

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TOPP & SCREED S.A.,
Petitioner,

v.

SOMERO ENTERPRISES, INC.,
Patent Owner.

Case IPR2024-00051
U.S. Patent No. 8,038,366

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 8,038,366**

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LIST OF EXHIBITS¹

Ex-1001	U.S. Patent No. 8,038,366 (“’366 Patent”)
Ex-1002	Prosecution History of the ’366 Patent
Ex-1003	U.S. Patent Publication No. 2003/0068200 (“Quenzi”)
Ex-1004	European Patent Application EP0743408B1 (“Jochems”)
Ex-1005	U.S. Patent No. 6,022,171 (“Munoz”)
Ex-1006	Declaration of Thomas S. Breidenbach, P.E., including his curriculum vitae as Appendix A
Ex-1007	U.S. Patent No. 5,129,803 (“Nomura”)
Ex-1008	U.S. Patent No. 4,655,633 (“Somero”)
Ex-1009	U.S. Patent No. 7,195,423
Ex-1010	U.S. Patent No. 7,407,339
Ex-1011	U.S. Patent No. 7,854,565
Ex-1012	U.S. Patent No. 4,930,935
Ex-1013	U.S. Patent No. 6,129,481
Ex-1014	U.S. Patent No. 6,152,647
Ex-1015	U.S. Patent No. 6,183,160
Ex-1016	U.S. Patent No. 6,588,976

¹ Four-digit pin citations that begin with 0 are to the production numbers added by Petitioner. All other citations are to original page, column, paragraph, or line numbers.

Ex-1017	U.S. Patent No. 6,623,208
Ex-1018	AMERICAN CONCRETE INSTITUTE, GUIDE FOR CONSOLIDATION OF CONCRETE (ACI Committee 309, ACI309R-96 1997)
Ex-1019	ELSEVIER SCIENCE LTD., ADVANCES IN BUILDING TECHNOLOGY 679 (M. Anson et al. eds. Volume 1 2002)
Ex-1020	<i>Screed</i> , <u>Merriam-Webster's Collegiate Dictionary</u> (11th Ed. 2003)
Ex-1021	U.S. District Courts–Combined Civil and Criminal Federal Court Management Statistics (June 30, 2023), https://www.uscourts.gov/sites/default/files/data_tables/fcms_na_dist_profile0630.2023.pdf

I. INTRODUCTION

Topp & Screed S.A. (“Petitioner”) respectfully requests *inter partes* review (“IPR”) of Claims 1-15 of U.S. Patent No. 8,038,366 (“’366 Patent”) (Ex-1001), currently assigned to Somero Enterprises, Inc. (“PO”).

II. MANDATORY NOTICES UNDER 37 C.F.R. §42.8

Real Parties-in-Interest: Out of an abundance of caution, Petitioner identifies the following real parties-in-interest: Topp & Screed S.A.; Topp & Screed USA Inc.; Industrial Floor Consulting, Inc.; Twintec USA, Inc., and Kalman Floor Company.

Related Matters: Patent Owner has asserted the ’366 Patent against Petitioner in *Somero Enterprises, Inc. v. Topp & Screed SA et al.*, Case No. 3-23-cv-00245 (W.D.N.C. filed April 27, 2023).

The ’366 Patent was previously asserted against a third party in *Somero Enterprises, Inc. v. Ligchine International Corporation*, Case Nos. 1:20-cv-002356, 4:21-cv-00028 (S.D. Ind. filed September 10, 2020), which was dismissed on March 15, 2021, prior to claim construction, and was involved the following IPR: *Ligchine International Corporation v. Somero Enterprises, Inc.*, IPR2021-00490. Both proceedings were terminated based on settlement.

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In compliance with 37 C.F.R. §42.10(b), a Power of Attorney is also filed concurrently herewith.

III. GROUNDS FOR STANDING

Petitioner certifies that the '366 Patent is available for review, and Petitioner is not barred or estopped from requesting review.

IV. FEE AUTHORIZATION

The PTO is authorized to charge any fees due during this proceeding to Deposit Account No. 50,0310 (Order No. 045636-8001)

V. PRECISE RELIEF REQUESTED

Petitioner requests cancellation of Claims 1-15 under 35 U.S.C. §§102, 103 on the following grounds, supported by a declaration from Thomas S. Breidenbach, P.E. Ex-1006.

Ground	Prior Art	Claims	§102/103
1	Quenzi (Ex-1003)	1-9	102
2	Quenzi (Ex-1003)	1-9	103
3	Jochems (Ex-1004) in view of Quenzi	1-15	103

VI. THE CHALLENGED PATENT

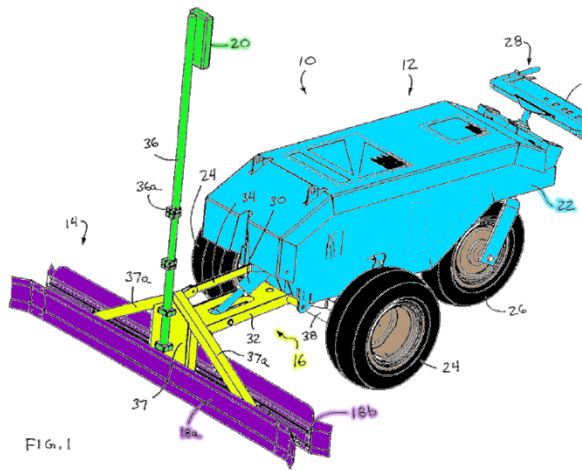
A. STATEMENT ON PRIORITY

The '366 Patent issued on October 18, 2011, from an application filed on November 22, 2010 (Ex-1002, 0141), and is subject to pre-AIA 35 U.S.C. §§102 and 103 for purposes of this Petition.

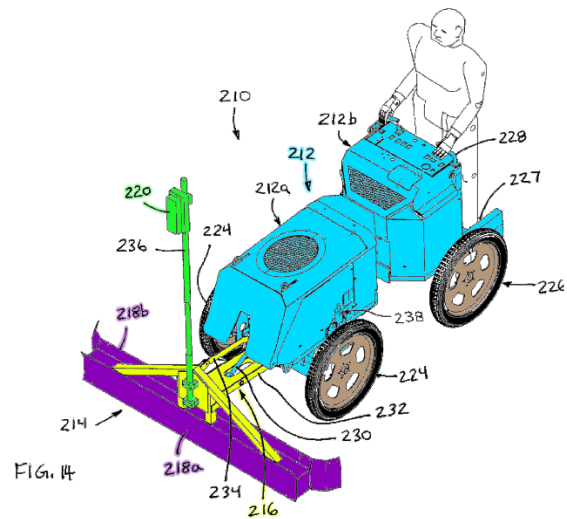
The '366 Patent is a continuation of three earlier utility applications that resulted in U.S. Patent Nos. 7,195,423 (Ex-1009); 7,407,339 (Ex-1010); and 7,854,565 (Ex-1011). The entire '366 Patent family claims the benefit of provisional application Nos. 60/521,950, filed July 26, 2004; 60/619,672, filed October 18, 2004; and 60/666,672 filed March 30, 2005. Thus, July 26, 2004, is the earliest possible priority date that could be claimed. Because all prior art used herein significantly pre-date July 26, 2004, Petitioner does not, in this Petition, challenge the purported 2004 priority date.

B. OVERVIEW

The '366 Patent discloses and claims a screeding device for striking off uncured concrete surfaces. Ex-1001, 1:21-23; Ex-1006, ¶32. It discloses various embodiments of screeding devices, including walk-behind machines (e.g., Figure 1) and those that can be ridden by an operator (e.g., Figure 14).



Ex-1001, Fig.1

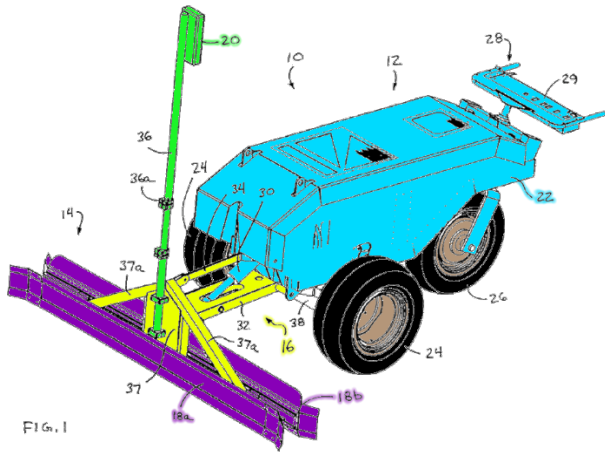


Ex-1001, Fig.14

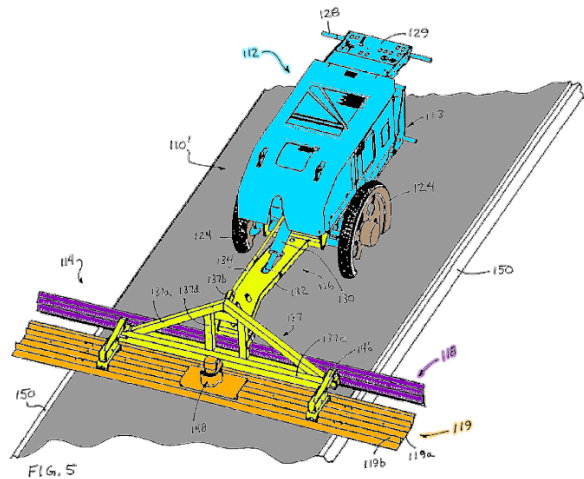
Each embodiment generally comprises a wheeled base having a frame 22, 222 (blue) and a plow assembly 14, 214, having plow blades 18, 218 (purple) adjustably mounted to the frame via mechanical linkage 16, 216 (yellow). Ex-1001, 2:6-12. The plow assembly is vertically adjustable with respect to the frame to strike off the concrete at a desired level or grade. *Id.*, 1:55-63; 3:48-52; 6:15-17; Ex-1006, ¶33. The plow assembly is adjustable responsive to a laser reference system using laser receiver 20, 220 (green) and may include a vibrating member to compact and smooth the concrete at the desired grade as established by the plow. Ex-1001, 1:63-67; 6:22-25; 20:37-40; Ex-1006, ¶33. The adjustable mount allows plow assembly to be adjusted vertically to establish the desired level or grade. Ex-1001, 1:60-62; 2:1-6; 2:12-15; 2:37-39; 3:17-20; 3:48-52; Ex-1006, ¶¶33.

The challenged claims are directed to a particular wheeled screeding device.

Figures 1 and 5 are exemplary embodiments, shown below:



Ex-1001, Fig.1



Ex-1001, Fig.5

The device comprises a wheeled base unit 12 (blue) and an adjustably mounted plow head or assembly 14, 114 (orange and purple). Ex-1001, Fig.1, 6:15-18; Ex-1006, ¶35. The wheeled base unit 12 includes a frame 22 supported by wheels 24, 26. Ex-1001, 6:28-30; Ex-1006, ¶35. The plow assembly 14 includes a strike-off member or plow (purple) and is adjustably mounted to the base unit 12 (blue) through a lift mechanism 16 (yellow) and hydraulic actuator 30 to form vertically movable mechanical linkage. Ex-1001, 6:15-67; Ex-1006, ¶35. The plow's grade may be adjusted relative to the base 12 in response to a signal from a laser receiver 20. Ex-1001, 6:22-24; Ex-1006, ¶35. In some embodiments, the plow assembly 14 may be

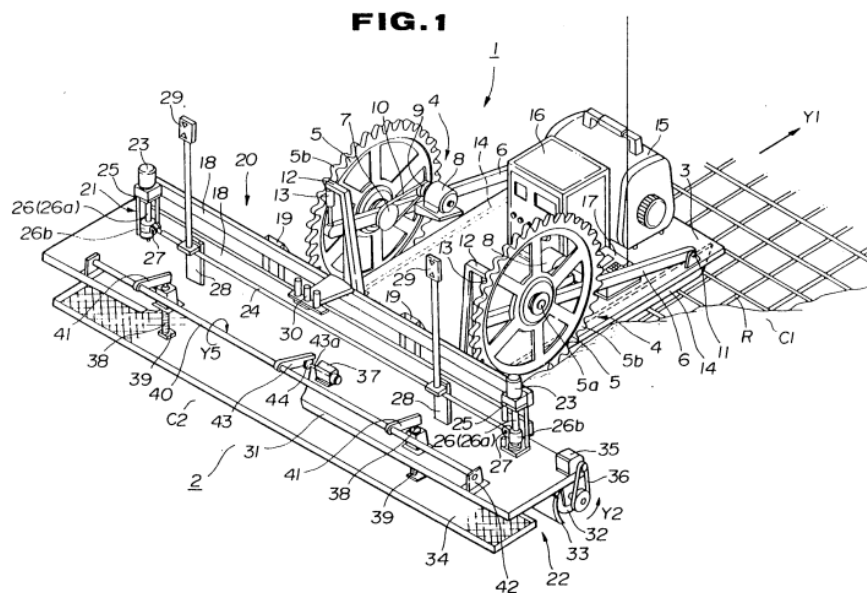
replaced with a screeding device 114, which includes a plow or strike-off member 118 (purple) and a vibrating member 119 (orange), shown in Figure 5. Ex-1001, 9:45-52; Ex-1006, ¶35.

C. PROSECUTION HISTORY

Application claims 1-20 ultimately issued without amendment. Despite the Examiner possessing extremely relevant prior art teaching all the limitations of claims 1-9 (e.g., U.S. 6,976,805 that issued from Quenzi (Ex-1003)) and prior art unambiguously teaching wheeled units that were articulatable as in claims 10-16 (e.g., Jochems (Ex-1004)), the Examiner did not use the most relevant art. Instead, the Examiner only rejected the claims based on Nomura (Ex-1007), which was, as discussed below, easily distinguished by the Applicant. As to Quenzi, the applicant only cited the issued patent version, U.S. 6,976,805, which issued after the '366 Patent's priority date. The Examiner likely did not appreciate that Quenzi had published earlier as 102(b) prior art. Whatever the reason, the Examiner clearly erred by failing to consider Quenzi's anticipatory disclosures as they relate to claims 1-9, and that Quenzi could readily be combined with Jochems to teach claims 10-15.

Claims 1-9 were rejected under 35 U.S.C § 102(b) as being anticipated by U.S. 5,129,803 ("Nomura") (Ex-1007) and claims 10-15 were rejected as obvious over Nomura in view of U.S. 6,022,171 ("Munoz") (Ex-1005). Ex-1002, 094-095.

As shown below, Nomura discloses a wheeled concrete screeding device (concrete leveling machine 1) having a screeding head (leveling unit 2) including a grade setting device (leveling section 22) having a plow (leveling auger 32 and leveling blade 33) and a vibrating beam (tamper 34) secured to a support frame 20 at the rear of platform 3. Ex-1007, 3:45-49; 4:38-44; 5:59-62; Ex-1006, ¶37.



Ex-1007, Fig.1

In rejecting claims 1-9, the Examiner found that Nomura's:

vibratable member (34) is adjustably attached at a rearward end of said grade setting assembly, as at (28), such that said vibratable screed (34) at least partially floats behind said plow (33) on the struck-off concrete surface, as said wheeled unit is in (sic) moving through said concrete (C1). See Cols. 3-4; Figs. 7-14

Ex-1002, 094.

To overcome Nomura, however, the Applicant argued Nomura's vibratable member (tamper 34) is not "at least partially *floating* behind the grade establishing element *on the struck-off surface*" and is not "*at least partially supported at the struck-off surface* of the uncured concrete as the wheeled unit is moved in the screeding direction." Ex-1002, 116-118 (Applicant's Response) (emphasis in original). Claim 1 was allowed based on these arguments. However, as discussed below, the '366 Patent relies on the prior art Quenzi as written description support for this feature. Ex-1006, ¶38. Thus, Applicant's arguments misled the Patent Office as to the patentability of the claims.

In rejecting claim 10, the Examiner argued that Munoz (Ex-1005) taught a similar, laser-guided screeding machine having a 4-wheel primary mover and asserted that it would have been obvious to one of ordinary skill to provide the screeding machine of Nomura with the 4-wheel prime mover as taught by Munoz. Ex-1002, 095 (First Office Action). In response, the Applicant argued that Munoz does not teach "an *articulatable* wheeled unit (such as claimed in claims 11-15), which includes a front frame portion that is *articulatable* relative to a rear frame portion *about a generally vertical pivot axis*." Ex-1002, 119 (Applicant's Response) (emphasis in original). A Notice of Allowance issued shortly thereafter. Ex-1002, 127. However, claim 10 does not require an articulatable wheeled unit, and as described below, other prior art (such as Jochems) clearly disclosed articulatable

wheeled units, as claimed. Ex-1006, ¶39. Again, Applicant's arguments misled the Patent Office.

As described above, the Examiner only ever applied Nomura as a base reference to claims 1-15 and inexplicably failed to consider more relevant prior art references that were of record, such as Quenzi and Jochems. These references teach the same purported deficiency that Applicant argued Nomura had, so the challenged claims should not have issued had the Examiner adequately considered Quenzi and Jochems. These oversights by the Examiner were material error. *See Advanced Bionics, LLC v. MED-EL Elektromedizinische Gerate GmbH*, IPR2019-01469, Paper 6, 10 (PTAB Feb. 13, 2020) (“[I]f the record of the Office’s previous consideration of the art is not well developed or silent, then a petitioner may show the Office erred by overlooking something....”); Ex-1006, ¶¶36-40.

VII. DISCRETIONARY FACTORS FAVOR INSTITUTION

A. The *Fintiv* Factors Favor Institution

The Board should not exercise its discretion to deny review where, as here, the Petition is strong on the merits. *See Interim Procedure for Discretionary Denials In AIA Post Grant Proceedings With Parallel District Court Litigation*, PTO Director’s Memorandum, p.9 (June 21, 2022).

Even so, the stage of the parallel district court litigation does not support denying institution based on the *Fintiv* factors.

Factor 1 is arguably **neutral** because no party has requested a stay (yet). However, the parallel litigation is in its infancy. As of the filing of this Petition, a scheduling order through claim construction was only recently entered on October 23, 2023, **no discovery** has been taken, and Petitioner intends to request a stay shortly after the filing of this petition.

Factor 2 favors institution. The most recent statistics for the Western District of North Carolina suggest a median time to trial of **36.4 months**. Ex-1021. Given the April 27, 2023, filing date, the parallel litigation would be expected to reach trial in approximately May 2026, well after the Board would be projected to issue a Final Written Decision in this IPR.

Factor 3 favors institution. The district court litigation is still in its **early stages** where no discovery has been taken and no invalidity contentions have been served.

Factor 4 favors institution because the Final Written Decision here will likely trigger estoppel before trial.

Factor 5 is **favors institution** or is **neutral** because “[a]ll parties to this proceeding are included in the related [] proceeding.” *Cast Lighting, LLC v. Wangs Alliance Corp.*, PGR2021-00012, Paper 12, 36 (PTAB June 7, 2021).

Factor 6 favors institution and is dispositive under the Guidance because the unpatentability challenges here are **compelling**. *See infra* Section XI. Additionally,

Petitioner's IPR is the only challenge to the '366 Patent presently before the Board, which favors institution. There is a strong public interest against "leaving bad patents enforceable." *Thryv, Inc. v. Click-To-Call Techs., LP*, 140 S. Ct. 1367, 1374 (2020).

Because all *Fintiv* factors favor institution or are neutral, Petitioner respectfully requests the Board decline to discretionarily deny review.

B. 35 U.S.C. § 325(d) & *Becton/Advanced Bionics*

The Board revised the framework under 35 U.S.C. § 325(d) to focus on (1) whether the same or substantially the same art was previously presented to the Office; and, if so, (2) whether the Office erred in a manner material to the patentability of challenged claims. *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, 8 (PTAB Feb. 13, 2020).

1. Advanced Bionics, Part 1

Although Jochems and the patent that ultimately issued from Quenzi were cited on an IDS, they were never substantively raised by the Examiner or addressed by the Applicant during prosecution. Also, neither reference is substantively "the same or substantially the same art previously" applied by the Examiner. As described in the overview of the prosecution history above, the Examiner issued only one Non-Final Office Action and each ground therein relied on Nomura (Ex-1007) as the primary reference. But, as discussed in connection with Part 2, Applicant's arguments regarding Nomura are completely inapplicable to the analysis of Quenzi

(Grounds 1 & 2) and its combination with Jochems (Ground 3). As such, the art relied upon by Examiner was not substantially the same. Moreover, the Examiner was not presented with, nor did he consider, the Jochems-Quenzi combination (Ground 3).

2. Advanced Bionics, Part 2

The Office also clearly made a manifest error by “overlooking specific teachings of the relevant prior art” and “not consider[ing]” the full extent of the references relied on herein. *See Advanced Bionics*, 8, n. 9 (error to overlook specific teachings material to patentability); *Oticon Medical AB v. Cochlear Ltd.*, No. IPR2019-00975, Paper 15 (PTAB Oct. 16, 2019) (sections II.B and II.C designated precedential) (error when Office fails to consider a material reference). For example, as previously discussed, Applicant distinguished Nomura by arguing that its vibratable member does not “at least partially float” and is not “at least partially supported” at a struck-off surface. But those arguments are inapplicable to Quenzi (and the Jochems-Quenzi combination). As discussed in Section IX, when addressing this same feature, Quenzi uses nearly identical wording as claimed by the ’366 Patent when it discloses a vibratable member that is “partially supported by, or essentially ‘floating’ upon, the uncured concrete surface.” Ex-1003, ¶112. Quenzi’s express disclosure of this claim element is not surprising because the ’366 Patent relies on the disclosure from Quenzi to provide written description support for these

features. *See* Ex-1001, 20:44-60. But Quenzi is prior art. Thus, the Examiner made a material error by accepting Applicant's arguments regarding Nomura and not appreciating that the '366 Patent expressly acknowledges that those same features are disclosed by other prior art (Quenzi) that anticipates many of the patent claims, as shown below in Ground 1. Given this, and that Quenzi and Jochems were not substantively applied by the Office, the Board should not discretionarily deny institution here.

VIII. LEVEL OF ORDINARY SKILL IN THE ART

A person of ordinary skill in the art ("POSITA") would have had an undergraduate education in mechanical, civil, construction, or industrial engineering, or a related field and at least two years of experience in research, design, development, testing, or use of mechanical or industrial equipment. Ex-1006, ¶42. Additional education may substitute for experience and vice-versa. *Id.*

IX. CLAIM CONSTRUCTION

Petitioner interprets the claims of the '366 Patent according to 37 C.F.R. § 42.100(b). In a prior IPR, a prior petitioner identified three terms for construction: (i) "grade establishing element," (ii) "vibratable member," and (iii) "at least partially floats"/"at least partially supported." IPR2021-00490, Paper 1, 16-19. However, to resolve the grounds presented herein, Petitioner does not believe that any term requires explicit construction. Ex-1006, ¶¶45-49.

For example, the prior petitioner proposed construing “at least partially floats”/“at least partially supported” as “taken together to mean a vibratable or vibrating member that contacts the uncured surface with at least a portion of its weight.” As described in Section VI.C. above, the Applicant overcame the prior art to Nomura by arguing that it lacked this element.

While prior petitioner’s proposed construction appears to be consistent with the ’336 Patent specification and file history, the Board need not construe this term to resolve any issue presented by the petition because the Petitions primary reference Quenzi expressly discloses a vibratable member that is “partially supported by, or essentially ‘floating’ upon, the uncured concrete surface.” Ex-1003, ¶112. Indeed, the ’366 Patent expressly relies on, and incorporates by reference, Quenzi’s prior art disclosure as written description support for how the screed head “generally floats on or is supported by the concrete surface.” *See* Ex-1001, 20:44-60. Thus, Quenzi indisputably discloses any possible construction of this element, and therefore, the prior petitioner’s construction is immaterial to the analysis. Ex-1006, ¶49. Similarly, the prior petitioner’s proposals to construe “vibratable member” as “having a flat surface for engaging uncured concrete that is vibrated by a vibratory device” has no material effect on any issue presented herein. IPR2021-00490, Paper 1, 17-18. The prior art uses a vibratable beam having a flat surface for engaging uncured concrete.

The prior petitioner also asserted “grade establishing element” should be interpreted under 35 U.S.C. §112, ¶6, where the function is to “establish a struck-off surface of the uncured concrete at a desired grade” and the corresponding structure is “a plow and/or an auger disposed behind the plow.” IPR2021-00490, Paper 1, 15-17. Petitioner generally agrees with this proposed function and corresponding structure. However, Petitioner does not believe that this term, when considered as a whole, implicates Section 112, ¶6. While the prior petitioner correctly noted that “element” is “a recognized nonce word that **may**² be used as a substitute for ‘means,’” *id.*, the Federal Circuit has also made clear that “[c]laim language that further defines a generic term like ‘mechanism’ can sometimes add sufficient structure to avoid 112 ¶6.” *Massachusetts Inst. of Tech. & Elecs. For Imaging, Inc. v. Abacus Software*, 462 F.3d 1344, 1354 (Fed. Cir. 2006). Here, the independent claims recite that the grade establishing element is part of the screed head and is vertically adjustable to establish a struck-off surface. Ex-1006, ¶48. Further, dependent claims recite that the grade establishing element comprises a plow or an auger disposed behind a plow. *Id.* In this context, Petitioner believes the claims recite sufficient structure. Nonetheless, should the Board determine this term implicates

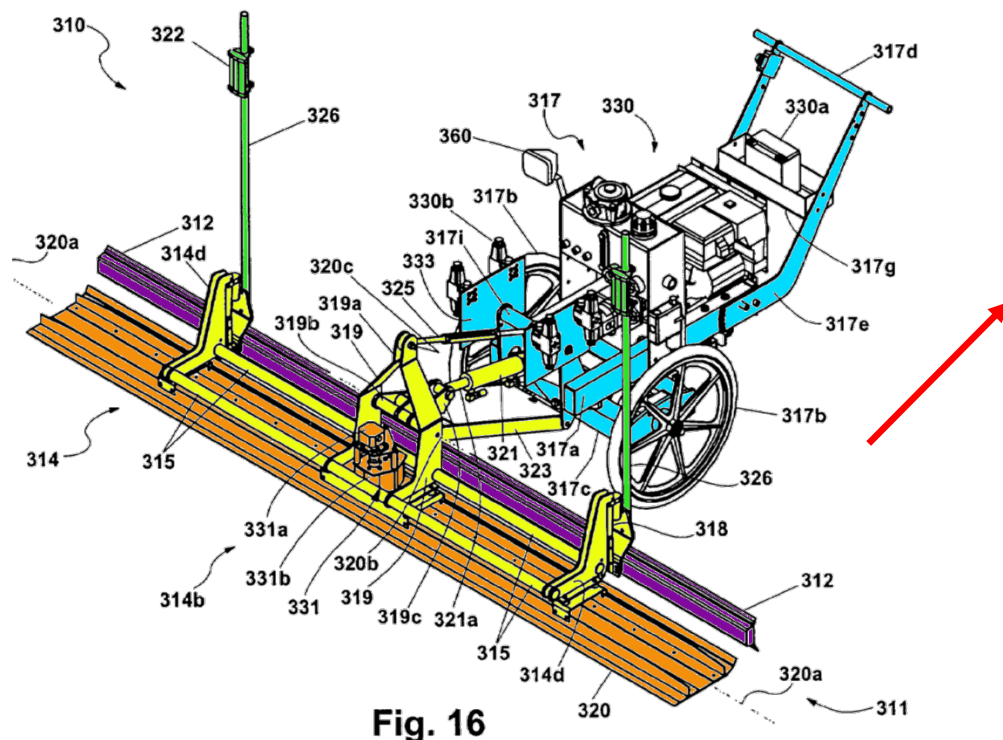
² Emphasis added in quotes throughout unless otherwise indicated.

Section 112, ¶6, Petitioner identifies below how the prior art discloses the corresponding structure (i.e., “a plow and/or an auger disposed behind the plow”).

X. BRIEF DESCRIPTION OF THE APPLIED PRIOR ART REFERENCES

A. Quenzi (Ex-1003)

Quenzi, entitled “Light Weight Apparatus For Screeding And Vibrating Uncured Concrete Surfaces,” published on April 10, 2003, more than one year prior to the earliest alleged priority date (July 26, 2004) of the '366 Patent. Quenzi is prior art under at least **35 U.S.C. §102(b)**.

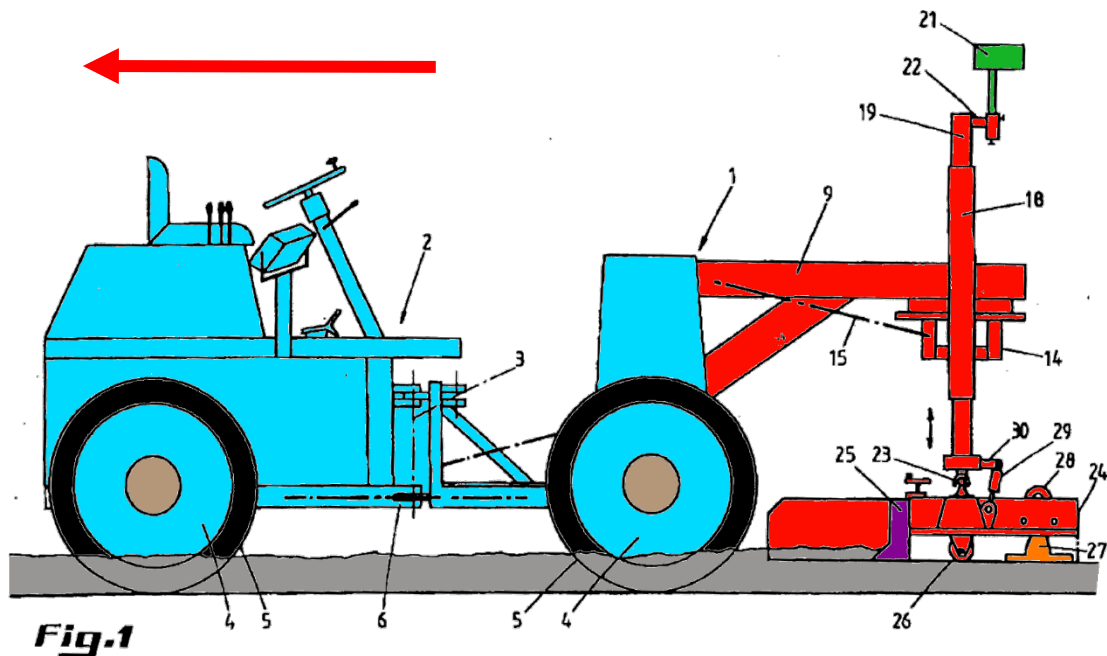


With reference to colorized Figure 16, above, Quenzi’s device may be moved in the direction of the red arrow via human effort pulling on the wheeled support

unit (blue), and/or motorized and driven by wheels. Ex-1003, ¶8; Ex-1006, ¶51. Quenzi has a screed head including a working member (orange), such as a vibrating member or beam 320, and “a grade setting member” (purple), such as a plow 312, located ahead of the vibrating member (orange). *Id.*, ¶98; Ex-1006, ¶51. The grade setting member (purple) may include a strike-off plow, an auger, a spinning tube, or a flexible belt or chain. Ex-1003, ¶8; Ex-1006, ¶51. The grade setting member is automatically adjustable to establish a desired surface elevation of struck-off concrete. Ex-1003, 2:64-3:6; Ex-1006, ¶¶51. The vibrating member “generally floats upon” or is at least partially supported directly on the uncured concrete surface to smooth and finish the surface behind the device. Ex-1003, ¶9; Ex-1006, ¶51.

B. Jochems (Ex-1004)

Jochems, entitled “Machine for striking off poured concrete” published on October 7, 1998, more than one year prior to the earliest alleged priority date (July 26, 2004) of the ’366 Patent. Jochems is prior art under, at least, **35 U.S.C. §102(b)**.



With reference to colored Figure 1, above, Jochems' machine may be moved generally in the direction of the red arrow via operator control of the wheeled support unit (blue). Ex-1004, 1:53-56; Ex-1006, ¶53. Jochems machine "consists...of a first frame part 1 and a second frame part 2 which are hingedly connected to each other at the vertical hinge axis 3." Ex-1004, 2:30-34. Jochems' machine is designed "to move the machine through the poured concrete" and "stri[k]e off the concrete afterwards." Ex-1004, 4:26-30; Ex-1006, ¶53.

Jochems machine also has a screed head (red), which "consist of a scraper (25) [purple], a rotating roller (26) and a vibrating beam (27) [orange]." Ex-1004, Cl.4. Jochems also teaches "said scraper (25), roller (26) and vibrating beam (27)

are mounted on a support beam (24), the height of which is adjustable by means of sensors (21) [green] with respect to a laser beacon.” Ex-1004, Cl.5.

XI. DETAILED EXPLANATION OF THE UNPATENTABILITY GROUNDS

A. Ground 1: Claims 1-9 Are Anticipated By Quenzi (Ex-1003)

Quenzi discloses several embodiments of a wheeled concrete screeding devices. For purposes of Ground 1, Petitioner demonstrates three embodiments that each separately anticipate claims 1-9, namely the embodiments discussed in connection with: (i) Figs. 12-15; (ii) Figs. 16-20; and (iii) Fig.23. However, as discussed in obviousness Ground 2, Quenzi expressly describes combining various features from these embodiments, and their disclosures are in no way mutually exclusive. Ex-1006, ¶57.

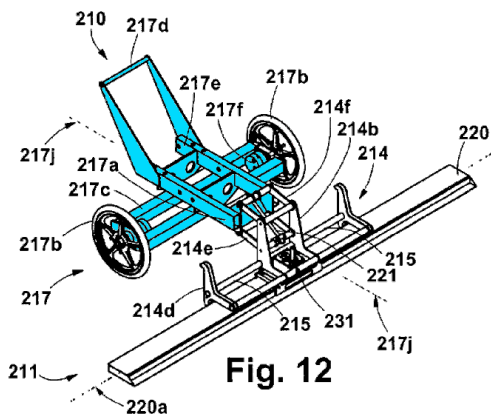
1. Independent Claim 1

a. Element 1[preamble]: A wheeled concrete screeding device for screeding uncured concrete, said wheeled concrete screeding device comprising:

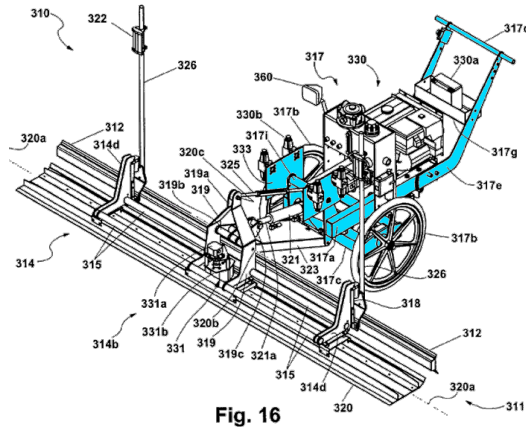
The preamble is non-limiting because it merely recites the purported invention’s intended use. *See, e.g., Kaidi LLC et al. v. Limoss US, LLC*, IPR2019-01184, Paper 16, 12-13 (PTAB Dec. 11, 2019).

To the extent the Board finds the preamble limiting, as shown below, each of the embodiments described in connection with Figures 12-15, 16-20, and 23 are

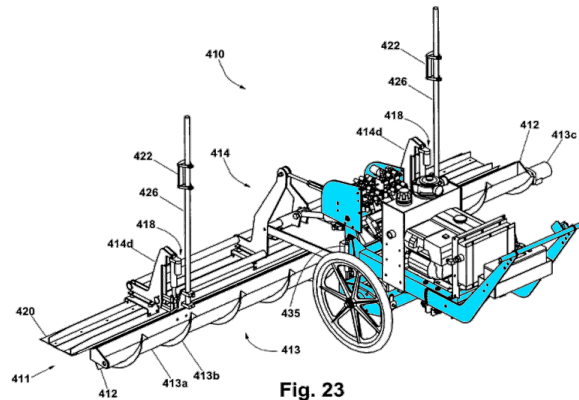
concrete screeding devices for screeding uncured concrete having “wheeled supports” (blue). *See* Ex-1003, Figs. 12-20, 23; *see also* Ex-1006, ¶¶59-61.



Ex-1003, Fig.12



Ex-1003, Fig.16



Ex-1003, Fig.23

Quenzi thus discloses “[a] wheeled concrete screeding device for screeding uncured concrete [e.g., the devices shown in Figs. 12-20 and 23].” Ex-1006, ¶62.

- b. Element [1.1]: a wheeled unit having at least two wheels for movably supporting a frame portion of said wheeled unit**

As shown in the exemplary figures below, each of the embodiments disclosed in connection with Figures 12-5, 16-20, and 23 of Quenzi are a wheeled unit having

at least two wheels for movably supporting a frame portion (highlighted in blue) of said wheeled unit. *See* Ex-1003, Figs. 12-20, 23; *see also* Ex-1006, ¶63.

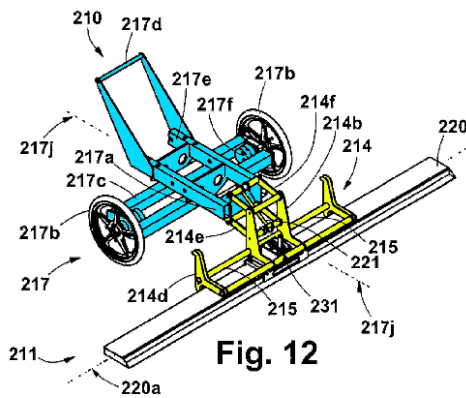


Fig. 12

Ex-1003, Fig.12

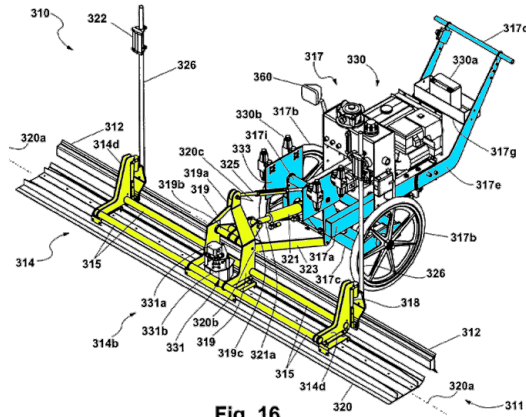


Fig. 16

Ex-1003, Fig.16

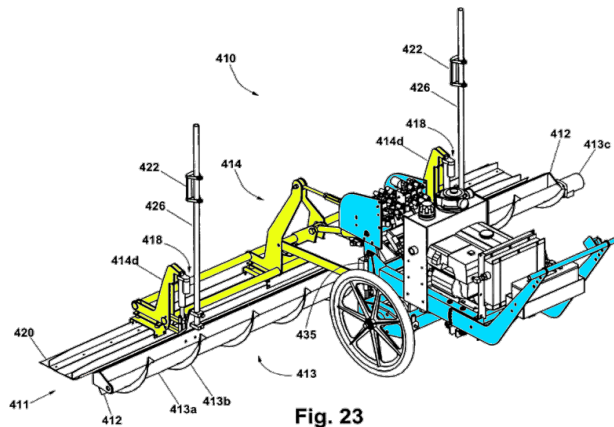


Fig. 23

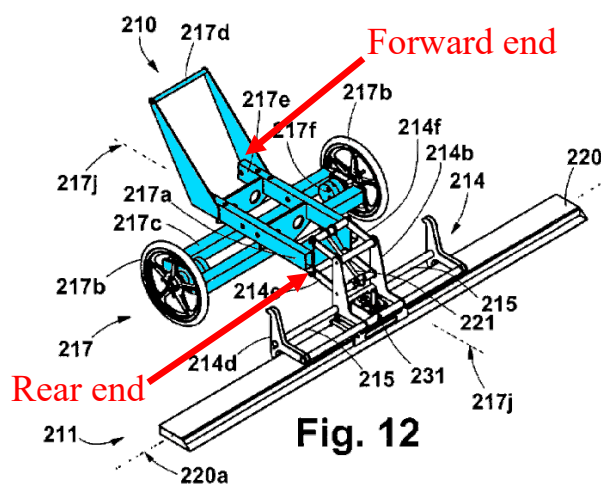
Ex-1003, Fig.23

Quenzi also describes that the “pair of wheels” 217b, 317b movably supports the frame portion, i.e., wheeled support 217, 317 (blue), as well as the attached framework 214, 314 (yellow). *See* Ex-1003, ¶¶88-89 (Figs. 12-15), ¶¶98-99 (Figs. 16-20), ¶121 (Fig.23); *see also* Ex-1006, ¶64.

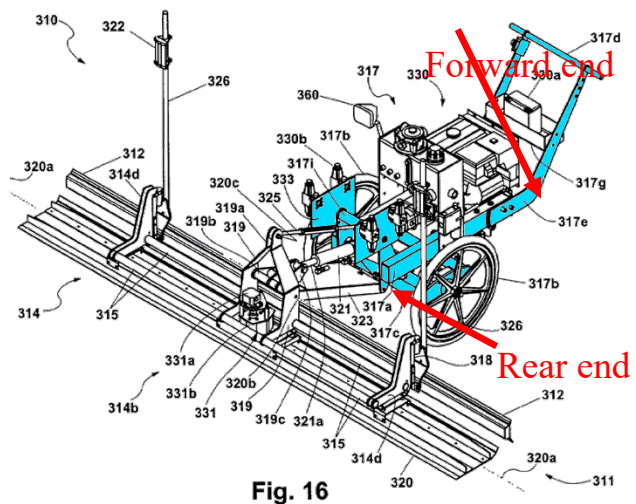
Quenzi thus discloses “a wheeled unit [e.g., Quenzi’s devices shown above] having at least two wheels [e.g., wheels 217b, 317b] for movably supporting a frame portion [e.g., wheeled supports 217, 317] of said wheeled unit.” Ex-1006, ¶65.

c. Element [1.2]: said frame portion having a forward end and a rearward end

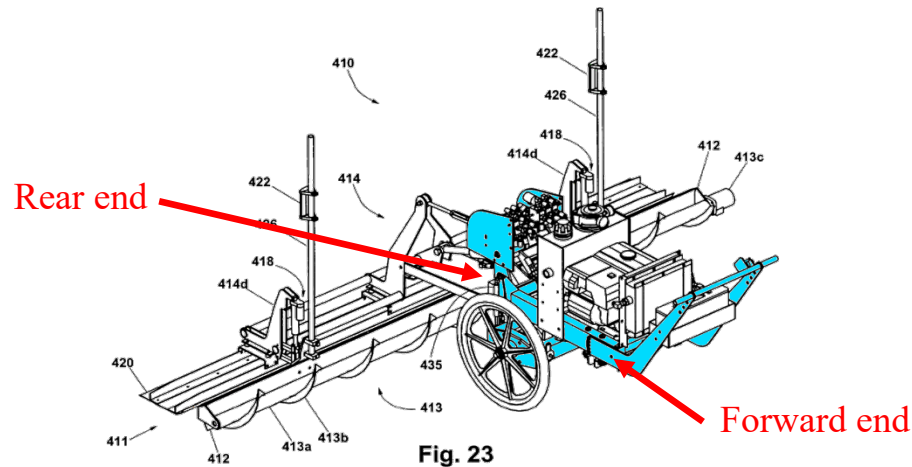
As shown in the exemplary figures below, the wheeled support (blue) of each of the embodiments disclosed in connection Figures 12-15, 16-20, and 23 has rearward and forward ends. *See* Ex-1003, Figs. 12-20, 23; *see also* Ex-1006, ¶66.



Ex-1003, Fig.12



Ex-1003, Fig.16



Ex-1003, Fig.23

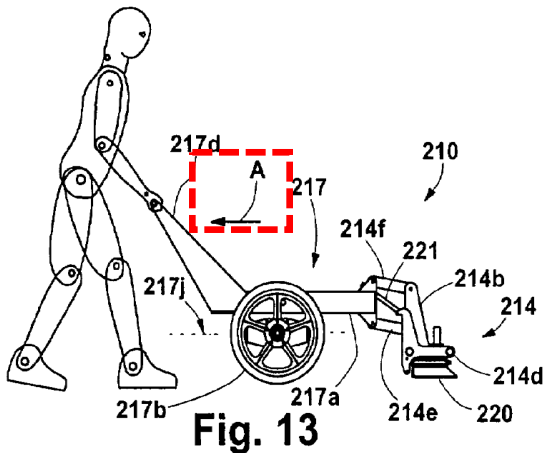
For Figs. 12-15 and 16-20, Quenzi expressly labels the “rear end” 217a, 317a and “forward end” 217e, 317e of wheeled support 217, 317. Ex-1003, ¶¶88-89, 99, 106. Quenzi does not repeat its discussion of these elements for Fig.23 but makes clear the configuration is “substantially similar to screeding device 310 ... such that a detailed discussion will not be repeated herein.” Ex-1003, ¶123; Ex-1006, ¶67.

Quenzi thus discloses “said frame portion [e.g., wheeled support 217, 317 (blue)] having a forward end [e.g., forward end 217e, 317e] and a rearward end [e.g., rear end 217a, 317a].” Ex-1006, ¶68.

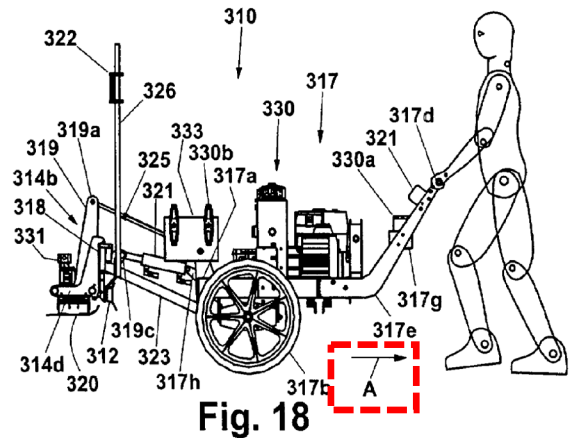
d. Element [1.3]: wherein said wheeled unit is movable through uncured concrete in a screeding direction

Consistent with the aforementioned labels, Quenzi repeatedly describes that the wheeled units is movable “through ... uncured concrete” in the “forward direction” (i.e., the screeding direction, as claimed). *See* Ex-1003, ¶¶81, 89, 95, 110,

148; Ex-1006, ¶70. Quenzi also illustrates the screeding direction by an “arrow A” in certain figures, including Figs. 13 and 18:



Ex-1003, Fig.13



Ex-1003, Fig.18

Ex-1003, Figs. 13, 18 (red box added); *see also id.*, ¶¶95, 110 (describing screeding direction); Ex-1006, ¶70.

Quenzi thus discloses “wherein said wheeled unit is movable through uncured concrete [e.g., through the poured concrete] in a screeding direction [e.g., in the “forward direction” indicated by the arrow in the red box above].” Ex-1006, ¶72.

- e. **Element [1.4]: a screed head supported at said rearward end of said frame portion and following behind said wheeled unit when said wheeled unit is moved in said screeding direction**

As shown in the exemplary figures below, Quenzi’s wheel unit includes a screed head consisting of the vibrating member (orange) and plow (purple) supported at the rearward end of the frame portion (blue) by a framework (yellow), such that the screed head (orange) follows behind the wheel unit when moved in the

Ex-1006, ¶73.



Ex-1003, Fig.12



Ex-1003, Fig.16



Ex-1003, Fig.23

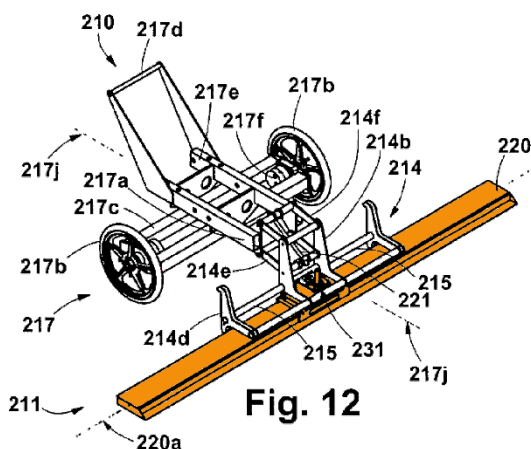
16-20); *id.*, ¶121 (Fig.23). As such, the screed head follows behind the wheeled unit

when moved in the screeding direction (discussed in connection with Elements 1.2, 1.3). Ex-1006, ¶74.

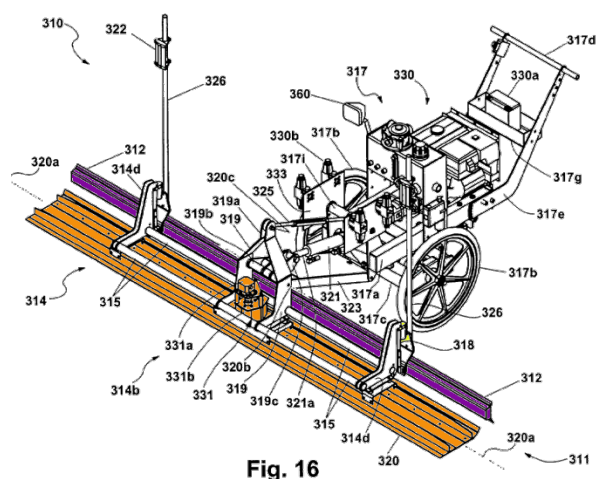
Quenzi thus discloses “a screed head [e.g., “screeding heads” 211, 311, 411] supported at said rearward end of said frame portion [e.g., rear end 217a, 317a] and following behind said wheeled unit when said wheeled unit is moved in said screeding direction [e.g., in the “forward direction” indicated by the arrow in the red box discussed above].” Ex-1006, ¶75.

f. Element [1.5]: said screed head comprising a grade establishing element and a vibratable member

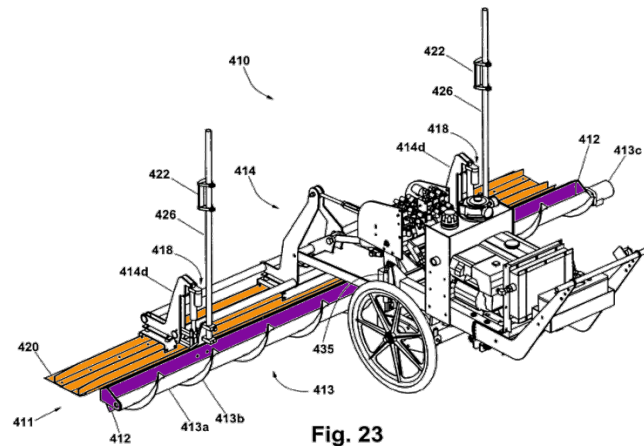
As shown in the exemplary figures below, the aforementioned screed heads comprise a grade establishing element, such as a plow (purple), and a vibratable member (orange). *See* Ex-1003, Figs. 12-20, 23; *see also* Ex-1006, ¶76.



Ex-1003, Fig.12



Ex-1003, Fig.16



Ex-1003, Fig.23

Although Figs. 12-15 do not depict a grade setting member, Quenzi makes clear the “screeding head 211 [] includes a vibrator beam or member 220” and “may also include a plow or other grade setting device or member.” Ex-1003, ¶¶88, 91; Ex-1006, ¶77. The vibrating beams 320, 420 and plows 312, 412 are similarly described (and also illustrated) for Figs. 16-20 and 23. Ex-1003, ¶98 (Figs. 16-20), ¶121 (Fig.23). As Quenzi explains in its background, “[t]he vibrating member and grade setting device together generally comprise a screeding head.” Ex-1003, ¶17; Ex-1006, ¶78.

Quenzi thus discloses “said screed head [e.g., “screeding heads” 211, 311, 411] comprising a grade establishing element [e.g., plows 312, 412 (purple)] and a vibratable member [e.g., vibrating beams 320, 420 (orange)].” Ex-1006, ¶79.

- g. **Element [1.6]: wherein said grade establishing element is generally vertically adjustable responsive to a signal from a laser receiver disposed at said screed head to establish a struck-off surface of the uncured concrete at a desired grade when said wheeled unit is moved in said screeding direction**

Quenzi describes “[t]he screeding device includes a plow or other grade setting element or device which is **vertically adjustable** relative to a concrete surface working member or vibrating member of the screeding device to adjust the grade setting device to the desired grade height as the screeding device is moved over and supported on the uncured concrete surface.” Ex-1003, ¶30. Specifically, “[t]he screeding device includes an automatic control system which is **responsive to a laser plane or laser-guided reference for vertically adjusting the grade setting device** to the desired grade height.” *Id.*; Ex-1006, ¶80.

As illustrated the exemplary figures below, the embodiments of Figs. 16-20 and 23 have a laser receiver 322, 422 (green) disposed at the screed head (orange, purple). *See id.*, Figs. 16-20, 23; *see also id.*, ¶103 (Figs. 16-20), ¶126 (Fig.23); Ex-1006, ¶81.

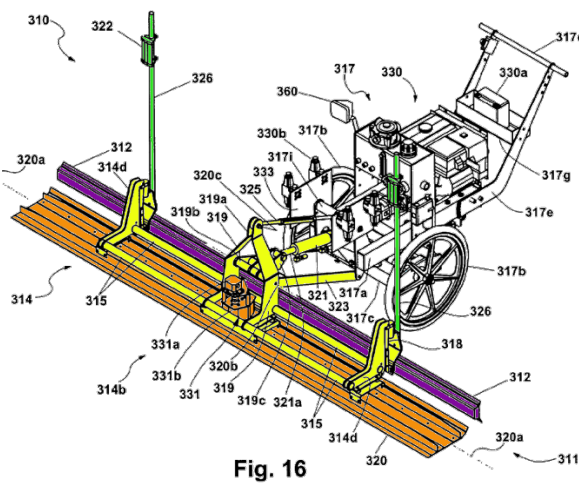


Fig. 16

Ex-1003, Fig.16

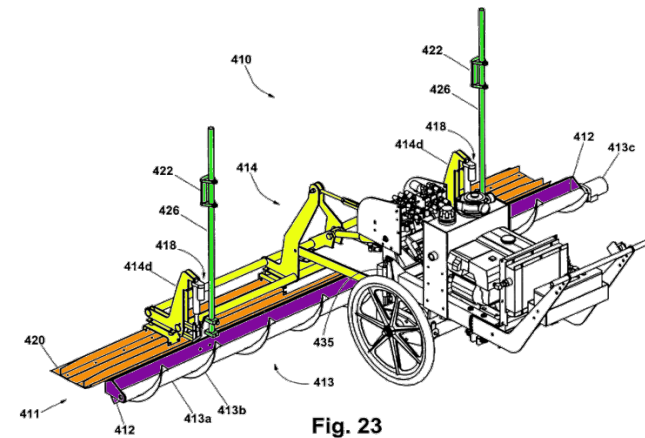


Fig. 23

Ex-1003, Fig.23

Although Figs. 12-15 do not illustrate laser receivers, Quenzi makes clear that this embodiment may likewise incorporate “laser receivers 22 (as shown in FIG. 1 and FIG. 10).” Ex-1003, ¶96; Ex-1006, ¶82.

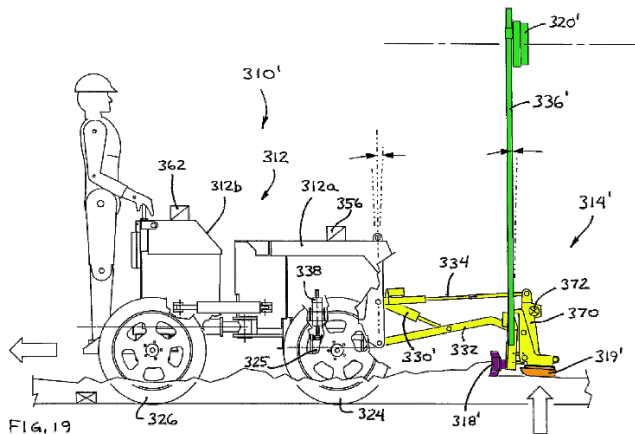
For each embodiment, Quenzi describes that the laser receiver is used to adjust the position of the grade establishing element, such as the plow (purple), in order to establish a struck-off surface of the uncured concrete at a desired grade when said wheeled unit is moved in said screeding direction. Ex-1003, ¶¶79-81 (Figs. 12-15), ¶103 (Figs. 16-20), ¶126 (Fig.23); *see also* Ex-1006, ¶83.

Quenzi thus discloses “wherein said grade establishing element is generally vertically adjustable [e.g., “plow [purple] or other grade setting element or device which is vertically adjustable....”] responsive to a signal from a laser receiver disposed at said screed head [e.g., laser receiver 322, 422 (green)] to establish a struck-off surface of the uncured concrete at a desired grade [e.g., “automatic control

system which is **responsive to a laser plane or laser-guided reference for vertically adjusting the grade setting device** to the desired grade height.”] when said wheeled unit is moved in said screeding direction [e.g., in the “forward direction” discussed above].” Ex-1006, ¶84.

h. Element [1.7]: wherein said vibratable member is adjustably attached at a rearward end of said grade establishing element

The plain language of Element 1.7 reflects two requirements, namely that the vibratable member is (1) adjustable (i.e., adjustably attached) and (2) attached at a location rearward of the grade establishing member (i.e., attached at said rearward end). Ex-1006, ¶86. The claim’s use of “at” to reference the general location of the vibratable member is confirmed by numerous uses of similar phrasing throughout the ’366 Patent claims and specification, as well as its illustrating of embodiments. *Id.*, ¶¶87-92. For example, Figure 19 of the ’366 Patent illustrates adjustably attaching the vibratable member (orange) at a location reward of the grade establishing element (purple) using nearly identical structure as illustrated in Quenzi:



Ex-1001, Fig.19

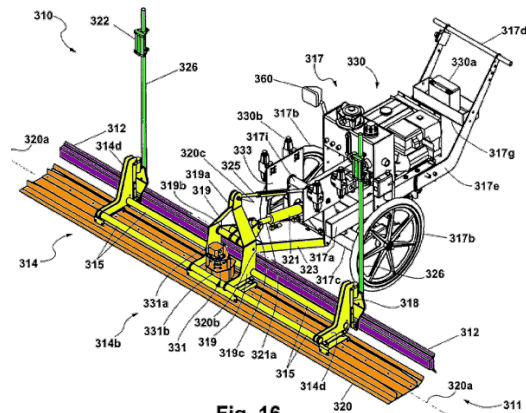


Fig. 16
Ex-1003, Fig.16

With respect to Figs. 12-15, although not depicted, as discussed in Element 1.5, Quenzi describes that the grade establishing element (e.g., plow) may be “mounted to the side frame members 214d and vertically adjustable relative to the vibrating beam 220.” Ex-1003, ¶91. As shown below, mounting a plow to the side frame members 214d results in the vibratable beam 220 (orange) being “attached at a rearward end of said grade establishing element,” as claimed:

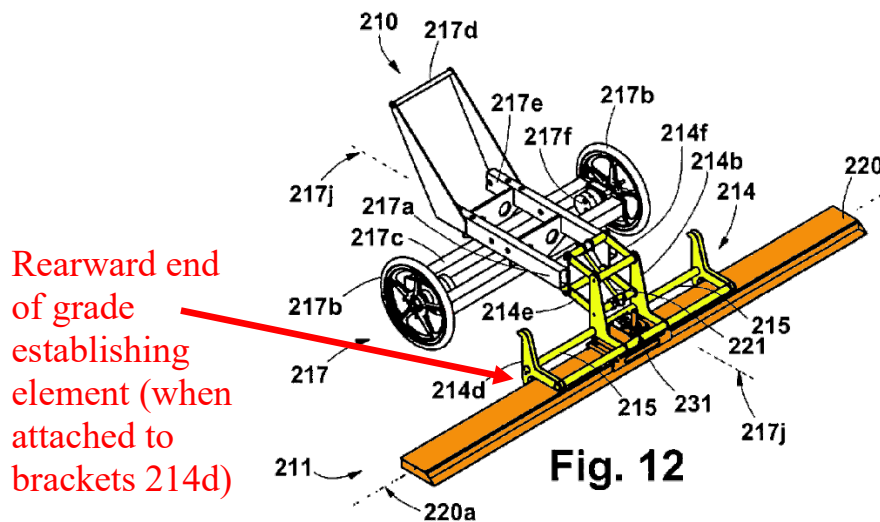
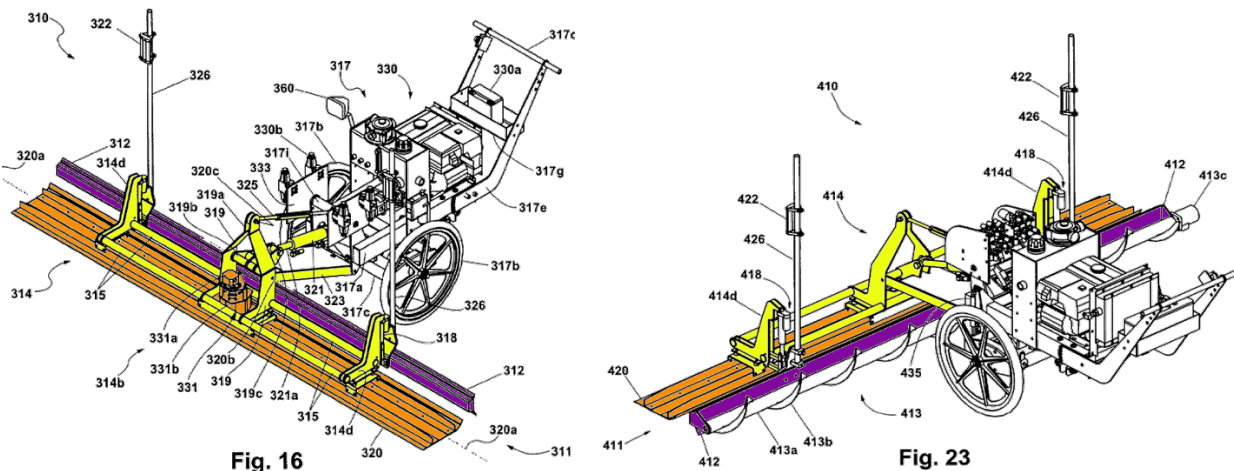


Fig. 12

Ex-1003, Fig.12; Ex-1006, ¶93. As to the vibratable member's adjustability, Quenzi describes that the "[t]he operating range height of the vibrating beam 220 may be manually adjusted relative to the level of the wheels 217b via an adjustment device 221," which may be "an actuator, a threaded rod, turnbuckle, or any other extension and retraction device or the like." Ex-1003, ¶92; Ex-1006, ¶94.

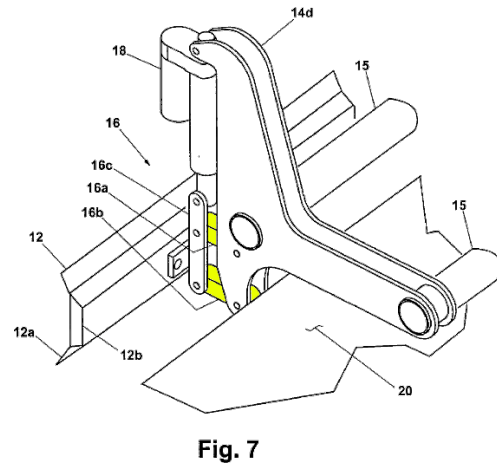
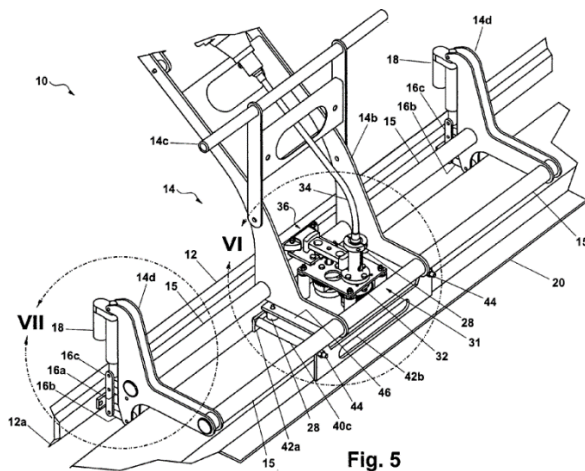
As shown below, for Figs. 16-20 and 23, Quenzi illustrates the vibratable member beam (orange) as being adjustably attached at a rearward end of said grade establishing element (purple) via the framework (yellow). Ex-1003, Figs. 12-20, 23.



Ex-1003, Fig.16, Fig.23; Ex-1006, ¶95. Quenzi further describes for each embodiment that the vibratable member is adjustable in both height and pitch angle.

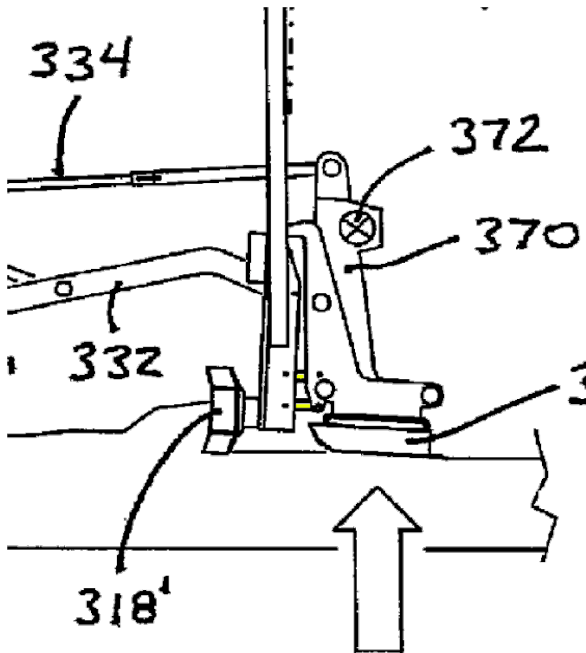
See Ex-1003, ¶109 (Figs. 16-20), ¶¶121, 126-127 (Fig.23); *see also* Ex-1006, ¶96.

Moreover, in each of the above embodiments, the vibrating member is also adjustably attached at the plow via linkages and actuators (e.g., 16, 318). Ex-1003, ¶¶91, 103, 131, Fig.23; Ex-1006, ¶97.

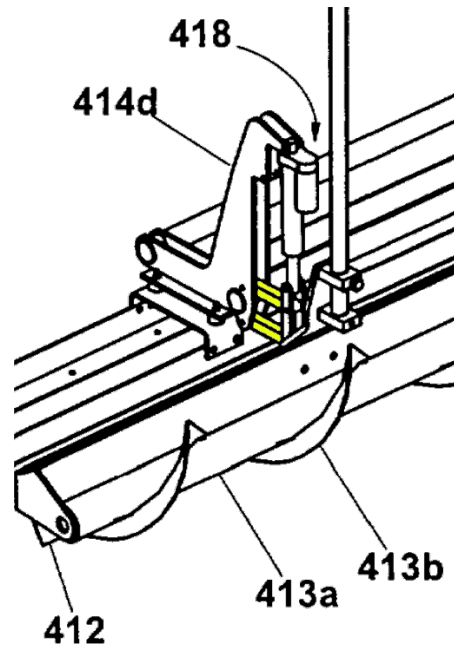


Specifically, Quenzi teaches “[p]low 12 is adjustable relative to vibrator beam 20 via pivotal movement of linkages 16 and in response to actuators 18 ... mounted to a pair of side frame members 14....” Ex-1003, ¶72; *see also id.*, ¶131; Ex-1006, ¶¶97-102. Quenzi teaches incorporating similar linkages and actuators for each embodiment above. Ex-1003, ¶¶91, 103, 125.

Moreover, the '366 Patent expressly relies on and incorporates by reference Quenzi's prior art disclosure as written description support for how the screed head is attached and adjusted. Ex-1001, 20:44-60; Ex-1006, ¶104. A comparison of the '366 Patent's framework and Quenzi's is shown below:



Ex-1001, Fig.19 (excerpted)



Ex-1003, Figure 23 (excepted)

Quenzi thus discloses “wherein said vibratable member [e.g., vibrating beams 320, 420 (orange)] is adjustably attached [e.g., adjustable in both height and pitch angle] at a rearward end of said grade establishing element [e.g., plows 312, 412 (purple)].” Ex-1006, ¶105.

- i. **Element [1.8]: and wherein said vibratable member at least partially floats behind said grade establishing element on the struck-off surface of the uncured concrete and is at least partially supported at the struck-off surface of the uncured concrete as said wheeled unit is moved in said screeding direction.**

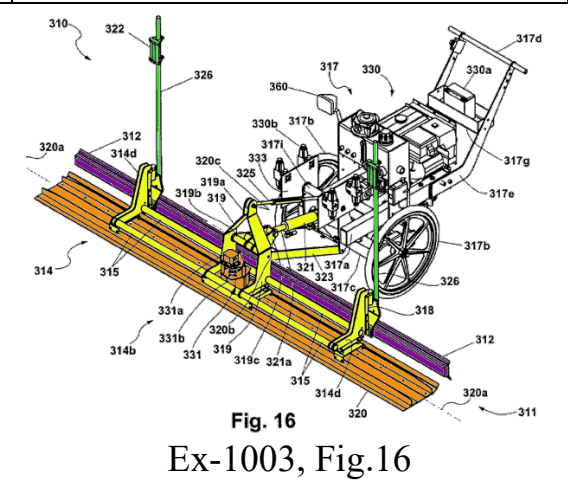
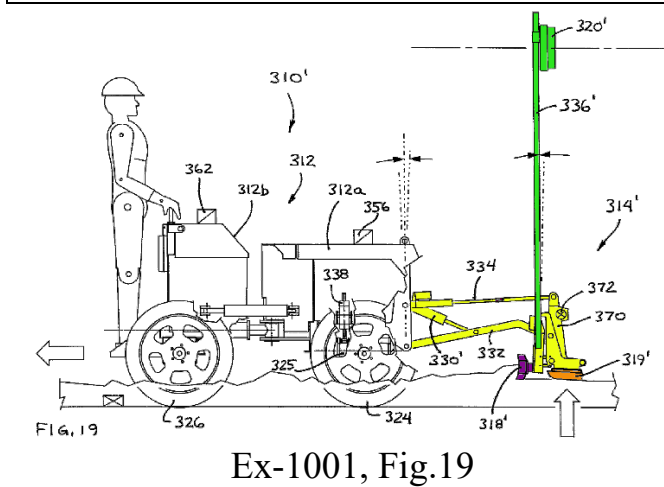
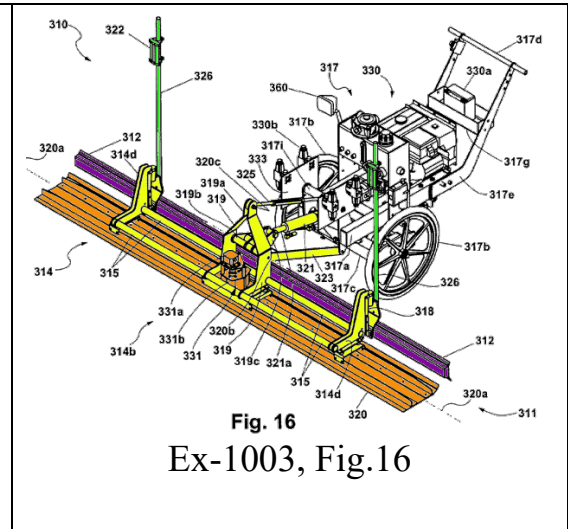
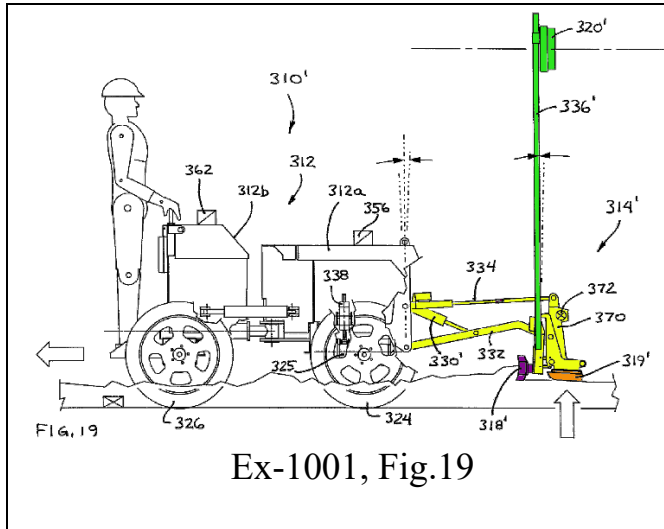
Quenzi describes that “[t]he **vibrating member generally floats upon or is supported** directly on the uncured concrete surface created **by the grade setting device ahead of it.**” Ex-1003, ¶9. Quenzi further describes “[t]he present invention thus provides ... the ability of the apparatus to be **at least partially supported upon**

the desired correct elevation surface it creates, as the device itself advances.”

Id., ¶111; *see also id.*, ¶68 (“the vibrator beam 20 **floats on or is at least partially supported** on the uncured surface”). These disclosures apply equally to each of the embodiments in Figs. 12-20 and 23 as described above given they each use the same or similarly functioning adjustable framework for supporting the vibratable member behind the grade setting device at the desired height on the struck-off surface of the concrete. Ex-1006, ¶107.

For example, for Figs. 12-15, Quenzi expressly describes “[v]ibrating beam 220, and/or any other grade setting device, may at least be **partially supported** by a wheeled support 217 of the screeding device 210.” Ex-1003, ¶96. And for the embodiment of Figs. 16-20, Quenzi describes “that vibrating beam 320 is at least **partially supported by, or essentially ‘floating’ upon, the uncured concrete surface**, and applies a sufficient and desired amount of down-pressure to work the surface.” *Id.*, ¶112; *see also id.*, ¶¶115-116 (describing options to manually or automatically shift the frame positioning to adjust the “degree of float”). Likewise, for Fig.23, Quenzi describes “[s]creeding device 410, vibrating beam 420 and plow 412 are otherwise substantially similar to screeding device 310, vibrating beam 320 and plow 312, discussed above, such that a detailed discussion will not be repeated herein.” *Id.*, ¶121; *see also* Ex-1006, ¶108.

As shown below, Quenzi's disclosed framework structure (yellow) for attaching the vibratable member (orange) and grade setting device (purple) is nearly identical to that illustrated the '366 Patent and described as "generally floats on or is supported by the concrete surface." See Ex-1001, 20:45-54. Indeed, the '366 Patent **expressly relies on and incorporates by reference Quenzi's prior art** disclosure as written description support for how the screed head "generally floats on or is supported by the concrete surface." *Id.*, 20:44-60; Ex-1006, ¶¶109-110.



Quenzi thus discloses “wherein said vibratable member [e.g., vibrating beams 320, 420 (orange)] at least partially floats behind said grade establishing element [e.g., plows 312, 412 (purple)] on the struck-off surface of the uncured concrete [e.g., “partially supported by, or essentially ‘floating’ upon, the uncured concrete surface”] and is at least partially supported at the struck-off surface of the uncured concrete as said wheeled unit is moved in said screeding direction [e.g., to “appl[y] a sufficient and desired amount of down-pressure to work the surface”]”. Ex-1006, ¶111.

Accordingly, Quenzi teaches every limitation of and anticipates claim 1.

2. Dependent Claim 2: “The wheeled concrete screeding device of claim 1, wherein said grade establishing element comprises a plow member”

As described for Element 1.5, for each embodiment shown in Figs. 12-20 and 23, Quenzi describes that the grade establishing element may include a plow. *See* Ex-1003, ¶¶88, 91 (Figs. 12-15: “a screeding head 211...may also include a plow”); ¶98 (Figs. 16-20: “a screeding head 311, which includes a grade setting member or strike-off plow 312”); ¶121 (Fig.23: “a screeding head 411, which includes a grade setting device, such as a plow 412”); Ex-1006, ¶113.

Quenzi thus discloses “said grade establishing element comprises a plow member [e.g., plows 312, 412 (purple)].” Ex-1006, ¶114.

3. Dependent Claim 3: “The wheeled concrete screeding device of claim 2, wherein said grade establishing element comprises an auger disposed behind said plow member, and wherein said auger is generally vertically adjustable with said plow member”

In connection with Fig.23 (shown below), Quenzi illustrates and describes an auger (teal) mounted to the forward side of the plow (purple). *See* Ex-1003, Fig.23; *see also id.*, ¶¶121-122; Ex-1006, ¶¶115-116.

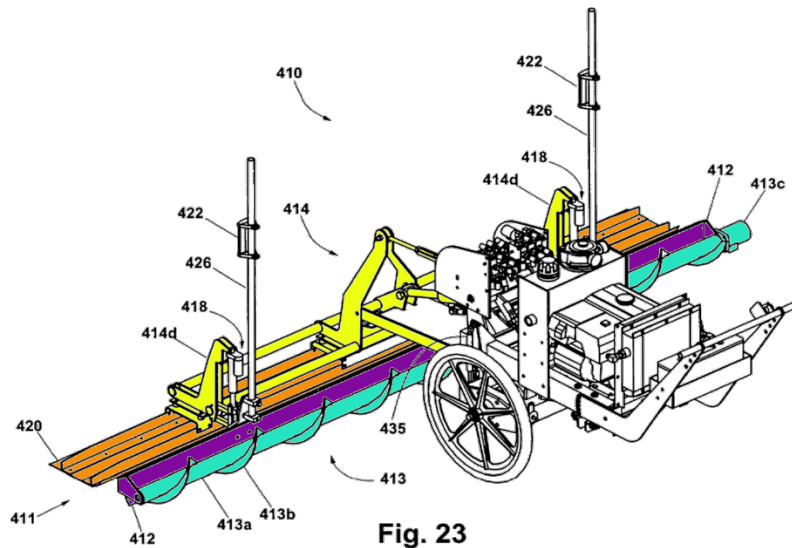
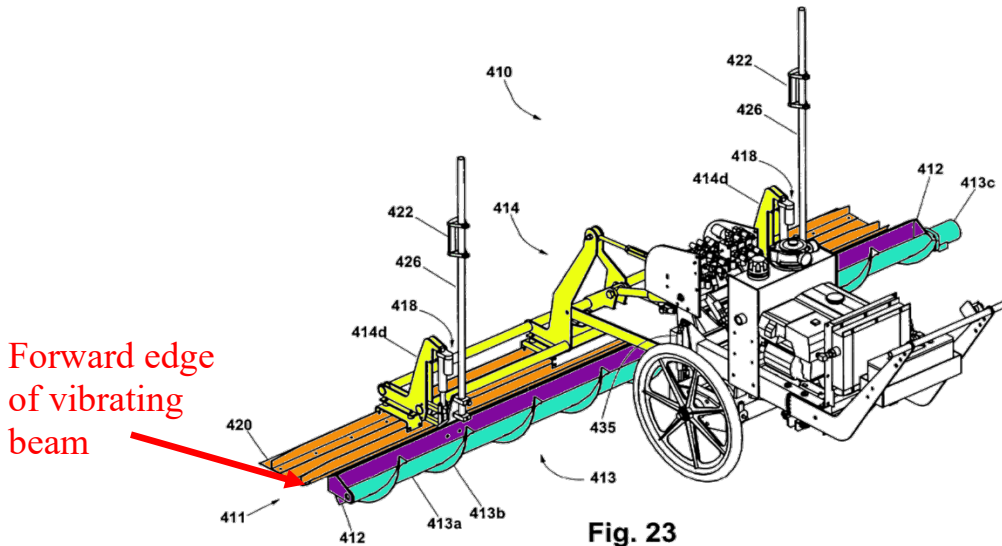


Fig. 23

Ex-1003, Fig.23

While the auger (teal) above is *forward* of the plow (purple), without providing a separate figure illustrating, Quenzi goes on to describe: “It is envisioned that the screeding device of the present invention **may alternately include an auger or the like positioned along a forward edge of the vibrating beam,**” where “[s]uch an embodiment may or may not include a strike-off plow or indicating member.... [T]he auger may supplement engagement and strike-off of the concrete.” Ex-

1003, ¶125. As demonstrated with reference to Fig.23, positioning the auger (teal) along the “forward edge” of vibrating beam (orange) results in the auger (teal) being positioned behind said plow member (purple), as claimed:



Ex-1003, Fig.23

See Ex-1006, ¶¶117-118. Further, Quenzi’s proposed modification is not limited to Fig.23, but rather is discussed in a standalone paragraph generally referring to “the screeding device of the present invention” and referring “to the other grade setting devices 12, 112, 212, 312 and/or 412, discussed above.” Ex-1003, ¶125. As such, the modification applies equally to each embodiment discussed above. Ex-1006, ¶119.

Quenzi also confirms that “[t]he auger or other such device may be vertically adjustable in response to the elevation actuators or cylinders to adjust the concrete surface to the desired grade, such as in a manner similar to the other grade setting

devices 12, 112, 212, 312 and/or 412, discussed above.” Ex-1003, ¶125. The elevation actuators or cylinders also adjust the position of the plow. *Id.*, ¶103; *see also* Ex-1006, ¶120.

Quenzi thus discloses “said grade establishing element comprises an auger disposed behind said plow member [e.g., “an auger or the like positioned along a forward edge of the vibrating beam” and behind plows 312, 412 (purple)], and wherein said auger is generally vertically adjustable with said plow member [e.g., “vertically adjustable in response to the elevation actuators or cylinders”].” Ex-1006, ¶121.

4. Dependent Claim 4: “The wheeled concrete screeding device of claim 3, wherein said rearward end of said grade establishing element comprises a rearward end of said auger and wherein said vibratable member is adjustably attached at said rearward end of said auger”

As described in connection with Claim 3, Quenzi describes embodiments where the “grade establishing element” may include an auger “positioned along a forward edge of the vibrating beam,” which results in the auger (teal) being positioned behind the plow member (purple) Ex-1003, ¶¶121-125. In such embodiments, the “rearward end of the grade establishing element” would be the “rearward end of said auger.” Ex-1006, ¶122. Similarly, in this configuration, the vibratable member, which, as described in connection with Element 1.7, is

adjustably attached at the rearward end of the “grade establishing element,” would also therefore be adjustably attached at the rearward end of the auger. *Id.*

Quenzi thus discloses “wherein said rearward end of said grade establishing element [e.g., the auger and plows 312, 412 (purple)] comprises a rearward end of said auger and wherein said vibratable member [e.g., vibrating beams 320, 420 (orange above)] is adjustably attached at said rearward end of said auger.” Ex-1006, ¶123.

5. Dependent Claims 5 & 6³:

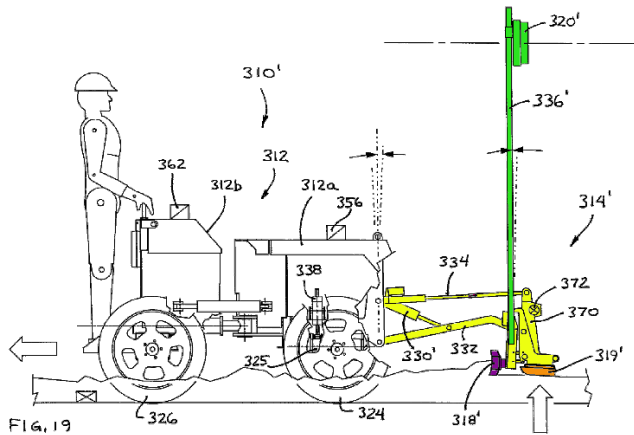
“5. The wheeled concrete screeding device of claim 1, wherein said vibratable member is pivotally attached at said rearward end of said grade establishing element”

“6. The wheeled concrete screeding device of claim 5, wherein said vibratable member is pivotally attached at said rearward end of said grade establishing element via a pair of links that are pivotally attached at said rearward end of said grade establishing element”

As described in connection with Element 1.7, the vibratable member is adjustably attached at the rearward end of the grade establishing element. Quenzi also confirms that the vibratable member for each embodiment is “pivotally attached” at this location as well via a pair of pivotally attached links. Ex-1003,

³ Claim 6 repeats the limitations of Claim 5. Accordingly, Petitioner addresses them together.

¶¶88, 107-109, 121. As with Element 1.7, the plain language of “attached at said rearward end” refers to the location where the elements are attached. Ex-1006, ¶125. Here again, the '366 Patent discloses nearly identical structure as Quenzi for pivotally attaching the vibratable member (orange) via a pair of links (e.g., linkages as part of the yellow framework) that are pivotally attached at said rearward end of said grade establishing element (purple):



Ex-1001, Fig.19

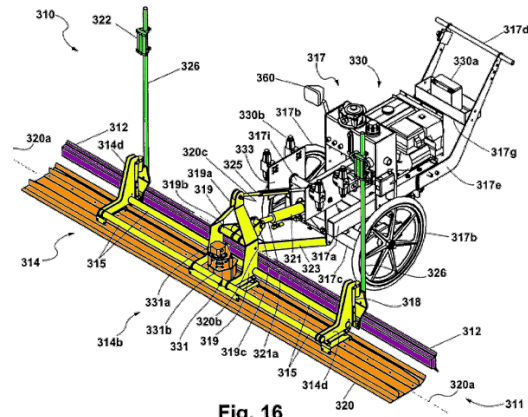
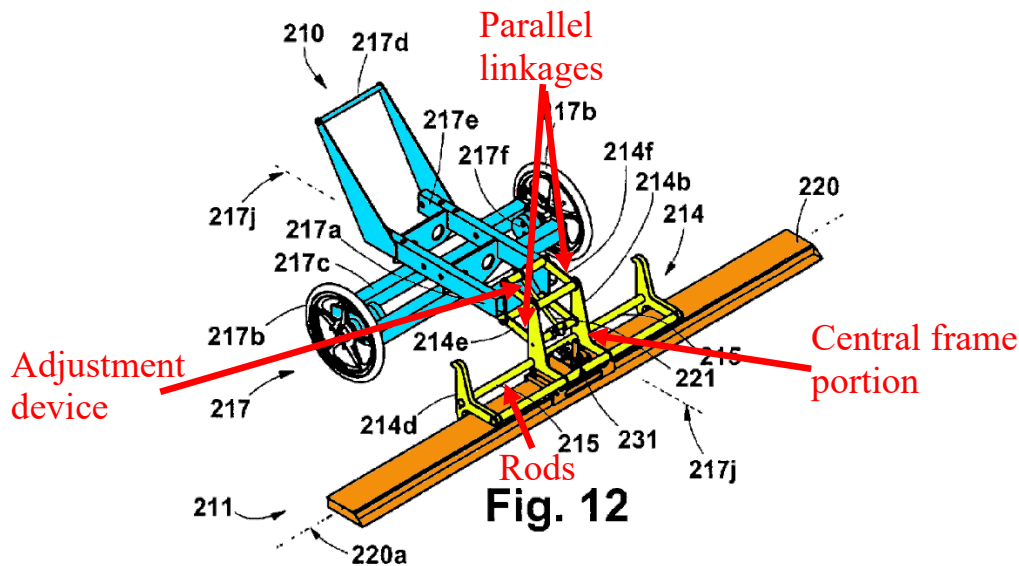


Fig. 16

Ex-1003, Fig.16

For Figs. 12-15, Quenzi describes “[t]he spaced, **parallel linkages 214e, 214f...**are **pivotable** to adjust the framework 214, and thus the vibrating beam 220, relative to wheeled support 217, as discussed below.” Ex-1003, ¶88. As best seen in Fig.12, the parallel linkages 214e, 214f are pivotally attached to framework 214 via central frame portion 214b attached to frame members 214d via rods 215, each of which are attached to the vibrating beam by mounts (*see* Ex-1003, ¶77) and pivotable via adjustment device 221:

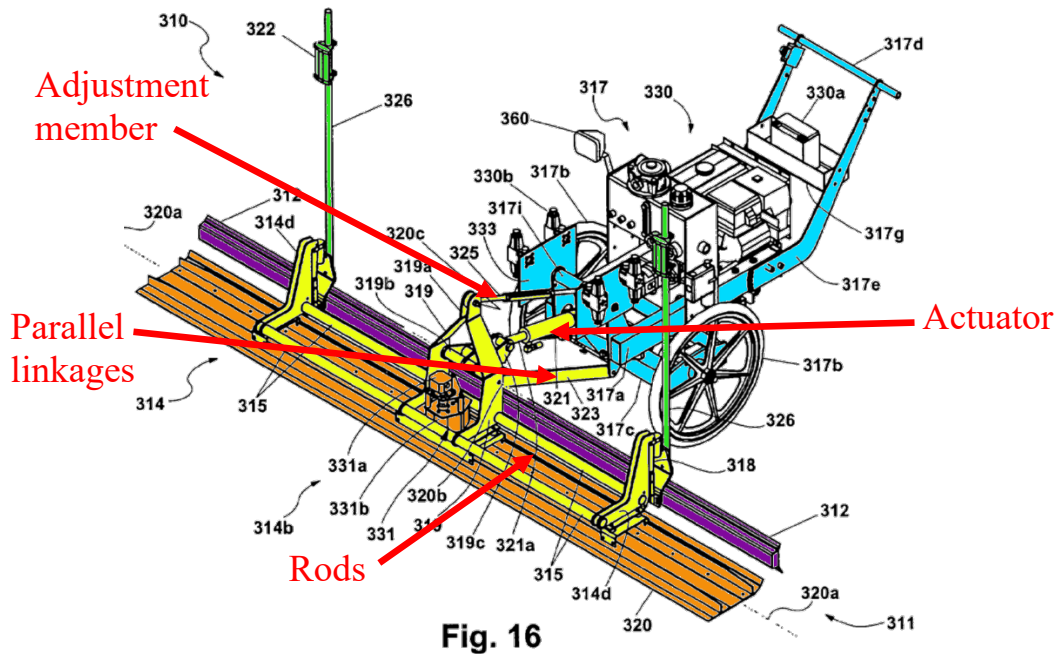


Ex-1003, Fig.12

See id., ¶¶88, 92 (describing same); Ex-1006, ¶¶126-128. Although not shown, as discussed in Element 1.5, when the optional plow is “adjustably mounted to the side frame members 214d,” these components would therefore be pivotally attached at said rearward end of said grade establishing element. Ex-1003, ¶91; Ex-1006, ¶129.

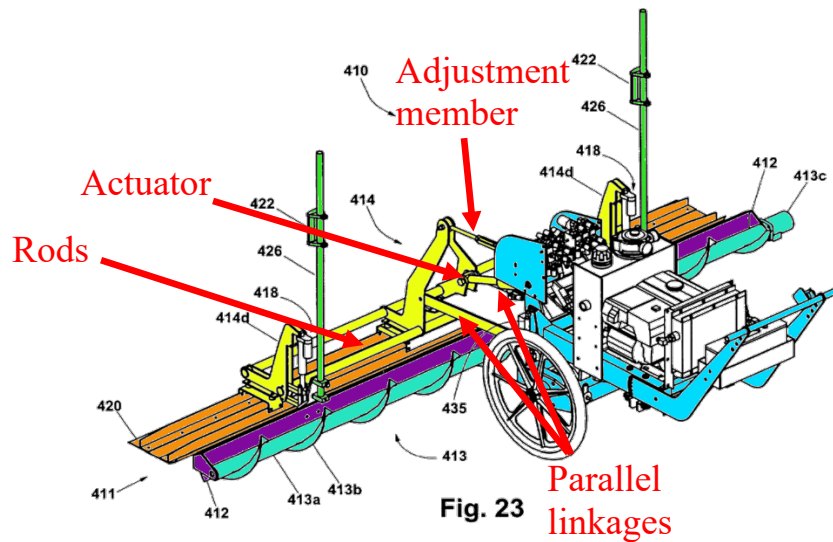
For Figs. 16-20, Quenzi describes “central frame portion 314b is **pivotally and adjustably mounted** to rear end 317a of wheeled support 317 via the pair of **parallel linkages 323**, the **adjustable member 325** and **actuator 321**.” Ex-1003, ¶107; *see also id.*, ¶109 (“[A]djustment of the length of **adjustable member 325** causes **pivotal movement of brackets 319 and vibrating beam 320** and plow 312 about cross member 319b and pivot axis 320b.”). As shown below, the parallel linkages 323, adjustable member 325, actuator 321, rods 315, and other linkages

(yellow) are pivotally attached at said rearward end of said grade establishing element:
element:



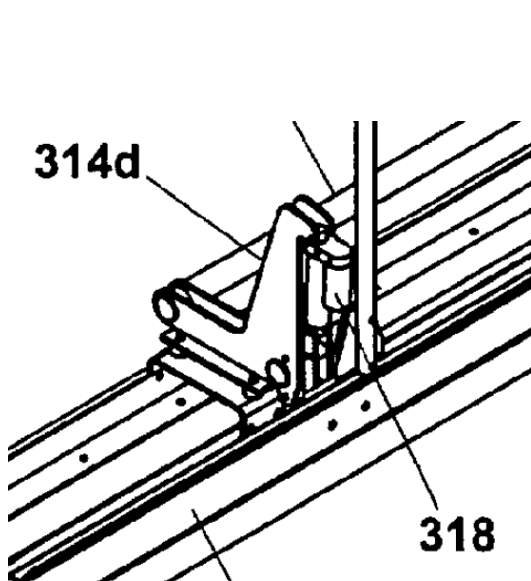
Ex-1003, Fig.16; *see also id.*, ¶ 72 (describing mounts for attaching the vibrating beam); Ex-1006, ¶¶130-131.

For Fig.23, Quenzi describes “screeding device 410 includes a screeding head 411 ... and a vibrating beam 420 attached to a framework 414, similar to screeding device 310 discussed above” and “such that a detailed discussion will not be repeated herein.” Ex-1003, ¶121. Like Figure 16 above, the pivotable linkages, adjustment member, actuator, rods, and other linkages are clearly shown in Fig.23 as being pivotally attached at said rearward end of said grade establishing element. Ex-1006, ¶132.

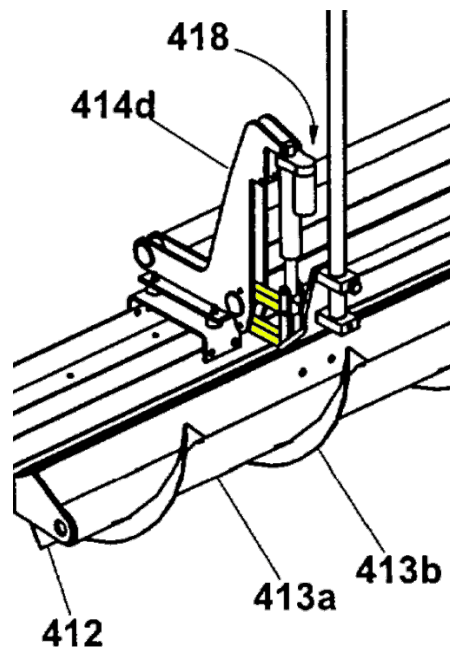


Ex-1003, Fig.23

In addition, for the same reasons provided in Element 1.7, incorporated here, Quenzi discloses linkages that are pivotally attached to the vibrating member at the rearward end of the plow as well. *Supra* Section XI.A.1.h; Ex-1006, ¶134.



Ex-1003, Figure 17 (excerpted)



Ex-1003, Figure 23 (excerpted)

Quenzi thus discloses “wherein said vibratable member [e.g., vibrating beams 320, 420 (orange)] is pivotally attached at said rearward end of said grade establishing element [e.g., the auger and plow 312, 412 (purple)] via a pair of links that are pivotally attached at said rearward end of said grade establishing element [e.g., parallel linkages 214e, 214f, adjustable member 325, actuator 321, rods 215, 315, and other linkages attached to the brackets at reward end of auger and plow].”
Ex-1006, ¶135.

6. Dependent Claim 7: “The wheeled concrete screeding device of claim 5, wherein said vibrating member is pivotally attached at at least one bracket at said rearward end of said grade establishing element”

As described in connection with Claims 5 and 6, Quenzi describes that the vibratable member is pivotally attached at the rearward end of the grade establishing element. As illustrated below, the vibrating member is also pivotally attached at at least one bracket located at the rearward end of the grade establishing element:

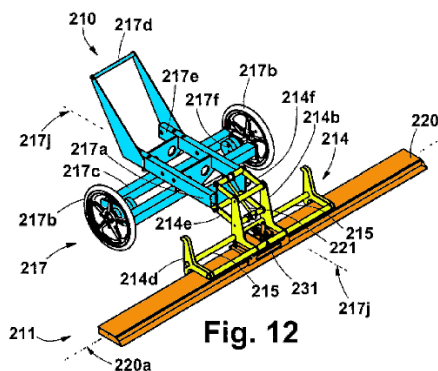


Fig. 12
Ex-1003, Fig.12

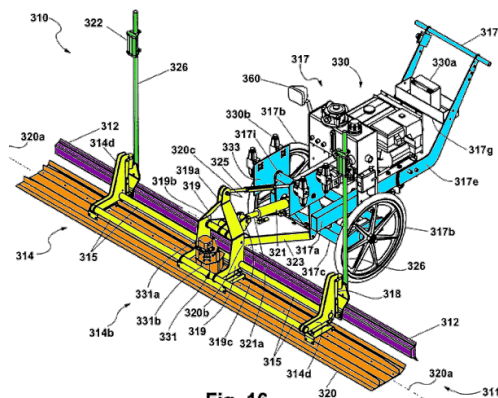
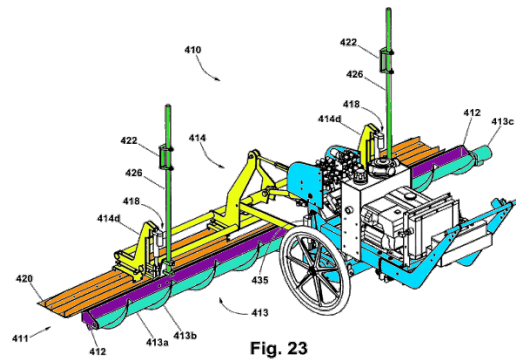


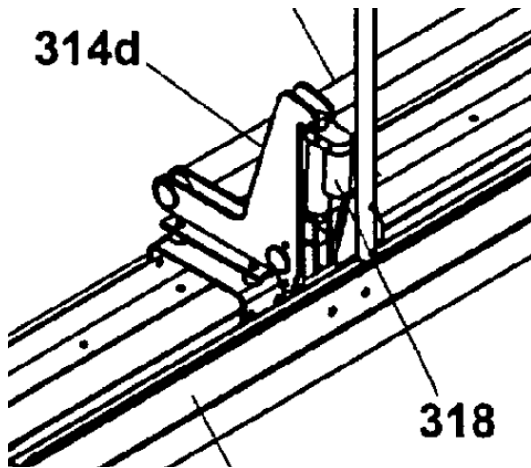
Fig. 16
Ex-1003, Fig.16



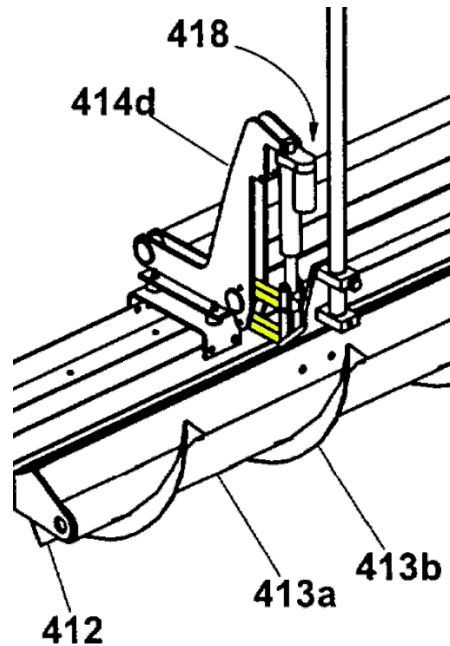
Ex-1003, Fig.23

See id., ¶88 (describing “central frame portion 214b” for Figs. 12-15); *id.*, ¶¶98, 106 (describing “upwardly extending brackets or flanges 319” for Figs. 16-20); *id.*, ¶121 (describing Fig.23 uses “similar” framework as screeding device 310); Ex-1006, ¶137. As shown in the above figures, the vibratable member is also pivotally attached by bracket “mounts” that attach the side frame members 214d, 314d and rods 215, 315 (yellow) to the top side of the vibratable beam (orange). Ex-1006, ¶138; *see also* Ex-1003, ¶77 (describing mounting plates, bolts, and sandwich mounts for attaching the vibratable member), Fig. 6 (showing close-up of mounts).

Further, for the same reasons provided in Element 1.7, incorporated here, Quenzi discloses linkages that are pivotally attached to the vibrating member at the rearward end of the plow. *Supra* Section XI.A.1.h; Ex-1006, ¶140.



Ex-1003, Figure 17 (excerpted)

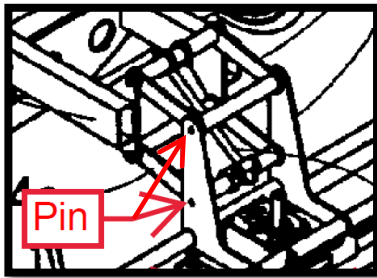


Ex-1003, Figure 23 (excerpted)

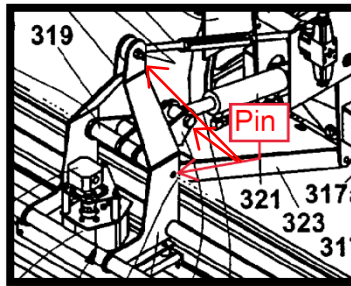
Quenzi thus discloses “wherein said vibrating member [e.g., vibrating beams 320, 420 (orange)] is pivotally attached at at least one bracket at said rearward end of said grade establishing element [e.g., pivotally attached by parallel linkages 214e, 214f. 323, 325, rods 215, 315, and other linkages attached to the brackets (yellow) and vibratable beam (orange) at reward end of auger (teal) and plow (purple)].” Ex-1006, ¶141.

7. **Dependent Claim 8: “The wheeled concrete screeding device of claim 7, wherein said vibrating member is pivotally attached at said at least one bracket via at least one mounting pin”**

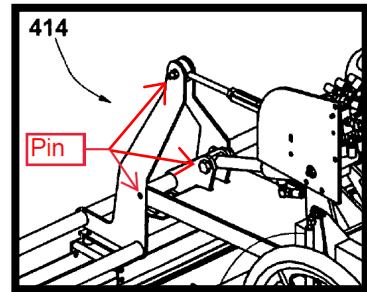
Quenzi’s figures clearly depict that the brackets identified for claim 7, incorporated here, pivotally attach to the vibrating member via pins, including those shown running through the cross-members below:



Ex-1003, Fig.12



Ex-1003, Fig.16



Ex-1003, Fig.23

Ex-1006, ¶142. The other brackets discussed for claim 7 that pivotably attach the framework to the vibratable beam are also attached via at least one mounting pin, which are not numbered but clearly visible in Quenzi's figures. *See* Ex-1003, Fig. 6 (showing close-up of mounts); Ex-1006, ¶143.

Further, the linkages pivotally attaching the vibrating member at the rearward end of the plow discussed in Element 1.7 and shown below, are attached via at least one mounting pin. Ex-1006, ¶¶144-146.

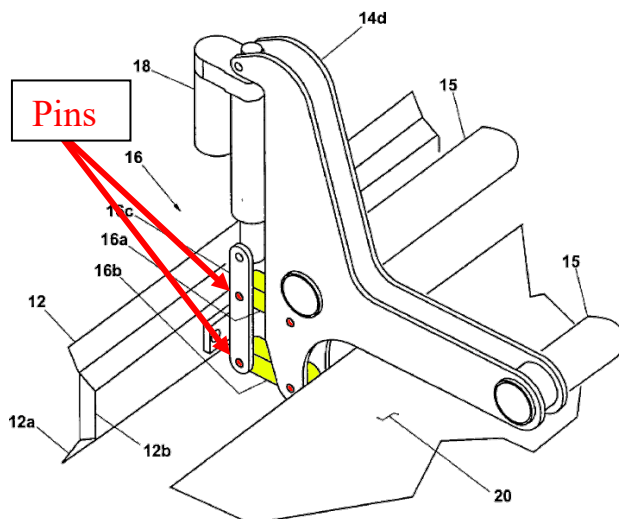
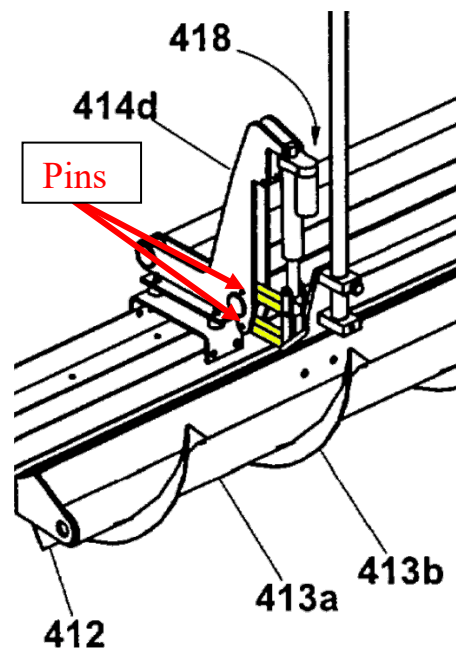


Fig. 7



Ex-1003, Fig.7

Ex-1003, Fig.23 (excerpted)

As such, Quenzi discloses “said vibrating member is pivotally attached at said at least one bracket via at least one mounting pin.” *Id.*, ¶147.

8. **Dependent Claim 9: “The wheeled concrete screeding device of claim 7, wherein said vibrating member is securable relative to said at least one bracket to retain said vibrating member at a desired attack angle as said vibrating member is moved in said screeding direction behind said grade establishing element”**

For Figs. 12-15, Quenzi describes that the vibratable member is attached relative to the brackets comprising the central frame portion 214b by parallel rods 215 extending between frame members 214d and mounting brackets attached to the beam’s surface. Ex-1003, ¶¶77, 88. In this way, adjustment of framework 214 using adjustment device 221 (as described with Element 1.7) causes parallel linkages 214e, 214f to “pivot[] to adjust the framework 214, and thus the vibrating beam 220...” *Id.* Quenzi also describes that the “either or both of the linkages 214e, 214f may be replaced with **adjustment devices** that are operable to **adjust the relative angle or pitch** of the framework 214, central frame portion 214b, and vibrating beam 220,” and “are thus operable to adjust the ‘**angle of attack**’ of the **vibrating beam 220** relative to the wheeled support 217.” *Id.*, ¶¶94. As such, vibrating member 220 is securable relative to the brackets discussed in connection with claim 7 above to

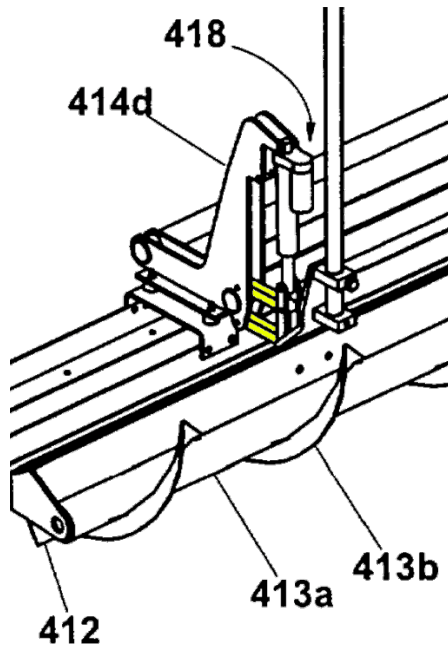
retain vibrating member 220 at a desired attack angle as it is moved in the screeding direction. Ex-1006, ¶149.

For Figs. 16-20, Quenzi similarly describes that the vibratable member is attached relative to upwardly extending brackets 319 by parallel rods 315 extending between frame members 314d and mounting brackets attached to the beam's surface, "such that pivotal movement of cross member 319b causes pivotal movement or rotation of the brackets 319 and of vibrating beam 320..." Ex-1003, ¶98. Quenzi further describes that "[a]djustable member 325...is adjustable to adjust a **pitch or 'angle of attack' of framework 314 and vibrating beam 320** relative to wheeled support 317," and that "adjustable member 325 functions to **maintain vibrating beam 320 at the desired orientation or 'angle of attack'** relative to wheeled support 317 through the operating range of travel." *Id.*, ¶106. In this way, "the **pitch angle and general height of the vibrating beam 320** relative to the wheeled support 317 may be selected and adjusted via adjustment of the turnbuckle or adjustable member 325 and extension and/or retraction of the adjustable member 321." Ex-1003, ¶109. Quenzi also describes that the screeding head 311 may be mounted so that it "may be pivoted...about an axis 320b generally parallel to the longitudinal axis 320a of the vibrating beam (FIGS. 16 and 17)." *Id.*, ¶105. Thus, vibrating beam 320 is securable relative to the brackets discussed in connection with claim 7 above

to retain vibrating beam 320 at a desired attack angle as it is moved in the screeding direction. Ex-1006, ¶¶150-151.

For Fig.23, Quenzi describes that “vibrating beam 420” is “attached to a framework 414, similar to screeding device 310 discussed above” and “such that a detailed discussion will not be repeated herein.” Ex-1003, ¶121. Thus, the embodiment of Fig.23 discloses this limitation for the reason reasons as Figs. 16-20. Ex-1006, ¶152.

In addition, for the same reasons provided in Element 1.7, incorporated here, each embodiment of Quenzi discloses linkages that are pivotally attached to the vibrating member at the rearward end of the plow. *Supra* Section XI.A.1.h. Quenzi teaches that once the angle of attack for the vibrator beam is set and secured using adjustable member 325, the height of the plow can still be adjusted utilizing these linkages. Ex-1003, ¶¶72-73; Ex-1006, ¶¶153-157.



Ex-1003, Fig.23 (excerpted)

Quenzi thus discloses “wherein said vibrating member is securable relative to said at least one bracket to retain said vibrating member at a desired attack angle [e.g., the wheeled devices have adjustment mechanisms “operable to adjust the ‘angle of attack’ of the vibrating beam 220 [orange] relative to the wheeled support 217 [blue]”] as said vibrating member is moved in said screeding direction behind said grade establishing element [e.g., in the “forward direction” as discussed in Element 1.3].” Ex-1006, ¶158.

B. Ground 2: Claims 1-9 Are Rendered Obvious By Quenzi (Ex-1005)

Ground 1 is based on three embodiments from Quenzi that each anticipate on their own. Nonetheless, Quenzi *expressly* describes combining disclosures from these embodiments, and their disclosures are in no way mutually exclusive. Ex-

1006, ¶160. Moreover, Quenzi also describes other, closely related embodiments that operate in a similar manner. *Id.*, ¶¶160-162. It would have been obvious to a POSITA to combine the features of Quenzi's embodiments given at least: (i) the similarity between the structure and function of each disclosed embodiment, including how the plow, vibratable beam, and/or auger are all attached to the wheeled support using an adjustable framework; and (ii) Quenzi's repeated references to prior embodiments when discussing features of the devices or potential modifications thereto. *Id.*, ¶163. Thus, to the extent PO argues that any specific features discussed above are not expressly disclosed to be present on the same embodiment, it would nonetheless have been obvious to combine the elements of each embodiment on the same device. *Id.*

As non-limiting examples, as discussed for Element 1.8 above, Quenzi repeatedly describes that the vibratable member at least partially floats behind the grade establishing element and is at least partially supported at the struck-off surface. Petitioner further demonstrated that such disclosures apply equally to each of the embodiments in Ground 1. To the extent PO disputes this assertion for anticipation, it would have nevertheless been obvious to a POSITA to ensure the vibratable members at least partially float on, and are at least partially supported at, the struck-off surface. Ex-1003, ¶¶164-165. For example, a POSITA would have readily understood based on Quenzi's disclosure that the vibratable members discussed in

Ground 1 are designed to at least partially float behind the unit, and be at least partially supported at the struck-off surface. *Id.*, ¶165. Quenzi confirms that this is an obvious and desirable feature because “[t]he floating action of the vibrator beam 20 over the uncured concrete [] continues to consolidate, smooth, level and finish the uncured concrete surface.” Ex-1003, ¶81. Thus, a POSITA would have been expressly motivated based on Quenzi’s disclosure to include this feature. Ex-1006, ¶165.

For claims 3 and 4, as discussed, Quenzi describes modifying the embodiment of Fig.23 to include an auger behind the plow member and with the vibrating member attached rearward of the auger. Ex-1003, ¶125 (“the auger may supplement engagement and strike-off of the concrete.”) It would also have been obvious to a POSITA to modify the other embodiments of Ground 1 in a similar manner, especially given Quenzi’s repeated descriptions of making the same types of modifications to its various embodiments. Ex-1006, ¶166. A POSITA would appreciate it would be advantageous to incorporate an auger behind the plow to “supplement engagement and strike-off of the concrete” as taught by Quenzi. Ex-1003, ¶125; Ex-1006, ¶167. A POSITA would further appreciate that placing an auger behind the plow would have the benefit of removing excess concrete not captured by the plow and filling any low spots in the concrete not otherwise filled by the plow. *See* Ex-1003, ¶122; Ex-1006, ¶168. At the very least, and given that

Quenzi only discloses two options (an auger before or behind the plow), use of an auger behind a plow would have been obvious to try as there were a finite number of identified, predictable solutions, and there was a reasonable expectation of success in using either (Quenzi specifically shows a POSITA how to design a screed head in either configuration). Ex-1006, ¶¶169-170.

For Element 1.7 and claims 4-9, as discussed, Quenzi describes that the vibrating beam is pivotably attached to the plow via linkages. Ex-1003, ¶¶72-73, 131 (describing linkages 16, 516 that “**function to generally vertically adjust the position of grade setting device...relative to vibrating beam...**”). While Quenzi describes these linkages in detail with respect to alternative embodiments, Quenzi teaches these linkages operate similarly in each embodiment described in Ground 1. Ex-1003, ¶¶ 91, 103, 131, Fig.23. Still, if necessary, it would have been obvious to modify the embodiments of Ground 1 to incorporate these linkages—i.e., adjusting the plow independently of the vibrating member. Ex-1006, ¶171.

For claim 8, to extent PO argues Quenzi does not expressly disclose a mounting pin pivotally attaching the vibrating member to the brackets discussed above for claim 8, it would have been obvious to a POSITA to use mounting pin. Ex-1006, ¶172. For example, using a mounting pin arranged as shown and suggested in the figures cited in Ground 1 would permit the frame, and thus vibrating member, to pivot during adjustment of the framework (e.g., 214, 314, 414, etc.). *Id.*

Petitioner believes the disclosures identified in Ground 1 confirm that Quenzi discloses the same structure, arranged in the same manner as claimed. To the extent PO argues there are minor differences in structure that would purportedly defeat an anticipation claim (which Petitioner disputes), such minor differences would also have been obvious to a POSITA based on Quenzi's robust disclosures discussed above for each element. *Id.*, ¶173.

C. Ground 3: Claims 1-15 Are Rendered Obvious By Jochems (Ex-1004) in view of Quenzi (Ex-1003)

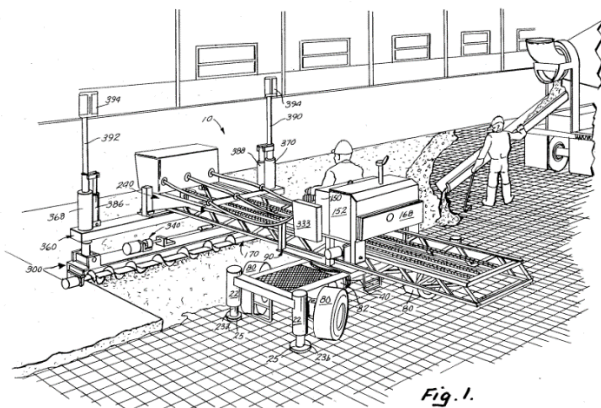
1. Motivation to Combine Jochems-Quenzi

A POSITA would have been motivated to modify Jochems multi-frame screeding machine in view of Quenzi to utilize a screed head with a floating-type vibrator/vibrating beam for the following reasons. Specifically, a POSITA would have been motivated to replace Jochems' screed head with Quenzi's screed head to achieve the numerous benefits of Quenzi's floating-type vibrator/vibrating beam, as further described below. *See* Ex-1006, ¶¶175-193.

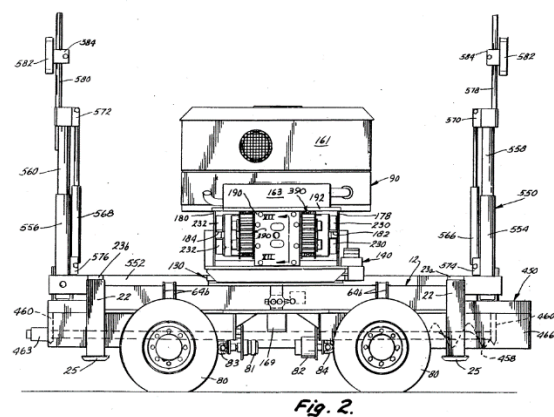
First, a POSITA would have appreciated that Jochems and Quenzi are analogous art to the claimed invention of the '366 Patent because they are within the **same field of endeavor** and **address the same problem**. *See Bigio*, 381 F.3d at 1325, 72 USPQ2d at 1212. The '366 Patent defines its "FIELD OF THE INVENTION" as "raking or striking-off devices for striking-off uncured concrete at

floors and surfaces.” Ex-1001, 1:22-24. The claims are directed to “[a] wheeled concrete screeding device for screeding uncured concrete...” Ex-1001, Cls. 1, 13. As are Jochems and Quenzi. Ex-1003, ¶2 (“The present invention relates generally to screeding devices for uncured concrete...”); Ex-1004, 1:3-4 (“The present invention relates to a machine for striking off poured concrete...”). Furthermore, the wheels of Jochems, Quenzi, and the ‘366 patent operate in uncured concrete. Ex-1004, 2:39-54; Ex-1003, ¶¶95; Ex-1001, 10:59-66, Fig 6; Ex-1006, ¶¶176.

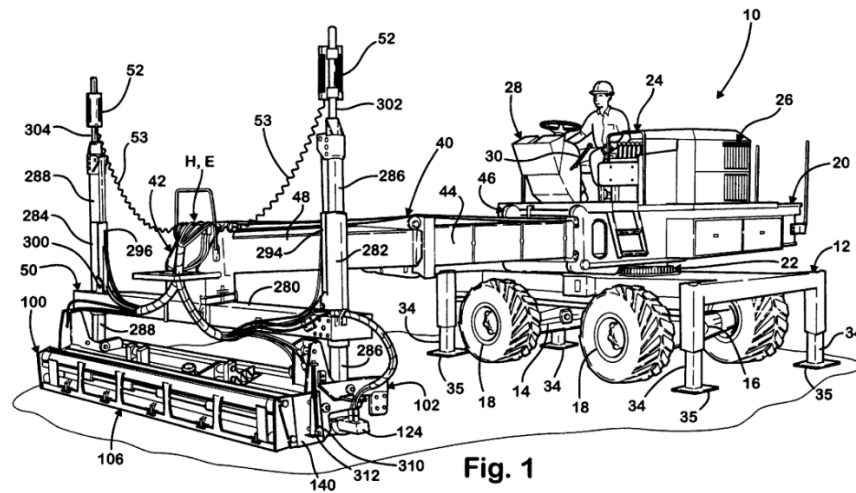
Moreover, Jochems and Quenzi are reasonably pertinent to the problem identified in the ‘366 Patent. *In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004). The ‘366 Patent describes known boom screeds, shown below, that are referred to as boom screeds that were large and could not operate in areas with low ceilings, tight corners, or obstacles such as pillars or low hanging pipes. Ex-1001, 1:37-44; Ex-1006, ¶¶177-179.



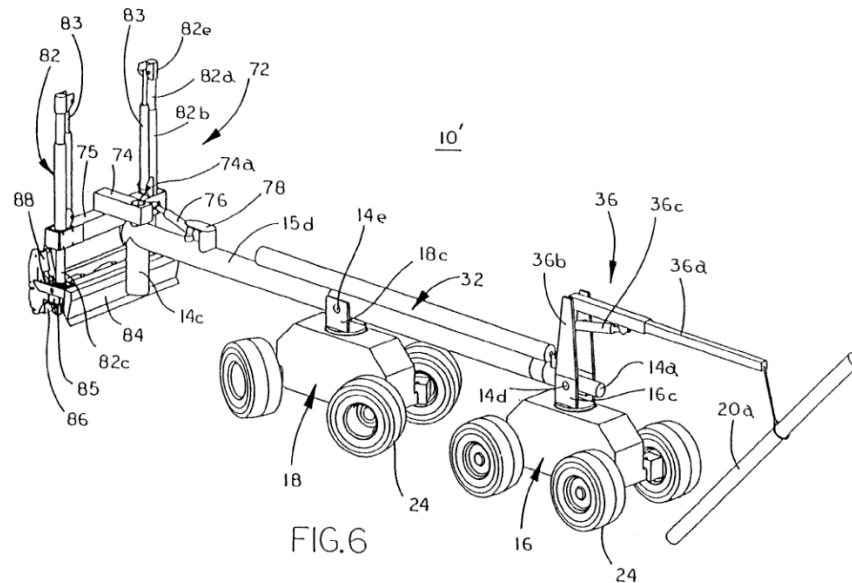
Ex-1008 (US 4,655,633), Fig.1



Ex-1012 (US 4,930,935), Fig.2



Ex-1013 (US 6,129,481), Fig.1; Ex-1014 (US 6,152,647),
Fig.1; and Ex-1015 (US 6,183,160), Fig.1



Ex-1016 (US 6,588,976), Fig.6 and Ex-1017 (US 6,623,208), Fig.6

According to the '366 Patent, when a traditional or large "screeding machine cannot be used, the concrete still must be spread out or struck-off...by manual effort which is very labor intensive and costly." Ex-1001, 1:44-48. The '366 Patent

identifies the problem to be solved is providing “an improved striking-off or raking apparatus and/or method that requires less manual labor” in places where such large screeding machines cannot operate. Ex-1001, 1:49-51; Ex-1006, ¶179.

Here, Jochems and Quenzi address this problem by disclosing screeding machines that are highly maneuverable around obstacles and can be used in smaller areas. Ex-1006, ¶180. Like the '366 Patent, Jochems also teaches there are numerous drawbacks to large boom screeds. Ex-1004, 1:11-26 (describing known boom screeds as “seriously hampered by the presence of obstacles such as for example pillars, high lying sewer systems, too low ceilings, too small passages, and the like.”). Therefore, Jochems expressly teaches a screeding machine “to achieve striking off concrete floor surfaces under all circumstances on a very flexible manner...” and that “...can be deployed under all possible angles and under the most thinkable circumstances for striking off concrete.” Ex-1004, 1:53-56, 2:57-3:1. Similarly, Quenzi teaches that “[t]he present invention provides an apparatus for screeding and vibrating uncured concrete...in areas which may be inaccessible to larger machines and equipment, such as due to the space limitations of small buildings, or the weight restrictions maintained during the construction of elevated decks and surfaces.” Ex-1003, ¶8. Therefore, Jochems and Quenzi are not only in the same field of endeavor as the '366 patent, but also address the very problem that the '366 patent purports to solve. Ex-1006, ¶¶181-182.

Second, a POSITA would have been motivated to combine Jochems and Quenzi. While Jochems discloses a screed head, Quenzi explains the benefits to using screed head with a floating-type vibrating beam (i.e., vibration beam/vibratable member). Ex-1003, ¶81 (“The **floating action** of the vibrator beam 20 over the uncured concrete then **continues to consolidate, smooth, level and finish** the uncured concrete surface.”), ¶112 (explaining floating “**applies a sufficient and desired amount of down-pressure to work the surface.**”); *see id.*, ¶70, ¶115. A POSITA would have appreciated that Quenzi’s screed head with floating-type vibrator/vibrating beam as applied on Jochems’ articulating screeding machine would provide these same improvements and benefits. Ex-1006, ¶¶183-187.

Screeds that can create a more smooth and level concrete surface were also commercially desirable. Ex-1006, ¶188. A POSITA would appreciate the cost effectiveness, both in labor and capital equipment, is an important consideration in placing floor slabs. *Id.*, ¶¶188-189. Utilizing Jochems’ machine with Quenzi’s screed head would have led to increased cost effectiveness because of a reduction in construction time (using Jochems’ articulating machine) and increase in quality and performance (using Quenzi’s floating-type vibrator/vibrating beam and corresponding screed head). This would have further motivated a POSITA to follow Quenzi’s teachings regarding the advantages of its floating-type vibrator/vibrating

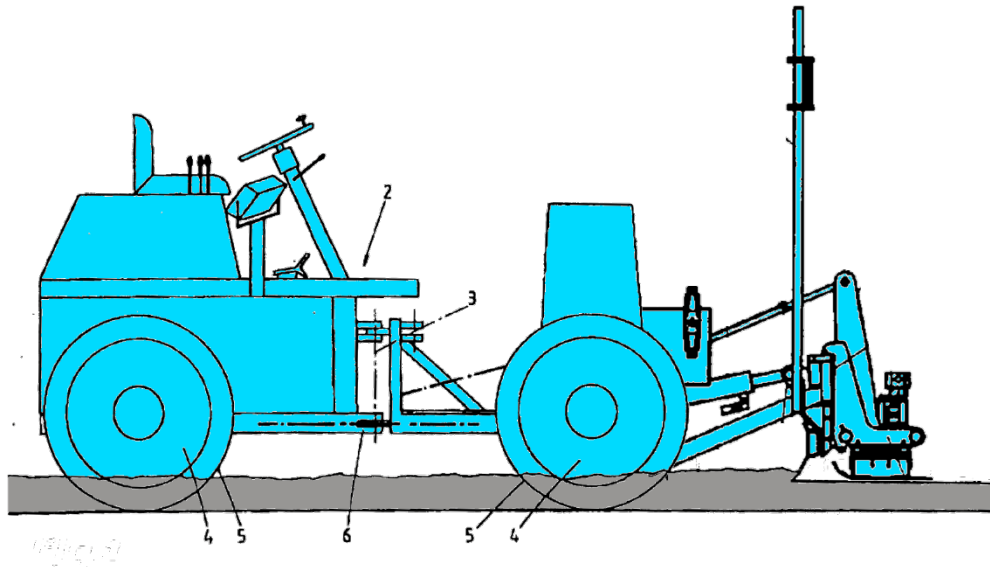
beam screed head, in order to design a screeding machine to meet this commercial demand. *Id.*

Third, given that a POSITA would merely need to mount Quenzi's floating-type vibrator/vibrating beam and corresponding screed head to Jochems' articulating screeding machine, there was a reasonable expectation of success in making this combination. *Id.*, ¶190. Articulating screeding machines were well known (e.g., Jochems) and Quenzi's screed head utilizes a well-known four-bar linkage to connect its screed head to its wheeled support. Such four-bar linkages are used on a variety of commercial equipment and are readily adaptable by POSITAs. *Id.* Therefore, A POSITA would have had a reasonable expectation of success incorporating Quenzi's screed head on Jochems' machine by utilizing well-known four-bar linkage systems with minimal modification. *Id.*

A POSITA also would have had a reasonable expectation of success in making this modification because the screeding components described in Jochems and Quenzi (e.g., wheeled screeds, vibrating screed heads, laser leveling, height adjustable screed heads, etc.) were well-known at the time. *See, e.g.*, Ex-1001, 8:57-66; Ex-1003, ¶6, ¶79; Ex-1004, 1:12-14, 1:27-33, 4:7-8; *see also* Ex-1006, ¶191. As such, it would also have been straightforward for a POSITA to modify Jochems screed to include Quenzi's screed head and such a system would work. Ex-1006, ¶191.

In view of the motivations discussed above, it would have been obvious to a POSITA before July 2004 to modify Jochems' articulating screeding machine in view of Quenzi, *i.e.*, replace Jochems' screed head with Quenzi's screed head having a floating-type vibrator/vibrating beam. Ex-1006, ¶192. To improve operation of the modified screed, a POSITA would likely also have made some other minor modifications including adapting Jochems' articulating screeding machine to accept and manipulate Quenzi's screed head with floating-type vibrator/vibrating beam, such as by incorporating Quenzi's well-known four bar linkage system to Jochems. *Id.* A POSITA would also have ensured Jochems' electrical and hydraulic control mechanisms were adapted to function with the screed head control scheme described by Quenzi. *Id.* A POSITA would also ensure that Quenzi's screed head was sufficiently balanced and supported to permit the floating taught by Quenzi. *Id.* A POSITA would also have modified the dimensions of Quenzi's screed head (e.g., the span of the screed head) to match up with the dimensions of Jochems machine to ensure an appropriate swath of concrete was screeded with each pass. *Id.* Such modifications would have been obvious design changes well within the knowledge of a POSITA, and would not require undue experimentation. *Id.*

An illustrative example of Jochems' articulating screeding machine as modified by Quenzi is shown below. *Id.*, ¶193.



Illustrative Jochems-Quenzi Combination

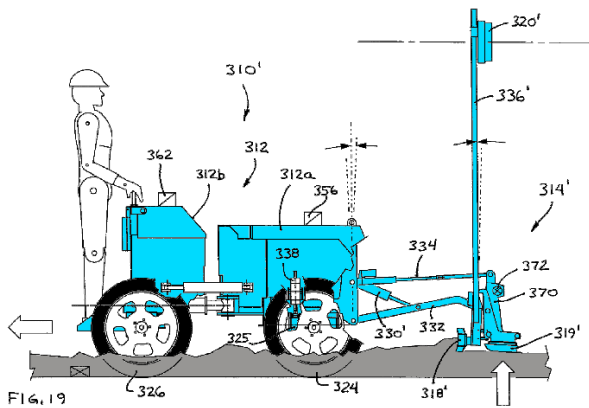
2. Independent Claim 1

- a. **Element 1[preamble]: A wheeled concrete screeding device for screeding uncured concrete, said wheeled concrete screeding device comprising:**

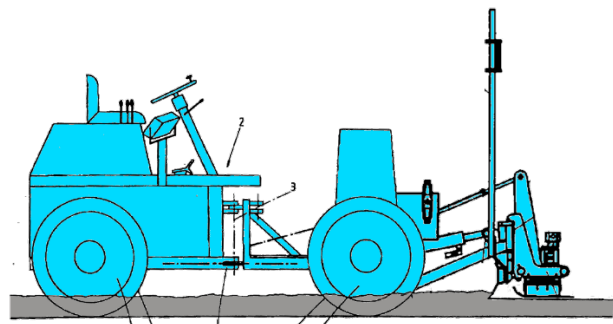
To the extent that the Board finds that the preamble is limiting, Jochems-Quenzi discloses it. Jochems teaches “[t]he present invention relates to a **machine for striking off poured concrete...**” Ex-1004, 1:3-4; *see also id.* 1:53-56, 2:49-50. The ’366 Patent uses the terms screeding and striking-off interchangeably. Ex-1001, 4:50-53 (describing a “strike-off device”), 1:22-24, 8:67 (describing a “simple wooden ‘2x4’” as a “hand-held screed[.]”). A POSITA would therefore appreciate that “striking off concrete” means “screeding uncured concrete.” Ex-1006, ¶196

(citing Ex-1020, 003 (defining a screed as “a leveling device drawn over freshly poured concrete”)).

Further, both the '366 Patent (left) and Jochems-Quenzi (right) depict a wheeled concrete screeding device (blue) screeding uncured concrete (gray):



Ex-1001, Fig.19



Jochems-Quenzi

Jochems-Quenzi thus discloses “[a] wheeled concrete screeding device for screeding uncured concrete [e.g., Jochems’ machine for striking off poured concrete].” Ex-1006, ¶198.

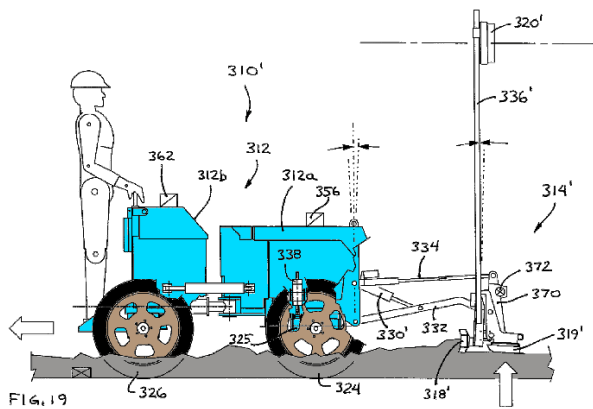
- a. **Element [1.1]: a wheeled unit having at least two wheels for movably supporting a frame portion of said wheeled unit,**

Jochems’ teaches a wheeled unit for supporting “**a first frame part 1 and a second frame part 2** which are hingedly connected to each other at the vertical hinge axis 3.” Ex-1004, 2:30-34. Specifically, Jochems discloses:

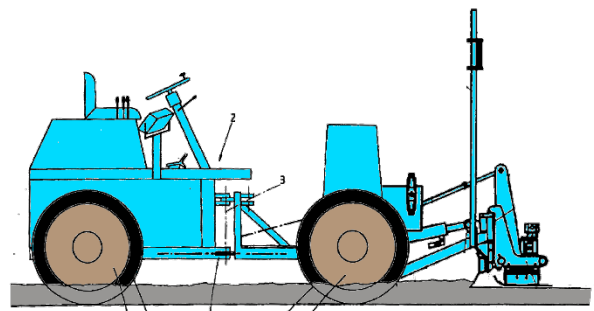
A machine for striking off poured concrete composed of frame parts (1,2) which carry the elements for striking

off the concrete and the control members thereof, which **frame parts are equipped with wheels (4)**, at least some of which are **drive wheels, characterised in that said wheels (4) are equipped with tires (5)** having a tire width of 18 cm at the most.

Ex-1004, Cl.1. Jochems' frame parts (1,2) (blue) and wheels (4) (brown) are depicted below.



Ex-1001, Fig.19



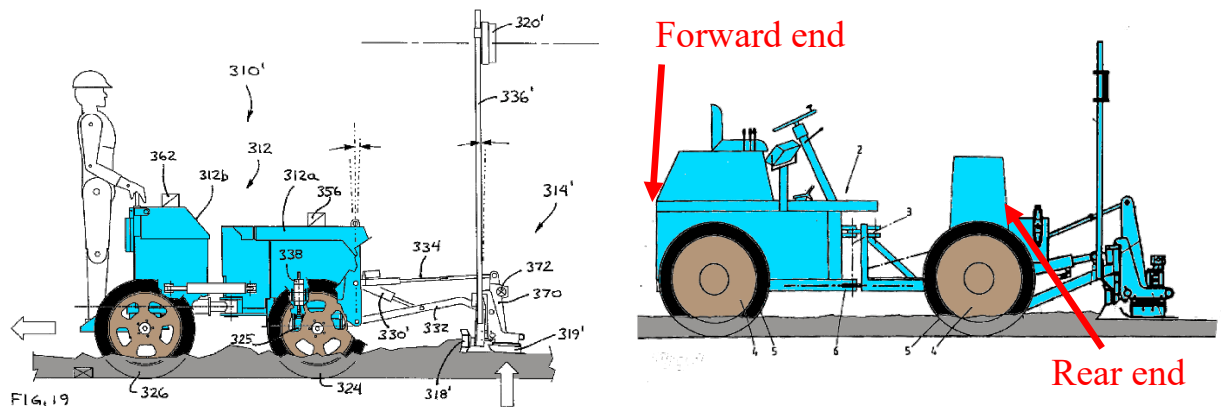
Jochems-Quenzi

See also Ex-1004, 1:3-8, 2:35-45.

Jochems-Quenzi thus discloses “a wheeled unit [e.g., Jochems' machine for striking off poured concrete] having at least two wheels [e.g., wheels (4) (white), and tires (5)] for movably supporting a frame portion [e.g., frame parts (1,2) (blue)] of said wheeled unit.” Ex-1006, ¶¶199-202.

b. Element [1.2]: said frame portion having a forward end and a rearward end,

Jochems teaches its machine for striking off poured concrete includes frame parts (1,2) (blue). Ex-1004, 2:30-34, Cl.1. For example, Jochems' Figure 1 depicts the frame portion having forward and rearward ends:



Ex-1001, Fig.19

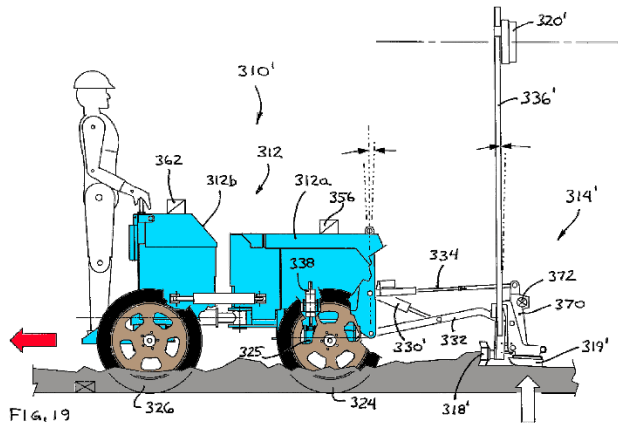
Jochems-Quenzi

Jochems thus discloses “said frame portion [e.g., frame parts (1,2) (blue)] having a forward end [e.g., left end of frame part 2] and a rearward end [e.g., right end of frame part 1].” Ex-1006, ¶¶203-204.

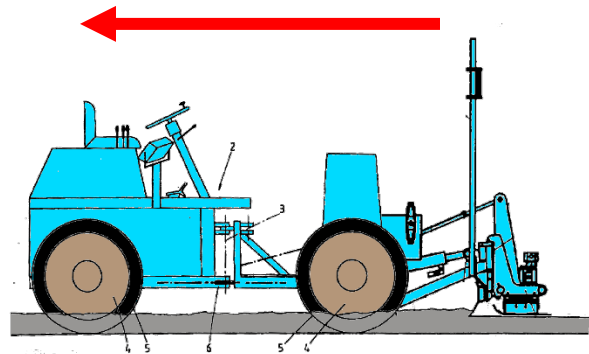
c. Element [1.3]: wherein said wheeled unit is movable through uncured concrete in a screeding direction;

Jochems teaches “[i]t is further also possible, thanks to the use of wheels with the appropriate diameter and band width, to move the machine through the poured concrete without causing any problems upon striking off the concrete afterwards.” Ex-1004, 4:26-30; *see also id.*, 2:41-45, 3:2-6 (describing wheels’ movement through “freshly poured concrete”).

Jochems also teaches “[a] roller 26 is also fixed to the support beam, **the rotation direction of which is opposite to the direction wherein the machine moves.**” Ex-1004, 4:12-14. Therefore, a POSITA would appreciate that Jochems’ machine moves in a screeding direction as shown below. Ex-1006, ¶205.



Ex-1001, Fig. 19



Jochems-Quenzi

Specifically, a POSITA would understand that because Jochems’ machine is designed “to move the machine through the poured concrete” and “stri[k] off the concrete **afterwards**,” the screeding direction is that identified in Figure 1, above. Ex-1004, 4:26-30; Ex-1006, ¶206.

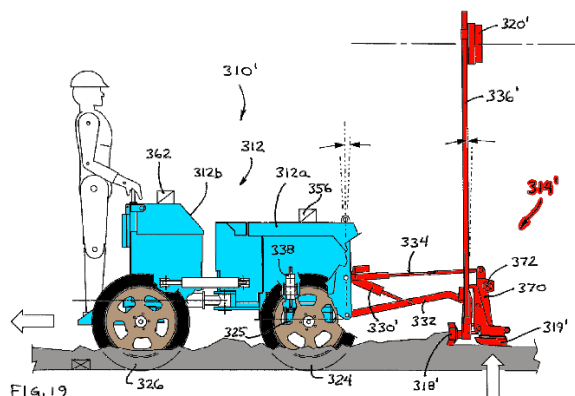
Jochems-Quenzi thus discloses “wherein said wheeled unit is movable through uncured concrete [e.g., moving the machine through the poured concrete] in a screeding direction [e.g., in a direction (red) preceding striking off the concrete afterwards].” Ex-1006, ¶207.

- d. **Element [1.4]: a screed head supported at said rearward end of said frame portion and following behind said wheeled unit when said wheeled unit is moved in said screeding direction,**

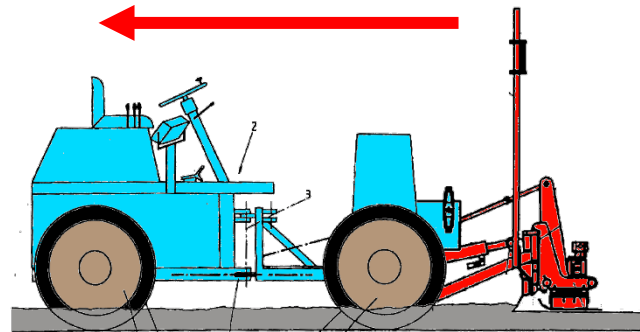
Jochems disclose “[t]he first frame part 1 carries the required instruments for striking off the poured concrete...” Ex-1004, 2:35-38; *see also* Ex-1004, C1.4.

For the reasons provided above in the motivation to combine section, a POSITA would have been motivated to utilize Quenzi’s screed head with floating vibrating member on Jochems’ machine. *Supra* Section XI.C.1; Ex-1006, ¶208.

As such, the Jochems-Quenzi combination discloses a screed head (red) consisting of a vibrating member and plow supported at the rearward end of the frame portion (blue). *See* Ground 1, Element 1.4, *supra* Section XI.A.1.e (analyzing Quenzi’s screed head with vibrating member and plow); Ex-1006, ¶209.



Ex-1001, Fig.19



Jochems-Quenzi

Further, for the reasons provided in Element 1.3, incorporated here, Jochems teaches its screed head follows behind when its machine is moved in the screeding

direction. *Supra* Section XI.C.2.c; Ex-1006, ¶110 Quenzi also teaches this for the reasons provided in Ground 1, Element 1.3, incorporated here. *Supra* Section XI.A.1.d ; Ex-1006, ¶210.

Jochems-Quenzi thus discloses “a screed head [e.g., Quenzi’s “screeding heads” 211, 311, 411 (red)] supported at said rearward end of said frame portion [e.g., at right side of Jochems’ frame part 1] and following behind said wheeled unit when said wheeled unit is moved in said screeding direction [e.g., in a direction (red arrow) preceding striking off the concrete afterwards].” Ex-1006, ¶211.

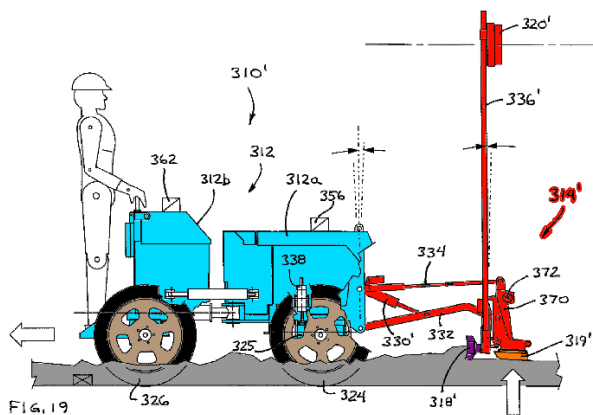
e. Element [1.5]: said screed head comprising a grade establishing element and a vibratable member;

For the reasons provided above in the motivation to combine section, a POSITA would have been motivated to utilize Quenzi’s screed head with floating vibrating member on Jochems’ machine. *Supra* Section XI.C.1; Ex-1006, ¶212.

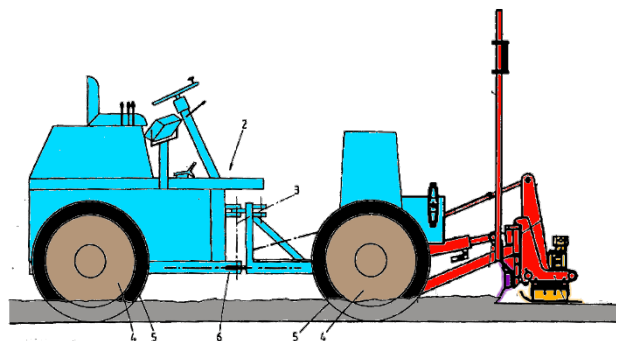
As discussed in Ground 1, Element 1.5, incorporated here, Quenzi’s screed heads comprise a grade establishing element, such as a plow, and a vibratable member. Ex-1006, ¶212. In addition, Jochems teaches its screed head includes scraper (25), rotating roller (26), and vibrating beam (27). Ex-1004, Cl.4 (“said elements for striking off the poured concrete consist of a scraper (25), a rotating roller (26) and a vibrating beam (27).”); *id.*, Cl.5. Jochems also teaches “the

concrete which is entirely levelled by striking off the concrete...” Ex-1004, 2:49-50; *see* Ex-1004, 4:14-26 (discussing vibration motor 28); Ex-1006, ¶213.

As shown below, the Jochems-Quenzi combination screed head (red) is shown with a plow (purple) and vibrating beam (orange). *See* Ex-1003, Figs.12-20, 23; *see also* Ex-1006, ¶214.



Ex-1001, Fig.19



Jochems-Quenzi

Jochems-Quenzi thus discloses “said screed head [e.g., Quenzi’s “screeding heads” 211, 311, 411 (red)] comprising a grade establishing element [e.g., Quenzi’s plows 312, 412 (purple)] and a vibratable member [e.g., Quenzi’s vibrating beams 320, 420 (orange)].” Ex-1006, ¶215.

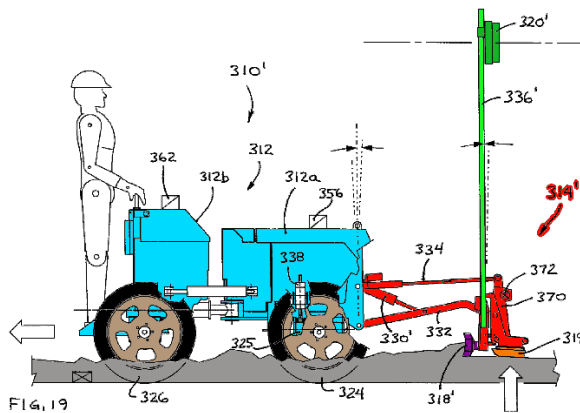
- f. **Element [1.6]: wherein said grade establishing element is generally vertically adjustable responsive to a signal from a laser receiver disposed at said screed head to establish a struck-off surface of the uncured concrete at a desired grade when said wheeled unit is moved in said screeding direction; and**

For the reasons provided above in the motivation to combine section, a POSITA would have been motivated to utilize Quenzi's screed head with floating vibrating member on Jochems' machine. *Supra* Section XI.C.1.

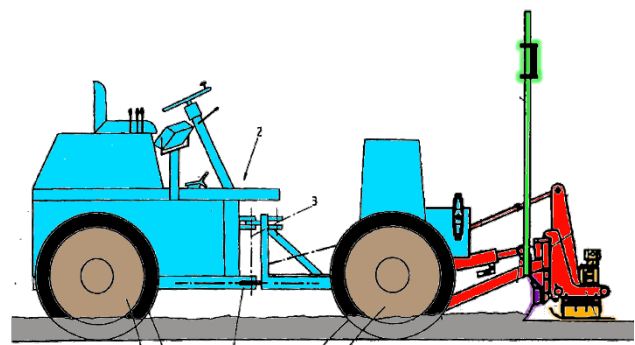
As discussed in Ground 1, Element 1.6, incorporated here, Quenzi's screed heads teach this limitation. *Supra*, Section XI.A.1.g; Ex-1006, ¶216. For instance, Quenzi describes "[t]he screeding device includes a plow or other grade setting element or device which is **vertically adjustable....**" Ex-1003, ¶30. Specifically, "[t]he screeding device includes an automatic control system which is **responsive to a laser plane or laser-guided reference for vertically adjusting the grade setting device** to the desired grade height." *Id.*; Ex-1006, ¶¶217-218,

Furhter, Jochems explicitly teaches "said **scraper (25)**, roller (26) and vibrating beam (27) **are mounted on a support beam (24), the height of which is adjustable by means of sensors (21) with respect to a laser beacon.**" Ex-1004, Cl.5. Jochems further teaches "[t]he **sensors 21 act on a laser beacon**, as known, which has not been illustrated in the figures." Ex-1004, 4:7-9; Ex-1006, ¶219.

As shown below, Quenzi-Jochems' screed head includes a plow (purple) that is vertically adjustable responsive to a laser receiver (green) disposed at the screed head (red):



Ex-1001, Fig.19



Jochems-Quenzi

Jochems further teaches “[t]he present invention relates to a **machine for striking off poured concrete...**” (Ex-1004, 1:3-4) and “**the concrete which is entirely levelled by striking off** the concrete...” Ex-1004, 2:49-50; Ex-1006, ¶221. Further, for the reasons provided in limitation 1.3, incorporated here, Jochems teaches its screed head follows behind when its machine is moved in the screeding direction. *Supra* Section ; Ex-1004, 4:12-14 (“A roller 26 is also fixed to the support beam, **the rotation direction of which is opposite to the direction wherein the machine moves.**”). Quenzi also teaches this for the reasons provided in Ground 1, Element 1.3, incorporated here. *Supra* Section XI.A.1.d; Ex-1006, ¶221.

Jochems-Quenzi thus discloses “wherein said grade establishing element is generally vertically adjustable [e.g., Quenzi’s “plow [purple] or other grade setting

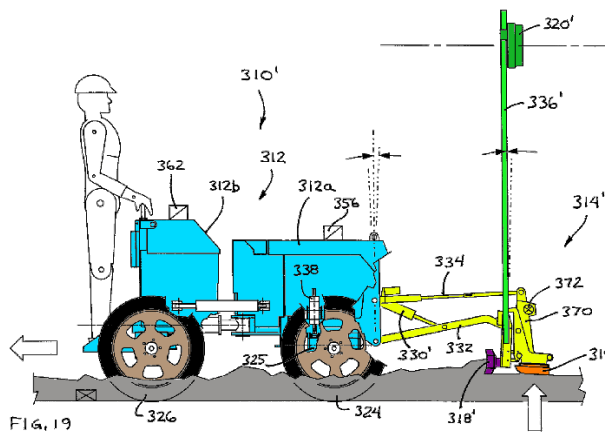
element or device which is vertically adjustable....”] responsive to a signal from a laser receiver disposed at said screed head [e.g., Quenzi’s laser receiver 322, 422 (green)] to establish a struck-off surface of the uncured concrete at a desired grade [e.g., Quenzi’s “automatic control system which is **responsive to a laser plane or laser-guided reference for vertically adjusting the grade setting device** to the desired grade height.”] when said wheeled unit is moved in said screeding direction [e.g., in a direction (red arrow) preceding screeding the concrete afterwards].” Ex-1006, ¶222.

g. Element [1.7]: wherein said vibratable member is adjustably attached at a rearward end of said grade establishing element

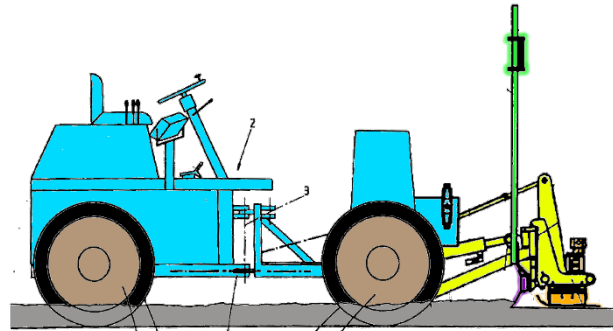
For the reasons provided above in the motivation to combine section, a POSITA would have been motivated to utilize Quenzi’s screed head with floating vibrating member on Jochems’ machine. *Supra* Section XI.C.1.

As discussed in Ground 1, Element 1.7, incorporated here, Quenzi’s screed heads teach this limitation. *Supra*, Section XI.A.1.h.; Ex-1006, ¶223.

Further, as shown below, vibratable member (orange) is adjustably attached to the rearward end of the plow (purple) via framework (yellow):



Ex-1001, Fig.19



Jochems-Quenzi

For example, Quenzi describes that the “[t]he operating range height of the vibrating beam 220 may be manually adjusted relative to the level of the wheels 217b via an adjustment device 221,” which may be “an actuator, a threaded rod, turnbuckle, or any other extension and retraction device or the like.” Ex-1003, ¶92; *see also* Ex-1006, ¶225. Quenzi teaches for each of its embodiments, that the vibratable member is adjustable in both height and pitch angle. *See* Ex-1003, ¶109 (Figs.16-20), ¶¶121, 126-127 (Fig.23); *see also* Ex-1006, ¶225.

Jochems-Quenzi thus discloses “wherein said vibratable member [e.g., Quenzi’s vibrating beams 320, 420 (orange)] is adjustably attached [e.g., adjustable in both height and pitch angle via framework (yellow)] at a rearward end of said grade establishing element [e.g., Quenzi’s plows 312, 412 (purple)].” Ex-1006, ¶226.

- h. Element [1.8]: and wherein said vibratable member at least partially floats behind said grade establishing element on the struck-off surface of the uncured concrete and is at least partially supported at the struck-off surface of the uncured concrete as said wheeled unit is moved in said screeding direction.**

For the reasons provided above in the motivation to combine section, a POSITA would have been motivated to utilize Quenzi's screed head with floating vibrating member on Jochems' machine. *Supra* Section XI.C.1.

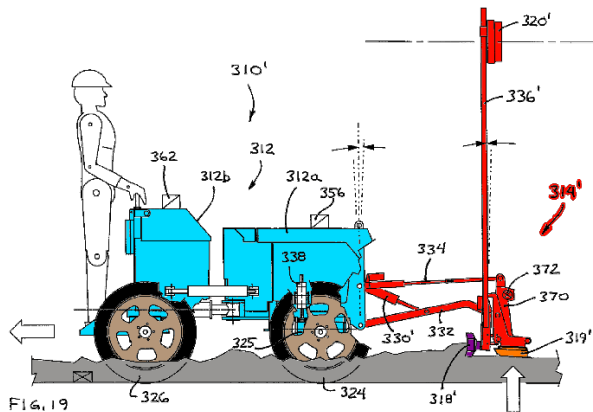
As discussed in Ground 1, Element 1.8, incorporated here, Quenzi's screed heads teach this limitation. *Supra*, Section XI.A.1.i; Ex-1006, ¶227. For example, Quenzi describes that "[t]he **vibrating member generally floats upon or is supported** directly on the uncured concrete surface created by the grade setting device ahead of it." Ex-1003, ¶9. Quenzi further describes "[t]he present invention thus ... **at least partially supported upon the desired correct elevation surface it creates, as the device itself advances.**" *Id.*, ¶11; *see also id.*, ¶68 ("the vibrator beam 20 **floats on** or is **at least partially supported** on the uncured surface"); *id.*, ¶¶96, 112, 121. As discussed in Ground 1, these disclosures apply to each embodiment. *See* Ex-1006, ¶228.

Jochems-Quenzi thus discloses "wherein said vibratable member [e.g., Quenzi's vibrating beams 320, 420 (orange)] at least partially floats behind said grade establishing element [e.g., Quenzi's plows 312, 412 (purple)] on the struck-

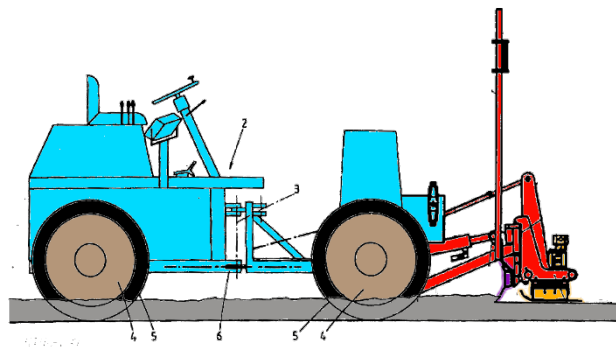
off surface of the uncured concrete [e.g., “partially supported by, or essentially ‘floating’ upon, the uncured concrete surface”] and is at least partially supported at the struck-off surface of the uncured concrete as said wheeled unit is moved in said screeding direction [e.g., to “appl[y] a sufficient and desired amount of down-pressure to work the surface.”]”. Ex-1006, ¶229.

3. Dependent Claim 2: “The wheeled concrete screeding device of claim 1, wherein said grade establishing element comprises a plow member.”

For the same reasons provided in Element 1.5, incorporated here, the Jochems-Quenzi combination discloses said grade establishing element comprises a plow member. *Supra* Section XI.C.2.e; Ex-1006, ¶230.



Ex-1001, Fig.19



Jochems-Quenzi

The Jochems-Quenzi combination thus discloses “said grade establishing element comprises a plow member [e.g., Quenzi’s plows 312, 412 (purple)].” Ex-1006, ¶231.

4. **Dependent Claim 3: “The wheeled concrete screeding device of claim 2, wherein said grade establishing element comprises an auger disposed behind said plow member, and wherein said auger is generally vertically adjustable with said plow member.”**

For the same reasons provided in Ground 1, Claim 3, incorporated here, the Jochems-Quenzi combination discloses this limitation. *Supra* Section XI.A.3; Ex-1006, ¶232.

5. **Dependent Claim 4: “The wheeled concrete screeding device of claim 3, wherein said rearward end of said grade establishing element comprises a rearward end of said auger and wherein said vibratable member is adjustably attached at said rearward end of said auger.”**

For the same reasons provided in Ground 1, Claim 4, incorporated here, the Jochems-Quenzi combination discloses this limitation. *Supra* Section XI.A.4; Ex-1006, ¶233.

6. **Dependent Claim 5: “The wheeled concrete screeding device of claim 1, wherein said vibratable member is pivotally attached at said rearward end of said grade establishing element.”**

Dependent Claim 6: “The wheeled concrete screeding device of claim 5, wherein said vibratable member is pivotally attached at said rearward end of said grade establishing element via a pair of links that are pivotally attached at said rearward end of said grade establishing element.”

For the same reasons provided in Ground 1, Claims 5 and 6, incorporated here, the Jochems-Quenzi combination discloses this limitation. *Supra* Section XI.A.5; Ex-1006, ¶234.

7. **Dependent Claim 7: “The wheeled concrete screeding device of claim 5, wherein said vibrating member is pivotally attached at at least one bracket at said rearward end of said grade establishing element.”**

For the same reasons provided in Ground 1, Claim 7, incorporated here, the Jochems-Quenzi combination discloses this limitation. *Supra* Section XI.A.6; Ex-1006, ¶235.

8. **Dependent Claim 8: “The wheeled concrete screeding device of claim 7, wherein said vibrating member is pivotally attached at said at least one bracket via at least one mounting pin.”**

For the same reasons provided in Ground 1, Claim 8, incorporated here, the Jochems-Quenzi combination discloses this limitation. *Supra* Section XI.A.7; Ex-1006, ¶236.

9. **Dependent Claim 9: “The wheeled concrete screeding device of claim 7, wherein said vibrating member is securable relative to said at least one bracket to retain said vibrating member at a desired attack angle as said vibrating member is moved in said screeding direction behind said grade establishing element.”**

For the same reasons provided in Ground 1, Claim 9, incorporated here, the Jochems-Quenzi combination discloses this limitation. *Supra* Section XI.A.8; Ex-1006, ¶237

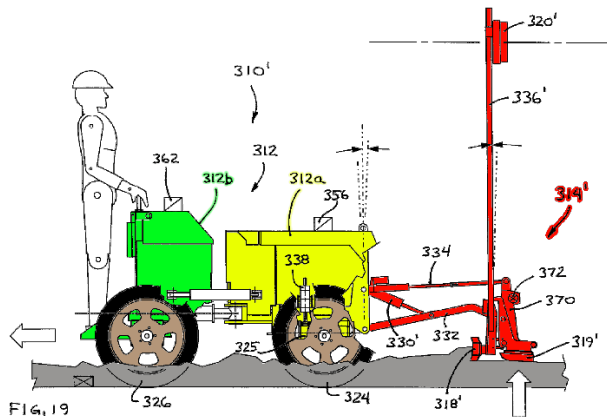
- 10. Dependent Claim 10: “The wheeled concrete screeding device of claim 1, wherein said wheeled unit comprises a pair of front wheels supporting a front frame portion and a pair of rear wheels supporting a rear frame portion, wherein said screed head is supported at a rearward end of said rear frame portion.”**

Jochems teaches its machine for striking off poured concrete “consists...of **a first frame part 1 and a second frame part 2 which are hingedly connected to each other at the vertical hinge axis 3.**” Ex-1004, 2:30-34; Ex-1006, ¶238.

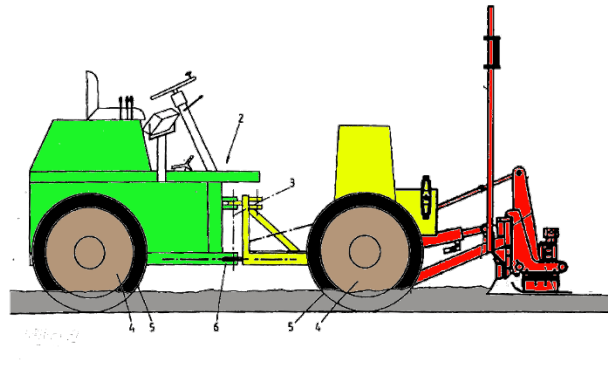
Specifically, Jochems discloses:

A machine for striking off poured concrete composed of frame parts (1,2) which carry the elements for striking off the concrete and the control members thereof, which frame parts are equipped with wheels (4), at least some of which are drive wheels, characterised in that said wheels (4) are equipped with tires (5) having a tire width of 18 cm at the most.

Ex-1004, Cl.1. Jochems’ first frame part (1) (yellow), second frame part (2) (green), wheels (4) (brown), and tires (5) (black), are depicted below. Ex-1006, ¶239. In addition, the Jochem-Quenzi screed head (red) is shown supported at a rearward end of first frame part (1) (yellow):



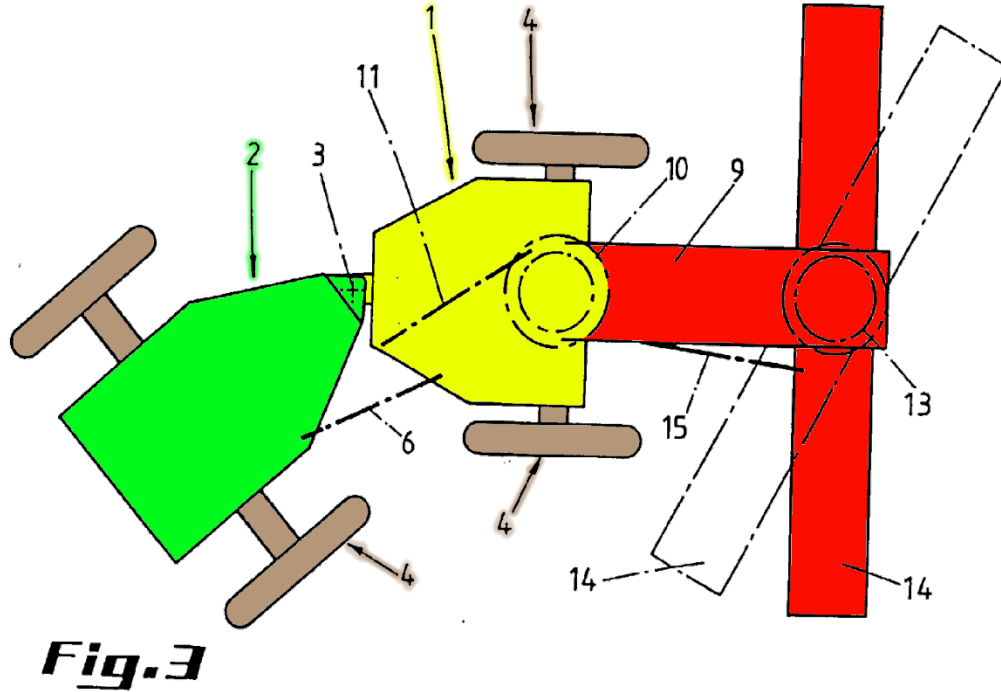
Ex-1001, Fig.19



Jochems-Quenzi

Specifically, Jochems teaches “[t]he diameter of the **wheels 4** and the thickness of the **tires 5** which equip these wheels are calculated in such a manner that **the machine can be moved without problems through the poured concrete.**” Ex-1004, 2:41-45; *see also id.*, 1:3-8, 2:35-41; Ex-1006, ¶240.

In addition, Jochems’ Figure 3, below, discloses a pair of wheels (4) supporting each of the first frame part (1) (yellow) and second frame part (2) (green):



Ex-1004, Fig.3

Ex-1006, ¶241.

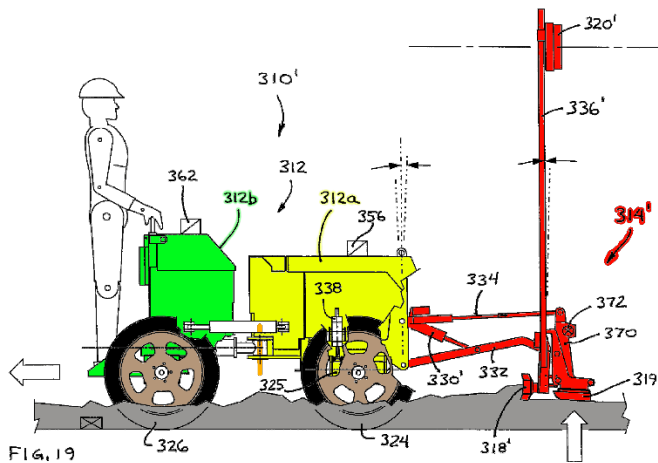
Jochems-Quenzi thus discloses “wherein said wheeled unit comprises a pair of front wheels [e.g., wheels (4) (brown)] supporting a front frame portion [e.g., second frame part (2) (green)] and a pair of rear wheels [e.g., wheels (4) (brown)] supporting a rear frame portion [e.g., first frame part (1) (yellow)], wherein said screed head [e.g., Quenzi’s screed head (red)] is supported at a rearward end of said rear frame portion [e.g., at right side of frame part 1].” Ex-1006, ¶242.

11. Dependent Claim 11: “The wheeled concrete screeding device of claim 10, wherein said wheeled unit comprises an articulatable wheeled unit and wherein said front frame portion is articulatable relative to said rear frame portion about a generally vertical pivot axis when said wheeled unit is supported at a generally horizontal support surface.”

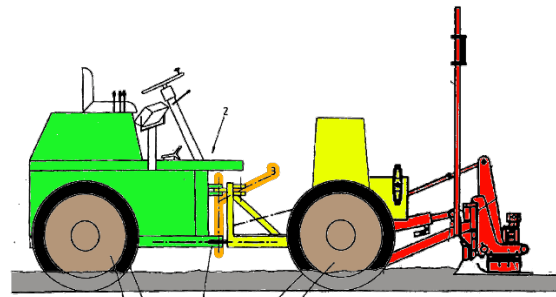
The '366 Patent describes its “articulatable wheeled base” as including frame portions that connect to form a “hinged articulated frame to steer the machine in either the left or right direction.” Ex-1001, 13:38-62, 14:10-11.

Like the '366 Patent, Jochems explicitly teaches **“a first frame part 1 and a second frame part 2 which are hingedly connected to each other at the vertical hinge axis 3.”** Ex-1004, 2:30-34. Ex-1006, ¶243. Specifically, Jochems discloses **“[h]andling the machine occurs on a technically very reliable manner... and the first frame part 1 and the second frame part 2 can be set up under very different angles with respect to each other.”** Ex-1004, 3:9-17.

Jochems Figure 1, below, depicts its articulatable wheeled concrete screeding device with first (1) (yellow) and second (2) (green) frame parts articulable relative to one another via vertical hinge axis (3) (orange) and supported at a generally horizontal support surface. Ex-1006, ¶243.



Ex-1001, Fig.19



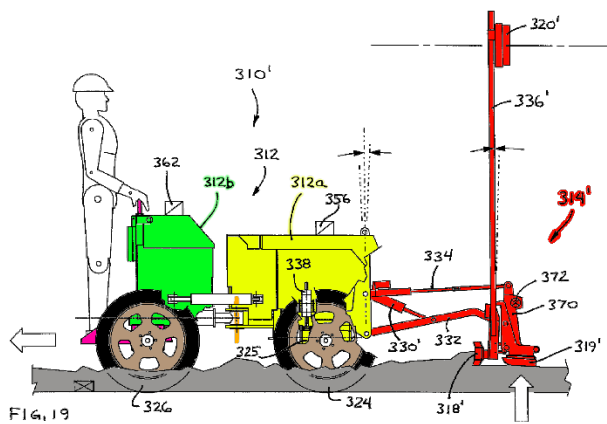
Jochems-Quenzi

Jochems further discloses its articulatable wheeled concrete screeding device is supported at a generally horizontal support surface. Specifically, Jochems teaches “...the machine can be moved without problems through the poured concrete.” Ex-1004, 2:41-45; *see id.*, 1:3-8, 2:35-4, 4:26-30; Ex-1006, ¶244.

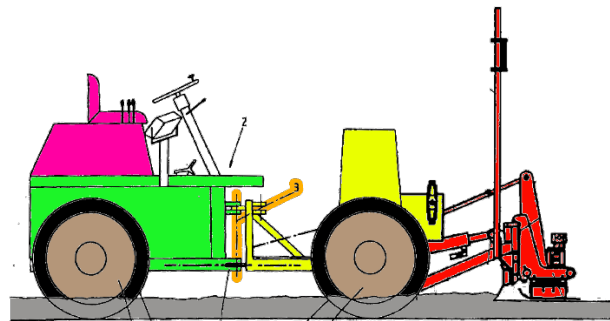
Jochems-Quenzi thus discloses “wherein said wheeled unit comprises an articulatable wheeled unit [e.g., first and second frame parts (1, 2)] and wherein said front frame portion [e.g., second frame part (2) (yellow)] is articulatable relative to said rear frame portion [e.g., first frame part (1) (green)] about a generally vertical pivot axis [e.g., vertical hinge axis (3) (orange)] when said wheeled unit is supported at a generally horizontal support surface [e.g., moving through poured concrete].” Ex-1006, ¶245.

- 12. Dependent Claim 12: “The wheeled concrete screeding device of claim 11, wherein said front frame portion includes a platform at its forward end, and wherein said platform supports an operator of said wheeled concrete screeding device during operation of said wheeled concrete screeding device.”**

Jochems teaches “the second frame part is **equipped with the different mechanic and hydraulic control members of the machines.**” Ex-1004, 2:35-38; Ex-1006, ¶246. As shown below, Jochems discloses the second frame part (2) (green) includes a platform (pink) at the forward end with a seat to support an operator and controls, including a steering wheel and pedals, for Jochems’ machine (also pink):



Ex-1001, Fig.19



Ex-1004, Fig.1

Jochems-Quenzi thus discloses “wherein said front frame portion includes a platform at its forward end [e.g., top platform of second frame part (2) (pink)], and wherein said platform supports an operator [e.g., seat on top platform of second frame part (2)] of said wheeled concrete screeding device during operation of said

wheeled concrete screeding device [e.g., using steering wheel, pedal, and controls].”

Ex-1006, ¶247.

13. Independent Claim 13

The Jochems-Quenzi combination discloses every limitation of claim 13, rendering it obvious. Claim 13’s limitations are either identical or analogous to the claims addressed above, as outlined in the chart below.

Claim 13 Limitation	Analogous Limitation	Sections
13[preamble]	1[preamble]	XI.C.2.a
13.1	1.3, Claim 10, and Claim 11	XI.C.2.c, XI.C.10- XI.C.11
13.2	1.4	XI.C.2.d
13.3	1.5 and Claim 2	XI.C.2.e, XI.C.3
13.4	1.6	XI.C.2.f
13.5	Claim 5	XI.C.6

Each of claim 13’s limitations are disclosed by the Jochems-Quenzi combination for the reasons provided above, incorporated here. As such, claim 13 is rendered obvious by the Jochems-Quenzi combination. Ex-1006, ¶¶248-255.

- 14. Dependent Claim 14: “The wheeled concrete screeding device of claim 13, wherein said grade establishing element comprises an auger disposed behind said plow member, and wherein said auger is generally vertically adjustable with said plow member, and wherein said rearward end of said grade establishing element comprises a rearward end of said auger and wherein said vibratable member is pivotally attached at said rearward end of said auger.”**

Claim 14 is analogous to claims 3, 4, and 5 and is disclosed by the Jochems-Quenzi combination for the reasons provided above. *Supra* Sections XI.C.4-XI.C.6. Ex-1006, ¶256. Claim 14 is rendered obvious by the Jochems-Quenzi combination.

- 15. Dependent Claim 15: “The wheeled concrete screeding device of claim 13, wherein said front frame portion includes a platform at its forward end, and wherein said platform supports an operator of said wheeled concrete screeding device during operation of said wheeled concrete screeding device.”**

Claim 15 is analogous to claim 12 and is disclosed by the Jochems-Quenzi combination for the reasons provided above. *Supra* Section XI.C.12. Ex-1006, ¶257. Claim 15 is rendered obvious by the Jochems-Quenzi combination.

XII. CONCLUSION

Accordingly Claims 1-15 of the '366 Patent should be cancelled.

Respectfully Submitted,

/s/ Dion M. Bregman /

Dion M. Bregman (Reg. No. 45,645)

U.S. PATENT NO. 8,038,366 – Listing of Challenged Claims

No.	Claim Limitations
1[preamble]	A wheeled concrete screeding device for screeding uncured concrete, said wheeled concrete screeding device comprising:
1.1	a wheeled unit having at least two wheels for movably supporting a frame portion of said wheeled unit,
1.2	said frame portion having a forward end and a rearward end,
1.3	wherein said wheeled unit is movable through uncured concrete in a screeding direction;
1.4	a screed head supported at said rearward end of said frame portion and following behind said wheeled unit when said wheeled unit is moved in said screeding direction,
1.5	said screed head comprising a grade establishing element and a vibratable member;
1.6	wherein said grade establishing element is generally vertically adjustable responsive to a signal from a laser receiver disposed at said screed head to establish a struck-off surface of the uncured concrete at a desired grade when said wheeled unit is moved in said screeding direction; and
1.7	wherein said vibratable member is adjustably attached at a rearward end of said grade establishing element
1.8	and wherein said vibratable member at least partially floats behind said grade establishing element on the struck-off surface of the uncured concrete and is at least partially supported at the struck-off surface of the uncured concrete as said wheeled unit is moved in said screeding direction.
2	The wheeled concrete screeding device of claim 1, wherein said grade establishing element comprises a plow member.
3	The wheeled concrete screeding device of claim 2, wherein said grade establishing element comprises an auger disposed behind said plow member, and wherein said auger is generally vertically adjustable with said plow member.
4	The wheeled concrete screeding device of claim 3, wherein said rearward end of said grade establishing element comprises a rearward end of said auger and wherein said vibratable member is adjustably attached at said rearward end of said auger.

5	The wheeled concrete screeding device of claim 1, wherein said vibratable member is pivotally attached at said rearward end of said grade establishing element.
6	The wheeled concrete screeding device of claim 5, wherein said vibratable member is pivotally attached at said rearward end of said grade establishing element via a pair of links that are pivotally attached at said rearward end of said grade establishing element.
7	The wheeled concrete screeding device of claim 5, wherein said vibrating member is pivotally attached at at least one bracket at said rearward end of said grade establishing element.
8	The wheeled concrete screeding device of claim 7, wherein said vibrating member is pivotally attached at said at least one bracket via at least one mounting pin.
9	The wheeled concrete screeding device of claim 7, wherein said vibrating member is securable relative to said at least one bracket to retain said vibrating member at a desired attack angle as said vibrating member is moved in said screeding direction behind said grade establishing element.
10	The wheeled concrete screeding device of claim 1, wherein said wheeled unit comprises a pair of front wheels supporting a front frame portion and a pair of rear wheels supporting a rear frame portion, wherein said screed head is supported at a rearward end of said rear frame portion.
11	The wheeled concrete screeding device of claim 10, wherein said wheeled unit comprises an articulatable wheeled unit and wherein said front frame portion is articulatable relative to said rear frame portion about a generally vertical pivot axis when said wheeled unit is supported at a generally horizontal support surface.
12	The wheeled concrete screeding device of claim 11, wherein said front frame portion includes a platform at its forward end, and wherein said platform supports an operator of said wheeled concrete screeding device during operation of said wheeled concrete screeding device.
13[preamble]	A wheeled concrete screeding device for screeding uncured concrete, said wheeled concrete screeding device comprising:
13.1	an articulatable wheeled unit having a front frame portion movably supported by front wheels and a rear frame portion movably supported by rear wheels, wherein said front frame

	portion is articulatable relative to said rear frame portion about a generally vertical pivot axis when said wheeled unit is supported at a generally horizontal support surface, wherein said articulatable wheeled unit is movable through uncured concrete in a screeding direction;
13.2	a screed head supported at a rearward end of said rear frame portion so that said screed head follows behind said articulatable wheeled unit when said articulatable wheeled unit is moved in said screeding direction,
13.3	said screed head comprising a grade establishing element and a vibratable member, wherein said grade establishing element comprises a plow member;
13.4	wherein said grade establishing element is generally vertically adjustable relative to said rear frame portion responsive to a signal from a laser receiver disposed at said screed head to establish a struck-off surface of the uncured concrete at a desired grade when said articulatable wheeled unit is moved in said screeding direction;
13.5	wherein said vibratable member is pivotally attached at a rearward end of said grade establishing element, and wherein said vibratable member at least partially floats behind said grade establishing element on the struck-off surface of the uncured concrete and is at least partially supported at the struck-off surface of the uncured concrete as said articulatable wheeled unit is moved in said screeding direction.
14	The wheeled concrete screeding device of claim 13, wherein said grade establishing element comprises an auger disposed behind said plow member, and wherein said auger is generally vertically adjustable with said plow member, and wherein said rearward end of said grade establishing element comprises a rearward end of said auger and wherein said vibratable member is pivotally attached at said rearward end of said auger.
15	The wheeled concrete screeding device of claim 13, wherein said front frame portion includes a platform at its forward end, and wherein said platform supports an operator of said wheeled concrete screeding device during operation of said wheeled concrete screeding device.

CERTIFICATE OF WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), Petitioner certifies that this petition includes 13,989 words, as measured by Microsoft Word, exclusive of the table of contents, mandatory notices under § 42.8, certificates of service, word count, claim lists, and exhibits.

Dated: October 24, 2023

Respectfully submitted,

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CERTIFICATE OF SERVICE (37 C.F.R. § 42.6(e)(1))

The undersigned hereby certifies that the above document was served on October 24, 2023, by filing this document through the Patent Trial and Appeal Board P-TACTS System, as well as delivering a copy via express mail upon the following attorneys of record for the Patent Owner:

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Petition for IPR of U.S. Patent No. 8,038,366
Case No. IPR2024-00051

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