

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RONALD MARK GINN,
DANA D. BRANHAM
and KEITH L. STANLEY

Appeal No. 2000-1841
Application 09/016,738

ON BRIEF

Before PATE, STAAB, and MCQUADE, Administrative Patent Judges.
MCQUADE, Administrative Patent Judge.

DECISION ON APPEAL

Ronald Mark Ginn et al. appeal from the final rejection of claims 1 through 17, all of the claims pending in the application.

THE INVENTION

The invention relates to a compact linkage assembly for operatively connecting a work implement (e.g., a bucket) to

the frame of a work machine (e.g., a wheel loader) without unduly

obstructing the view of the work area from the cab of the machine. Representative claim 1 reads as follows:

1. A linkage assembly for connecting an implement to a frame of a work machine, comprising:

a box-boom lift arm having a frame end portion and an implement end portion, wherein (i) said frame end portion is pivotally couplable to said frame, (ii) said implement end portion is pivotally couplable to said implement, and (iii) said frame end portion includes a first extension and a second extension spaced apart from each other so as to define a first lever space therebetween;

a lift cylinder having a frame end and a lift arm end, wherein (i) said frame end is pivotally couplable to said frame, and (ii) said lift arm end is pivotally coupled to said box boom lift arm;

a rear tilt link having a first end and a second end, wherein said first end is pivotally couplable to said frame;

a rear tilt lever having a cylinder end and a link end, wherein (i) said link end is pivotally coupled to said second end of said rear tilt link, (ii) said rear tilt lever is pivotally coupled to said box boom lift arm at a location which is interposed between said cylinder end and said link end, and (iii) said rear tilt lever extends through said first lever space; and

a tilt cylinder having a lever end and an implement end, wherein (i) said lever end is pivotally coupled to said cylinder end of said rear tilt lever, and (ii) said implement end is mechanically couplable to said implement.

THE PRIOR ART

The references relied on by the examiner as evidence of obviousness are:

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Shook et al. (Shook)	3,487,958	Jan. 6, 1970
Garman	4,768,917	Sep. 6, 1988
Brown	5,400,531	Mar. 28, 1995

THE REJECTIONS

Claim 14 stands rejected under 35 U.S.C. § 112, second paragraph, as failing to particularly point out and distinctly claim the subject matter the appellants regard as the invention.

Claims 1, 4, 8 through 10 and 13 through 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shook in view of Brown.

Claims 2, 3, 5 through 7, 11 and 12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Shook in view of Brown and Garman.

Attention is directed to the appellants' main and reply briefs (Paper Nos. 10 and 14) and to the examiner's answer (Paper No. 11) for the respective positions of the appellants and the examiner with regard to the merits of these rejections.

DISCUSSION

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I. The 35 U.S.C. § 112, second paragraph rejection

The examiner (see page 3 in the answer) considers claim 14 to be indefinite due to a lack of clear antecedent basis for the term "said front links." A review of the claim indicates that the term in question actually is "said front tilt link," and that it does indeed lack a proper antecedent basis. The appellants,

in apparent acquiescence to the examiner's position, have chosen

not to dispute the rejection (see page 2 in the main brief).

Accordingly, we shall summarily sustain the standing 35 U.S.C. § 112, second paragraph, rejection of claim 14.

II. The 35 U.S.C. § 103(a) rejections

Shook, the examiner's primary reference, discloses a loader vehicle 11 comprising a vehicle body 17, an operator station 12,

a bucket 13, lift arms 14, hydraulic lift jacks 19, forward levers 23, links 26, crank arms 29, links 31 and tilt jacks

34, these elements being related as shown in Figure 1. The examiner (see page 4 in the answer) concedes that this assembly does not respond to the limitations in independent claims 1 and 9 requiring (1) the lift arm to be a "box-boom lift arm"¹ having first and second extensions spaced apart to define a first lever space therebetween and (2) the rear tilt lever to extend through the first lever space. In contrast, Shook's link arm consists of bar-like link arms 14 and Shook's rear tilt lever consists of crank arms 29 disposed outwardly of the link arms 14.

Brown discloses an earth-working device composed of a forked dipper arm 10, an earth-working implement 11, and linkage 12. As described in the reference, and shown in Figure 1,

¹ The appellants' specification (page 13) defines the term "box boom lift arm" as meaning

a lift arm assembly fabricated from a number of metal plates such that the lift arm assembly has (i) a generally hollow interior and (ii) the structure of the lift arm assembly has a generally rectangular shaped transverse cross section which extends for a substantial distance along the length of the lift arm assembly.

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[t]he implement 11 is articulatably pivotal around the dipper arm 10 in response to movement of the linkage 12 by hydraulic ram 13.

Forked dipper arm 10 comprises [a] main . . . strut member 15 with furcations or sub-strut members 16,17 extending therefrom. A substantially U-shaped portion 18 is thereby formed between the furcations [column 5, lines 33 through 39].

In proposing to combine Shook and Brown to reject the appealed claims, the examiner concludes that "[i]t would have been obvious to construct each boom 14 in Shook as a box beam with spaces at opposite ends for links 23 and lever 29 in view of the teaching in Brown. See Brown['s] . . . portion 18. Note appellants' claims do not preclude the use of parallel booms" (answer, page 3). The examiner goes on to reason that

the alignment in Shooks [sic] of elements 23 and 29 would lead an artisan to use open spaces at opposite ends of boom 14 in view of the open space [18] taught by Brown. This arrangement using open spaces at opposite ends of boom 14 in Shook to receive link 23 and lever 29 instead of mounting them to the side of the boom would be an obvious substitution of equivalent structures [answer, page 5].

Rejections based on 35 U.S.C. § 103(a) must rest on a factual basis. In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 177-78 (CCPA 1967). In making such a rejection, the examiner has the initial duty of supplying the requisite

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factual basis and may not, because of doubts that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in the factual basis. Id.

As correctly pointed out by the appellants (see page 18 in the main brief), neither Shook nor Brown teaches or suggests a box-boom lift arm having a first extension and a second extension spaced apart to define a first lever space therebetween and a rear tilt lever that extends through the first lever space. The examiner's attempt to rationalize these deficiencies away constitutes a classic case of hindsight reconstruction predicated on speculation and unfounded assumptions as to what the combined teachings of the references would have suggested to one of ordinary skill in the art.

Accordingly, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of claims 1 and 9, or of dependent claims 4, 8, 10 and 13 through 17, as being unpatentable over Shook in view of Brown.

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Inasmuch as Garman affords no cure of the shortcomings in the basic Shook-Brown combination, we also shall not sustain the standing 35 U.S.C. § 103(a) rejection of dependent claims 2, 3, 5 through 7, 11 and 12 as being unpatentable over Shook in view of Brown and Garman.

SUMMARY

The decision of the examiner is affirmed with respect to the 35 U.S.C. § 112, second paragraph, rejection of claim 14, and reversed with respect to the 35 U.S.C. § 103(a) rejections of claims 1 through 17.

AFFIRMED-IN-PART

WILLIAM F. PATE, III)	
Administrative Patent Judge)	
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LAWRENCE J. STAAB)	
Administrative Patent Judge)	INTERFERENCES
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