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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte ROBERT L. MUELLER, JINMAN KANG, and
SANTIAGO GARCIA-REYERO VINAS

Appeal 2019-000366
Application 15/500,461
Technology Center 2400

Before ROBERT E. NAPPI, JAMES W. DEJMEK, and
MICHAEL T. CYGAN, *Administrative Patent Judges*.

DEJMEK, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant¹ appeals under 35 U.S.C. § 134(a) from a Final Rejection of claims 1–15. We have jurisdiction over the pending claims under 35 U.S.C. § 6(b).

We reverse.

¹ Throughout this Decision, we use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42 (2017). Appellant identifies Hewlett-Packard Development Company, L.P. as the real party in interest. App. Br. 3.

STATEMENT OF THE CASE

Introduction

Appellant's disclosed and claimed invention generally relates to "an apparatus or system that allow[s] a camera to be aligned based on an image captured by the camera." Spec. ¶¶ 20, 51. In a disclosed embodiment, a support structure allows a camera to be rotatably aligned during installation based on an image taken by the camera of reference markers. Spec. ¶ 51. The support structure comprises an opening such that the camera may capture an image through the opening in the structure and, further, where the inner surface of the camera opening is sized to rotatably mate with an outer surface of the camera. Spec. ¶¶ 51, 60, 62–63. Figure 9 is illustrative of the camera opening in the support structure and is reproduced below:

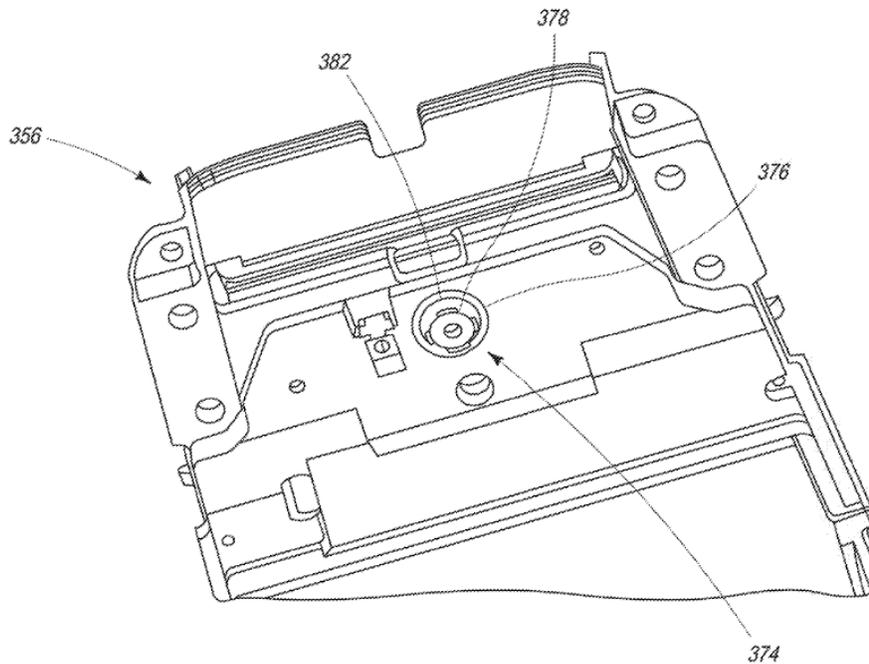


FIG. 9

Figure 9 shows a bottom view of a camera support structure. Spec. ¶¶ 11, 51. As shown, support structure (356) includes a camera opening (374)

having an inner surface (376) sized to rotatably mate with an outer surface of a camera (378) (e.g., lens barrel (382)). Spec. ¶¶ 63, 65.

Claim 1 is illustrative of the subject matter on appeal and is reproduced below with the disputed limitation emphasized in *italics*:

1. An apparatus comprising:

a calibration surface including an image alignment reference marker; and

a support structure to support a camera to face towards the calibration surface,

wherein the support structure includes a camera opening to allow the camera to capture an image containing the marker through the camera opening, the camera opening including an inner surface sized to rotatably mate with an outer surface of the camera to allow the camera to rotate relative to the inner surface of the camera opening to rotatably align the camera with an aligned position based on the captured image, and

wherein the support structure includes a securing element to allow the camera to be secured to the support structure in the aligned position during installation of the camera.

The Examiner's Rejections

1. Claims 9–11 stand rejected under 35 U.S.C. § 103 as unpatentable over Fritsch et al. (US 2008/0316368 A1; Dec. 25, 2008) (“Fritsch”). Final Act. 5–7.

2. Claims 1–8 and 12–15 stand rejected under 35 U.S.C. § 103 as unpatentable over Fritsch and Johnson (US 5,482,048; Jan. 9, 1996). Final Act. 7–11.

ANALYSIS²

Claims 1–8 and 12–15

Appellant disputes the Examiner’s finding that Fritsch teaches or reasonably suggests the claimed support structure including a camera opening to allow a camera to capture an image and having an inner surface sized to rotatably mate with an outer surface of the camera to allow the camera to rotate relative to the inner surface of the camera opening during alignment of the camera. App. Br. 8–10; Reply Br. 1–2. In particular, Appellant argues Fritsch merely describes a camera attached to a camera holder and that the camera holder does not have a camera opening including an inner surface sized to rotatably mate with an outer surface of the camera. App. Br. 8–10. Instead, Appellant asserts the camera and camera holder in Fritsch rotate together about an axis (A7). App. Br. 9. We begin our analysis with a brief review of Fritsch, as relied on by the Examiner in rejecting independent claims 1 and 12 (*see* Final Act. 7–10).

Fritsch generally relates to “a method for moving a camera that is disposed on a pan/tilt head along a given trajectory especially in a set or studio as well as an associated camera robot.” Fritsch, Abstract. Fritsch describes the camera is “disposed on a pan/tilt head” or “disposed on a receiving flange of a robot.” Fritsch ¶ 1.

² Throughout this Decision, we have considered the Appeal Brief, filed June 11, 2018 (“App. Br.”); the Reply Brief, filed October 17, 2018 (“Reply Br.”); the Examiner’s Answer, mailed August 23, 2018 (“Ans.”); and the Final Office Action, mailed November 30, 2017 (“Final Act.”), from which this Appeal is taken.

Figure 3 of Fritsch is illustrative and is reproduced below:

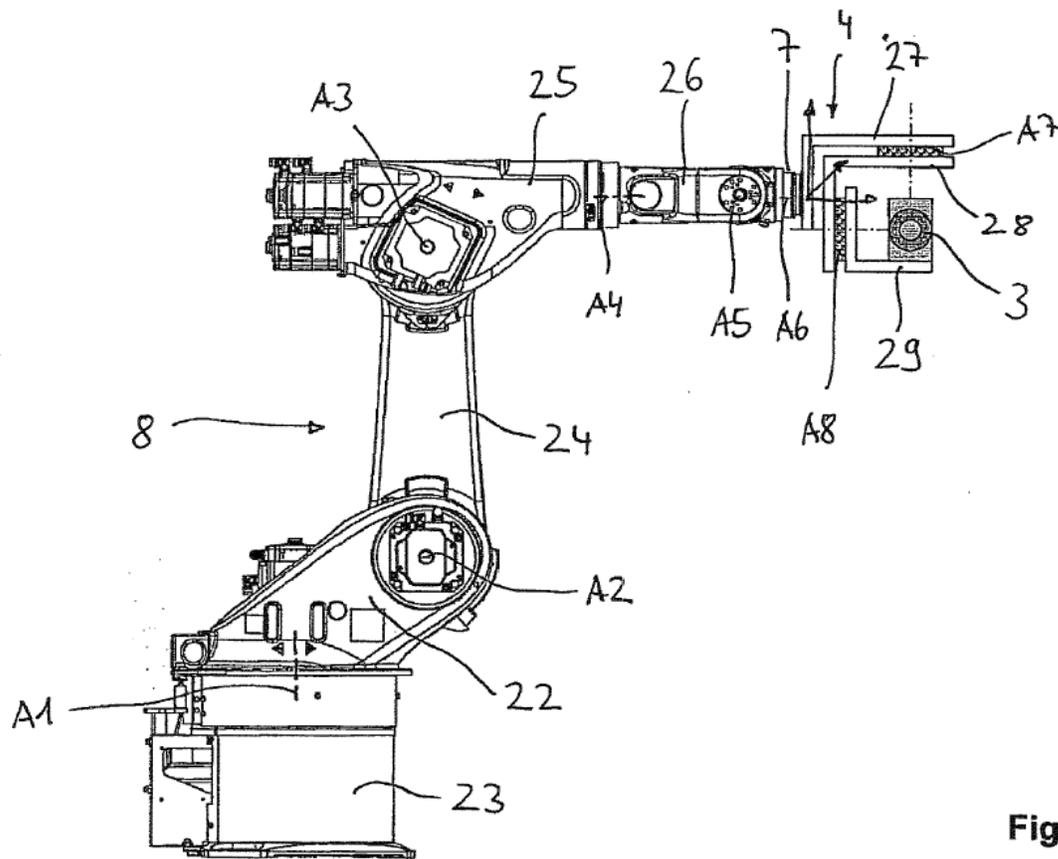


Fig. 3

Figure 3 of Fritsch illustrates a “camera robot” according to a disclosed embodiment. Fritsch ¶¶ 46, 52. As shown in Figure 3, Fritsch describes a six-shaft industrial robot constructed as an articulated-arm robot. Fritsch ¶ 52. Of particular note, Fritsch describes a camera (3) is attached to camera holder (29). Fritsch ¶ 53. Fritsch describes the camera holder (29) is supported by pivoting structure (28), which is rotatably supported on connecting plate (27) by an axis (A7). Fritsch ¶ 53.

The Examiner finds camera holder (29) teaches the claimed support structure including a camera opening to allow the camera to capture an image through the camera opening and, further that the camera opening includes an inner surface sized to rotatably mate with an outer surface of the

camera. Final Act. 7–8. The Examiner explains that because Fritsch describes the pivoting structure (28) is rotatably supported on connecting plate (27), and the camera holder (29) is supported by pivoting structure (28), it follows that the camera (3) is also rotatably supported along with pivoting structure (28). Ans. 16. In addition, the Examiner states a camera opening having an inner surface to rotatably mate with an outer surface of the camera is “inherently disclosed because cameras have an inner surface and an outer surface that accept the lens barrel which allows the camera to take images as well as rotate.” Ans. 16.

As relied on and explained by the Examiner, we agree with Appellant that Fritsch fails to teach the claimed support structure including a camera opening to allow the camera to capture an image through the opening and, further, that has an inner surface of the opening sized to rotatably mate with an outer surface of the camera. Instead, as described by Fritsch, the camera is merely disposed on a flange or camera support. *See* Fritsch ¶ 1, Fig. 3.

When construing claim terminology during prosecution before the Office, claims are to be given their broadest reasonable interpretation consistent with the Specification, reading claim language in light of the Specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). However, the broadest *reasonable* interpretation differs from the broadest *possible* interpretation. *In re Smith Int’l, Inc.*, 871 F.3d 1375, 1383 (Fed. Cir. 2017). The correct inquiry in giving a claim term its broadest reasonable interpretation in light of the specification is “an interpretation that corresponds with what and how the inventor describes his invention in the specification, *i.e.*, an interpretation that is ‘consistent with the

specification.” *Smith*, 871 F.3d at 1382–83 (quoting *In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997)). Additionally, we are mindful that limitations are not to be read into the claims from the Specification. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993).

Thus, to the extent the Examiner finds the camera support (or flange) of Fritsch is open and therefore includes a camera opening, consistent with the Specification, we do not find that such opening further includes an inner surface sized to rotatably mate with an outer surface of the camera.

Because we find it dispositive that the Examiner has not shown by a preponderance of evidence that Fritsch teaches or reasonably suggests the claimed support structure including a camera opening, we do not address other issues raised by Appellant’s arguments related to these claims. *See Beloit Corp. v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir. 1984) (finding an administrative agency is at liberty to reach a decision based on “a single dispositive issue”).

For the reasons discussed *supra*, we are persuaded of Examiner error. Accordingly, we do not sustain the Examiner’s rejection of independent claim 1. For similar reasons, we do not sustain the Examiner’s rejection of independent claim 12, which recites commensurate limitations. In addition, we do not sustain the Examiner’s rejection of claims 2–8 and 13–15, which depend directly or indirectly therefrom.

Claims 9–11

Independent claim 9 generally relates to a camera support structure comprising, *inter alia*, “an actuator connectable to the camera to adjust the rotational alignment of the camera along an imaging axis of the camera” and

a processor to “actuate the actuator to adjust the rotational alignment of the camera to an aligned position based on the received data.”³

The Examiner finds Fritsch teaches servo amplifiers that are actuated to adjust the pan/tilt head to which a camera/camera support are attached. Final Act. 5 (citing Fritsch ¶¶ 49–51, Figs., 1b, 3, and 5). Further, the Examiner finds that “‘actuating the actuator to adjust the rotational alignment of the camera to an aligned position based on the received data,’ [is] a method [that] is well known in the art.” Final Act. 6. In addition, the Examiner finds Fritsch teaches the position of the camera may be determined and moved via an adjustable height stand. Final Act. 6 (citing Fritsch ¶¶ 27–29).

As an initial matter, we agree with Appellant (*see* App. Br. 14) that the Examiner has not provided sufficient technical reasoning or evidence to support a finding that actuating the actuator to adjust the rotational alignment of the camera based on the received data is “well known in the art.” *See* Final Act. 6; *see also Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1361–62 (Fed. Cir. 2016) (cautioning against relying on common sense in an obviousness analysis to find a missing claim limitation).

Additionally, Appellant asserts, and we agree, Fritsch, as relied on by the Examiner, does not disclose or suggest rotating the camera based on data

³ In the event of further prosecution, we leave it to the Examiner to determine whether there is sufficient antecedent basis under 35 U.S.C. § 112(b) for “the processor” recited in independent claim 9. Although the Board is authorized to reject claims under 37 C.F.R. § 41.50(b), no inference should be drawn when the Board elects not to do so. *See* Manual of Patent Examining Procedure (MPEP) § 1213.02 (9th ed. Rev. 08.2017, Jan. 2018).

received by the camera. App. Br. 14–15. The Examiner does not respond to Appellant’s assertion. *See* Ans. 19.

For the reasons discussed *supra*, we are persuaded of Examiner error. Accordingly, we do not sustain the Examiner’s rejection of independent claim 9. In addition, we do not sustain the Examiner’s rejection of claims 10 and 11, which depend therefrom.

DECISION

Claims Rejected	Basis	Affirmed	Reversed
9–11	35 U.S.C. § 103, Fritsch		9–11
1–8 and 12–15	35 U.S.C. § 103, Fritsch and Johnson		1–8 and 12–15
Overall Outcome			1–15

REVERSED