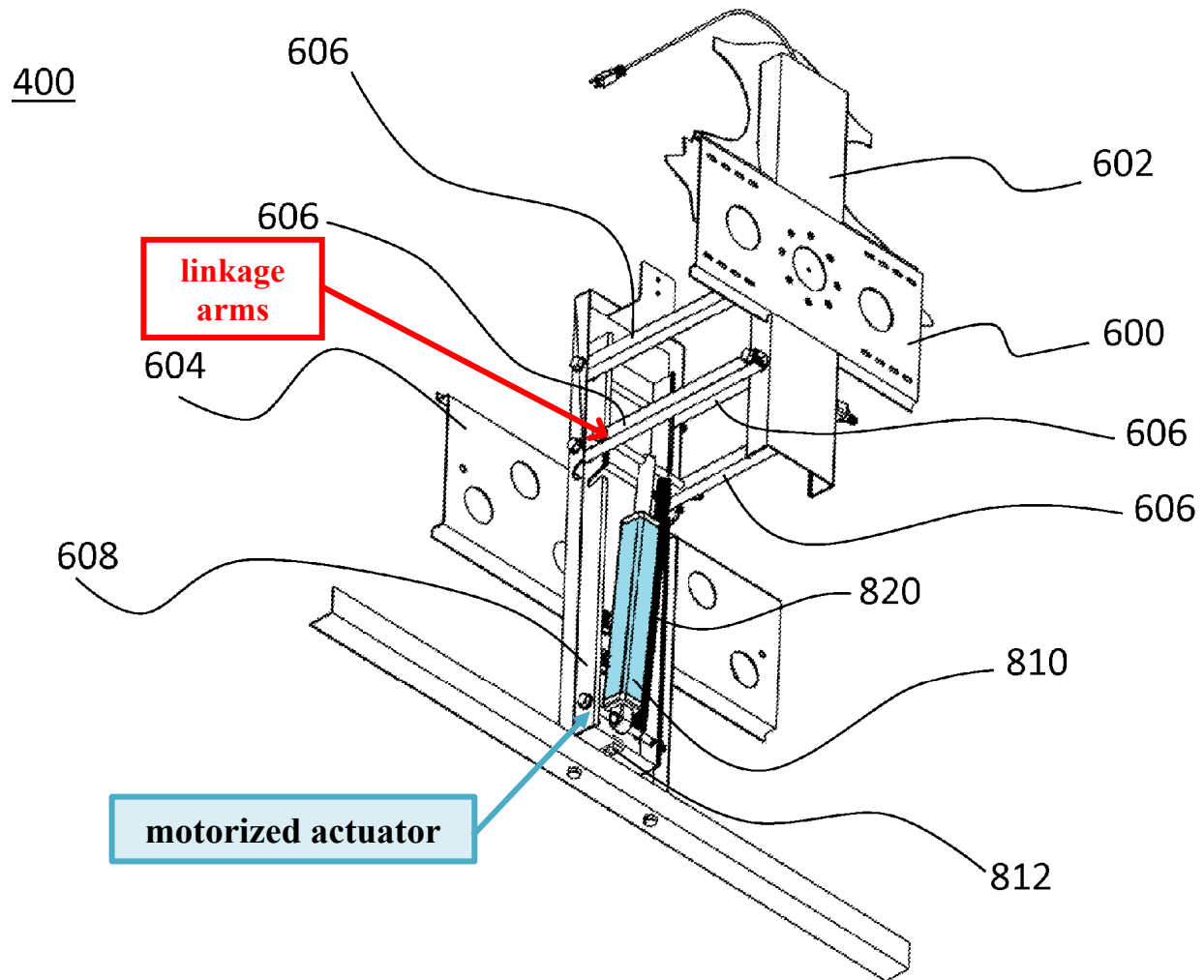
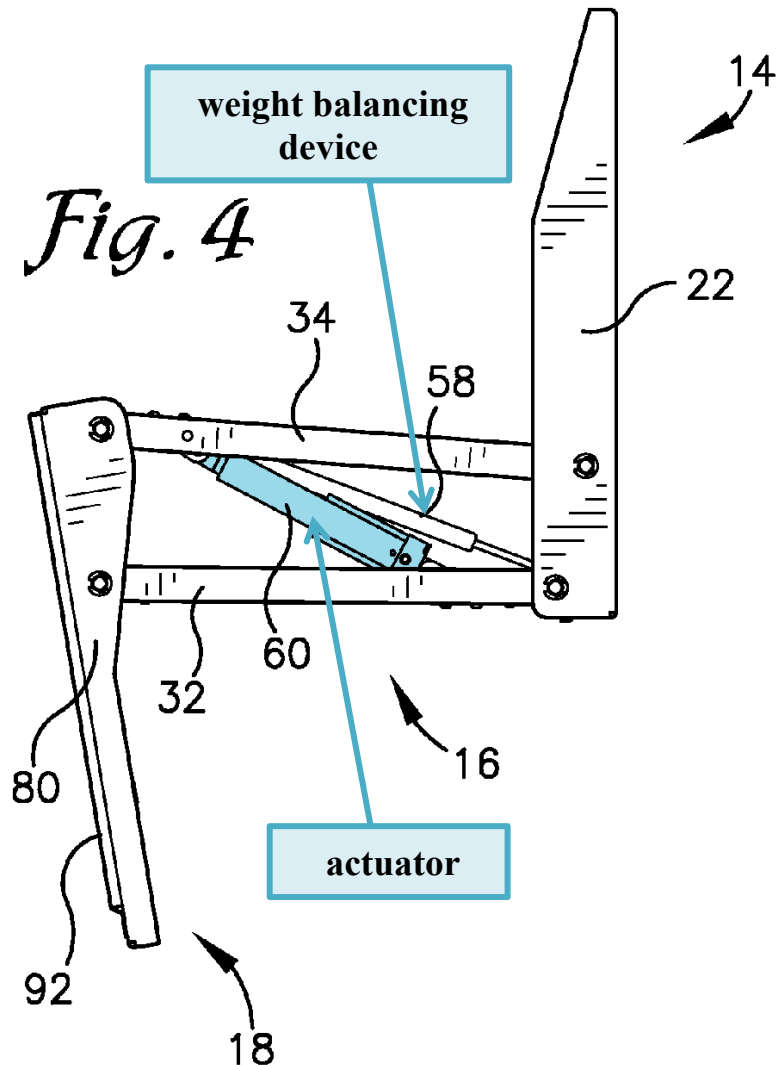
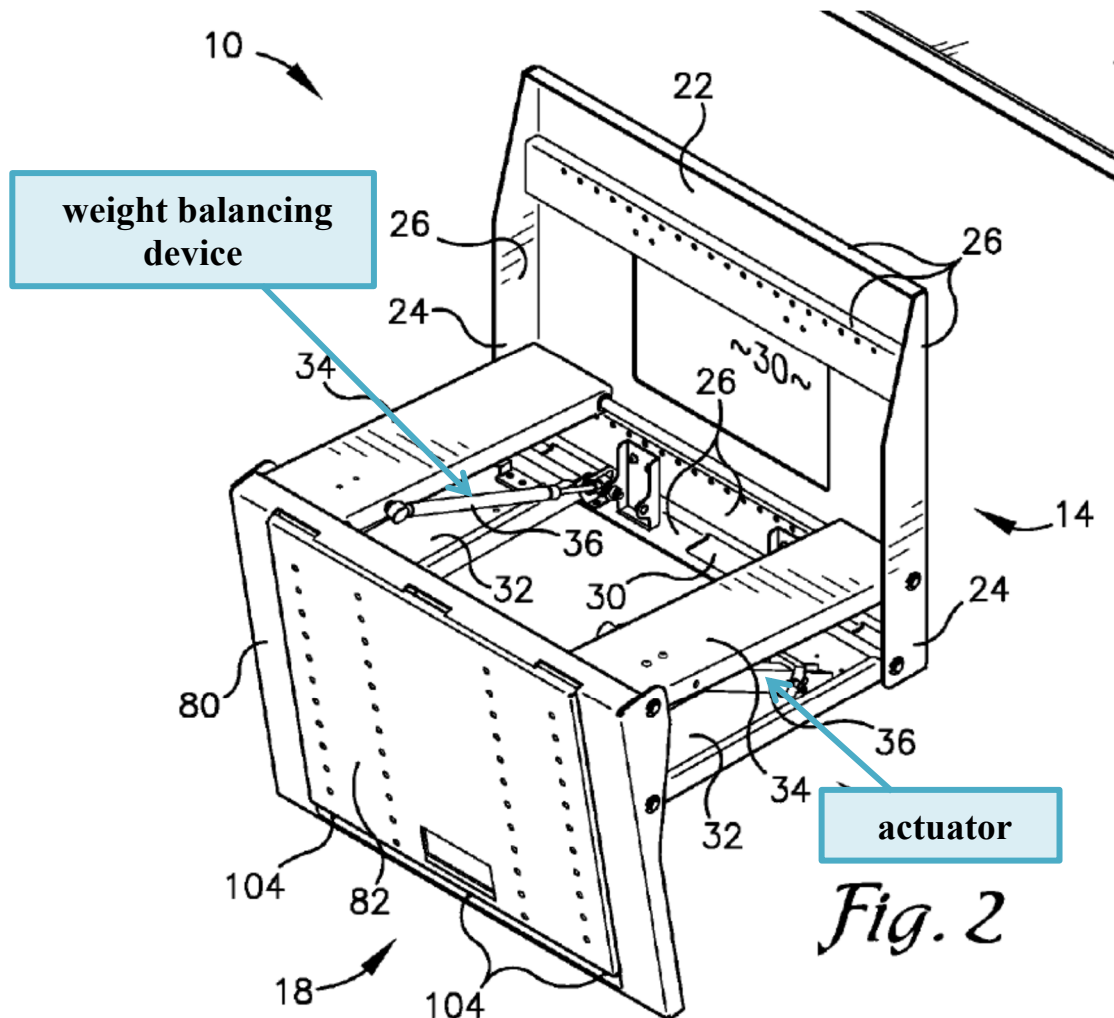


FIG. 8

Pankros also discloses a mounting system in which the actuator assembly 60 is directly rotatably coupled to an arm 34 of the arm assembly, as shown in annotated Figure 4 below. EX1006 at [0051]. Pankros' weight balancing device 58, which can be a motorized linear actuator, also has a display bracket end rotatably coupled

to the arm assembly the other end rotatably coupled to the support bracket. *Id.* at [0050], Figs. 2, 3, 4 and 7; EX1003 ¶ 141.





Thus, it was well-known for a POSITA to use this feature in a mounting system. EX1003 ¶ 142. Rotatably coupling the actuator assembly directly to a linkage arm instead of a bracket or other intervening part would have been a mere design choice from a finite number of options. *Id.* In a four-bar linkage system like Clary, there are only a few options for coupling the actuator. *Id.* If one end of the actuator assembly is coupled to the support bracket, then the other end of the actuator assembly can be coupled to a linkage arm or the display bracket. *Id.* This is

confirmed by the Juan reference which states “a linear actuator 810 is attached to two points on the four-bar linkage (composed of the set of bars 606, mounting plate 600/rear casing 602, and front mount 604/front casing 608).” EX1005 at [0066]. A POSITA would have been motivated to directly rotatably couple the actuator assembly to an arm of the arm assembly because this could reduce the number of parts and provide direct force from the actuator to the arm assembly which causes the display bracket to move. EX1003 ¶ 142. This configuration would simplify the design by reducing part count resulting in reduced inventory, assembly and inspection costs. *Id.* Such a modification could also allow for a shorter actuator. *Id.*

A POSITA also would have reasonably expected success in directly coupling the actuator assembly to an arm of the arm assembly. EX1003 ¶ 143. For example, a POSITA would have readily understood that the end of the actuator assembly could be directly coupled to the linkage arms instead of one of the brackets, as disclosed in Pankros, Tsuji and Juan. *Id.* A POSITA would have known that a simple modification to Clary would be to directly rotatably couple the actuator assembly 11, 11b, 3c to the upper arm(s) of the system because Clary already has the actuator assembly coupled adjacent to the upper arm axis 5b. *Id.* Moving the actuator end or the upper arm end to directly couple these two parts would be a minor modification, and a POSITA would have expected success in making this modification in a simple four-bar linkage system to perform the same function of

driving the linkage movement. *Id.* Thus, the modification would have involved no more than the routine substitution of one coupling location for another coupling location but still providing all the same desired functionality. *Id.*

Modifying Clary's configuration such that the actuator assembly directly couples with an arm(s) of the arm assembly would not affect the other functional limitations of claim 33. EX1003 ¶ 144. For example, as explained below in Section XII.B (Pankros Ground), coupling the actuator assembly directly to an upper arm of the arm assembly provides a configuration in which a portion of the motorized actuator assembly still moves relatively toward and past a portion of the lower arm when the arm assembly moves toward the raised configuration. *Id.* The simple modification of coupling the actuator assembly directly to an upper arm of arm assembly, similar to Pankros' configuration, would not significantly change the movement of Clary's actuator assembly relative to the lower arm of the arm assembly. *Id.*

Thus, in view of the analysis above in Ground 3 and the further analysis in this section (Ground 4), Clary combined with Tsuji and the general knowledge of a POSITA render obvious claims 33 and 34. EX1003 at ¶ 145.

C. Clary Combined With Tsuji and the General Knowledge of a POSITA Renders Obvious Claim 35

Claim 35 depends from claim 33 and recites “wherein the lower arm extends between a first axis of rotation and a second axis of rotation, wherein the portion of

the motorized actuator assembly is positioned forward of the first axis of rotation and the second axis of rotation when the arm assembly is at the raised configuration.”

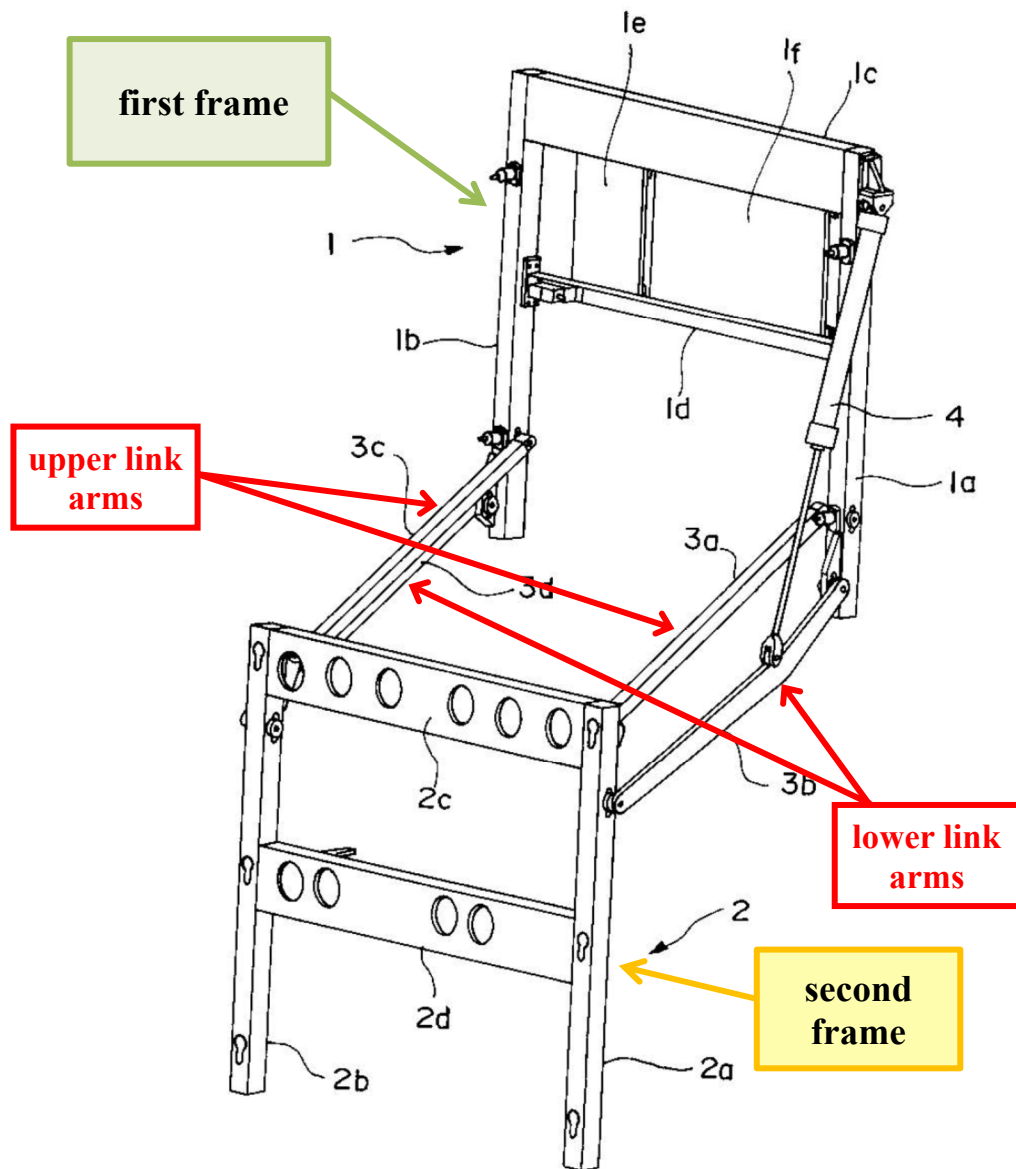
As explained above in Ground 3, Clary discloses this limitation. However, to the extent Clary somehow fails to disclose this specific feature, it would have been obvious for a POSITA to use an actuator configuration with this feature. EX1003 ¶¶ 146-147. This was a common design feature in mounting systems and would have been within the general knowledge of a POSITA. *Id.* It is merely an expected result of using an actuator and linkage arms having certain size and dimensions. *Id.* A POSITA would have known that this was a common design feature in mounting systems and would have been within the general knowledge of a POSITA. *Id.*

It would have been obvious for a POSITA to slightly change Clary’s arrangement so that a greater portion of the actuator assembly (including the portion) is forward of the lower arm axes in the raised configuration. EX1003 ¶ 148. For example, a POSITA would have used a more powerful actuator which would be larger in diameter and would extend further forward in the raised position. *Id.* A POSITA would have been motivated to make this modification because a larger diameter actuator would provide additional support, stability, and longevity to the system. *Id.*

Also, a POSITA would have easily modified Clary’s upper and lower linkage arms so that they are not aligned in the vertical direction. EX1003 ¶ 149. For

example, a POSITA would have known based on general knowledge to couple the lower arms to the system at a position inward or outward of the upper arms so that the upper and lower arms do not abut against each other in the raised position. *Id.* A POSITA would be motivated to make this modification because it would make the raised configuration more compact with the television closer to the wall. *Id.* It would also take up less space and would be more aesthetically desirable. *Id.* A POSITA would have known that there are benefits to the linkage arms not being aligned so that they can overlap and pass each other during movement of the system. *Id.* For example, Tsuji describes a system in which the linkage arms 3a-3d are not aligned vertically (offset) so that they can pass one another and not abut, as shown below in annotated Figure 1. EX1015 at [0019]-[0022], Figs. 1-4.

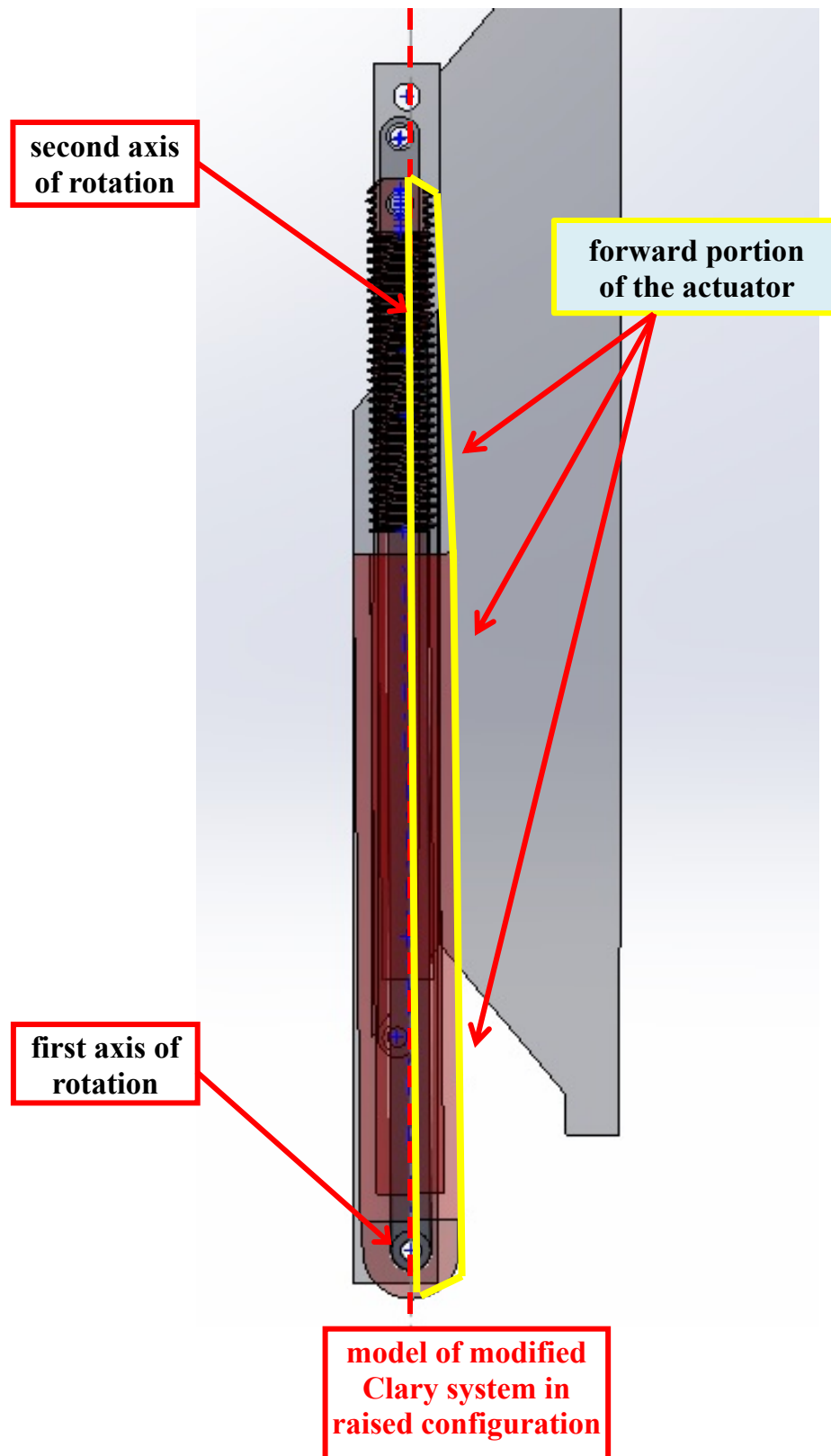
[Fig. 1]



Pankros also discloses a weight balancing device 58 and support arm 410 that are rotatably coupled at positions inside the linkage arms so that it is not aligned

vertically with the linkage arms. EX1006 at [0050], [0052], [0085], Figs. 2-5; EX1003 ¶ 150.

Modifying Clary's upper and lower arms in this manner would make the raised configuration more compact and would cause a larger portion (including the portion) of the actuator assembly to be forward of the lower arm axes in the raised configuration. EX1003 ¶ 151. This is shown in the model below which was provided by Dr. Pratt and illustrates Clary's raised configuration with the arm positions offset (not aligned vertically) to allow a more compact raised configuration with the portion of the actuator assembly forward of the lower arm axes. *Id.*



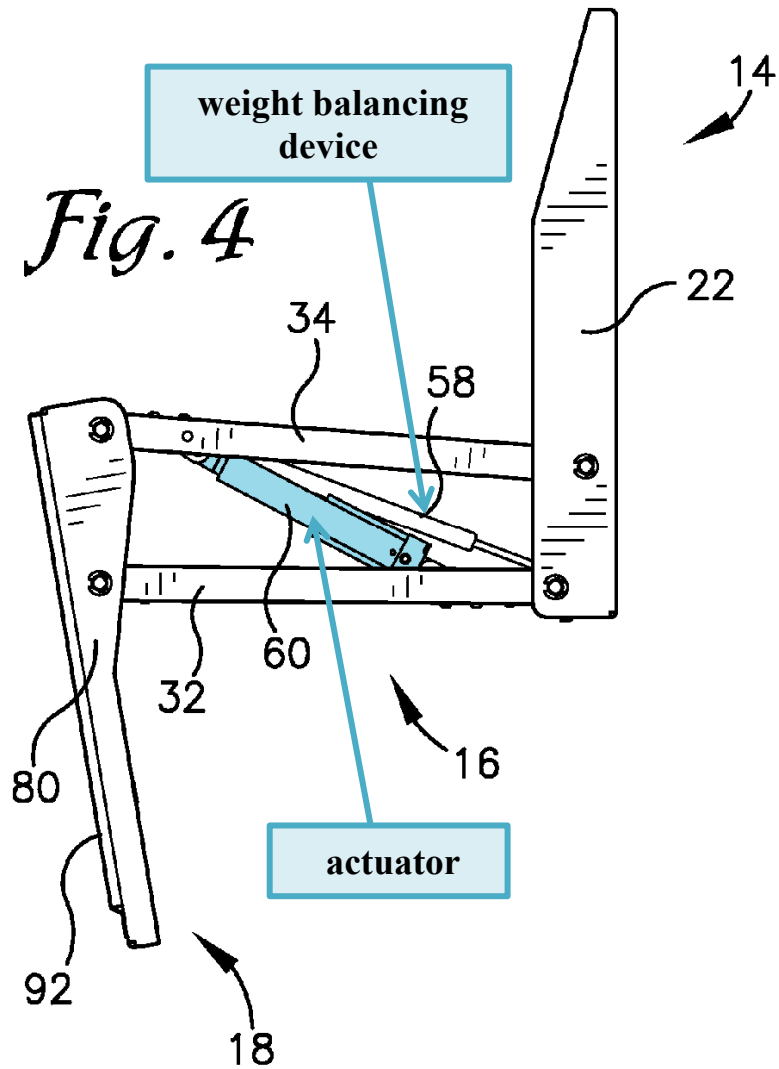
Thus, claim 35 would have been obvious in view of the combination of Clary with Tsuji and the general knowledge of a POSITA.

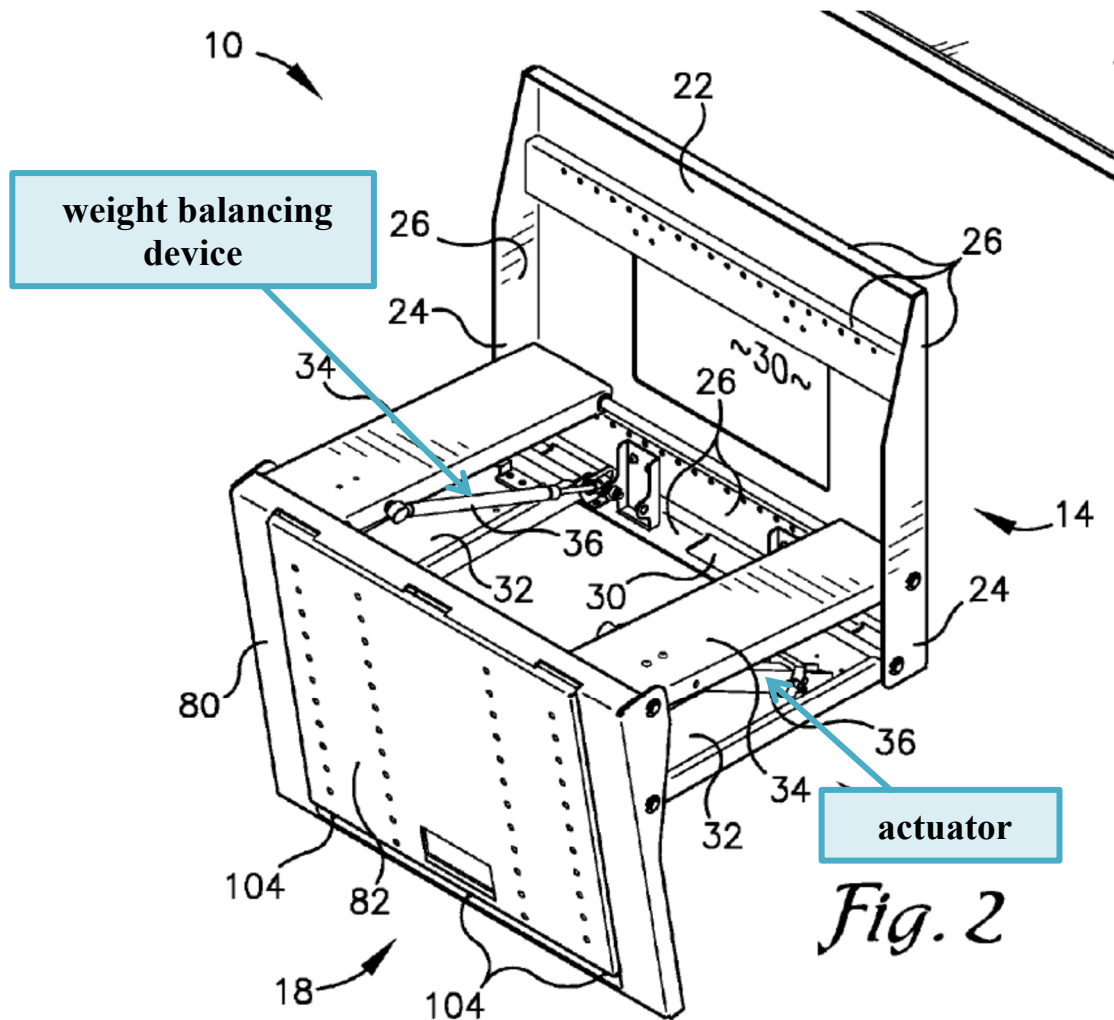
D. Clary Combined With Tsuji and the General Knowledge of a POSITA Renders Obvious Claim 36

Claim 36 depends from claim 35 and recites “wherein the first axis of rotation and the second axis of rotation are spaced apart from and located below an extendable actuator of the motorized actuator assembly when the arm assembly is in the lowered configuration.”

To the extent claim 36 is somehow supported by written description and not indefinite, Clary discloses this limitation at least because a portion of the motorized actuator assembly is located above the first and second axes when the arm assembly is in the lowered configuration, similar to the relevant embodiment of the '703 patent. *See* Ground 3 (Section X.E). However, to the extent this limitation somehow requires that the actuator assembly needs to be positioned higher above the first and second axes in the lowered configuration, which it does not, such modification would have been obvious in view of the general knowledge of a POSITA. EX1003 ¶¶ 152-153. An actuator with a higher position relative to the lower arm was a common design feature in mounting systems and would have been within the general knowledge of a POSITA. *Id.* Tsuji’s actuator assembly is rotatably coupled to the support bracket at a location higher than the first and second axes of the lower arm. EX1015 at Figs. 1-4. Pankros also discloses a rotatable coupling of the actuator

assembly to the support bracket at a position above the first and second axes of the lower arm. For example, Pankros discloses weight balancing device 58, which may be a linear actuator, that is rotatably coupled to the support bracket at an attachment positioned above the axes of the lower arm when the arm assembly is in the lowered position, as show in annotated Figures 2 and 4 below. EX1006 at claim 20, [0050] and [0052]. Thus, it would have been well-known to a POSITA to couple the actuator assembly to the support bracket at a position higher than the axes of the lower arm in the lowered configuration, as disclosed in the prior art. EX1003 ¶ 153.





Rotatably coupling the actuator assembly to the support bracket at a higher location would have been a mere design choice from a finite number of options. EX1003 ¶ 154. In a four-bar linkage system like the prior art references and the '703 patent, there are a limited number of locations for coupling the actuator. *Id.* A POSITA would have been motivated to rotatably directly couple the actuator assembly to the support bracket because the support bracket is attached to the wall and is thus stable and secure, and to reduce part count and associated inventory, assembly and inspection costs. *Id.* Coupling the actuator assembly at a location on

the support bracket between the axes of the upper and lower arms could also allow for a shorter actuator and a more compact system in the raised and lower configurations. *Id.* A POSITA also would have reasonably expected success in coupling the actuator assembly to a higher location on the support bracket. *Id.* For example, a POSA would have readily understood that the support bracket end of the actuator assembly could be coupled to the support bracket at a higher location that still provides the same movement of the arm assembly, as disclosed in Pankros. *Id.* Moving the actuator connection higher would be a minor modification, and a POSITA would have expected success in making this modification in a simply four-bar linkage system to perform the same function of driving the linkage movement. *Id.* Thus, the modification would have involved no more than the routine substitution of one coupling location for another coupling location but still providing all the same desired functionality. *Id.*

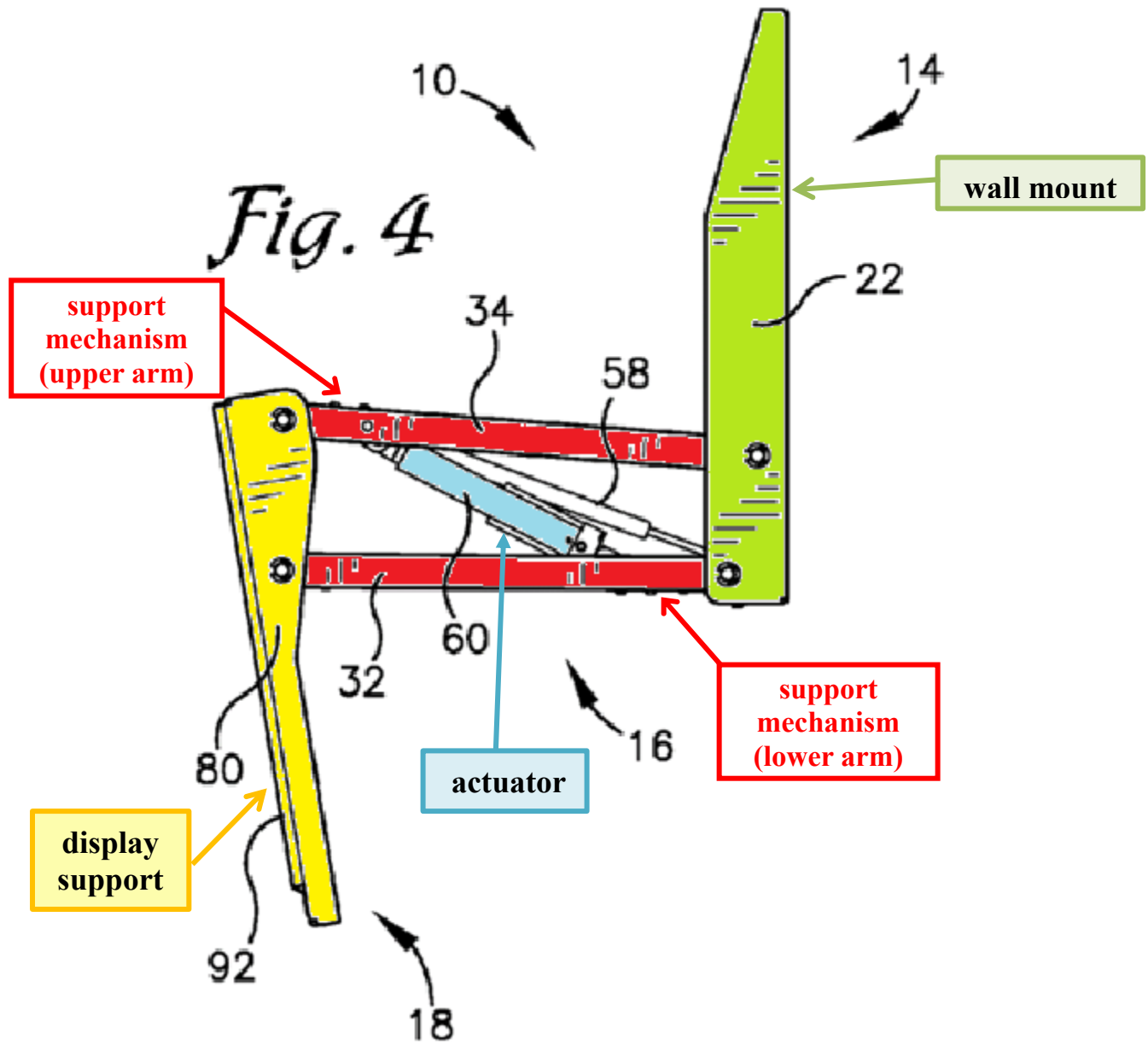
Thus, claim 36 would have been obvious in view of the combination of Clary with Tsuji and the general knowledge of a POSITA. EX1003 ¶ 155.

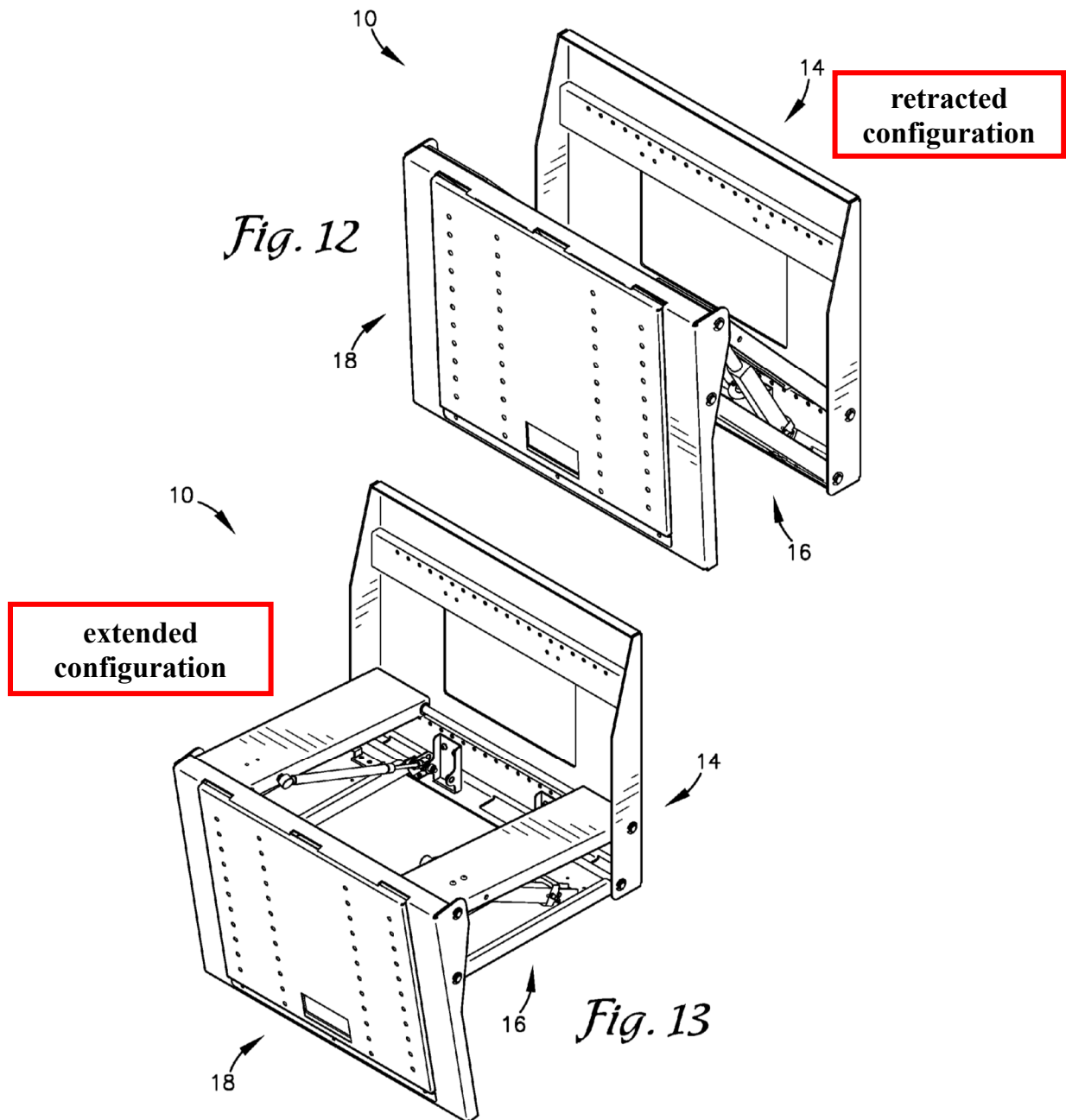
XII. GROUND 5: PANKROS ANTICIPATES CLAIMS 33-36

A. Disclosure of Pankros

Pankros is listed on the face of the '703 patent but was not applied by the Examiner during prosecution. Pankros discloses a display mounting apparatus that includes a wall mount 14, a support mechanism 16, a display support 18, and an

electronics system, as shown in the annotated figures below. EX1006 at [0041], Fig. 4; EX1008 at [0009], [0039]. The wall mount 14 secures the apparatus to a wall. EX1006 at [0043], Fig. 4; EX1008 at [0010]. The support mechanism 16 includes an upper support arm 34 and a lower support 32 arm which rotatably connect the to the display support 18 and the wall mount 14. EX1006 at [0046], [0047], Fig. 4; EX1008 at [0014]. The display support 18 removably attaches a display to the mounting apparatus. EX1006 at [0053], Fig. 4; EX1008 [0018]. The support mechanism 34 can also include an actuator 60. EX1006 at [0046], [0051], Fig. 4; EX1008 at [0017]. The actuator 60 moves the apparatus to extended and retracted configurations. EX1006 at [0046], [0051], Fig. 4; EX1008 at [0040].





B. Pankros Anticipates Claim 33

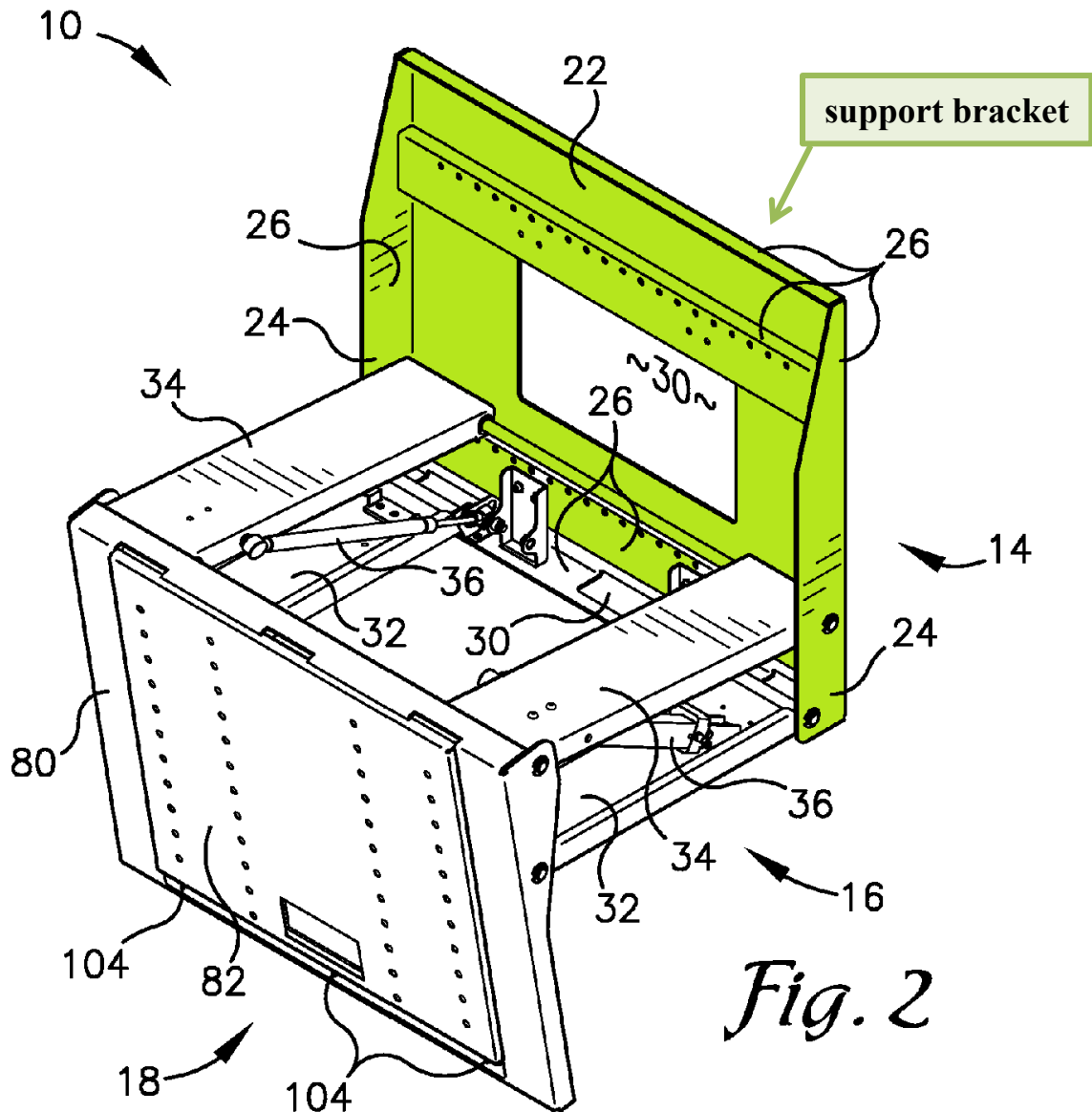
Pankros discloses a television mounting system with every element of claim 33. EX1003 ¶¶ 156-173.

1. Preamble

The preamble of claim 33 recites: “A television mounting system comprising.” To the extent the preamble is limiting, Pankros discloses such a mounting system. EX1003 ¶ 156-157. For example, Pankros discloses “adjustable flat panel display mounts” for use with televisions. EX1006 at [0002], [0003], [0005] and [0065]; EX1008 at [0004].

2. Limitation 33[a]: “a support bracket configured to couple to a wall;”

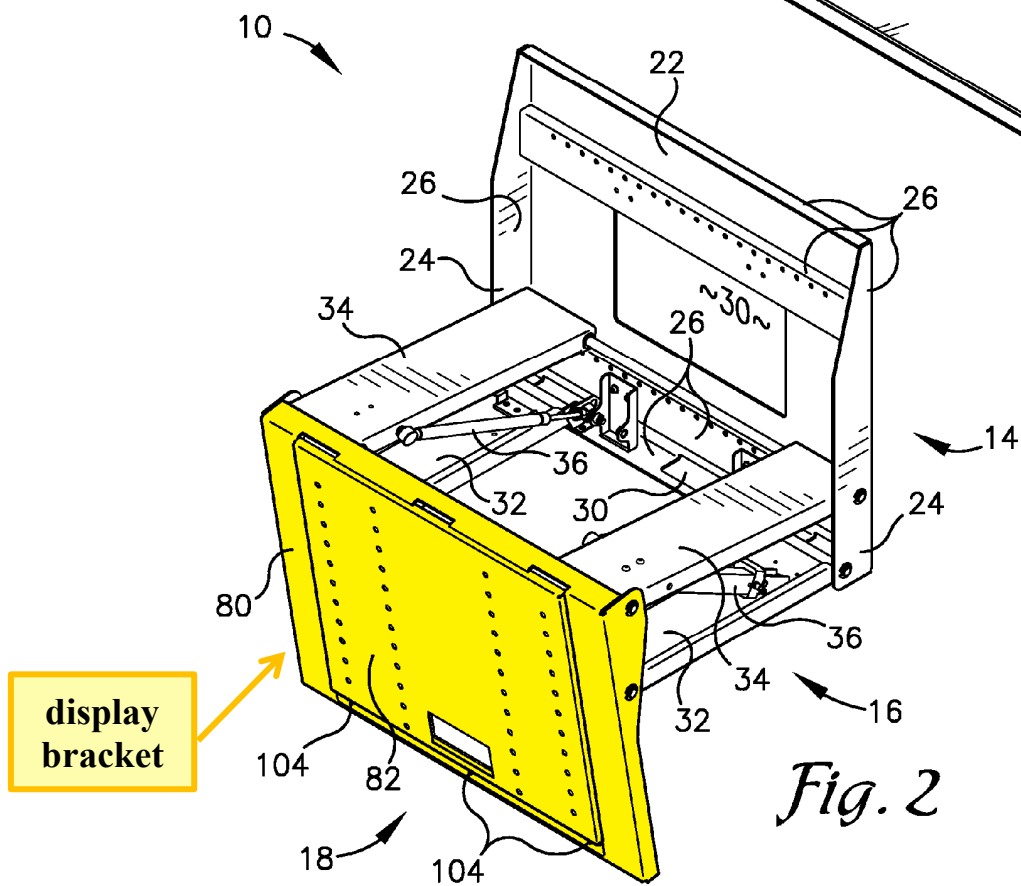
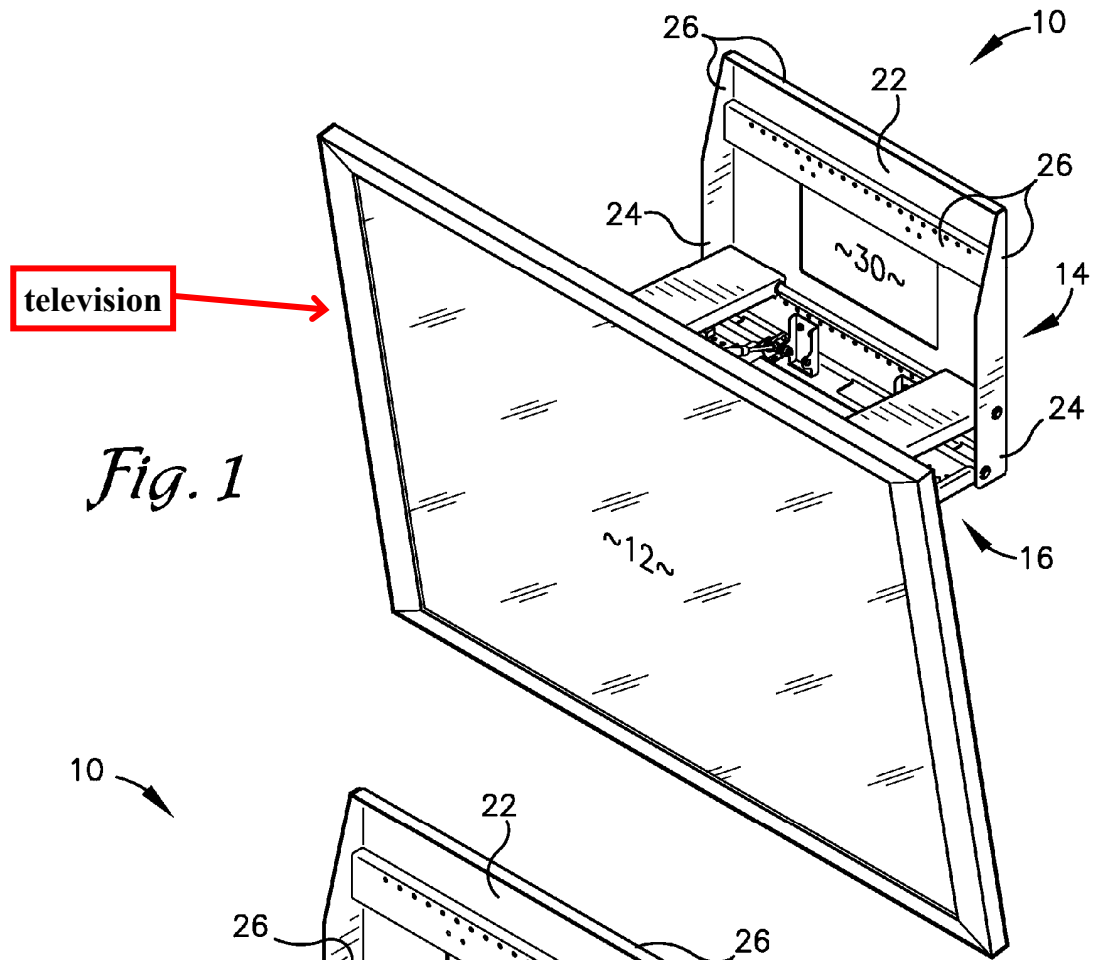
Pankros discloses this limitation, as shown below in Figure 2 (wall mount 14). *See, e.g.*, EX1006 at [0007] (“The wall mount fixably secures to a wall”), [0041], [0042], Fig.2 (annotated); EX1008 at [0010]; EX1003 ¶ 158.



3. **Limitation 33[b]: “a display bracket configured to hold a television”**

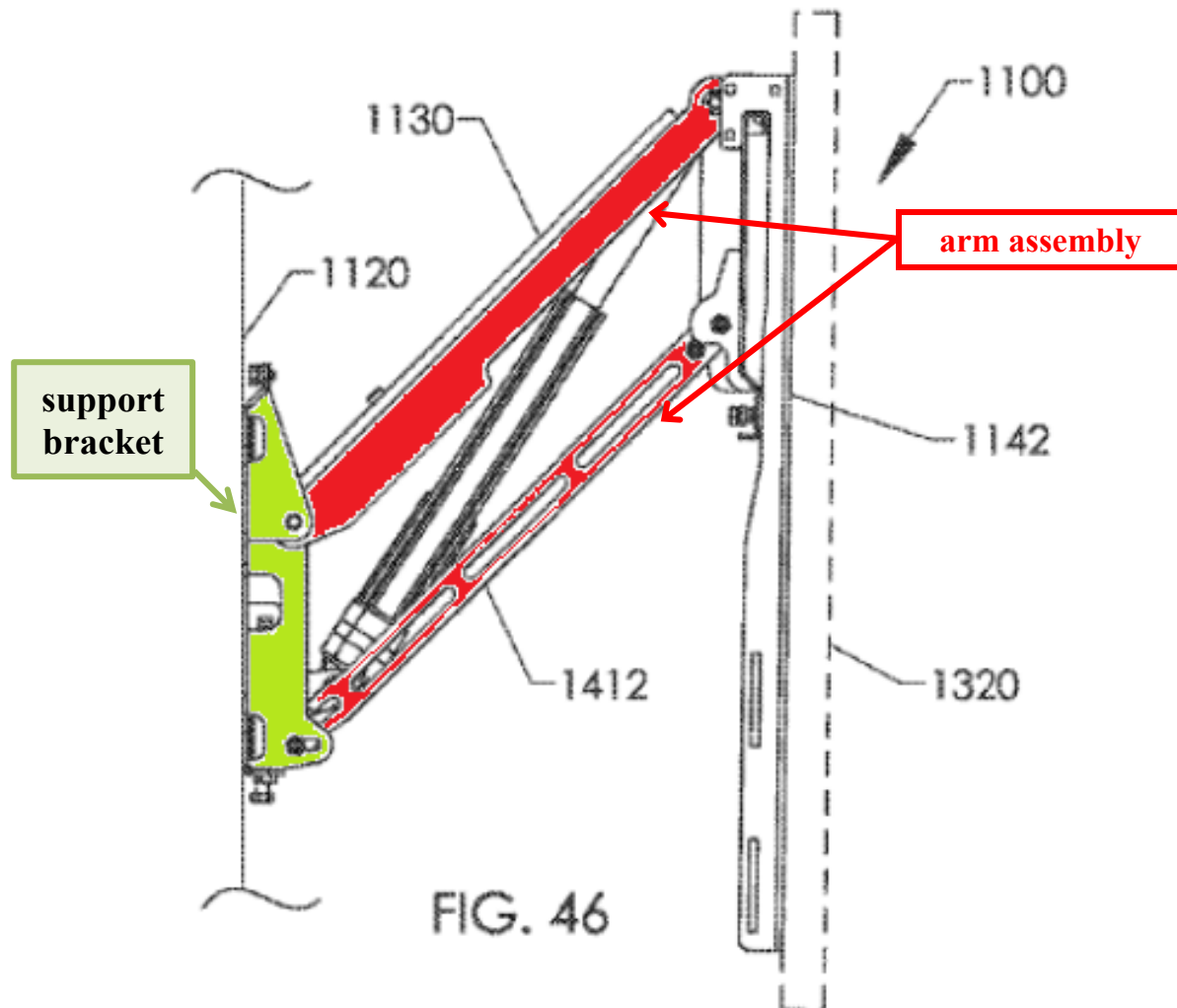
Pankros discloses this limitation, for example “[t]he display support removably attaches a display to the display mounting apparatus,” as shown below.

EX1006 at [0007], [0041] (a display support 18), Figs. 1-2 (annotated); EX1008 at [0018]; EX1003 ¶ 159.

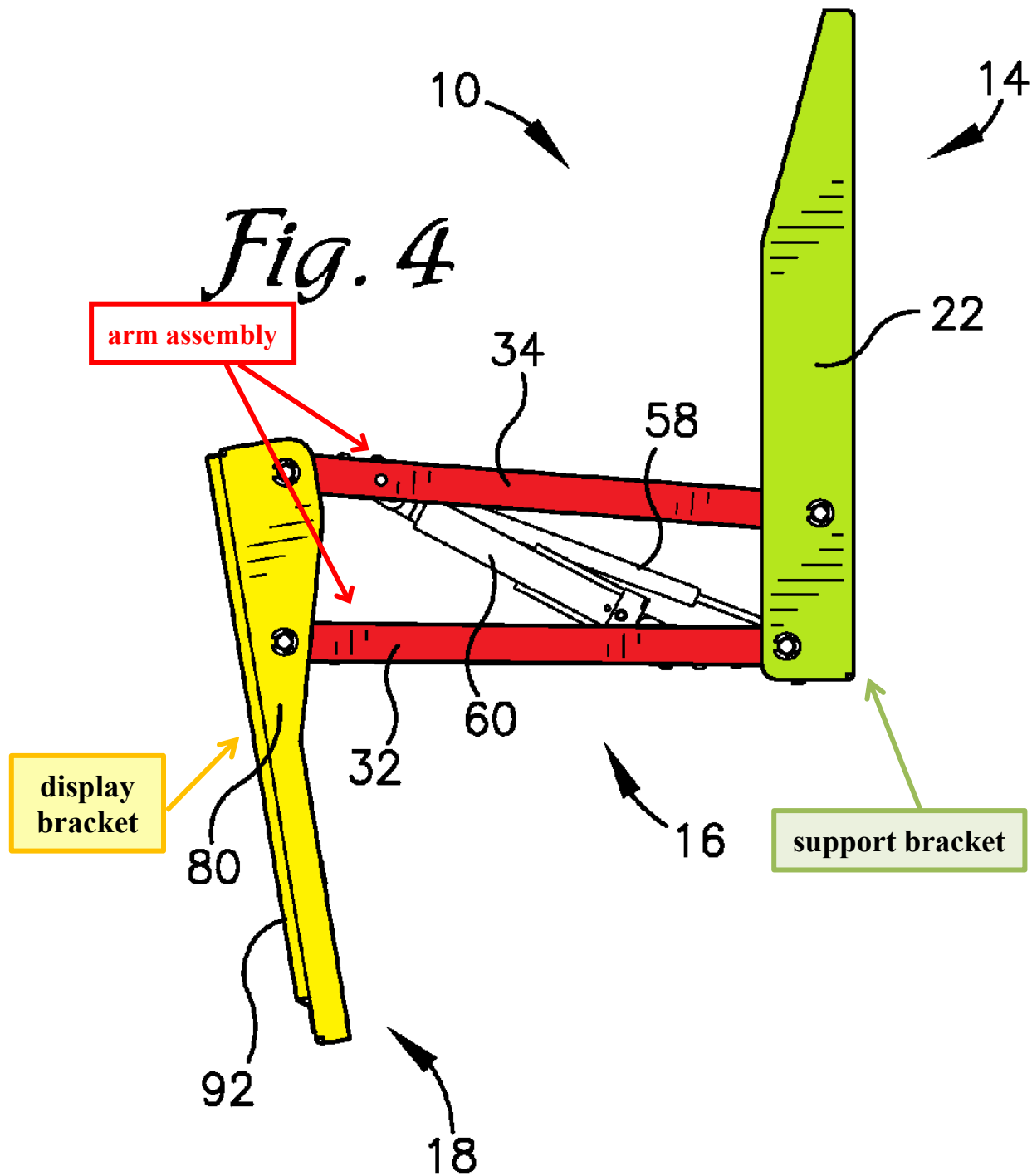


4. **Limitation 33[c]: “an arm assembly pivotally coupled to the support bracket and movable between a raised configuration to position the display bracket at a raised position and a lowered configuration to position the display bracket at a lowered position”**

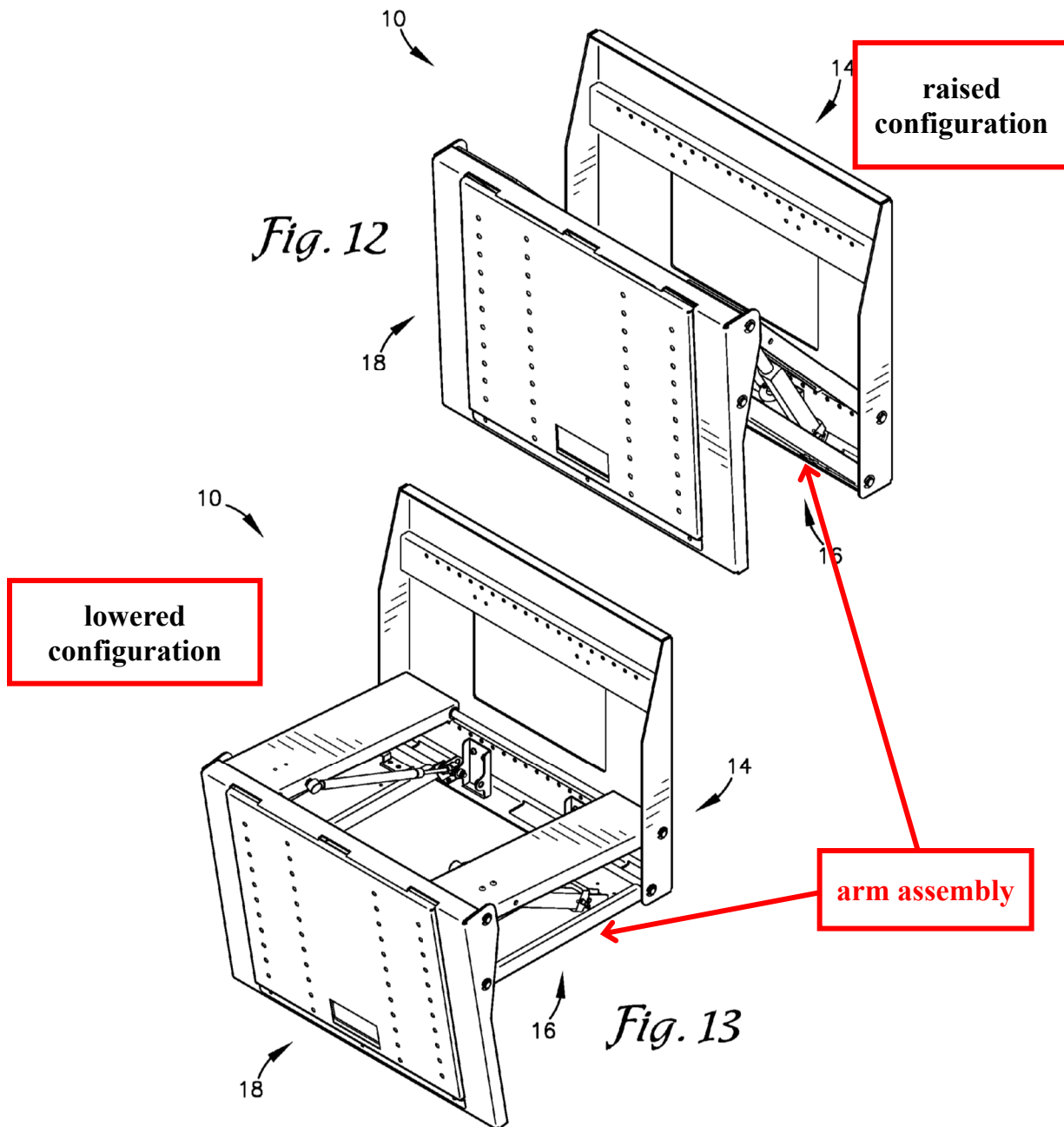
Pankros discloses this limitation. EX1003 ¶ 160. The '703 patent specification does not use the term “arm assembly,” but it does disclose a linkage assembly 1130 that is pivotally coupled to the support bracket at support pivots on the support bracket 1140. EX1001 at 17:42-54. As shown in annotated Figure 46 below, the arm/linkage assembly is movable to position the display bracket in different configurations. EX1001 at 1:64-2:1.



Like the assembly of the '703 patent, Pankros discloses an arm assembly (support mechanism 16) that is rotatably connected to the display bracket (display support 18) and the support bracket (wall mount 14), as illustrated in annotated Figure 4 below. EX1006 at [0007], [0046], Fig. 4 (annotated); EX1008 at [0014]-[0016], Figs. 2-3, Figs. 9-11; EX1003 ¶ 161.

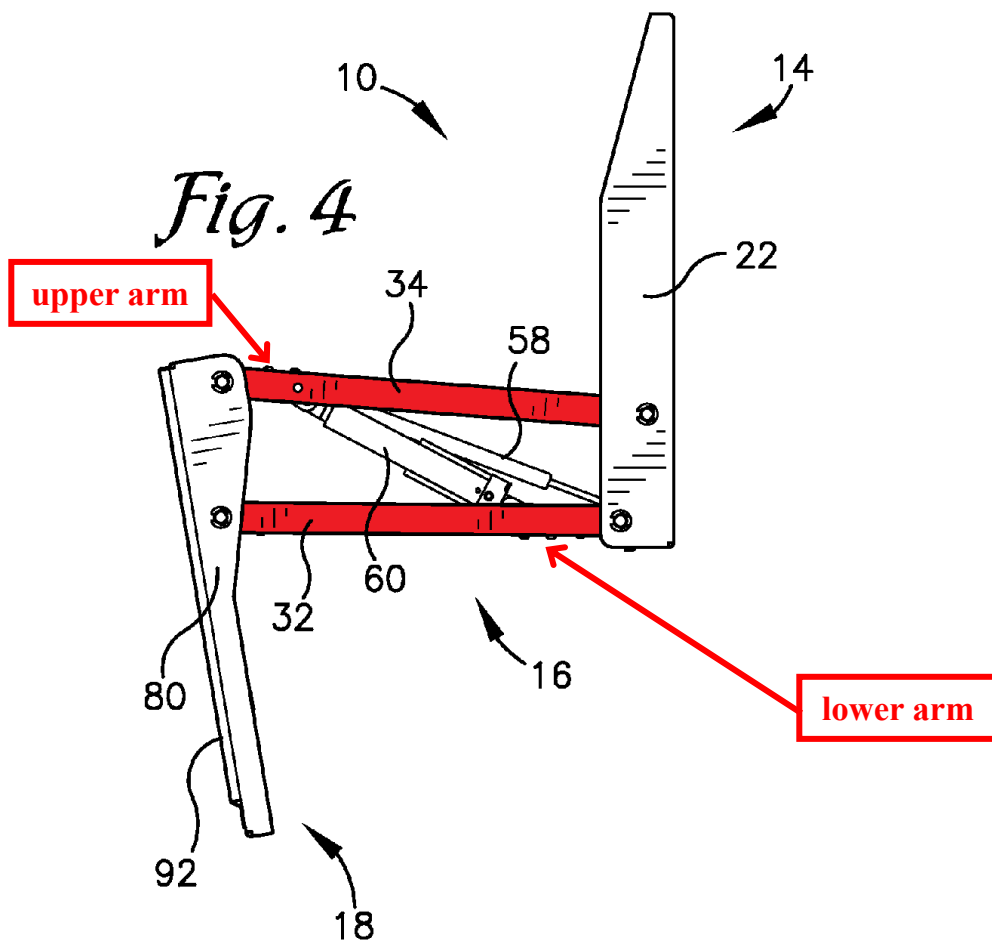


Pankros' arm assembly is also movable between a raised configuration to position the display bracket at a raised position and a lowered configuration to position the display bracket at a lowered position, as shown in Figures 12 and 13 below. EX1006 at [0067] (“the support mechanism 16 rotates from a substantially vertical position at 0-degree extension, to a substantially horizontal position at 90-degree extension, or to a downward-tilting position at 120-degree extension.”), [0068], [0069]-[0070], Figs. 12-13 (annotated); EX1008 at Figs. 9-11); EX1003 ¶ 162.



5. **Limitation 33[c][i]: “wherein the arm assembly includes an upper arm and a lower arm”**

Pankros discloses this limitation. EX1003 ¶ 163. For example Pankros’ arm assembly (support mechanism 16) includes an upper arm (upper support arm 34) and a lower arm (lower support arm 32), as shown below in annotated Figure 4. EX1006 at [0007], [0046], Fig. 4; EX1008 at [0014].

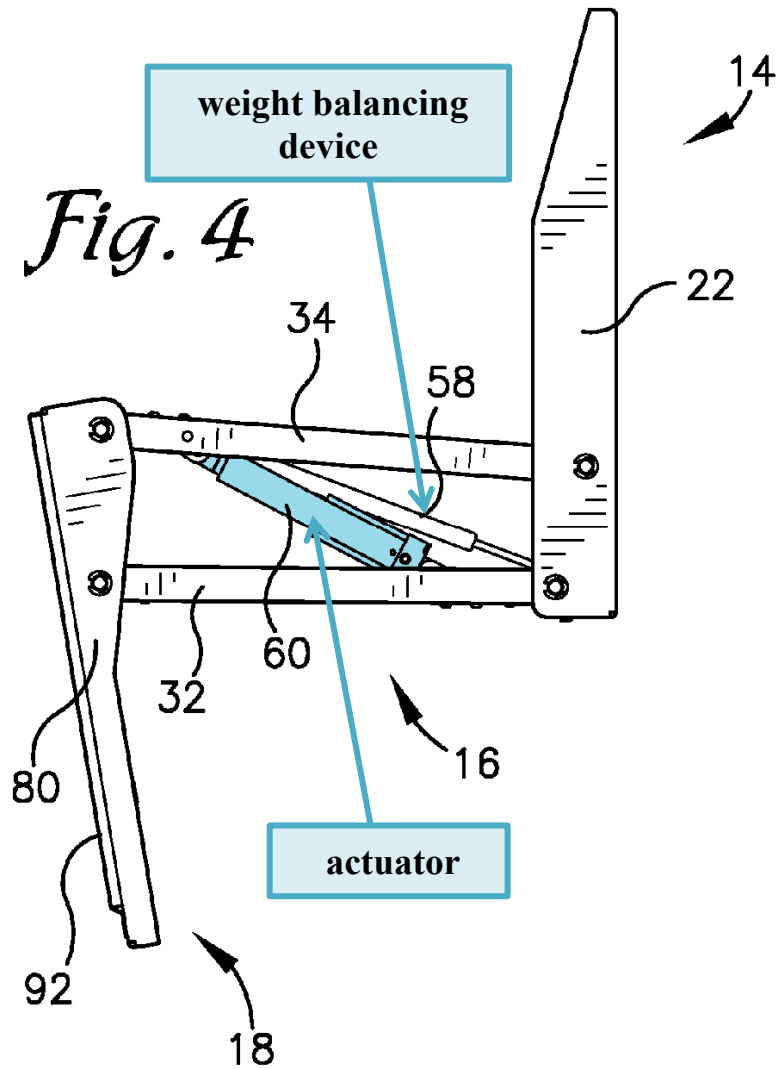


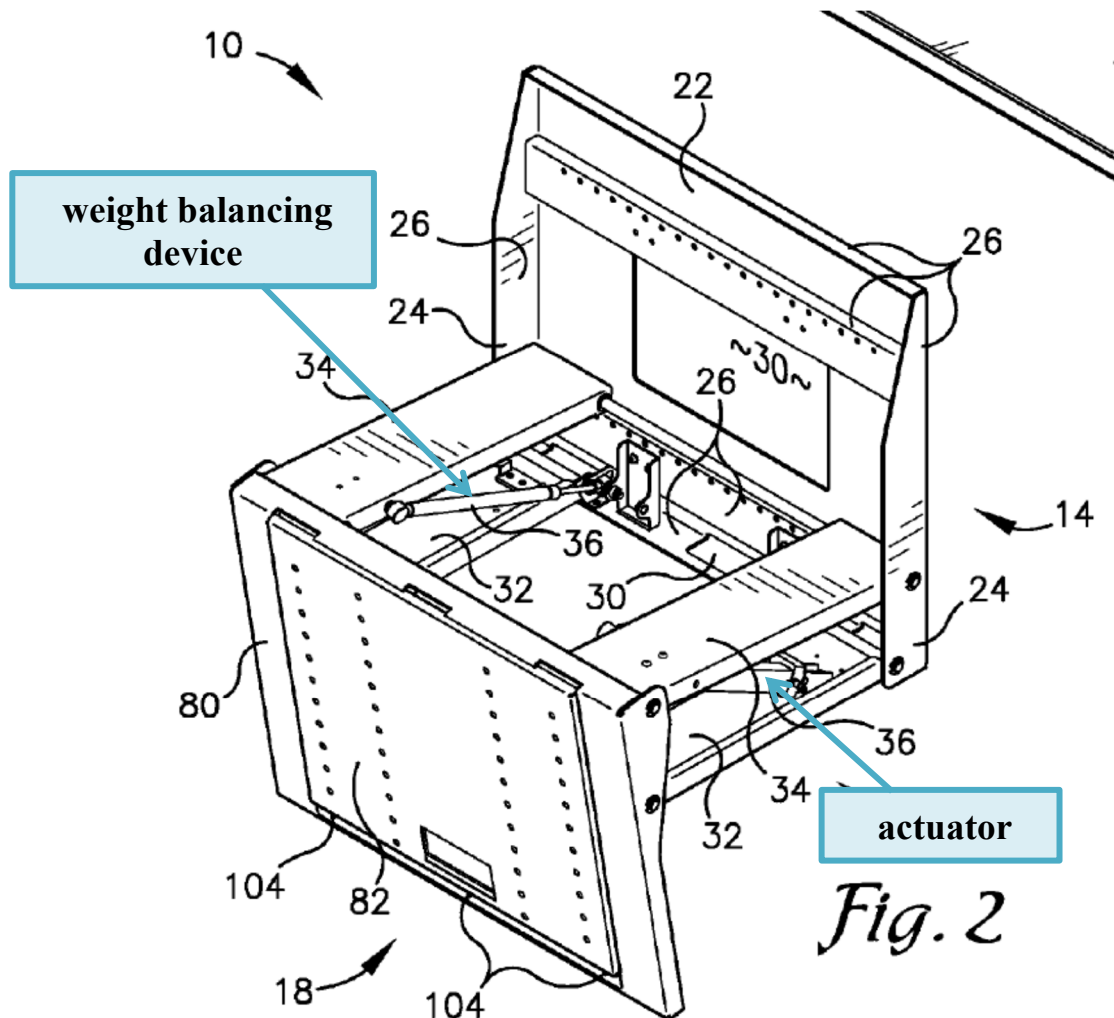
6. **Limitation 33[d]: “a motorized actuator assembly having a support bracket end rotatably coupled to the support bracket and a display bracket end rotatably coupled to the arm assembly”**

Pankros discloses this limitation. EX1003 ¶¶ 164-168. For example, Pankros includes a motorized actuator assembly (including a linear actuator which utilizes a motor). EX1006 at [0051], [0064], [0067], Claim 4 (“wherein the actuator is an electro-mechanical linear actuator, a stepper motor, a servo motor, a DC motor, an AC motor, and a universal motor.”); EX1008, at [0017], [0040].

Pankros discloses that its weight balancing device 58 can also be a linear actuator similar to actuator 60. EX1006 at [0050]; EX1008 at [0017].

Pankros also discloses that its motorized actuator assembly 60 has a display bracket end rotatably coupled to the arm assembly, as shown in annotated Figure 4 below. EX1006 at [0051]; EX1008 at [0017], Figs. 3 and 5. Pankros’ weight balancing device 58, which can be the motorized linear actuator, also has a display bracket end rotatably coupled to the arm assembly. *Id.* at [0050], Figs. 2, 3 and 7; EX1008 at [0017]; EX1003 ¶ 166.





Pankros further discloses that its actuator assembly has a support bracket end rotatably coupled to the support bracket. EX1003 ¶ 167. For example, Pankros discloses that its actuator 60 is “rotatably secured at a first end 72 to the lower support arm 32” and the lower support arm 32 is “pivotally connected” to the main body 22 of the support bracket. EX1006 at [0046] and [0051]; EX1008 at Figs. 1-3. The claim does not require that the actuator assembly be directly coupled to the support bracket, so this indirect rotatable coupling to the support bracket satisfies this limitation. EX1003 ¶ 167.

Moreover, Pankros also discloses direct rotatable coupling of the actuator assembly to the support bracket. EX1003 ¶ 168. For example, Pankros discloses “a lift mechanism connected at a first end to the upper support arm and connected at a second end to the wall mount.” EX1006 at claim 20. Pankros further explains that the lift mechanism 36 [] comprises a weight balancing device 58 and an actuator 60.” *Id.* at [0049]-[0050]. In addition, Pankros discloses that the weight balancing device 58 “may be a linear actuator” and the weight balancing device 58 has “a first attachment point 64 may connect to the wall mount 14 and the second attachment point 66 may connect to the display support 66” at the upper arm, as shown in Figure 2 above. *Id.* at [0050] and [0052]; EX1008 at [0017]. Thus, Pankros discloses systems in which the actuator assembly is connected to and directly coupled to the support bracket. EX1003 ¶ 168

7. **Limitation 33[d][i]: “wherein at least a portion of the motorized actuator assembly moves toward and past a portion of the lower arm when the arm assembly moves toward the raised configuration.”**

Pankros discloses this limitation. EX1003 ¶¶ 169-173. For example, Pankros discloses an actuator assembly that moves relative to the arm assembly (support mechanism 16) when the arm assembly moves toward the raised position, as shown in Figures 11-13 below. Similar to the relevant embodiment of the ’703 patent (Figures 41–48), at least a portion of Pankros’ actuator assembly gets closer to and past a portion of the lower arm when the arm assembly moves toward the raised

configuration. EX1003 ¶ 169; EX1001 at Figs 45-46; EX1006 at Figs. 11-13; EX1008 at Figs. 9-11.

As explained in Section X.B.7 above, during prosecution of the '703 patent, Patent Owner confirmed that the embodiment of Figures 41-48 is covered by the challenged claims and satisfies this limitation. EX1002 at 29.

Similar to the arm assembly and actuator assembly of the '703 patent, there is relative movement of Pankros' lower arm toward and past a portion of the actuator assembly when the assembly moves from the lowered configuration to the raised configuration. EX1003 ¶¶ 170-171. Pankros discloses two actuator assemblies: actuator 60 and actuator 58 (weight balancing device). *Id.*; EX1006 at [0049]-[0052]. Pankros has the same arm assembly configuration and actuator movement as the relevant embodiment of the '703 patent, as shown below in annotated Figures 11-13. *Id.*; EX1006 at Figs. 11-13; EX1008 at Figs. 9-11. When viewed from the side, each of the actuator assemblies overlap with the lower arm as the arm assembly moves to the raised position in Figure 11. EX1003 ¶ 171. Thus, a portion of the actuator assemblies 60 and 58 gets closer to and past a portion of the lower arm when the arm assembly moves toward the raised configuration. *Id.*

Fig. 12

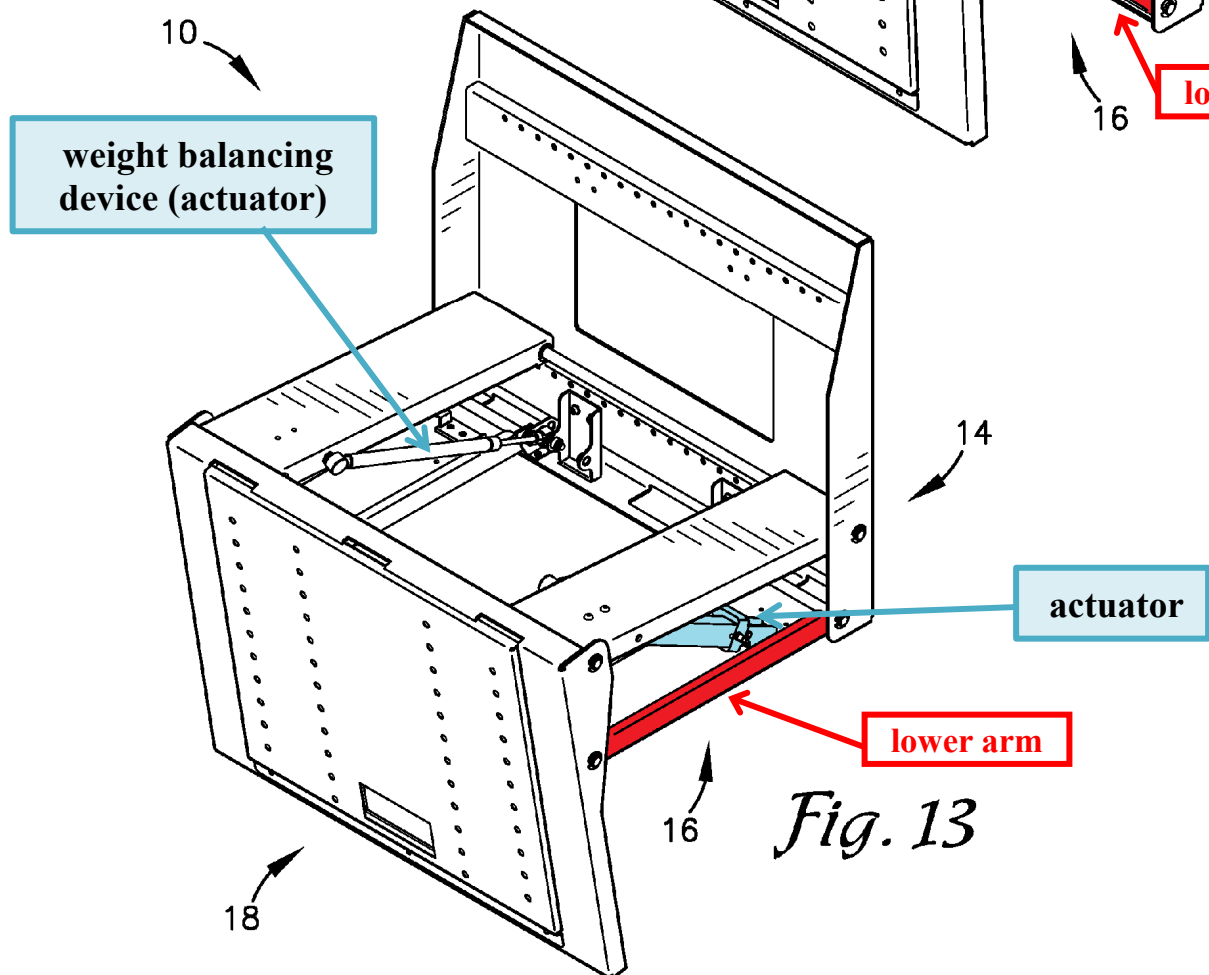
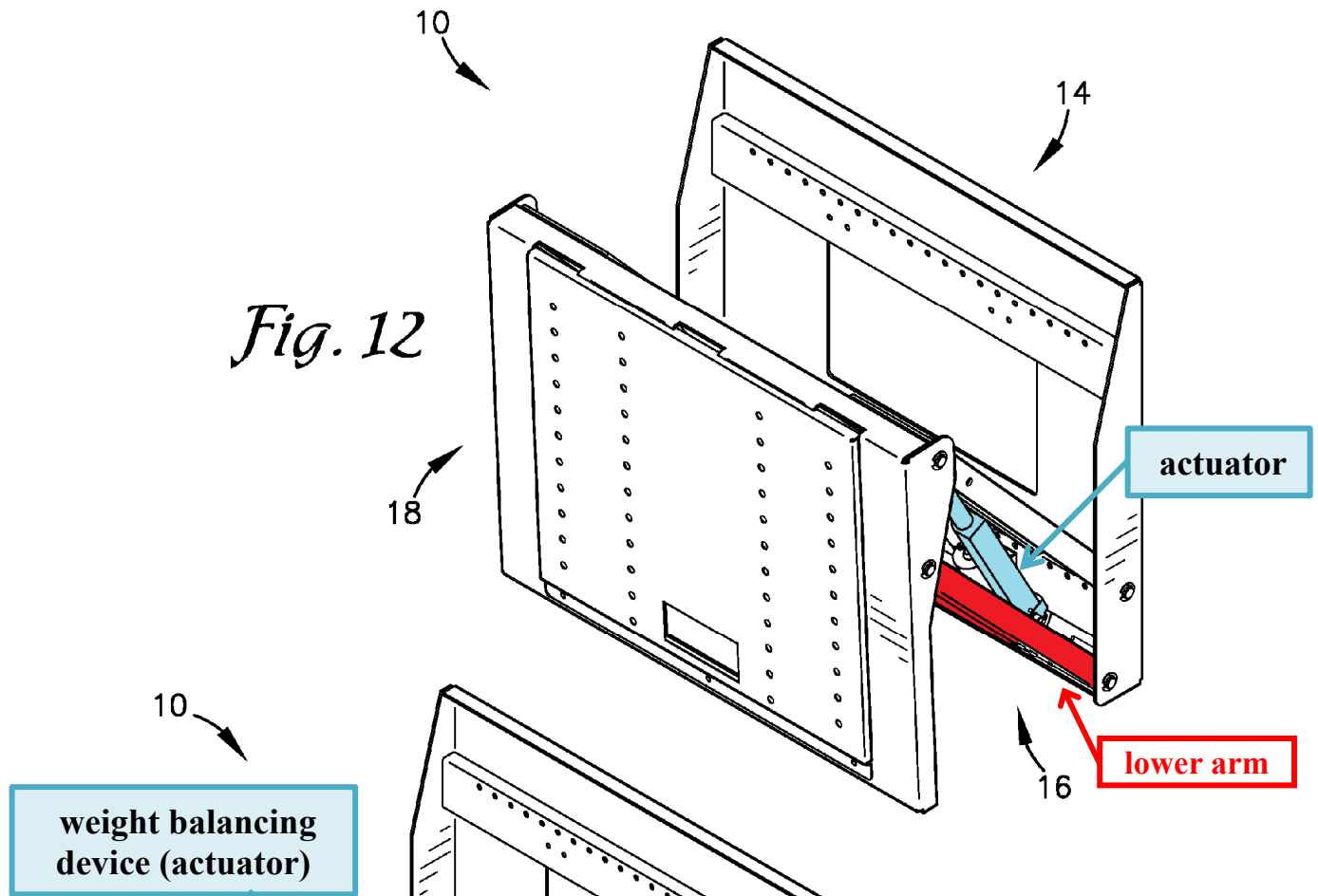
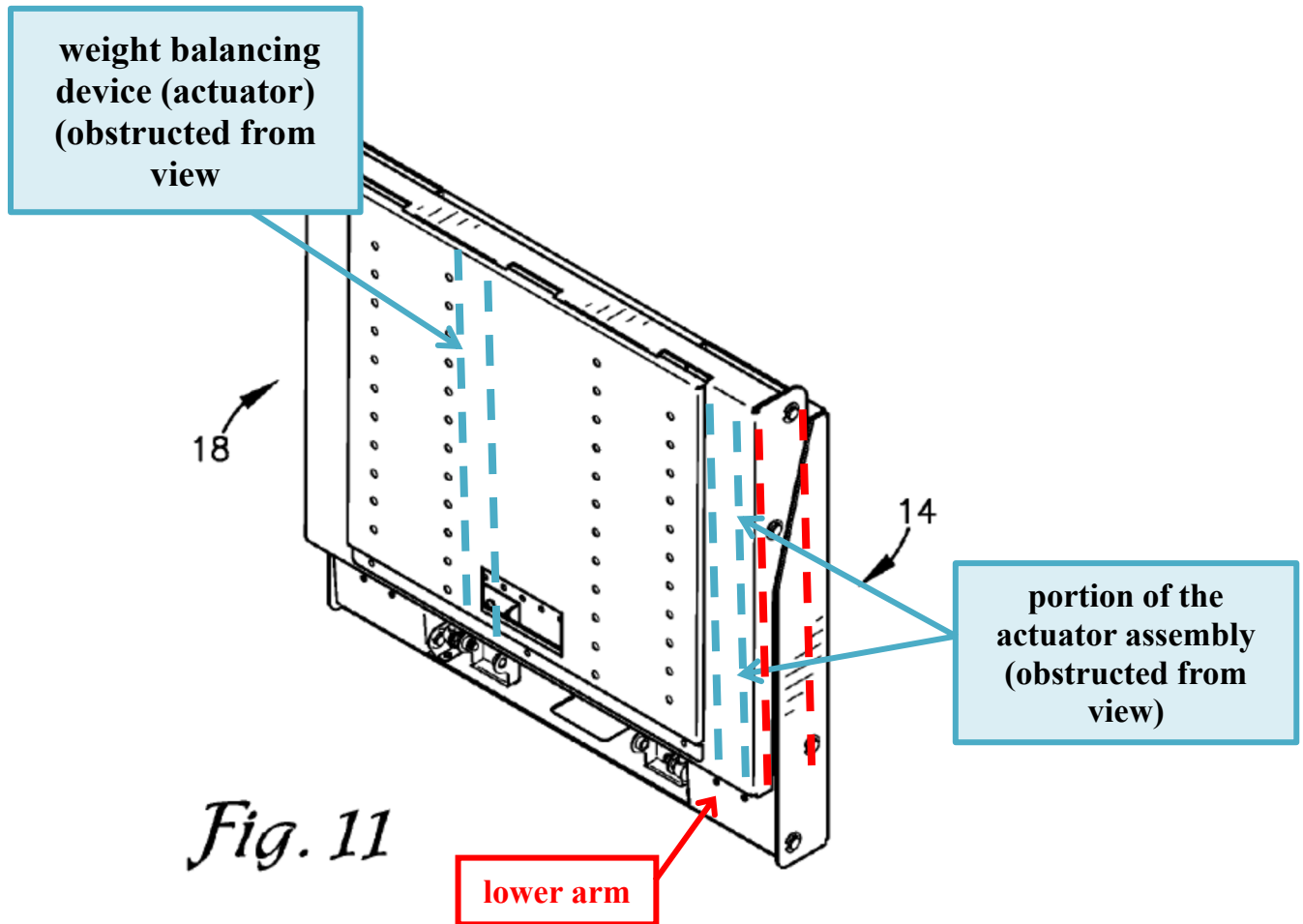


Fig. 13



These figures illustrate the movement of the arm assembly and actuator assemblies from the lowered configuration (Fig. 13) to the raised configuration (Fig. 11). *Id.* When moving to the raised configuration, at least a portion of each of Pankros' actuator assemblies gets closer to and past the lower arm such that the view of the actuators 60 and 58 is largely obstructed. EX1006 at Fig. 11; EX1003 ¶ 172. This movement and configuration of Pankros is the same as the relevant embodiment (Figures 41-48) of the '703 patent, in which the relative movement of the actuator

and lower arm cause at least a portion of the actuator assemblies to get closer to and past a portion of the lower arm when the arm assembly moves toward the raised configuration. EX1003 ¶ 172.

Pankros' actuator assembly 58 that is rotatably coupled directly to the support bracket has the same relative movement of the actuator assembly 60 and the lower arm. EX1003 ¶ 173. The actuator 58 being coupled directly to the support bracket provides similar relative movement and overlapping with the lower arm as Pankros' actuator assembly 60, and a POSITA would understand that both would satisfy this limitation. *Id.*

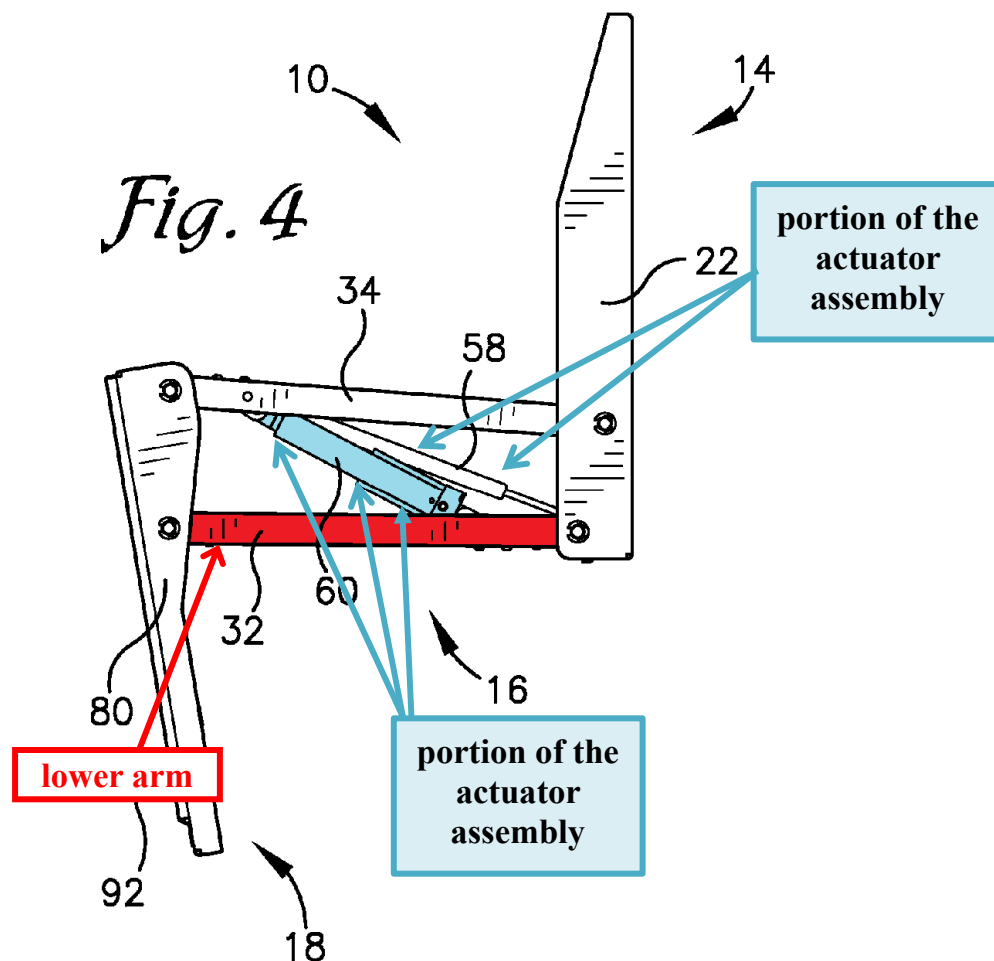
Thus, Pankros discloses this limitation. *Id.*

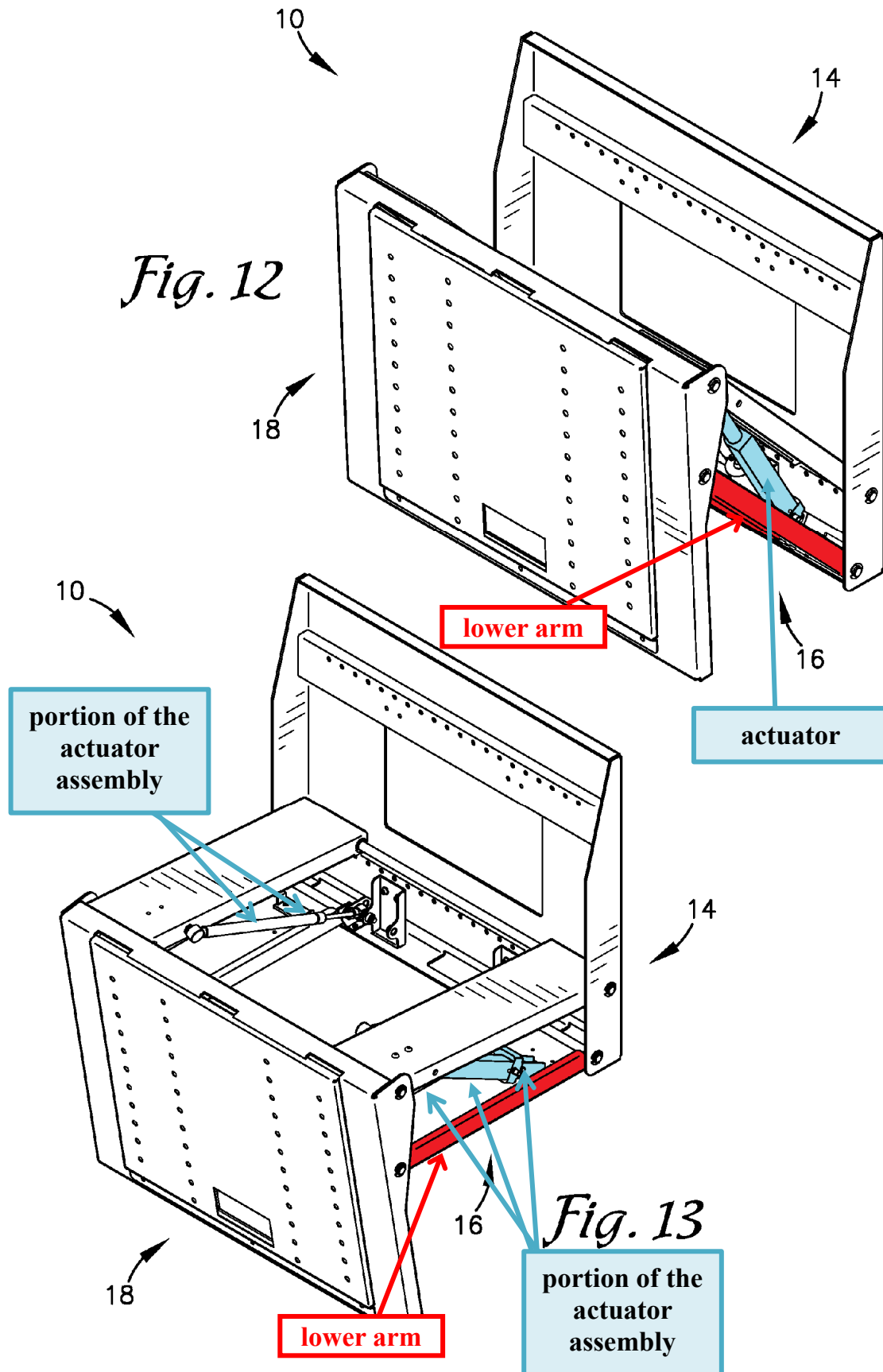
C. Pankros Anticipates Claim 34

Claim 34 depends from claim 33 and recites “wherein the portion of the motorized actuator assembly moves away from and is vertically spaced apart from the lower arm when the arm assembly is in the lowered configuration.”

As discussed above in Section VI.B, the claimed movement is not limited to movement of the portion of the actuator assembly in an upward direction away from the first arm, but rather it includes movement of the lower arm away from the actuator assembly which causes the portion of the actuator assembly to get further away from the lower arm. EX1003 ¶¶ 174-176.

Similar to the relevant embodiment of the '703 patent, in Pankros' system the portions of the motorized actuator assemblies 60 and 58 get further away from and are vertically spaced apart from the lower arm when the arm assembly is in the lowered configuration, as shown in annotated Figures 4 and 13 below. EX1003 ¶ 177; EX1006 at Figs. 4, 12-13; EX1008 at Figs. 9-11. As illustrated in Figure 6, most of the actuator assemblies is further away from and is vertically spaced apart from the lower arm 5 in the lowered configuration. EX1003 ¶ 177.





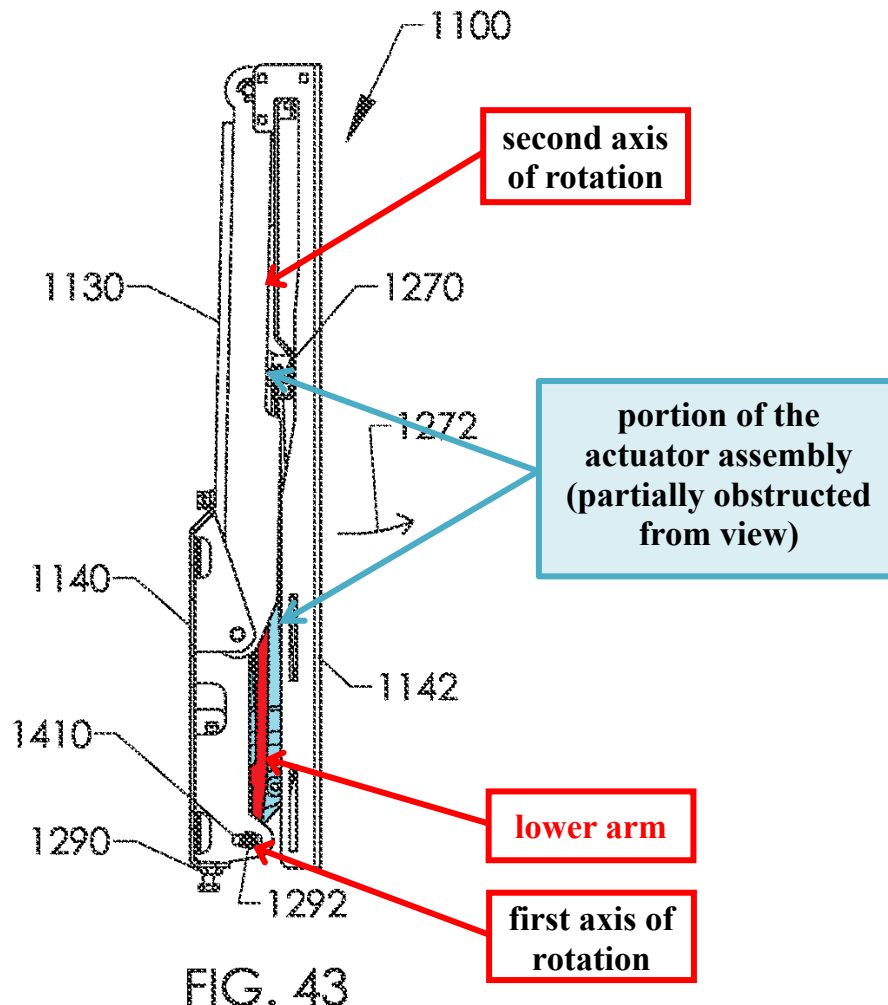
Both of Pankros' actuator assemblies 60 and 58 disclose this limitation and have the same movement relative to the lower arm. EX1003 ¶¶ 178-179. Moreover, both have a similar configuration and movement as the relevant '703 patent embodiments. *Id.*

Thus, Pankros discloses this limitation. *Id.*

D. Pankros Anticipates Claim 35

Claim 35 depends from claim 33 and recites “wherein the lower arm extends between a first axis of rotation and a second axis of rotation, wherein the portion of the motorized actuator assembly is positioned forward of the first axis of rotation and the second axis of rotation when the arm assembly is at the raised configuration.” Pankros discloses this limitation. EX1003 ¶¶ 180-184.

According to Patent Owner's statements during prosecution, the embodiment of Figure 43 of the '703 patent provides an example of this limitation in the raised configuration, as shown below. EX1002 at 29.



Similar to the '703 patent, Pankros discloses this limitation, as shown in annotated Pankros Figures 11, 12, and 13 below. EX1006 at Fig. 11; EX1003 ¶ 181. For example, Pankros discloses weight balancing device 58, which may be a linear actuator like actuator 60, that is rotatably coupled to the support bracket and an upper arm of the arm assembly. EX1006 at claim 20, [0050] and [0052]; EX1008 at [0017]. A POSITA would have understood that Pankros' figures show the weight balancing device 58 as a spring (e.g. gas or air). EX1003 ¶ 181. But Pankros

specifically discloses that the spring 58 “may be a linear actuator” which would be like the actuator 60 shown in the figures. *Id.* Therefore, a POSITA would understand that Pankros discloses replacing the spring 58 with a linear actuator like actuator 60. *Id.*

As illustrated in the figures below, when Pankros’ arm assembly is in the raised configuration (Figure 11), the portion of the motorized actuator assembly (weight balancing device 58 replaced by a linear actuator) is positioned forward of the first axis of rotation and the second axis of rotation when the arm assembly is at the raised configuration. EX1003 ¶ 182. As discussed above in sections XV.B and XV.C, Pankros’ weight balancing device 58 can be the claimed actuator and satisfies all of the actuator limitations of claims 33 and 34 because the weight balancing device (actuator) 58 is coupled to the system in a similar way as the actuator 60 and has similar movement relative to the arm assembly when moving between the raised and lowered configurations. *Id.* Thus, for all the reasons provided above with regard to the actuator 60, Pankros’ weight balancing device 58, which can be an actuator, also meets the actuator limitations. *Id.*

Fig. 12

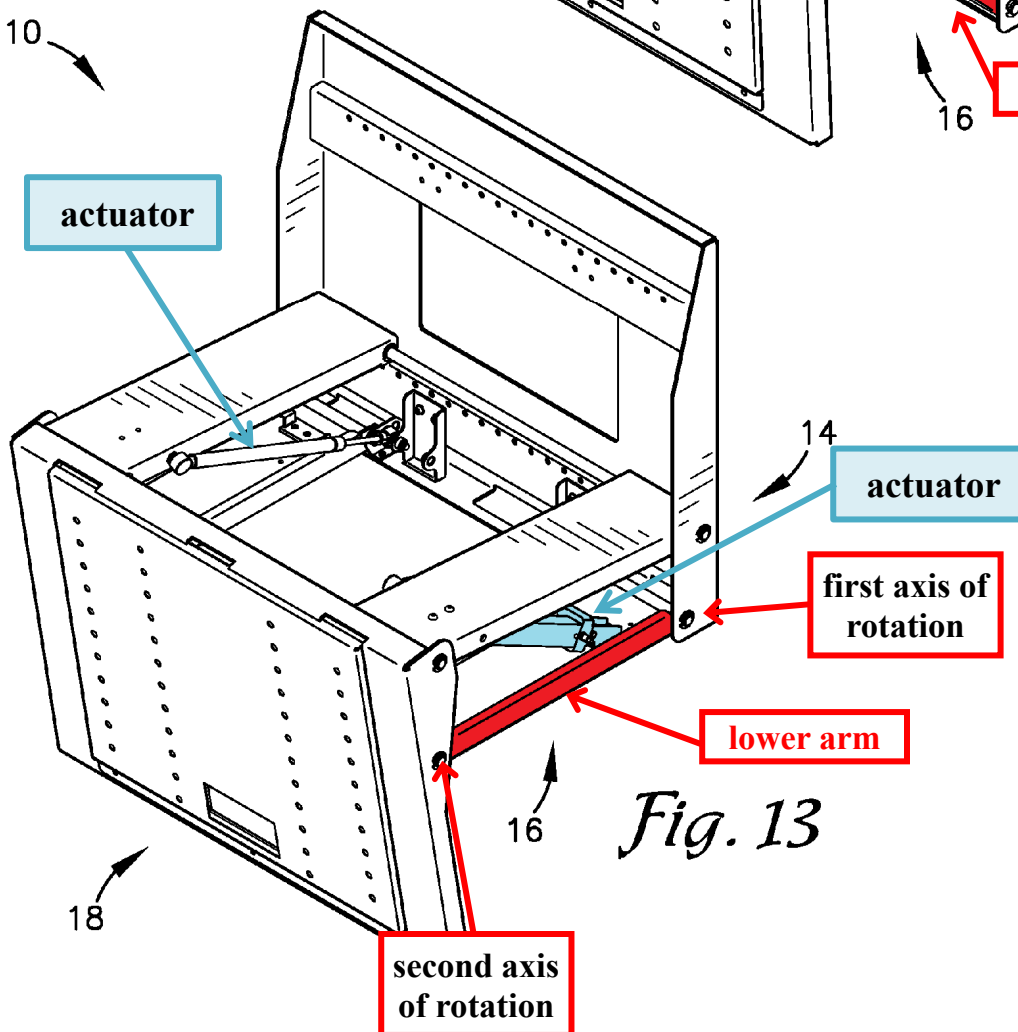
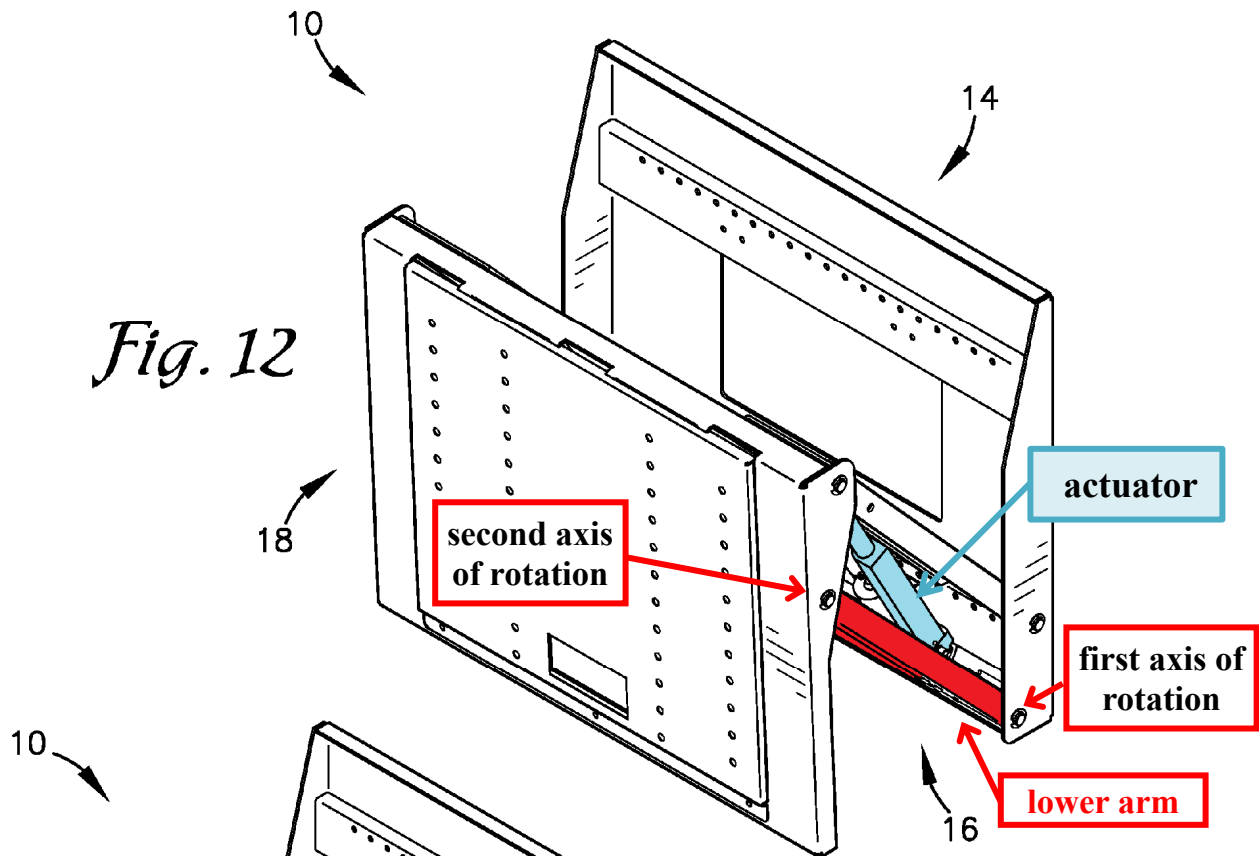
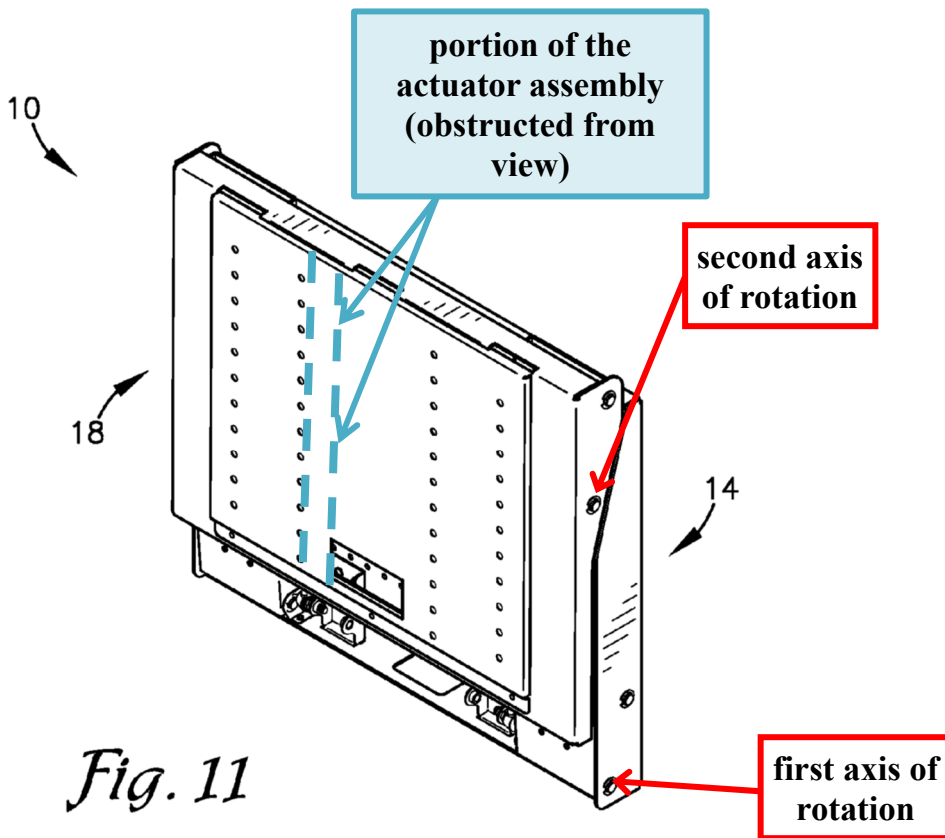


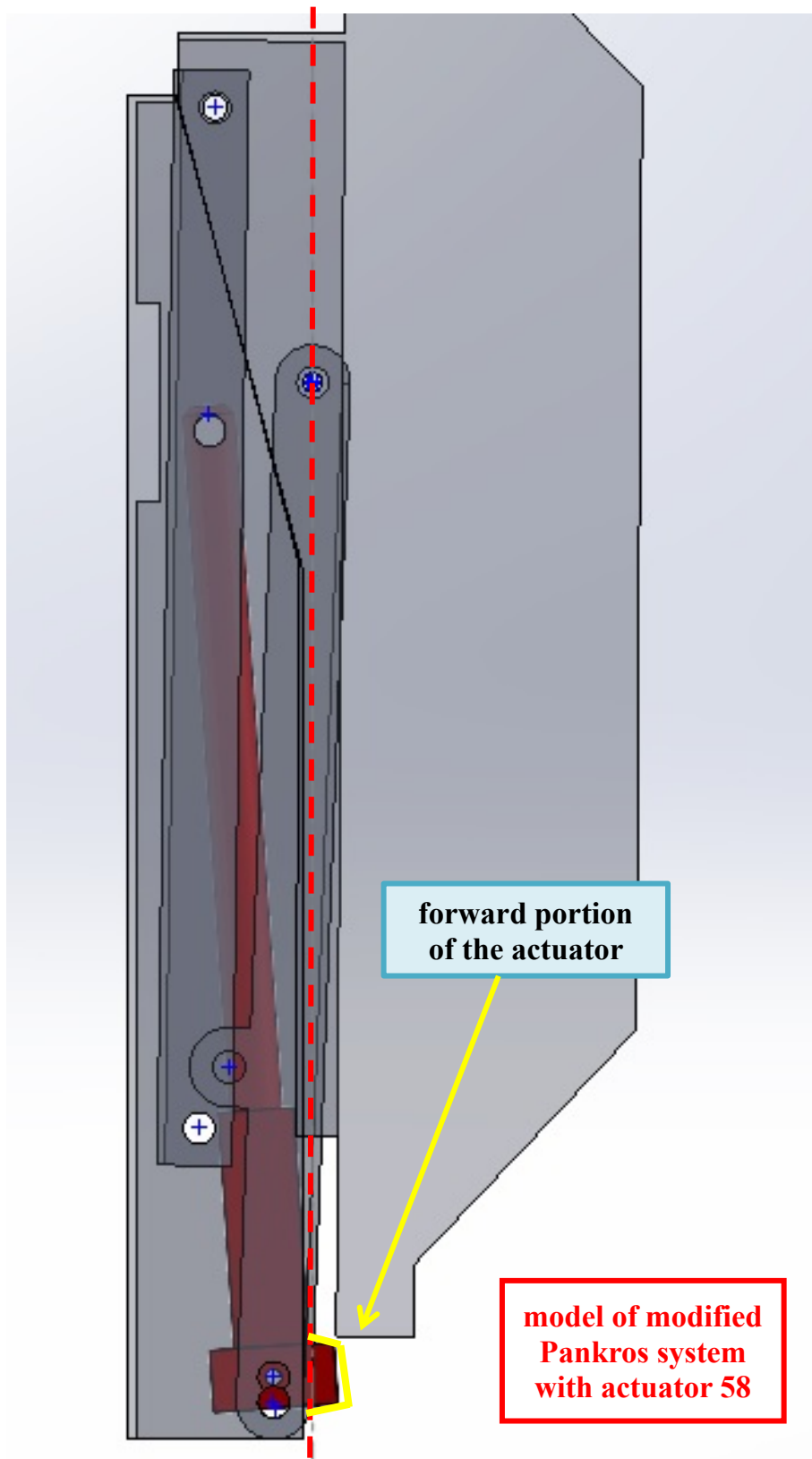
Fig. 13



As illustrated in annotated Figure 11 above, Pankros shows that the portion of the actuator assembly (weight balancing device 58) has moved past part of the lower arm, such that view of the actuator is largely obstructed by the lower arm and support bracket. EX1006 at Fig. 11; EX1008 at Fig. 11. The lower arm has the first and second axes of rotation at its ends and the portion of the actuator 58 is positioned forward of these axes in the raised configuration shown above. EX1003 ¶ 183. Thus, to the extent Figure 43 of the '703 patent shows an embodiment that satisfies this limitation, as asserted by Patent Owner during prosecution, then Pankros'

similar configuration and Figure 11 also illustrate a configuration that satisfies this limitation. *Id.*

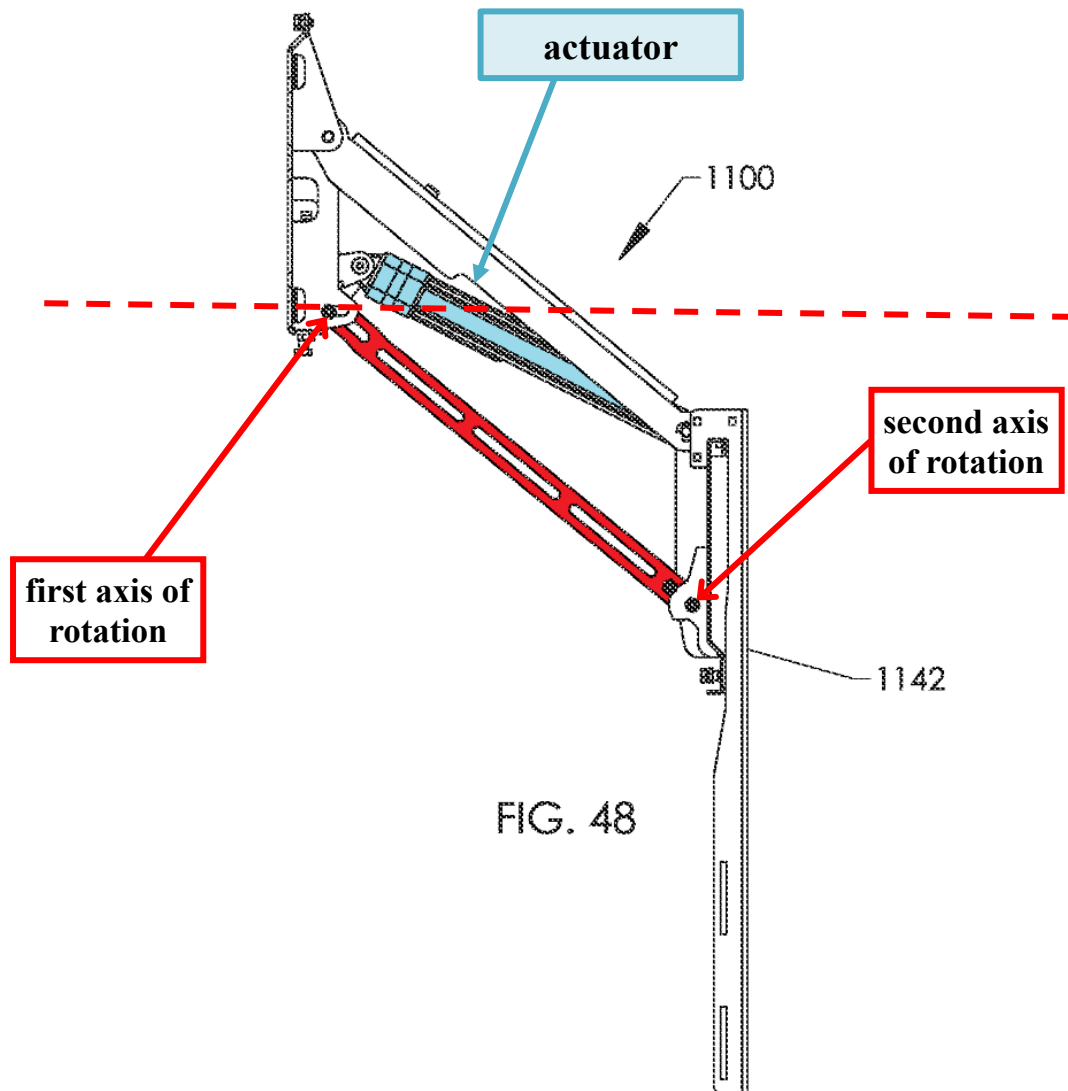
Dr. Pratt created a model of Pankros Figure 11 with visibility through the display bracket, support bracket and linkage arms such that the position of the actuator 58 is visible relative to the lower arm's first and second axes of rotation, as shown below. EX1003 ¶ 184. The gas/air spring 58 shown in the figures has been replaced with a model of the described linear actuator 60. *Id.* As illustrated, at least the portion of the actuator assembly 58 is positioned forward (to the right) of the first axis and the second axis when the arm assembly is at the raised configuration. *Id.*



E. Pankros Anticipates Claim 36

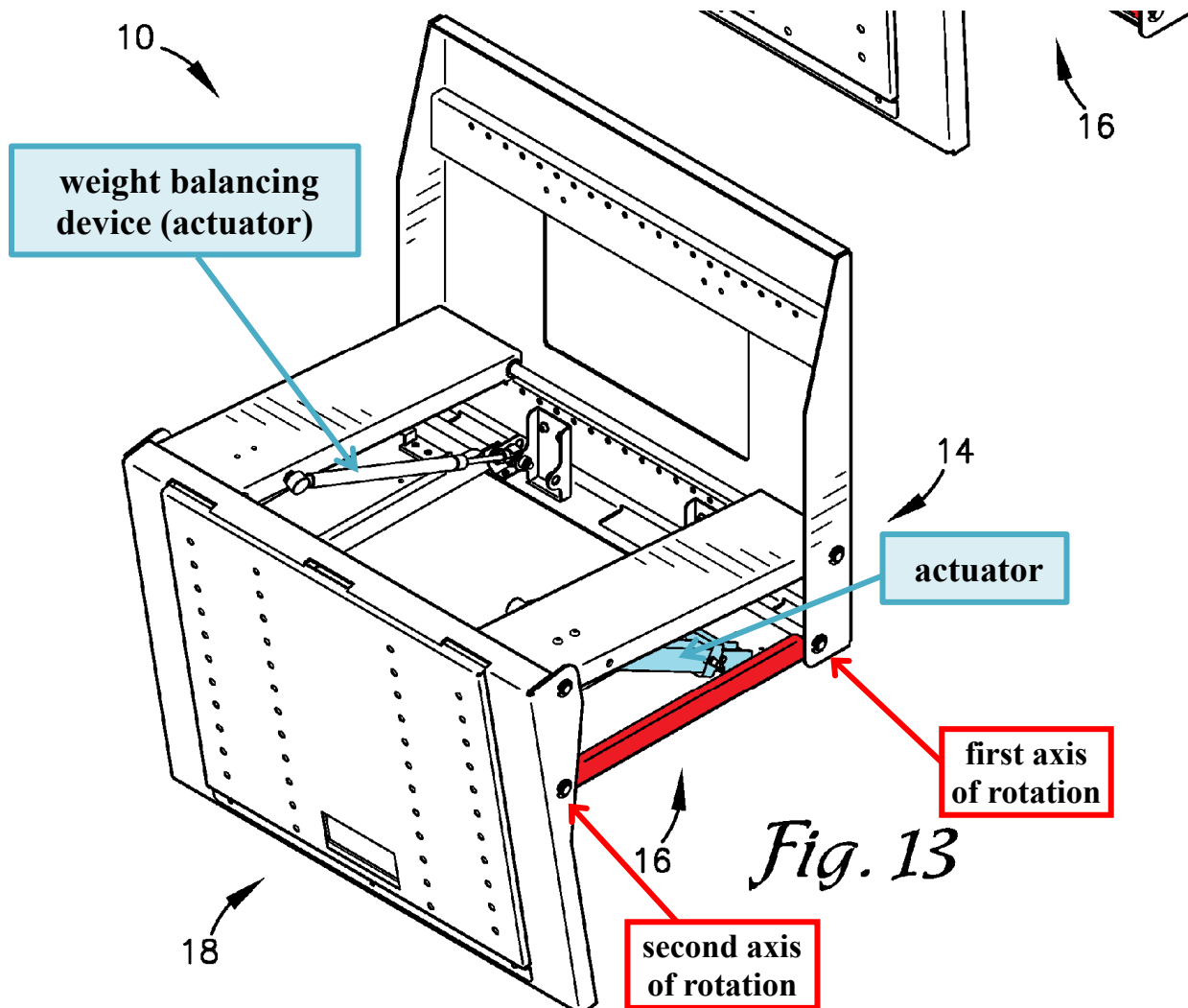
Claim 36 depends from claim 35 and recites “wherein the first axis of rotation and the second axis of rotation are spaced apart from and located below an extendable actuator of the motorized actuator assembly when the arm assembly is in the lowered configuration.” As discussed above in Sections VIII and IX, this claim 36 lacks written description support and is indefinite. However, to the extent this claim is somehow supported and not indefinite, its features would be disclosed by Pankros. EX1003 ¶¶ 185-188.

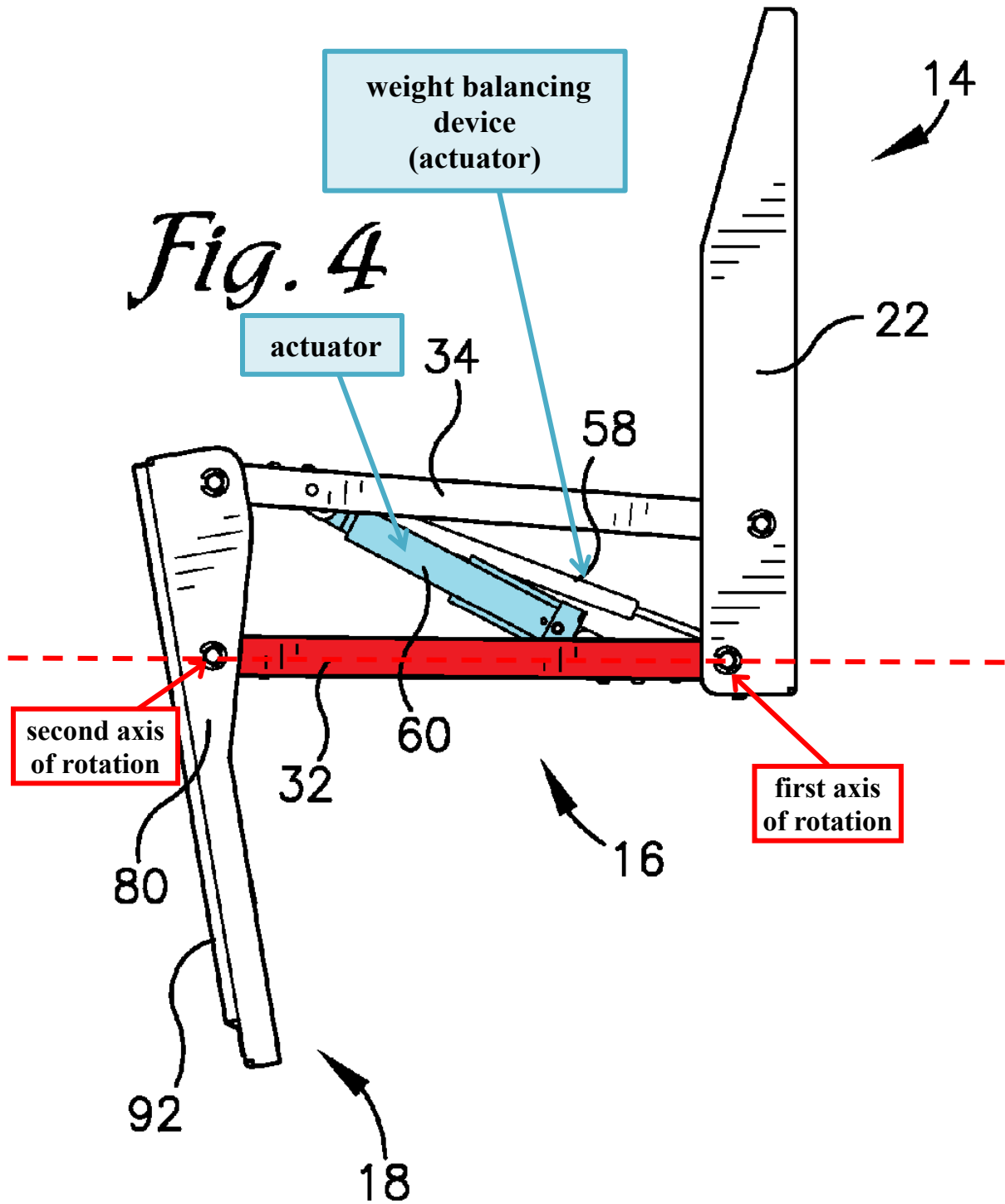
To the extent the ’703 patent discloses this limitation, Pankros discloses the same configuration and thus would disclose this limitation. EX1003 ¶ 186. As shown in annotated Figure 48 below, the relevant embodiment of the ’703 patent has a lowered configuration in which the first axis and second axis are spaced apart from and located below some of the actuator. *Id.*



Similarly, Pankros' system has a lower arm with a first axis of rotation and second axis of rotation. EX1003 ¶ 187. These axes of rotation are spaced apart from and located below the actuator assemblies 60 and 58 when the arm assembly is in the lowered configuration, as shown below in annotated Figures 4 and 13. EX1006 at [0019] and [0028], Figs. 4 and 13; EX1008 at Fig. 9; EX1003 ¶¶ 187-188. This is true whether the actuator assembly is the actuator 60 or the weight balancing device 58. EX1006 at [0049]-[0052], claim 20. Moreover, the axes are spaced apart

from and located below even more of the actuator assemblies of Pankros than the
'703 patent embodiment. EX1003 ¶ 187.





**XIII. GROUND 6: PANKROS IN VIEW OF CLARY AND THE
GENERAL KNOWLEDGE OF A POSITA RENDERS
OBVIOUS CLAIMS 33-36**

**A. Pankros Combined With Clary and the General Knowledge of a
POSITA Renders Obvious Claims 33 and 34**

As described above in Ground 5, Pankros discloses all the limitations of claim 33 and 34. To the extent Pankros somehow fails to disclose any specific configuration features, these limitations would have been obvious. EX1003 ¶¶ 189-190.

To the extent Pankros somehow fails to disclose a **motorized** actuator assembly, it would have been obvious to use a motorized linear actuator for the actuator disclosed in Pankros. EX1003 ¶ 191. A POSITA would have understood that Pankros' remote-controlled actuator already includes a motor to power the actuator. *Id.* This would also be an obvious feature for an actuator in a mounting system as part of a POSITA's general knowledge. *Id.*; *See* Section XI.B above.

To the extent Pankros somehow fails to disclose a motorized actuator assembly having a support bracket end **rotatably coupled to the support bracket**, such a configuration would have been obvious to a POSITA. EX1003 ¶ 192. This would have been part of a POSITA's general knowledge as a well know design option. *Id.* Pankros itself discloses that a lift mechanism, including an actuator, can be rotatably connected to the upper support arm and to the wall mount (support bracket). EX1006 at [0050], claim 20. Also, Pankros' weight balancing device 58,

which can be an actuator, is rotatably coupled to the upper arm and the support bracket. *Id.* at [0050] and [0052]. As explained above in Section X.B.6, Clary also discloses a mounting system in which the actuator assembly is rotatably coupled to the support bracket. Tsuji also discloses an actuator assembly 4 that is directly rotatably coupled at one end to a linkage arm 3b and to the support bracket 1 at the other end, as shown below in annotated Figure 4. EX1015 at [0022]-[0023]; EX1003 ¶ 192.

Rotatably coupling the actuator assembly to the support bracket instead of a linkage arm or the display bracket would have been a mere design choice from a finite number of options. EX1003 ¶ 193. In a four-bar linkage system like Pankros' and Clary, there are only a few options for coupling the actuator. *Id.* If one end of the actuator assembly is coupled to an upper arm, then the other end of the actuator assembly can be coupled to a lower arm, the display bracket, or the support bracket. *Id.* This is confirmed by the Juan reference. EX1005 at [0066]. A POSITA would have been motivated to rotatably couple the actuator assembly to the support bracket because the support bracket is attached to the wall and is thus stable and secure. EX1003 ¶ 193. This configuration would simplify the design by rotatably securing one end of the actuator assembly such that the actuator would not move translationally but would only move rotationally. *Id.* This configuration would simplify the design by reducing part count resulting in reduced inventory, assembly

and inspection costs. *Id.* Such a modification could also allow for a shorter actuator.

Id.

A POSITA also would have reasonably expected success in coupling the actuator assembly to the support bracket. EX1003 ¶ 194. For example, a POSA would have readily understood that the support bracket end of the actuator assembly could be coupled to the support bracket instead of a linkage arm, as disclosed in Clary and Pankros. *Id.* Moving the actuator connection to the support bracket from a linkage arm would be a minor modification, and a POSA would have expected success in making this modification in a simply four-bar linkage system to perform the same function of driving the linkage movement. *Id.* Thus, the combination would have involved no more than the routine substitution of one coupling location for another coupling location but still providing all the same desired functionality.

Id.

Modifying Pankros' actuator 60 such that the actuator assembly directly couples to the support bracket would not affect the other functional limitations of claim 33. EX1003 ¶ 195. For example, as explained above in Section X.B (Clary Ground), coupling the actuator assembly directly to the support bracket provides a configuration in which a portion of the motorized actuator assembly still gets closer to and past a portion of the lower arm when the arm assembly moves toward the raised configuration. *Id.* The simple modification of coupling the actuator assembly

directly to the support bracket, similar to Clary's configuration, would not significantly change the movement of Pankros' actuator assembly relative to the lower arm of the arm assembly. *Id.*

Thus, in view of the analysis above in Ground 5, Pankros combined with Clary and the general knowledge of a POSITA render obvious claims 33 and 34. EX1003 at ¶ 196.

B. Pankros Combined With Clary and the General Knowledge of a POSITA Renders Obvious Claim 35

Claim 35 depends from claim 33 and recites “wherein the lower arm extends between a first axis of rotation and a second axis of rotation, wherein the portion of the motorized actuator assembly is positioned forward of the first axis of rotation and the second axis of rotation when the arm assembly is at the raised configuration.”

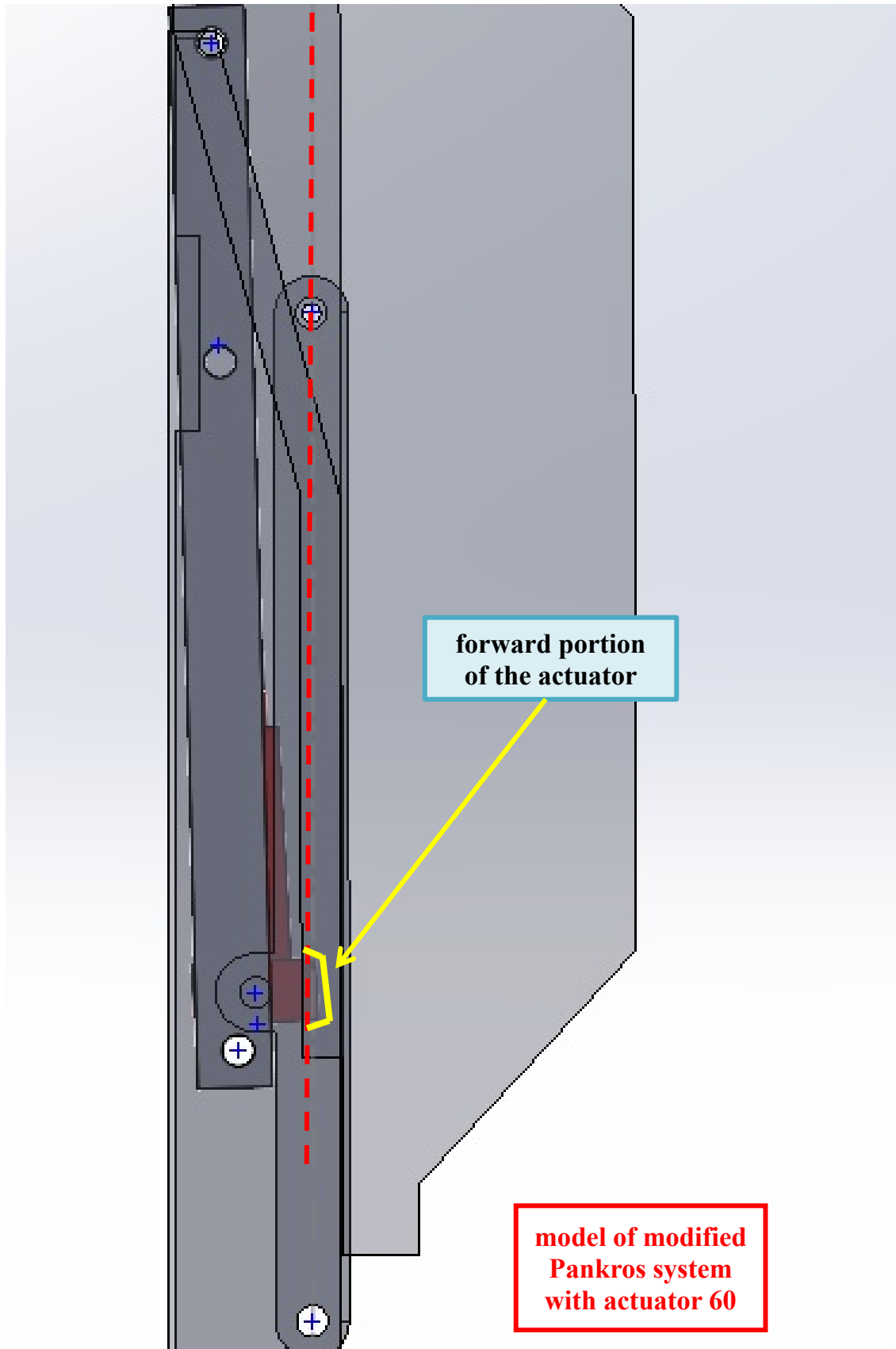
As explained above in Ground 5, Pankros discloses this limitation. However, to the extent Pankros somehow fails to disclose this specific feature, it would have been obvious for a POSITA to use an actuator configuration with this feature. EX1003 ¶¶ 197-198. This was a common design feature in mounting systems and would have been within the general knowledge of a POSITA. *Id.* It is merely an expected result of using an actuator and linkage arms having certain size and dimensions. *Id.*

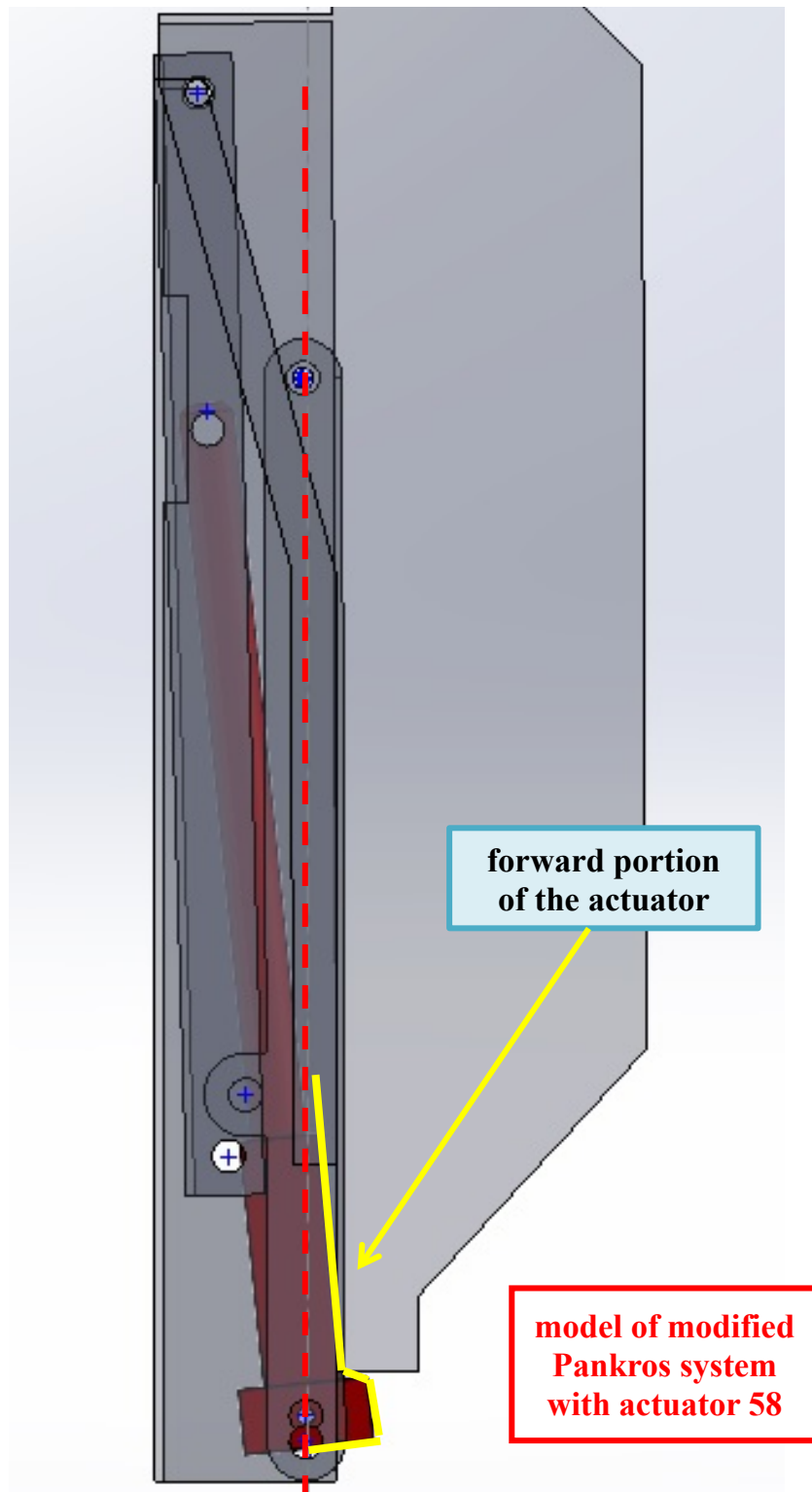
It would have been obvious for a POSITA to slightly change Pankros' arrangement so that a greater portion of the actuator assembly (including the portion)

is forward of the lower arm axes in the raised configuration. EX1003 ¶ 199. For example, a POSITA would have used a more powerful actuator which would be larger in diameter and would extend further forward in the raised position. *Id.* A POSITA would have been motivated to make this modification because a larger diameter actuator would provide additional support, stability, and longevity to the system. *Id.*

Also, a POSITA would have easily modified Pankros' upper and lower linkage arms so that they are not vertically aligned. EX1003 ¶ 200. For example, A POSITA would couple the lower arms to the system at a position inward or outward of the upper arms so that the upper and lower arms do not abut against each other in the raised position. *Id.* A POSITA would be motivated to make this modification because it would make the raised configuration more compact with the television closer to the wall. *Id.* It would also take up less space and would be more aesthetically desirable. *Id.* A POSITA would have known that there are benefits to the linkage arms not being aligned so that they can overlap and pass each other during movement of the system. *Id.* For example, Pankros itself discloses a weight balancing device 58 that is rotatably coupled at a position inside the linkage arms so that it is not aligned vertically with the linkage arms. EX1006 at [0050], [0052], Figs. 2-5. Tsuji also discloses a system in which the linkage arms 3a-3d are not aligned vertically (offset) so that they can pass one another and not abut, as shown

in Figure 1. EX1015 at [0019]-[0022], Figs. 1-4. A POSITA would have also removed the side portions of Pankros' wall mount 14 and display support 18 knowing that they do not serve any functional purpose and might also abut one another and prevent the Pankros system from achieving its most compact raised configuration. EX1003 ¶¶ 201-202. Modifying Pankros' system in this manner would make the raised configuration more compact and would cause a larger portion (including the portion) of the actuator assembly to be forward of the lower arm axes in the raised configuration. *Id.* This is true whether the actuator assembly is the actuator 60 or the weight balancing device 58 which can be an actuator assembly. EX1006 at [0049]-[0052], claim 20. This is shown in the models below which were provided by Dr. Pratt and illustrate how the portion of the actuator assembly is positioned forward of the first axis of rotation and the second axis of rotation when the arm assembly is at the raised configuration, for both the actuator 58 and the actuator 60. EX1003 ¶¶ 201-203.





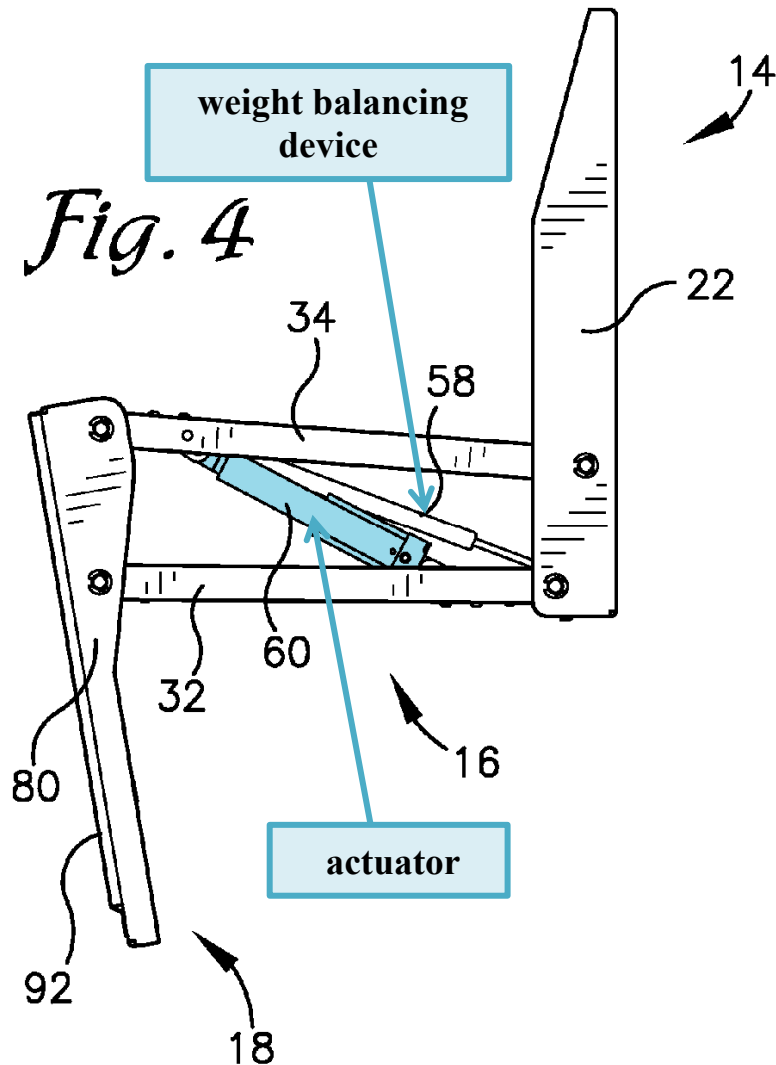
Thus, claim 35 would have been obvious in view of the combination of Pankros with Clary and the general knowledge of a POSITA.

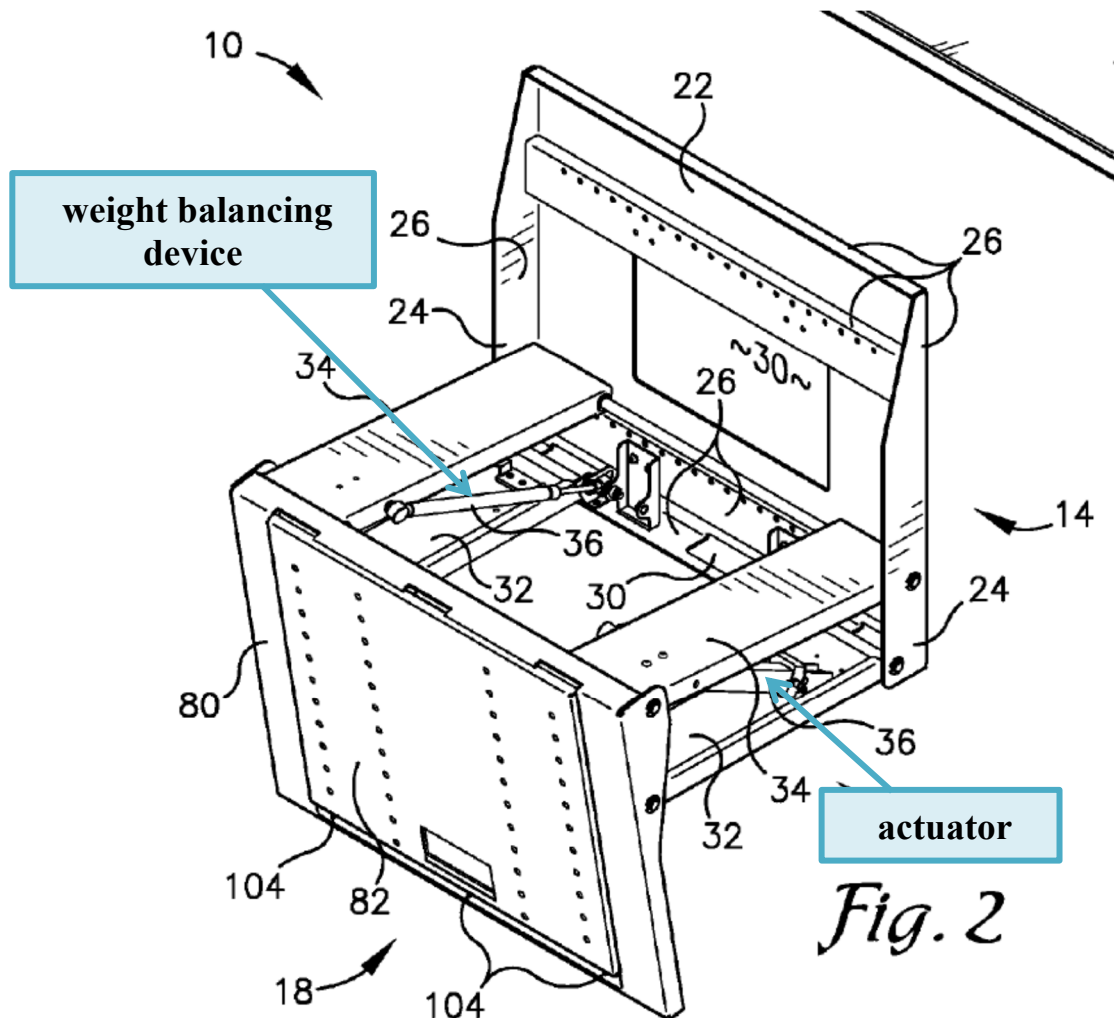
C. Pankros Combined With Clary and the General Knowledge of a POSITA Renders Obvious Claim 36

Claim 36 depends from claim 35 and recites “wherein the first axis of rotation and the second axis of rotation are spaced apart from and located below an extendable actuator of the motorized actuator assembly when the arm assembly is in the lowered configuration.”

This claim lacks written description and is indefinite, but to extent it somehow meets those requirements, it is disclosed by Pankros, as explained above in Ground 5 (Section XII.E). However, to the extent this limitation somehow requires that the actuator assembly needs to be positioned higher above the first and second axes, which it does not, such modification would have been obvious. EX1003 ¶¶ 204-205. An actuator with a higher connection to the support bracket relative to the lower arm was a common design feature and within the general knowledge of a POSITA. *Id.* For example, Juan discloses that the actuator can be attached at a location on the linkage arms or to the support bracket. EX1003 ¶ 205; EX1005 at [0066]. Pankros also discloses weight balancing device 58, which may be a linear actuator, that is rotatably coupled to the support bracket at an attachment positioned above the axes of the lower arm when the arm assembly is in the lowered position, as show in annotated Figures 2 and 4 below. EX1006 at claim 20, [0050] and [0052].

Thus, it would have been well-known to a POSITA to couple the actuator assembly to the support bracket at a higher position than the axes of the lower arm in the lowered configuration. EX1003 ¶ 205.





Rotatably coupling the actuator assembly to the support bracket at a higher location would have been a mere design choice from a finite number of options. EX1003 ¶ 206. A POSITA would have been motivated to rotatably couple the actuator assembly to the support bracket for stability, among other benefits discussed in Ground 4 above. *Id.* A POSITA also would have reasonably expected success in coupling the actuator assembly to a higher location on the support bracket. *Id.* ¶¶ 206-207. Moving the actuator connection higher would be a minor modification,

involving no more than the routine substitution of one coupling location for another.

Id.

Thus, claim 36 would have been obvious in view of the combination of Pankros with Clary and the general knowledge of a POSITA.

XIV. SECONDARY CONSIDERATIONS

Although secondary considerations should be taken into account, they do not control the obviousness conclusion. *Newell Cos., Inc. v. Kenney Mfg. Co.*, 864 F.2d 757, 768 (Fed. Cir. 1988). Where a strong prima facie obviousness showing exists, as here, secondary considerations may not dislodge the primary conclusion of obviousness. *See, e.g., Leapfrog Enters. Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007). Petitioner is not aware of any relevant secondary considerations, but if Patent Owner puts forth any such allegations, Petitioner respectfully requests an opportunity to respond.

XV. THE BOARD SHOULD NOT EXERCISE DISCRETION TO DENY INSTITUTION

A. Board Should Not Decline Institution Pursuant to 35 U.S.C. § 325(d)

This is the first petition challenging the '703 patent. Also, the prior art cited herein was not applied by the Examiner in any rejections during prosecution of the '703 patent. Moreover, as described above, the Petition makes a strong showing that the challenged claims are unpatentable.

B. Board Should Not Decline Institution Pursuant to 35 U.S.C. § 324(a)

Patent Owner has not asserted the '703 patent against Petitioner in any court. The only parallel litigation involving the '703 patent does not involve Petitioner. The district court case was only recently filed and is still in its very early stages. Moreover, this Petition raises a compelling case of unpatentability for the challenged claims of the '703 patent. Thus, none of the *Fintiv* factors support discretionary denial.

XVI. CONCLUSION

Petitioner has established a reasonable likelihood of prevailing in showing that the challenged claims are unpatentable as anticipated and obvious and, therefore, requests that the Board institute a PGR and cancel claims 33-36 of the '703 patent.

Dated: January 24, 2024

By: /Benjamin J. Everton/
Benjamin J. Everton (Reg. No. 60,659)
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APPENDIX 1

Listing of Claims from U.S. 11,781,703	
Claim 33 ³	
Preamble	33. A television mounting system comprising:
33[a]	a support bracket configured to couple to a wall;
33[b]	a display bracket configured to hold a television;
33[c]	an arm assembly pivotally coupled to the support bracket and movable between a raised configuration to position the display bracket at a raised position and a lowered configuration to position the display bracket at a lowered position
33[c][i]	wherein the arm assembly includes an upper arm and a lower arm
33[d]	a motorized actuator assembly having a support bracket end rotatably coupled to the support bracket and a display bracket end rotatably coupled to the arm assembly
33[d][i]	wherein at least a portion of the motorized actuator assembly moves toward and past a portion of the lower arm when the arm assembly moves toward the raised configuration.
Claim 34	
--	34. The television mounting system of claim 33, wherein the portion of the motorized actuator assembly moves away from and is vertically spaced apart from the lower arm when the arm assembly is in the lowered configuration.

³ Bracketed labels have been added for convenient referencing to the claim limitations.

Listing of Claims from U.S. 11,781,703	
Claim 35	
--	35. The television mounting system of claim 33, wherein the lower arm extends between a first axis of rotation and a second axis of rotation, wherein the portion of the motorized actuator assembly is positioned forward of the first axis of rotation and the second axis of rotation when the arm assembly is at the raised configuration.
Claim 36	
--	36. The television mounting system of claim 35, wherein the first axis of rotation and the second axis of rotation are spaced apart from and located below an extendable actuator of the motorized actuator assembly when the arm assembly is in the lowered configuration.

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(d), the undersigned certifies that this PETITION FOR POST GRANT REVIEW OF U.S. PATENT NO. 11,781,703 contains 18,450 words according to the word-processing program used to prepare this paper. The foregoing word count complies with the 18,700 word type-volume limit specified by 37 C.F.R. § 42.24(a)(1).

Dated: January 24, 2024

By: /Benjamin J. Everton/
Benjamin J. Everton (Reg. No. 60,659)
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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on the date below a copy of this PETITION FOR POST GRANT REVIEW OF U.S. PATENT NO. 11,781,703, PETITIONER’S POWER OF ATTORNEY, AND EXHIBITS EX1001-EX10018, were served by FedEx on the Patent Owner at the correspondence address of record for the subject patent as follows:

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Dated: January 24, 2024

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