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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/908,792	05/26/2005	Stanley M. Herzog	9980-10002	5792

27526 7590 01/24/2013

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EXAMINER	
BROADHEAD, BRIAN J	

ART UNIT	PAPER NUMBER
3665	

NOTIFICATION DATE	DELIVERY MODE
01/24/2013	ELECTRONIC

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte STANLEY M. HERZOG, RONALD A. SCHMITZ,
IVAN E. BOUNDS, and RANDY L. POGGEMILLER

Appeal 2010-008110
Application 10/908,792
Technology Center 3600

Before LINDA E. HORNER, JOHN W. MORRISON, and
SCOTT E. KAMHOLZ, *Administrative Patent Judges*.

HORNER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Stanley M. Herzog et al. (Appellants) seek our review under 35 U.S.C. § 134 of the Examiner's decision rejecting claims 1-6. We have jurisdiction under 35 U.S.C. § 6(b). An oral hearing was held on January 10, 2013.

We AFFIRM.

THE INVENTION

Appellants' claimed invention relates to "a GPS-based system for controlling logistics in connection with a vehicle." Spec., [Para 2]. Claim 1, reproduced below, is representative of the subject matter on appeal.

> 1. A system for distributing ballast along a railway having at least one area with ballast deficiency, comprising:
>
> a railcar for traveling on the railway, said railcar having a hopper for containing ballast;
>
> a discharge mechanism for said hopper having an open condition for discharging ballast and a closed condition for retaining ballast in the hopper;
>
> travel distance measuring means for measuring the distance said railcar has traveled from a location that is a known distance from said area; and
>
> means for generating a control signal effecting the open condition of said discharge mechanism when said travel distance measuring means determines that the railcar has reached said area, maintaining said open condition for a duration during which said travel distance measuring means determines that the railcar is traversing said area, and then effecting the closed condition of said discharge mechanism when said travel distance measuring means determines that the railcar has reached the end of said area.

THE EVIDENCE

The Examiner relies upon the following evidence:

Ward	US 5,359,942	Nov. 1, 1994
Kerkhoff	US 5,424,957	Jun. 13, 1995
Heggestad	US 5,533,695	Jul. 9, 1996
Bounds	US 5,657,700	Aug. 19, 1997

Anderson US 6,027,053 Feb. 22, 2000

Appellants present evidence in the form of a declaration of one of the named inventors, Ivan E. Bounds. App. Br. 49-53 (Bounds Decl.).

THE REJECTIONS

Appellants seek review of the following rejections:

1. Claims 1 and 2 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bounds and Anderson.
2. Claims 1 and 2 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ward and Kerkhoff.
3. Claims 3-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Bounds, Anderson, and Heggestad.
4. Claims 3-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ward, Kerkhoff, and Heggestad.

ISSUE

Appellants argue claims 1 and 2 as a group for each of the first and second grounds of rejection. As such, we select claim 1 as the representative claim, and dependent claim 2 stands or falls with claim 1 for each of these grounds of rejection. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2011). With regard to the third and fourth grounds of rejection, Appellants rely on the arguments in support of patentability of claim 1 over the first and second grounds of rejection, and provide that "[n]o argument is made regarding use of Heggestad in th[ese] rejection[s]." App. Br. 29-30. As such, the outcome of this appeal turns on our determination of the propriety of the Examiner's first and second grounds of rejection as applied to claim 1.

Appellants argue that the Examiner erred in rejecting claim 1 as being unpatentable over Bounds and Anderson and over Ward and Kerkhoff because both Anderson and Kerkhoff are non-analogous art. App. Br. 18-28. The Examiner determined that Appellants defined the field of invention too narrowly in limiting the field to railway ballast systems and that Appellants construed the references too narrowly in limiting their teachings to agricultural applications. Ans. 10-17. The Examiner defined the field of invention as encompassing systems to "control[] where to dispense a product from some type of vehicle" and determined that both Anderson and Kerkhoff are within this field of endeavor. Ans. 13. *See also* Ans. 14 ("the field of art that is applicable to the invention is not just railway ballast systems, [it] is the more generic field of art that addresses the problem of controlling the amount of material being spread or dispensed from a vehicle.") The Examiner also noted that the Board, in an appeal in related application 10/742,187, previously determined that Anderson is analogous art to the claimed system for distributing ballast along a railway. Decision in Appeal 2007-1787, dated Aug. 29, 2007.[1]

[1] In this prior Board decision, the Board determined that "Bounds and Anderson are both concerned with the problem of dispensing aggregate in a controlled manner and thus are reasonably pertinent to the particular problem with which Appellants are involved and are analogous art." Prior Decision at 10. Appellants present evidence in the present appeal, by way of the Bounds Declaration, to show that railway ballast is larger and heavier than the "aggregate" discussed in Anderson and Kerkhoff, so as to argue that these references are not reasonably pertinent to solving the problem of dispensing railway ballast. Bounds Decl., paras. 18-19.

The issue presented by this appeal is whether Anderson and Kerkhoff are analogous art to Appellants' claimed invention.

PRINCIPLES OF LAW

"The identification of analogous prior art is a factual question." *In re Bigio*, 381 F.3d 1320, 1324 (Fed. Cir. 2004) (citing *In re GPAC, Inc.*, 57 F.3d 1573, 1577 (Fed. Cir. 1995)).

> Two separate tests define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor's endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved. *In re Deminski*, 796 F.2d 436, 442 (Fed. Cir. 1986); *see also In re Wood*, 599 F.2d 1032, 1036 (CCPA 1979).

In re Bigio, 381 F.3d at 1325. "Th[e field of endeavor] test for analogous art requires the PTO to determine the appropriate field of endeavor by reference to explanations of the invention's subject matter in the patent application, including the embodiments, function, and structure of the claimed invention." *Id.* at 1325 (citations omitted).

ANALYSIS

The Specification describes the field of the invention as "relat[ing] generally to the field of logistics, and more particularly to a GPS-based system for controlling logistics in connection with a vehicle." Spec., [Para 2]. The Specification describes that "[t]he field of logistics management is relatively broad and includes a wide range of systems for tracking, controlling and reporting logistics operations involving various types of

materials. For example, loading and unloading materials are important logistics operations in the transportation field." *Id.* at [Para 3]. The Specification further describes that "[a]utomation is a primary goal of many logistics management systems" and that "computerized systems are available for controlling material loading and unloading operations." *Id.* at [Para 4]. The Specification further describes that "[t]he global positioning system (GPS) is a significant recent development in the field of vehicle navigation" and that "GPS-based navigation systems are in widespread use, particularly in commercial vehicles." *Id.* at [Para 5]. "The present invention applies the precise positioning features of current GPS equipment to the logistics management field, and more particularly to material loading and unloading operations." *Id.* at [Para 6].

In the Summary of the Invention, the Specification describes that "[i]n the practice of the present invention, a logistics system is provided for a vehicle, such as a railcar." *Id.* at [Para 7]. The Summary continues by describing that the logistics system includes a position control subsystem mounted on board the vehicle, a hydraulic actuator subsystem, a ballast discharge mechanism, and a global positioning system. *Id.* The Summary further describes that in the ballast railcar embodiment of the invention, hopper doors are opened and closed to direct the flow of ballast therefrom onto a rail track, the GPS is used for determining vehicle position, and a logistics operation is performed at a predetermined location. *Id.*

The Specification describes the "principal objects and advantages of the present invention" as including:

> providing a logistics management system and method; providing such a system and method which utilize the global positioning system (GPS); providing such a system and method which are *adaptable to various vehicles*; providing such a system and method which are *adapted for use in conjunction with material loading and unloading operations*; providing such a system and method which are adapted for controlling material discharge from railcars; providing such a system and method which are adapted to utilize vehicle movement for positioning purposes; providing such a system and method which are adapted for use with various positioning systems; providing such a system and method which utilize commercially available GPS equipment; providing such a system and method which utilize a computer mounted on board a vehicle for logistics management; providing such a system and method which can reduce the labor required for logistics operations; providing such a system and method which can be retrofit on existing vehicles; providing such a system and method which can be installed on new vehicles; providing such a system and method which are *adaptable for use with various discharge control means in connection with unloading operations*; providing such a system and method which include data storage means and steps for storing data for use in conjunction with logistics operations; and providing such a system and method which are economical and efficient.

Id. at [Para 8] (emphasis added).

As such, the Specification does not limit the field of invention, the discussion of the background art, the summary of the invention, or the principal objects and advantages of the invention to the field of railway ballast application systems. Instead, the Specification acknowledges the general applicability of the disclosed logistics system and method to various material loading and unloading operations. Even the Detailed Description of

the Preferred Embodiments of the Specification, which discloses an embodiment of the logistics system and method for use with railway ballast application equipment, provides, "[w]ithout limitation on the generality of useful applications of a logistics system 2, it is shown installed on a railcar 4 for controlling unloading operations thereof." *Id.* at [Para 17].

The operation of Appellants' logistics system and method does not require any particular focus on railway ballast discharge equipment. In fact, Appellants' acknowledge in the Specification that such equipment is known. *Id.* at [Para 23] (citing U.S. Patent No. 5,657,700 to Bounds for the construction and function of the hopper door assemblies 40). The Specification describes the method of operation as follows:

> [T]he on-board position control subsystem 8 is preprogrammed with various data corresponding to the operation of the logistic system 2. For example, discharge operations of the ballast discharge mechanism 12 can be programmed to occur at particular locations. Thus, ballast can be applied to a particular section of rail track 5 by inputting its GPS coordinates and programming the position control subsystem 8 to open the hopper door assemblies 40 in the desired directions and for predetermined durations. The GPS signals received by the on-board position control subsystem 8 can provide relatively precise information concerning the position of the railcar 4.

Id. at [Para 24]. This method of operation could apply equally to other vehicles having a discharge mechanism.

The logistics systems of Anderson and Kerkhoff have essentially the same structure and function as the logistics system of the claimed invention and thus are in the same field of endeavor as Appellants' claimed invention.

While claim 1 recites a railcar having a hopper for containing ballast and a discharge mechanism for discharging and retaining ballast, as discussed *supra* these features were known in the art and the Specification does not limit the applicability of the system to this particular vehicle or discharge mechanism. The systems of Anderson and Kerkhoff likewise include a vehicle having a hopper and discharge mechanism for discharging and retaining material from and within the hopper. The remainder of claim 1 calls for a travel distance measuring means and means for generating a control signal to control the discharge mechanism to open or close depending on the position of the vehicle as determined by the travel distance measuring means. The Examiner found that both Anderson and Kerkhoff disclose a travel distance measuring means and means for generating a control signal as called for in claim 1. Ans. 5-8. Appellants do not dispute these findings.

As such, Anderson and Kerkhoff each have substantially the same structure and function as Appellants' invention in that the systems of Anderson and Kerkhoff use a travel distance measuring means to determine the location of a vehicle and use means for generating a control signal to open and close a discharge mechanism on the vehicle so as to retain or discharge material from the vehicle based on the position of the vehicle as determined by the travel distance measuring means. For these reasons, we find that Anderson and Kerkhoff are in the same field of endeavor as the claimed invention and thus are analogous art under the first part of the analogous art test. *See, e.g.*, *In re Deminski*, 796 F.2d at 442 (finding that

"[the prior art] pumps and [the claimed] compressors have essentially the same function and structure: they move fluids by means of a double-acting piston, a cylinder, and valves."). *See also In re Wood*, 599 F.2d at 1036 (finding that prior art references relating to subsonic variable venturi carburetors are clearly within the field of the inventors' endeavor despite Appellants' assertions suggesting otherwise which contradict statements made in the background of invention section of their own specification and despite the fact that the claimed invention recited that the velocity of the air and fuel mixture through the throat zone in the claimed device is sonic).

In addition to the broad definition of the field of invention provided in the Specification, the prior art also supports the finding that the field of endeavor is not limited to railway ballast application equipment. For example, as noted by the Examiner, Ward discloses applicability of the railway ballast application control system for use with other hydraulic drive and positioning applications such as large trucks and similar applications. Ans. 8 (citing Ward, col. 1, ll. 26-31). *See also* Ans. 17 (Examiner finding Ward supports the view that dispensing of railway ballast is part of the larger field of vehicle dispensing). This teaching in Ward supports the view that the field of endeavor is broader than spreading ballast on a rail bed.

Appellants' evidence provided in the Bounds Declaration is directed to the second part of the analogous art test. In particular, the Declaration is based on the presupposition that the field of endeavor is limited to railway ballast application equipment and purports to show why Anderson and Kerkhoff are not reasonably pertinent to the problem facing the inventors.

See Bounds Decl., paras. 12-14 (attesting to the fact that neither Mr. Bounds, nor to his knowledge others in the railway industry, have referred to or considered equipment such as that disclosed in Anderson or Kerkhoff when designing or developing railway ballast application equipment). In view of Appellants' description of the invention provided in the Specification, the field of invention is directed to logistics management in connection with a vehicle in material loading and unloading operations. *See* Ans. 13 (defining field of art at "controlling where to dispense a product from some type of vehicle"). The Bounds Declaration presupposes that the field of endeavor is limited to the design and development of railway ballast application equipment despite the contradictory disclosure in the Specification that the invention is not directed specifically to railway ballast application equipment, which was known in the art, but generally to logistics systems for material loading and unloading using known material discharge mechanisms. *See also* Bounds Decl., paras. 15-16 (providing Mr. Bounds's opinion as to why the equipment of Anderson and Kerkhoff is not pertinent to railway ballast distribution equipment or the problems associated with distributing railway ballast), and *id.* at paras. 17-21 (providing the reasons for the opinions expressed in paragraphs 15 and 16). The testimony in paragraphs 15-21 appears to be directed solely to the second part of the analogous art test and does not provide persuasive reasons to limit the field of invention to railway ballast application systems. Again, we stress that the focus of the invention as described in Appellants' Specification is on a logistics system to control opening and closing of the discharge mechanism

to distribute materials from the vehicle and not on the particular known railway ballast equipment (e.g., hopper and discharge mechanism) disclosed in the preferred embodiment. For these reasons, we find that Anderson and Kerkhoff are within the same field of endeavor as Appellants' invention and thus are analogous art under the first part of the analogous art test.

CONCLUSION

Anderson and Kerkhoff are analogous art to Appellants' claimed invention.

DECISION

We AFFIRM the decision of the Examiner to reject claims 1-6.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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