

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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
ARUN K. SEKSARIA, and WILLIAM C. JONES JR.

Appeal No. 1998-1878
Application No. 08/543,734

HEARD: March 8, 2000

Before ABRAMS, STAAB, and GONZALES, Administrative Patent Judges.

GONZALES, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's final rejection of claims 6, 7, 16 and 17. Claims 8 through 10 and

18 through 20, the only other claims remaining in the application, are objected to as being dependent upon a rejected claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

We REVERSE.

The subject matter on appeal is directed to a multifunction single lever control for a lift truck. Claims 6 and 16, the only independent claims, are illustrative of the subject matter on appeal and are reproduced in an "Appendix" attached to the brief.

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

Habiger	4,036,321	Jul. 19, 1977
Schultz et al.		4,755,100
Jul. 5, 1988		
(Schultz)		

Claims 6, 7, 16 and 17 stand rejected under 35

U.S.C.

§ 103(a) as being unpatentable over Habiger in view of Schultz.

The full text of the examiner's rejection and the response to the arguments presented by appellants appear in the final rejection (Paper No. 19, mailed May 15, 1997) and the answer (Paper No. 23, mailed February 11, 1998), while the complete statement of appellants' arguments can be found in the brief (Paper No. 22, filed October 10, 1997).

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art references, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we conclude that the rejection cannot be sustained.

The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art. See In re Young, 927 F.2d 588, 591, 18

USPQ2d 1089, 1091 (Fed. Cir. 1991) and In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981).

Claim 6 recites a powered industrial lift truck having:

(A) a stand up operator's compartment designed to accommodate an operator standing in the compartment facing partially sideways in a "Y" direction laterally to the direction of travel of the lift truck in either forward or reverse traveling in an "X" direction generally perpendicular to the "Y" direction;

(B) powered means for propelling the powered lift truck in either the forward or reverse direction at variable speeds;

(C) a mast on the lift truck having a lift and lower motion corresponding to a push or pull motion of the operator's unsupported arm in the "Y" direction and involving a first large muscle group for effecting such motion and a first larger resistive force associated with the push or pull motion;

(D) a multi-function single-lever operator hand control having a neutral position and two directions of motion mounted in the operator's compartment comprising (1) a first "X" direction of motion for controlling the direction of travel

and speed of the lift truck, the "X" direction of motion corresponding to the "X" direction in the operator's compartment which motion corresponds to a right or left rolling motion of the operator's unsupported arm and involving a smaller muscle group for effecting such motion, generally parallel to the direction the operator is facing,¹ and a second smaller resistive force associated with the rolling motion, and (2) a second "Y" direction of motion corresponding to the "Y" direction of the operator's compartment; and

(E) control means responsive to displacement of the single-lever hand control from the neutral position in either the "X" or "Y" directions, the control means comprising (1) means rotatable about an axis approximately parallel to the operator's unsupported arm and perpendicular to the "X" direction of motion for varying the speed and direction of the "power means"² operable by the rolling action of the

¹ At the oral hearing, appellants explained that it is the smaller muscle group, not the right or left rolling motion, which is generally parallel to the direction the operator is facing, i.e., the "Y" direction.

² The following errors should be corrected upon return of the application to the jurisdiction of the examiner: in claim 6, line 18, the phrase "said power means" should read --said powered means-- for proper antecedent basis; in claim 16, line 11, "motion" should be deleted. The identified lines are found in the claims as reproduced in the appendix.

operator's hand and unsupported arm as controlled by the second smaller muscle group and (2) a second means rotatable about an axis generally perpendicular to the first axis being operable by the push or pull action of the operator's unsupported arm moving in the "Y" direction of motion involving the first larger muscle group thereby minimizing operator fatigue due to prolonged operation by matching the large and smaller muscle groups with the larger and smaller resistive forces.

Claim 16 recites a powered industrial lift truck having:

(A) a stand up operator's compartment designed to orient the operator relative to the direction of travel for ergonomical use of different muscle groups of the operator's body, a first muscle group comprising those that are capable of imparting a rolling motion in a right to left manner relative to the direction the operator is facing to the operator's arm and hand in a first "X" direction of the operator's compartment corresponding to the direction of travel and a second muscle group comprising those that are capable of imparting to the operator's arm and shoulder a push

or pull motion in a second "Y" direction corresponding to the direction the operator is facing;

(B) powered means for propelling the powered lift truck in either the forward or reverse direction at variable speeds;

(C) a mast on the lift truck having a lifting and lowering capability;

(D) a multi-function single-lever operator hand control in the operator's compartment having a neutral position and two directions of motion comprising (1) a first pivot axis perpendicular to the "X" direction of the operator's compartment about which the single-lever operator hand control pivots using the first muscle group, and (2) a second pivot axis perpendicular to the "Y" direction of the operator's compartment about which the single-lever operator hand control pivots using the second muscle group; and

(E) control means responsive to displacement of the single-lever operator hand control in either "X" or "Y" direction from the neutral position against an ergonomical reaction force acting in the "X" direction which is substantially lighter than an ergonomical reaction force acting in the "Y" direction such that the operator's first

muscle group is ergonomically coordinated to the lighter reaction force while the second muscle group is ergonomically coordinated to the larger reaction force in the "Y" direction whereby the operator can sustain longer periods of operation minimizing operator fatigue.

Habiger discloses a single lever steering control for hydraulic drive vehicles, particularly, crawler vehicles having left and right side crawler tracks, comprising a manually operable control lever 13 mounted to a support block 23 (Fig. 1) which is rotatable about a lower pivot 24 defining a horizontal axis 25 to permit the control lever to swing to the forward and reverse positions, first and second operating levers 15, 16 movable with the control lever about the axis for causing selective variable speed forward and rearward operation of the hydraulic fluid pumps 17, 18 feeding the hydraulic motor 19, 21 of the respective left and right tracks 20, 22 for selective steering drive of the vehicle 12. Control lever 13 further includes a pair of output operating levers 26, 27 (Fig. 3) individually mounted to a pivot 28 defining a horizontal axis 29 substantially orthogonal to axis 25. Levers 26 and 27 are biased upwardly, as seen in Fig. 3,

toward adjustable stops 30, 31 by spring 32. Stops 30, 31 are adjusted so that when the control lever 13 is in the neutral position of Fig. 1 and in the neutral position of Fig. 3, the abutment of levers 26, 27 with the stops 30, 31 causes linkages 15, 16 to cause pumps 17, 18 to be in the neutral position. As further shown in FIG. 3, control lever 13 is further mounted for pivotal movement on the pivot 35 for pivoting about an axis 36 parallel to axis 29. More specifically, the control lever 13 is mounted to a T-member 37 pivotally mounted to pivot 35 and carrying at the distal end of opposed arms 38 and 39 thereof a pair of rollers 40 and 41, respectively. Roller 40 is adapted to engage an upper surface 42 on lever 26 and roller 41 is adapted to engage an upper surface 43 on lever 27 so as to effect a movement of the levers selectively downwardly from the abutment with stops 30 and 31 to effect a selective differential movement between the linkages 15 and 16 as a function of the disposition of the control lever 13 in the left or right position shown in FIG. 3.

With the control lever in the neutral position of Fig. 3, a forward or reverse movement of the control lever, as shown

in Fig. 1, will effect a concurrent similar movement of linkages 15 and 16 to effect a concurrent similar operation of pumps 17 and 18 thereby effecting a concurrent similar drive of tracks 20 and 22 by the drive motors 19 and 21 to effect a selective forward or reverse straight drive of the vehicle. Alternatively, a movement of the control lever 13 toward the left or right position, as seen in Fig. 3, effects a displacement of the corresponding linkage 15 or 16 only, whereby only one of the pump motors 17 or 18 is correspondingly operated to effect a corresponding operation of one or the other of the track drive motors 19 or 21. Concurrent speed and/or directional adjustments may be made by lever 13 by both a forward or reverse positioning of the control lever concurrently with a left or right positioning thereof (Fig. 4).

Schultz discloses an operating control system for a lift truck controlled from a single multi-function operator hand control 62 which controls direction (forward/reverse), speed and the operation of all hydraulic functions of the truck related to the handling of loads. The control handle 62 may be pushed or pulled linearly along the control shaft 60 to

control all such hydraulic truck functions. The grip portion of the control handle is rotatable to control direction and speed of the truck. A switch 96 is located adjacent one end of the rotatable grip portion for selecting a variety of hydraulic functions by the same movements forwardly and rearwardly of the operator control handle along the control shaft 60. Electrical and hydraulic systems control the various hydraulic functions and are operatively connected to the control handle for operator selection of direction and speed of the truck as well as simultaneous operation of any selected hydraulic function one at a time only. Left and right steering is controlled by a separate steering control 24 (col. 1, lines 62-68).

Schultz is also concerned with minimizing operator fatigue (col. 1, lines 57-61). Accordingly, the handle control portion is designed to be located at its most convenient and comfortable position, specifically,

. . . in the operator's compartment on a bias to the longitudinal axis of the truck so that when in normal operating position it is not necessary that the operator turn his body to any substantial degree, but merely his head, in looking forwardly or rearwardly in those directions of truck operation [col. 1, lines 29-35].

In addition, the handle control "is designed and located so that the functions to be controlled are sense oriented" (col. 1, lines 22-24). To this end Schultz teaches that

[t]he mounting bracket 52 is located at a bias to the longitudinal axis of the truck, the vertical portion 56 thereof being formed to extend forwardly and downwardly so that the handle control portion 62,68,70 is designed to be located at its most convenient and comfortable position in the operator's compartment. Manual control is effected whether operating the truck in a forward or rearward direction by movement of the handle control along the downward tilt and inward bias of shaft 60; this provides good operator "sense" control as the handle is actuated forwardly, downwardly and inwardly, or rearwardly, upwardly and outwardly along shaft 60 to control the various hydraulic functions of the lift truck . . . [col. 2, line 63 through col. 3, line 9].

The examiner describes Habiger as disclosing all of the limitations of the claims, except for the environment of a powered industrial lift truck (final rejection, page 4; answer, page 4). Schultz is cited to show the lift truck environment (id.). It is the examiner's position (answer, page 4) that

[i]t would have been obvious . . . to modify Habiger such that the single lever control was installed in a lift truck in view of the teaching of Schultz et

al. for the purpose of having one-handed control of the direction of travel.

In order to establish the prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 985, 180 USPQ 580, 583 (CCPA 1974). Like appellants (brief, pages 5-7), we are unable to find, and the examiner has not specifically identified, where in the references it is either taught or suggested that (1) a larger resistive force is associated with a push or pull motion for operating the lift and lower motion of a lift truck mast and a smaller resistive force is associated with a right or left rolling motion for controlling the direction of travel and speed of the lift truck as recited in claim 6 or (2) an ergonomical reaction force acting in the "X" direction is substantially lighter than an ergonomical reaction force acting in the "Y" direction as recited in claim 16.

We point out that Habiger, which discloses a single control lever for steering and speed control in a crawler tractor vehicle, contains no discussion whatsoever of a control for operating the lift and lower motion of a lift

truck mast. Further, we perceive no suggestion in Habiger that a reaction force acting in the left-right direction, as illustrated in Habiger's Figure 3, is substantially different (larger or smaller) than a reaction force acting in the forward-reverse direction seen in Figure 1.

Schultz's control handle does have the "X" and "Y" directions of movement defined in claims 6 and 16. Further, while Schultz is concerned with minimizing operator fatigue, he reduces fatigue by locating the control handle at what he considers to be a more convenient and comfortable position, see col. 2, lines 63-68 and col. 1, lines 29-35. In addition, the handle control "is designed and located so that the functions to be controlled are sense oriented" (col. 1, lines 22-24). However, we perceive no suggestion in Schultz that the reactive force of the push-pull motion of the control handle is quantitatively different from the reactive force of the rotating motion of the grip handle for controlling direction and speed of the truck.

Since all the claim limitations are not taught or suggested by the applied prior art, the examiner has failed to establish a prima facie case for the obviousness of

independent claims 6 and 16 and the rejection of those claims cannot be sustained.

In addition, absent the appellants' own disclosure, we can think of no reason why one of ordinary skill in this art would have combined the teachings of Habiger and Schultz as the examiner has proposed. It is well settled that it is the teachings of the prior art taken as a whole which must provide the motivation or suggestion to combine the references. See In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992) and Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988). Here, the device of Schultz is directed to a different type of vehicle from that of Habiger and we know of no reason why one of ordinary skill would have retained only the Habiger control handle and reconstructed the vehicle disclosed in Schultz around the retained control handle of Habiger as suggested by the examiner. Nor is it clear to us how one of ordinary skill in the art would have incorporated the control handle of Habiger, which moves in an "X" direction and in a "Y" direction perpendicular to the "X" direction to control vehicle steering and speed, in the vehicle of Schultz which

provides a separate steering control from the control handle which controls the mast functions, as well as, forward/reverse and vehicle speed. In our view, the examiner has impermissibly relied upon the appellants' own teachings in arriving at a conclusion of obviousness. As the court in Uniroyal, 837 F.2d at 1051, 5 USPQ2d at 1438 stated "it is impermissible to use the claims as a frame and the prior art references as a mosaic to piece together a facsimile of the claimed invention." Thus, we also agree with the appellants' argument (brief, pages 8 and 9) that there is no motivation for combining the references along the lines suggested by the examiner.

Claims 7 and 17 are dependent on either claim 6 or 16 and contain all of the limitations of their respective parent claim. Therefore, we will also not sustain the standing 35 U.S.C. § 103 rejection of claims 7 and 17.

CONCLUSION

To summarize, the rejection of claims 6, 7, 16 and 17 under 35 U.S.C. § 103 is reversed.

REVERSED

NEAL E. ABRAMS)	
Administrative Patent Judge)	
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LAWRENCE J. STAAB)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
)	INTERFERENCES
)	
)	
)	
JOHN F. GONZALES)	
Administrative Patent Judge)	

JG/RK

JACK E. TOLIVER
INTELLPROP, L.C.
THE PARAGON CENTRE

Appeal No. 1998-1878
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2333 ALEXANDRIA DRIVE
LEXINGTON, KY 40504-3215