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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/262,872	04/28/2014	Jeffrey L. Hilpert	3260-00300	8825

62763 7590 08/31/2020

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ART UNIT	PAPER NUMBER
1774	

MAIL DATE	DELIVERY MODE
08/31/2020	PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JEFFREY L. HILPERT

Appeal 2019-006041
Application 14/262,872
Technology Center 1700

BEFORE ROMULO H. DELMENDO, BEVERLY A. FRANKLIN, and JANE E. INGLESE, *Administrative Patent Judges.*

FRANKLIN, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Pursuant to 35 U.S.C. § 134(a), Appellant[1] appeals from the Examiner's decision to reject claims 1, and 16–19. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

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[1] We use the word Appellant to refer to "applicant" as defined in 37 C.F.R. § 1.42(a). Appellant identifies the real party in interest as HilFlo, LLC. Appeal Br. 3.

CLAIMED SUBJECT MATTER

Claim 1 is illustrative of Appellant's subject matter on appeal and is set forth below:

> 1. A torque sensor for measuring the torque applied to a pinion gear of a planetary gearbox for a decanter centrifuge having a torque sensing assembly which includes a torque sensor arm and an over center lever arm comprising:
>
> a body having a first stem portion adapted to be received in a circular ring member located at a first end of the over center lever arm and having a first cross-sectional area and a head portion adapted to rest against a first end of the torque sensor arm having a second cross-sectional area larger than that of the stem portion; and
>
> a force sensor embedded in the head portion of the body and having a pair of electrical contacts whereby the torque on the pinion gear will be measured by the force sensor.

REFERENCES

The prior art relied upon by the Examiner is:

Name	Reference	Date
Häfner	US 4,644,805	Feb. 24, 1987
Miyoshi	US 7,668,669 B2	Feb. 23, 2010
Begale et al. "Begale"[2]	EP 1 136 804 A2	Sept. 26, 2001
Omega Reaction Torque Cell TQ201, http://www.omega.com/pptst/TQ201.html. _Internet Archive_. https://web.archive.org/Web/20130901203012/http://www.omega.com/pptst/TQ201.html. Sept. 1, 2013, July 25, 2017 "Omega."		
Tekscan, Tek.scan FlexiForce Sensors, retrieved from tekscan.com/flexible-force-sensors, dated March 25, 2014. Submitted by Applicant on 2 November 2016 "Tekscan."		

REJECTIONS[3]

1. Claims 1 and 16 are rejected under 35 U.S.C. §103 as being unpatentable over Begale in view of Häfner.

2. Claim 1 is rejected under 35 U.S.C. §103 as being unpatentable over Begale in view of Häfner and Omega.

3. Claims 17–19 are rejected under 35 U.S.C. §103 as being unpatentable over Begale in view of Häfner or Begale in view of Häfner and Omega, as applied to claim 1 above, and further in view of Miyoshi.

4. Claim 18 is rejected under 35 U.S.C. §103 as being unpatentable over Begale in view of Häfner or Begale in view of Häfner and Omega and further in view of Miyoshi, as applied to claim 17 above, and further in view of Tekscan.

[2] We use the name "Begale" to avoid confusion, but note this is not the first named inventor of this reference.
[3] A rejection under 35 U.S.C. § 112(b) of claims 1 and 16–19 has been withdrawn. Ans. 11; Final Act. 2–3.

OPINION

We review the appealed rejections for error based upon the issues identified by Appellant and in light of the arguments and evidence produced thereon. *Ex parte Frye*, 94 USPQ2d 1072, 1075 (BPAI 2010) (precedential), *cited with approval in In re Jung*, 637 F.3d 1356, 1365 (Fed. Cir. 2011) ("[I]t has long been the Board's practice to require an applicant to identify the alleged error in the examiner's rejections."). After considering the evidence presented in this Appeal (including the Examiner's Answer, the Appeal Brief, and the Reply Brief), we are persuaded that Appellant identifies reversible error. Thus, we reverse the Examiner's rejections and add the following primarily for emphasis.

We refer to pages 4–9 of the Answer regarding the Examiner's statement of the rejection for Rejection 1. Therein, the Examiner states that Begale discloses a torque sensor 10 capable of measuring the torque applied to a pinion gear of a planetary gearbox for a decanter centrifuge having a torque sensing assembly, which includes a torque sensor assembly, which includes a torque sensor arm and an over center lever arm comprising: a body having a first stem portion (narrower portion on elements 22 and/or 24 in Figure 3 of Begale), capable of being adapted to be received in a circular ring member located at a first end of the over center lever arm and having a first cross-sectional area, and a head portion (wider portion on elements 22 and/or 24 in Fig. 3), capable of being adapted to rest against a first end of the torque sensor arm having a second cross-sectional area larger than that of the stem portion; and a force sensor in the body and having a pair of electrical contacts 30 and 32, whereby the torque on the pension gear is capable of being measured by the force sensor. Ans. 4. The Examiner states

that Begale does not disclose that the force sensor is embedded in the head portion of the body. Ans. 4.

The Examiner states that Häfner discloses a force sensor 5 and/or 15 embedded in the head portion 1,2, 11 and/or 12 of the body (Fig. 1 and 2). Ans. 4.

The Examiner concludes that it would have been obvious to have modified the sensor of Begale to embed the force sensor as taught by Häfner for the purpose of improving sealing issues (Häfner, col. 1 ll. 30–49). Ans. 4.

To reiterate, Appellant's claim 1 recites:

> 1. A torque sensor for measuring the torque applied to a pinion gear of a planetary gearbox for a decanter centrifuge having a torque sensing assembly which includes a torque sensor arm and an over center lever arm comprising:
>
> a body having a first stem portion adapted to be received in a circular ring member located at a first end of the over center lever arm and having a first cross-sectional area and a head portion adapted to rest against a first end of the torque sensor arm having a second cross-sectional area larger than that of the stem portion; and
>
> a force sensor embedded in the head portion of the body and having a pair of electrical contacts whereby the torque on the pinion gear will be measured by the force sensor.

Appellant points out that Begale does not suggest the claimed torque sensor having a body 50 having two portions (stem portion 61 and head portion 52) with a sensor element 53 embedded in the head portion 52. Appeal Br. 6. Appellant argues that Begale also does not suggest a body having the stem portion 61 adapted to be inserted into a ring member 57 of an over center lever arm 58, and a head portion 52 adapted to rest upon a flat

surface on the lower portion 63 of torque arm 51 as shown in Appellant's Figure 5. Reply Br. 2. Appellant states that sensor 50 is embedded in the head portion 52. Appellant states that due to this geometry, the force sensor can be held in place between the torque arm and lever arm 56. *Id.* Appellant's Figure 5 is reproduced below (with annotations).

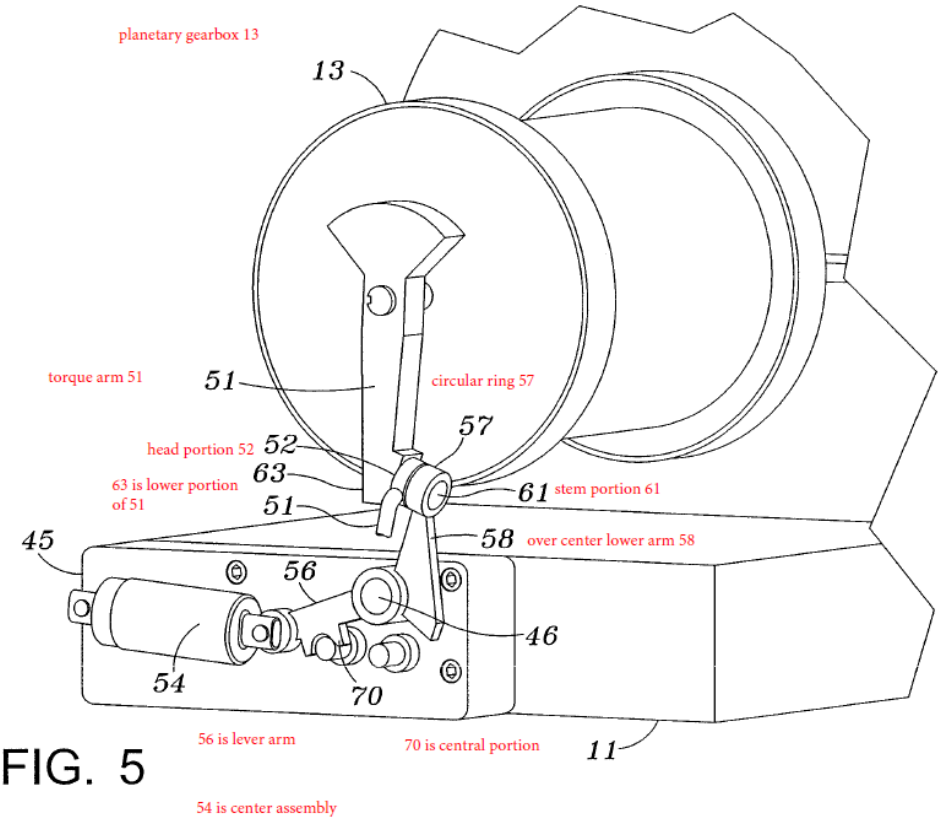

FIG. 5

FIG. 5 is a perspective view of a torque sensor according to an embodiment of the invention connected to the centrifuge torque sensing mechanism.

We are persuaded by the aforementioned arguments made by Appellant. The Examiner does not point to specific teachings in Begale that correlate with the aforementioned claimed structure (claimed elements) recited in claim 1. The Examiner states that the claimed functional language and intended use are met by the applied art because the claimed structure is disclosed in the applied art (Ans. 4-6), but, in fact, as pointed out by Appellant, the Examiner has not made adequate findings that Begale teaches the claimed structure in order to say that the claimed functional language and intended use are inherent. The Examiner's reliance upon Häfner does not cure the stated deficiencies of Begale.

In view of the above, we reverse Rejection 1. We also reverse Rejections 2–4 for the same reasons.

CONCLUSION

We reverse the Examiner's decision.

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/Basis	Reversed	Affirmed
1, 16–19	112(b)	Indefinite	1, 16–19	
1, 16	103	Begale, Häfner	1, 16	
1	103	Begale, Häfner, Omega	1	
17–19	103	Begale, Häfner, Omega, Miyoshi	17–19	
18	103	Begale, Häfner, Omega, Miyoshi, Tekscan	18	

Overall Outcome			**1, 16–19**	

REVERSED