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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes application details for Yohei MATSUZAWA and examiner information for SONG, HOON K.

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* YOHEI MATSUZAWA

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Appeal 2019-001507  
Application 14/730,713  
Technology Center 2800

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Before ROMULO H. DELMENDO, MICHAEL P. COLAIANNI, and  
GEORGE C. BEST, *Administrative Patent Judges*.

BEST, *Administrative Patent Judge*.

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant<sup>1</sup> appeals from the Examiner's decision to reject claims 1–3, 5 and 9–11 of Application 14/730,713.<sup>2</sup> Final Act. (September 5, 2017). We have jurisdiction under 35 U.S.C. § 6(b).

For the reasons set forth below, we *reverse*.

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<sup>1</sup> We use the word “Appellant” to refer to “Applicant” as defined in 37 C.F.R. § 1.42. Appellant identifies Toshiba Medical Systems Corporation as the real party in interest. Appeal Br. 1.

<sup>2</sup> Appellant has elected not to appeal the rejection of claim 4. Appeal Br. 4.

## BACKGROUND

The '713 Application describes an x-ray computed tomography apparatus. Spec. 1. To improve image quality, an x-ray computed tomography apparatus is designed to reduce gantry vibration when the gantry rotates. *Id.* The need to reduce gantry vibration is especially acute when a moving organ such as the human heart must be scanned with good image quality because such scans require high-speed rotation of the gantry. *Id.* The Specification describes x-ray computed tomography apparatuses that have reduced outer shape size and weight and can still rotate at high speed. *Id.* at 2.

Claim 1 is representative of the '713 Application's claims and is reproduced below from the Claims Appendix of the Appeal Brief.

1. An X-ray computed tomography apparatus, comprising:
  - an annular rotating unit on which an X-ray tube and an X-ray detector are configured to be mounted;
  - a first frame configured to support the rotating unit so as to allow the rotating unit to rotate about a rotation axis;
  - a base stand configured to support the first frame from a floor surface;
  - a gantry arm coupled to the base stand and one of half portions of the first frame divided by a horizontal axis perpendicular to the rotation axis; and
  - a second frame coupled to the gantry arm and the other of the half portions of the first frame.*

Appeal Br. 9 (emphasis added).

## REJECTION

On appeal, the Examiner maintains the following rejection:

Claims 1–3, 5, and 9–11 are rejected under 35 U.S.C. § 102(a)(2) as anticipated by Theiss.<sup>3</sup> Final Act. 3–6.

## DISCUSSION

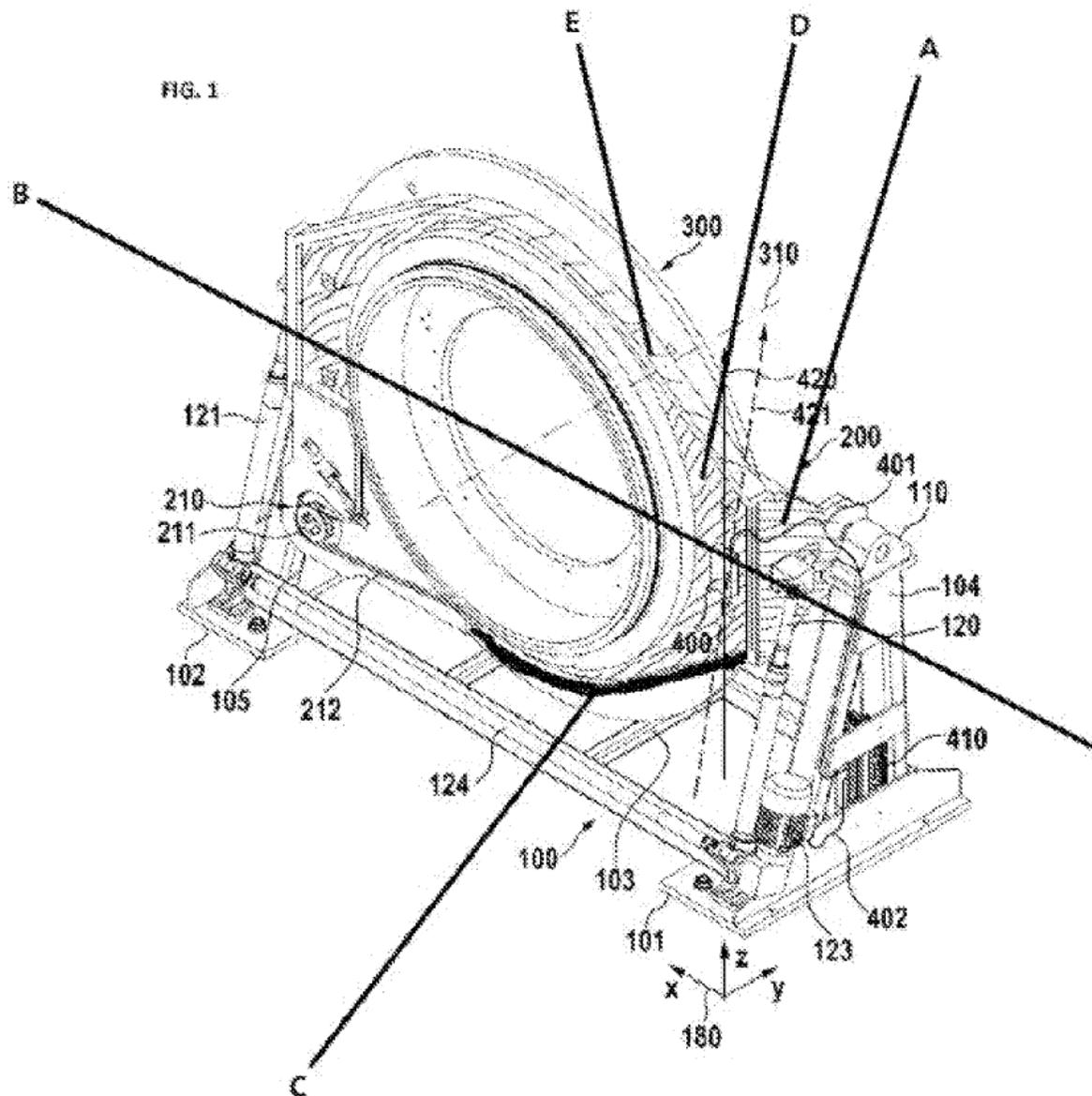
Appellant presents separate arguments for the patentability of independent claims 1, 10, and 11. We address each of these claims below.

*Claim 1.* Appellant argues that the rejection of claim 1 as anticipated by Theiss should be reversed because Theiss does not disclose the claimed “second frame coupled to the gantry arm and the other of the half portions of the first frame (in addition to having a gantry arm coupled to the base stand in one of [the] half portions of the first frame).” Appeal Br. 6 (emphasis omitted).

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<sup>3</sup> US 2014/0016758 A1, published January 16, 2014.

In rejecting claim 1, the Examiner provided an annotated version of Theiss's Figure 1, which we reproduce below.



Theiss's Figure 1 depicts a tiltable gantry of a CT scanner. Theiss ¶ 16. The Examiner has annotated Figure 1 to explain the basis for the rejection. Final Act. 3-4.

According to the Examiner, Theiss describes an x-ray computed tomography apparatus comprising an annular rotating unit 300 on which an x-ray tube and an x-ray detector are configured to be mounted. Final Act. 3.

The Examiner found that Theiss's Figure 1 includes a portion labeled by the Examiner as (D) that corresponds to the claimed first frame. *Id.* at 3. The Examiner further found that Figure 1 depicts "base stand 100, 104 configured to support the first frame from a floor surface." *Id.* The Examiner also found that Figure 1 depicts "a gantry arm (A) coupled to base stand 104" and the upper half portion of first frame (D), which is divided by a horizontal axis (B) perpendicular to the rotation axis. *Id.* The Examiner additionally found that Theiss's Figure 1 depicts a second frame (C) coupled to the gantry arm (A) and the bottom half portion of first frame (D). *Id.*

We begin by considering the meaning of the claim language "coupled to." During prosecution, the PTO gives the language of the proposed claims the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account any definitions or other enlightenment provided by the written description contained in the applicant's specification. *In re Morris*, 127 F.3d 1048, 1054–55 (Fed. Cir. 1997).

In the context in which it is used in the '713 Application's Specification, the verb "couple" means "to fasten together." *See, e.g., Couple | Definition of Couple by Merriam-Webster, Merriam-Webster.com* (September 23, 2019) <https://www.Merriam-Webster.com/dictionary/couple>. The Specification states that in the claimed apparatus the gantry arms and reinforcing frames "are coupled to each other with, for example, fastening tools such as screws." Spec. 11. The Specification also states that, as an alternative to being coupled to the gantry arm and the first frame, the second frame can be integrally formed with one or both of those parts. *See, e.g., id.* at 9–11. The Specification, therefore, distinguishes between integral formation and individual parts that are coupled together. In view of the

foregoing, we conclude that the claim term “coupled to” refers to individual pieces that are mechanically connected in some manner, e.g., pieces that are screwed or bolted together. Thus, we conclude that claim 1 requires that the gantry arm be fastened to the base stand, one of the half portions of the first frame, and the second frame. Claim 1 also requires that the second frame be fastened to the other half portion of the first frame.

We have reviewed the Examiner’s explanation of the basis for the rejection of claim 1. The Examiner does not explain the basis for the finding that Theiss describes the gantry arm as coupled to the base stand, one of the half portions of the first frame and the second frame or the second frame being coupled to the other half portion of the first frame. We have also examined Theiss’s Figure 1 and Specification. We agree with the Examiner’s inherent finding that Figure 1 shows the gantry arm (identified as portion C in the annotated version of Figure 1 reproduced above) rotatably connected to base stand 104. We, however, cannot find any support for the finding that the gantry arm is coupled to one of the half portions of the first frame as opposed to being integrally formed with the first frame. Similarly, the portion of Theiss’s apparatus that the Examiner identifies as corresponding to the second frame appears to be the integrally formed rim at the edge of the plate that the Examiner identifies as corresponding to the first frame. This rim also appears to be integrally formed with the gantry arm.

For the reasons set forth above, we determine that the Examiner erred by finding that Theiss describes “a gantry arm coupled to . . . one of half portions of the first frame” and “a second frame coupled to the gantry arm and the other of the half portions of the first frame.”

We, therefore, reverse the rejection of independent claim 1 and of dependent claims 2, 3, 5, and 9, which depend from claim 1.

*Claim 10.* For reasons set forth above, we conclude that the Examiner erred by finding that Theiss describes “a gantry arm coupled to . . . the first frame and including a first portion . . . configured to be coupled to one of half portions of the first frame . . . and a second portion . . . configured to be coupled to the other of the half portions of the first frame.” We, therefore, reverse the rejection of claim 10 as anticipated by Theiss.

*Claim 11.* For the reasons set forth above, we conclude that the Examiner erred by finding that Theiss describes an x-ray computed tomography apparatus having a first frame “wherein the one of the half portions of the first frame has a bent structure configured to be coupled to the gantry arm.” We, therefore, reverse the rejection of claim 11 as anticipated by Theiss.

### CONCLUSION

In summary:

<b>Claims Rejected</b>	<b>Basis</b>	<b>Affirmed</b>	<b>Reversed</b>
1-3, 5, and 9-11	§ 102(a)(2) Theiss		1-3, 5, and 9-11

REVERSED