

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 32

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MICHAEL J. KEELER

Appeal No. 2000-2064
Application No. 08/781,412

ON BRIEF

Before FRANKFORT, MCQUADE, and NASE, Administrative Patent Judges.

FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's rejection of claims 1, 2, 4 through 7, 9 and 10, all of the claims remaining in this application. Claims 3 and 8 have been canceled.

Appellant's invention relates to a tandem rear axle suspension for trucks and truck-tractors. As noted on page 1 of the specification, the invention more particularly relates to such suspensions wherein a non-reactive, roll compliant drive

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axle suspension having a single axle and equipped with wheel slip sensing and control means is combined with a roll stable, non-drive tag or pusher axle suspension having a single axle and equipped with means for transferring weight to the drive axle suspension. Page 1 of the specification also provides the following definitions of certain of the terms used above:

[t]he term "non-reactive" means that the suspension does not react appreciably to torque forces applied to a drive axle, primarily during acceleration. Being non-reactive substantially eliminates driveline torque induced problems. The term "roll compliant" means that a suspension does not adequately resist the tendency of a vehicle to roll when negotiating sharp turns. On the other hand, a non-reactive suspension has excellent traction characteristics when encountering uneven road conditions due to its roll compliance. The term "roll stable" means the opposite of "roll compliant."

Independent claim 1 is representative of the subject matter on appeal and a copy of that claim can be found in the Appendix to appellant's original brief (Paper No. 19).

The prior art references of record relied upon by the examiner in rejecting the appealed claims are:

Brandt	5,458,359	Oct. 17, 1995
"Trailing Axle Air Ride Suspension." Ridewell Corp. Brochure (April 19, 1990), 2 pages.		

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"Electronic Traction Controller Systems Stop Spinout. . . "
Detroit Automotive ELECTRAC™ Brochure (undated), 2 pages.

Claims 1, 2, 4 through 7, 9 and 10 stand rejected under
35 U.S.C. § 103(a) as being unpatentable over RIDEWELL in view of
Brandt and ELECTRAC.

OPINION

In reaching our decision in this appeal, we have given
careful consideration to appellant's specification and claims, to
the applied prior art references, and to the respective positions
articulated by appellant and the examiner. As a consequence of
our review, we have made the determination which follows.

In rejecting claims 1, 2, 4 through 7, 9 and 10 under
35 U.S.C. § 103(a) as being unpatentable over RIDEWELL in view of
Brandt and ELECTRAC it is the examiner's position (answer, pages
4-6) that RIDEWELL discloses a tandem rear axle suspension system
comprising a drive axle suspension and a roll stable, non-drive
tag axle suspension, wherein both the drive axle suspension and
the non-drive tag axle suspension include an air spring (see the

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"ALL AIR RIDE" embodiment on page 2 of RIDEWELL and as reproduced on page 4 of the examiner's answer). The examiner notes that RIDEWELL lacks a drive axle suspension which is roll compliant. To address this difference, the examiner turns to Brandt, urging that this reference discloses a drive axle suspension (Fig. 1) which is roll compliant. From the collective teachings of RIDEWELL and Brandt, the examiner has concluded that it would have been obvious to one of ordinary skill in the art "to modify RIDEWELL by providing the drive axle with a roll compliant suspension" because this would provide certain advantages noted by the examiner on page 5 of the answer. The examiner also recognizes that the combination of RIDEWELL and Brandt lacks a wheel slip and traction control system including means for transferring weight from the tag axle to the drive axle. In this instance, the examiner relies upon the teachings of ELECTRAC noted on pages 5 and 6 of the answer and concludes that it would have been obvious to one of ordinary skill in the art to further modify RIDEWELL by providing a wheel slip and traction control system like that claimed by appellant because this would provide better traction in slippery conditions (i.e., safer operation).

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Having reviewed and evaluated the applied references, we are in agreement with appellant that the examiner has misapprehended the Brandt patent by concluding that this reference teaches a drive axle suspension that is "roll compliant." In this regard, we agree with appellant's evaluation of Brandt set forth in the paragraph spanning pages 6 and 7 of Paper No. 27, filed May 26, 2000, and also in the reply brief (Paper No. 30, filed July 24, 2000). Like appellant, we are of the view that one of ordinary skill in the art would have understood that the single axle suspension seen in Figures 1 and 2 of Brandt and relied upon by the examiner is sufficiently roll stable so as to be driveable and roadworthy, and to thereby be such as to inherently resist the tendency to roll excessively when negotiating sharp turns. By contrast, appellant's drive axle suspension is said to be "roll compliant," meaning (specification, page 1) that it does not adequately resist the tendency of a vehicle to roll when negotiating sharp turns (i.e., that appellant's drive axle suspension if used alone would be viewed by an artisan as not being roadworthy or safe to drive because of excessive roll (i.e., roll beyond established safety limits) when negotiating sharp turns). This is why appellant combines the "roll compliant" drive axle suspension (5) with a "roll stable" non-

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drive tag or pusher axle suspension (6) to provide a tandem rear axle suspension arrangement for trucks and truck-tractors that is driveable and roadworthy, and which has optimum operating characteristics combined with minimum weight and costs of production and maintenance.

As for the examiner's position (answer, page 7) that because the drive axle suspension of Brandt (Figs. 1 and 2) has a similar arrangement of upper (38) and lower (40) connecting links to that seen in appellant's drive axle suspension "it would follow that it functions in a similar manner as well, i.e., it is 'roll compliant'," we find no basis for this conclusion and view the examiner's position as being fraught with speculation and conjecture. Like appellant, we do not see that the mere presence of these two similarities in construction necessarily or inherently means that Brandt's and appellant's respective suspensions are both "roll compliant" as that term would have been understood by one of ordinary skill in the art when construed in light of appellant's disclosure, especially since the single drive axle suspension of Brandt includes other components, e.g., the Panhard bar (42), that are specifically provided to ensure stability in the lateral direction (col. 5,

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lines 42-50), which components are not present in appellant's drive axle suspension.

In light of the foregoing, we see no basis for one of ordinary skill in the art to have modified the tandem rear axle suspension arrangement of RIDEWELL by the single axle suspension of Brandt so as to result in the drive axle in RIDEWELL having a "roll compliant" suspension. Moreover, even if the additional reference ELECTRAC were combined with RIDEWELL in the manner urged by the examiner, we note that it does not provide for the deficiency we have noted above. Since we have determined that the teachings and suggestions that would have been fairly derived from RIDEWELL, Brandt and ELECTRAC would not have made the subject matter as a whole of claim 1 on appeal obvious to one of ordinary skill in the art at the time of appellant's invention, we must refuse to sustain the examiner's rejection of that claim under 35 U.S.C. § 103(a). It follows that the examiner's rejection of dependent claims 2, 4 through 7, 9 and 10 under 35 U.S.C. § 103(a) based on RIDEWELL, Brandt and ELECTRAC will also not be sustained.

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The decision of the examiner to reject claims 1, 2, 4
through 7, 9 and 10 under 35 U.S.C. § 103(a) is reversed.

REVERSED

CHARLES E. FRANKFORT)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOHN P. MCQUADE)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
)	
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)	
JEFFREY V. NASE)	
Administrative Patent Judge)	

CEF/LBG

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MICHAEL J. MCGEE
COOK, ALEX, MCFARRON, MANZO, and CUMMINGS
200 W. ADAMS
SUITE 2850
CHICAGO, IL 60606