

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KEVIN BRADY,
ROBERT O. CROWLEY,
and CESAR W. MUJICA

Appeal No. 1997-2162
Application 08/280,430

ON BRIEF

Before BARRETT, FLEMING, and LALL, **Administrative Patent**

Judges.

FLEMING, **Administrative Patent Judge.**

DECISION ON APPEAL

Appeal No. 1997-2162
Application 08/280,430

This is a decision on appeal from the final rejection of claims 1 through 3, 7, 8, 10 through 16, 18, and 20 through 22.¹

The invention is directed generally to a mobile lifting device for the disabled. More particularly, Appellants disclose on page 4 of the specification a lifting device including a car with a gate that is mechanically interconnected to a docking plate. A hydraulic jack raises and lowers the car and is controlled by a DC control system. The control system includes an "UP" circuit and a "DOWN" circuit, each containing a switch controlled by the other circuit. Operating each one of the circuits activates the switch, which in turn prevents the other circuit from operating. Additionally, as disclosed on page 7 of the specification, a stage height sensor including a sensor switch indicates that a particular height has been reached. The

¹ The Examiner in the Final Office action mailed July 1, 1996 has indicated claims 5 and 23 through 26 as allowable. Additionally, the Examiner has withdrawn the rejection of claims 4, 6, 9, 17 and 19 under 35 U.S.C. § 103 in the answer mailed January 9, 1997. Accordingly, all the arguments concerning such rejections are considered moot.

Appeal No. 1997-2162
Application 08/280,430

opening or closing of the sensor switch stops the ascent of the car.

Representative independent claims 1, 7, 18, and 22 are reproduced as follow:

1. A mobile lifting device comprising:

a car having fixed sides and a first gate at one end of said car;

a wheeled chassis;

a jack coupled to said car and said chassis for raising and lowering said car relative to said chassis; and

a dock plate attached to said car at said one end and rotating about a horizontal axis, wherein said dock plate is approximately vertical when said gate is closed and said dock plate is mechanically linked to said gate whereby said dock plate is lowered to an approximately horizontal position as said gate is opened.

7. In a mobile lifting device including a vertically movable car and an electro-mechanical jack for raising or lowering said car, the control system comprising:

a first circuit for causing said jack to raise said car;

a second circuit for causing said jack to lower said car;

wherein said first circuit includes a first switch controlled by said second circuit and said second circuit includes a second switch controlled by said first circuit, whereby operating one of said first and second circuits prevents the other of said first and second circuits from operating;

Appeal No. 1997-2162
Application 08/280,430

a power supply for converting alternating current into direct current at a low voltage, wherein said first circuit and said second circuit are powered by said direct current.

18. A mobile lifting device comprising:

a car having fixed sides and a first gate at one end of said car;

a wheeled chassis;

a jack coupled to said car and said chassis for raising and lowering said car relative to said chassis;

a dock plate attached to said car at said one end and rotating about a horizontal axis; and

a stage height sensor for stopping said car at any point within a continuous range of movement, said sensor including an electrical switch, said switch having a wand extending from said sensor, wherein said car includes a knob attached to one of said sides and said knob engages said wand to actuate said switch when said car is raised to a predetermined height relative to a stage.

22. A mobile lifting device comprising:

a car having fixed sides, a first gate at one end of said car, and a second gate at a second end of said car;

a wheeled chassis;

a power supply for converting alternating current into direct current at a low voltage;

an electro-mechanical jack coupled to said car and said chassis for raising and lowering said car relative to said chassis, said electro-mechanical jack including an electric motor powered by said alternating current;

Appeal No. 1997-2162
Application 08/280,430

an electrical control circuit powered by said direct current for operating said jack;

wherein said first gate includes an electrical latch controlled by said control circuit and said second gate includes a mechanical latch;

a battery coupled to at least a portion of said control circuit for supplying power in the event said alternating current is interrupted, whereby said car can be lowered and said second gate can be opened absent said alternating current.

The Examiner relies on the following references:

Grove et al. (Grove)	3,902,573	Sept. 2, 1975
Nordskog	4,176,732	Dec. 4, 1979
Shah et al. (Shah)	4,785,915	Nov. 22, 1988
Schauder et al. (Schauder)	4,971,178	Nov. 20, 1990
Gary 1992	5,105,915	Apr. 21,
Warwick-Smith (Hugh) (British Published Specification)	1 502 921	Mar. 8, 1978

Claims 1 and 2 stand rejected under 35 U.S.C. § 103 as being unpatentable over Gary and Nordskog. Claims 3 and 18 stand rejected under 35 U.S.C. § 103 as being unpatentable over Gary, Nordskog, and Schauder. Claims 7, 8, 10, 13 through 16, and 20 through 22 stand rejected under 35 U.S.C. § 103 as being unpatentable over Gary, Shah, and Grove. Claims 11 and 12 stand rejected under 35 U.S.C. § 103 as being unpatentable over Gary, Shah, Grove, and Hugh.

Appeal No. 1997-2162
Application 08/280,430

Rather than repeat the arguments of Appellants and the Examiner, we make reference to the brief and the answer for the details thereof.

OPINION

After a careful review of the evidence before us, we agree with the Examiner that claims 18 and 22 are properly rejected under 35 U.S.C. § 103. However, we reach the opposite conclusion with respect to claims 1 through 3, 7, 8, 10 through 16, 20, and 21. Accordingly, we affirm-in-part.

Turning to the rejection of claim 1 under 35 U.S.C. § 103, Appellants argue on pages 9 and 10 of the brief that neither Gary nor Nordskog teaches a "dock plate" mechanically linked to a "gate" where the dock plate is lowered as the gate is opened. Appellants further argue that the Nordskog's ramp 136 not only is a separate staircase ramp and unsuitable for use by wheelchairs, but also requires to be put in place manually by someone else. Additionally, Appellants argue that Gary's ramps on both ends of the car are hinged and rotate about either a horizontal axis forming a ramp or about a vertical side of the car forming a gate. Appellants conclude that Gary does not show a dock plate and a gate at the same

Appeal No. 1997-2162
Application 08/280,430

end of the car. Appellants add on page 11 of the brief that Gary's end panel "moves as one" contrary to the separate gate and ramp at the same end of the car as recited in claim 1.

The Examiner responds to Appellants' arguments on page 4 of the answer by stating that Gary's ramp functions as a gate which means that the ramp and the gate are actuated together in order to be opened at the same time. The Examiner on page 5 on the answer adds that it is Nordskog's separate ramp and gate on the same side of the car not the stair ramp 136 which is relied upon in the rejection.

The Examiner has failed to set forth a *prima facie* case. It is the burden of the Examiner to establish why one having ordinary skill in the art would have been led to the claimed invention by the express teachings or suggestions found in the prior art, or by implications contained in such teachings or suggestions. *In re Sernaker*, 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983). "Additionally, when determining obviousness, the claimed invention should be considered as a whole; there is no legally recognizable 'heart' of the invention." *Para-Ordnance Mfg. v. SGS Importers Int'l, Inc.*, 73 F.3d 1085, 1087, 37 USPQ2d 1237, 1239 (Fed. Cir. 1995),

Appeal No. 1997-2162
Application 08/280,430

cert. denied, 519 U.S. 822 (1996) (**citing W.L. Gore & Assoc., Inc. v. Garlock, Inc.**, 721 F.2d 1540, 1548, 220 USPQ 303, 309 (Fed. Cir. 1983), **cert. denied**, 469 U.S. 851 (1984)).

We find that Gary teaches in col. 4, lines 6 through 57 and Fig. 1 a wheelchair lift with a horizontal platform 20 and fixed sides 32 mounted on an elevator frame 50 which provides for the vertical motion of the platform. The whole assembly rests on the supporting frame 60 which is equipped with casters 62 for movement of the lift. Gary further teaches that multiple hinges connect a back panel 30 to the rear edge of the platform allowing it to provide a ramp in its open position and to form a backstop when it is closed. However, in col. 7, lines 7 through 9, Gary teaches that the front panel 34 is attached either to the vertical edge of the side panel forming a gate or to the platform forming a ramp.

Turning to Nordskog, we find that in col. 5, lines 14 through 27 and Fig. 6 a wheelchair lift is shown with doors 38 at its ends and a removable ramp 142 connected to the edge of the cabin platform at one end which allows entry into the lift car. The ramp is removable and is placed on the interior wall of the lift car after the wheelchair is in the car. We

Appeal No. 1997-2162
Application 08/280,430

conclude that Gary teaches a wheelchair lift where the backplates either open to the side forming a gate or swing down to form a ramp while Nordskog suggests the use of a removable ramp through the opened door to help the entry of the wheelchair into the lift car.

We are not inclined to dispense with proof by evidence when the proposition at issue is not supported by a teaching in a prior art reference or shown to be common knowledge of unquestionable demonstration. Our reviewing court requires this evidence in order to establish a *prima facie* case. *In re Piasecki*, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984); *In re Knapp-Monarch Co.*, 296 F.2d 230, 232, 132 USPQ 6, 8 (CCPA 1961); *In re Cofer*, 354 F.2d 664, 668, 148 USPQ 268, 271-72 (CCPA 1966). Furthermore, our reviewing court states in *In re Piasecki*, 745 F.2d at 1472, 223 USPQ at 788, the following:

The Supreme Court in *Graham v. John Deere Co.*, 383 U.S. 1 (1966), focused on the procedural and evidentiary processes in reaching a conclusion under Section 103. As adapted to ex parte procedure, Graham is interpreted as continuing to place the "burden of proof on the Patent Office which requires it to produce the factual basis for its rejection of an application under section 102 and 103". *Citing*

Appeal No. 1997-2162
Application 08/280,430

In re Warner, 379 F.2d 1011, 1016, 154 USPQ 173, 177
(CCPA 1967).

After a review of the teachings in Gary and Nordskog, we fail to find a gate and a ramp located at the same end of the car where a mechanical link lowers the ramp when the gate is opened as recited in Appellants' claim 1. The ramp as taught by Gary moves by the movement of the jack mechanism under the platform providing a blocking gate by itself in closed position. The ramp and the door in Nordskog's lift are not mechanically linked and operate independently. Accordingly, we reverse the rejection of claims 1 and 2 under 35 U.S.C. § 103 over Gary and Nordskog and the rejection of claim 3 under 35 U.S.C. § 103 over Gary, Nordskog, and Schauder.

In regard to the rejection of the independent claim 7, Appellants on page 15 of the brief argue that the control circuit of Shah is powered by AC power from the transformer 70 whereas the DC power is supplied to the microprocessor to actuate the relays. Appellants further point to Grove's teaching in col. 4, lines 66 through 68 stating that the control circuit is "designed for normal operation . . . on 115-volts alternating current." The inverter 66 provides a DC output to actuate the emergency circuits only in case of power

Appeal No. 1997-2162
Application 08/280,430

failure. Appellants on pages 15 and 16 add that Shah and Grove are concerned with safety problems associated with elevators and not mobile lifting devices and thus provide no suggestion to combine such teachings with Gary's mobile lift.

The Examiner on page 7 of the answer responds to Appellants' arguments by pointing out that the scope of the claim is such that the DC powered circuits are not limited to those circuits that are powered only by DC power or low DC power. The Examiner further states that the safety switches used in both elevators and mobile lifts are similar as disclosed by Gary in col. 6, lines 2 and 3.

We find that Shah in col. 5, lines 50 through 67 teaches first and second control circuits 254 and 256 for raising and lowering the lift powered by AC current from the transformer 70. The relays 276 and 282 are controlled by the "DOWN" and the "UP" circuits respectively. Additionally, DC power is taught in col. 6, lines 61 through 66 to be generated by converters 259 and 261 and supplied to the microcomputer 246. Grove in col. 4, lines 31 through 37 and lines 58 through 68 discloses a battery charger 62 connected to a portion of the control circuit, particularly, to the battery 64 and the

Appeal No. 1997-2162
Application 08/280,430

inverter 66 for providing emergency DC power to the "down-slow valve" and the "relay coil DO" for safe descent of the elevator. We note that Grove explicitly teaches that the control system is on 115-volts alternating current during its normal operation. Grove in col. 5, lines 22 through 46 and Fig. 3 further discloses that in the event of a power failure, the DC power from the storage battery 64 actuates switches and relays which, in turn, allows the elevator to descend to a reference floor and the doors to open so that the occupants can exit.

In view of the findings above, we conclude that neither Shah nor Grove teach a DC source that powers both the first and the second control circuits for raising and lowering of the elevator car. Both Shah and Grove use control circuits for raising and lowering the elevator that are powered by alternating current during the normal operation. Shah's DC power is supplied only to the microcomputer and Grove's battery supplies DC power only to the second circuit for emergency lowering of the elevator during a power failure. Therefore, we reverse the rejection of claims 7, 8, 10, and 13 through 16 under 35 U.S.C. § 103 over Gary, Shah, and Grove

Appeal No. 1997-2162
Application 08/280,430

and the rejection of claims 11 and 12 under 35 U.S.C. § 103 over Gary, Shah, Grove, and Hugh.

Turning to the rejection of claims 20 and 21, we note that Appellants' claims 20 and 21 recite the same limitations present in claim 7. Appellants provide arguments related to the first and the second circuits being powered by a DC source which is similar to those presented for claim 7. In view of the above discussions related to the rejection of claims 7, 8, and 10 through 16, we reverse the rejection of claims 20 and 21 under 35 U.S.C. § 103 over Gary, Shah, and Grove.

In regard to the rejection of claim 18, Appellants on pages 12 and 13 of the brief argue that neither Gary nor Schauder teach that the stage height sensor switch can be located at any height and the lift can be stopped "at any point within a continuous range of movement." Appellants add that Schauder's cam is different from the Appellants' knob which does not require that the car be at a precise distance from the stage. Appellants on page 12 further state that Schauder is concerned with the movement of an elevator car in the shaft and does not have the surrounding structure as

associated with a mobile lift.² Appellants also state that Schauder's switch is permanently attached to the elevator shaft and signals the elevator car to start breaking rather than stop.

The Examiner on page 5 of the answer responds to Appellants' arguments by stating that the "stage" is the surrounding structure for a mobile lift. The Examiner further argues that Appellants' claims do not include the limitation of the sensor being permanently attached to the surrounding structure. The Examiner refers to Schauder's disclosure in col. 4, lines 16 through 36 to point out that the sensed signal is used for detecting the position of the elevator car in relation to the selected floor so that breaking may start for a smooth stop. The Examiner on page 6 of the answer further states that the limitation of a horizontal distance of the switch on the stage landing from the button on the car is not present in the claim.

The Federal Circuit states that "[t]he mere fact that the prior art may be modified in the manner suggested by the

² Since claims 3 and 18 contain the same limitations related to the stage height sensor, we consider Appellants' arguments with regard to claim 3.

Appeal No. 1997-2162
Application 08/280,430

Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." ***In re Fritch***, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992) (***citing In re Gordon***, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984)). The Federal Circuit reasons in ***Para-Ordnance Mfg. Inc. v. SGS Importers Int'l Inc.***, 73 F.3d 1085, 1088-89, 37 USPQ2d 1237, 1239-40 (Fed. Cir. 1995), ***cert. denied***, 519 U.S. 822 (1996), that for the determination of obviousness, the court must answer whether one of ordinary skill in the art who sets out to solve the problem and who had before him in his workshop the prior art, would have been reasonably expected to use the solution that is claimed by the Appellants.

We find that, as mentioned above, Gary teaches a wheelchair lift with fixed sides and a gate at one end while a back panel attached to the car rotates along a horizontal axis to provide a ramp to the car. The whole assembly rests on a supporting frame which includes a jack for raising and lowering the car. Gary further teaches in col. 5, lines 40 through 59 that a three-way switch 12, actuates the pump for either raising or lowering the platform as well as stopping it

Appeal No. 1997-2162
Application 08/280,430

once the desired height is reached. Nordskog teaches a wheelchair lift with a gate at one end where a removable ramp connected to the edge of the cabin platform allows entry into the lift car. Schauder is concerned with a control system for an elevator where switches on the side of the car detect the location of the car in relation with the floor at which the elevator is selected to stop. In particular, Schauder discloses in col. 1, lines 16 through 23:

..., reducing the speed of the car according to a predetermined deceleration schedule, to stop the car smoothly at the terminal floor.

and in col. 1, lines 42 through 45:

..., the present invention is a feedback controlled elevator system of the traction type in which the normal slowdown and stopping of an elevator car is controlled by a speed pattern SP (emphasis added).

Schauder is therefore concerned with stopping of the car at any floor along the range of the elevator vertical movement. The mechanical switches of Schauder are actuated by a cam on the car to detect the location of the car. The signal from these switches causes the car to slow down and stop at the floor associated with the switch that actuated the cam.

We find that Gary's mobile lift with the hinged ramp as modified by Nordskog's gate and ramp at the same end of the

Appeal No. 1997-2162
Application 08/280,430

car provides for controlled vertical movement similar to Schauder's elevator. In view of Schauder's teachings, Gary's mobile lift would have been improved by using the height sensors actuated by a cam on the car for automatic stopping at the desired height. Thus, the location of Gary's platform at any height would have been detected by actuating a switch that is positioned at the desired vertical location. Therefore, we find that the Examiner has provided sufficient reason for one of ordinary skill in the art to combine a reference providing a height sensor switch with Gary and Nordskog's mobile lift. In view of the forgoing, the decision of the Examiner rejecting claim 18 under 35 U.S.C. § 103 over Gary, Nordskog, and Schauder is affirmed.

As a further point, we find that Gary in col. 5, lines 59 through col. 6, line 5 does teach the limit switch 14 which is used to interrupt the lifting operation and stop the platform once a certain height is reached. The height sensor is further taught to include a trigger lever placed at a predetermined height on the surrounding fixtures which actuates a limit switch mounted on the front edge of the lift platform. Gary further teaches that once the platform reaches

the desired height, the limit switch interrupts lifting and causes the platform to stop and remain at that height.

Turning to the rejection of claim 22, Appellants on page 18 of the answer argue that the combination of Gary, Shah, and Grove teaches neither the DC powered control circuits nor the battery for emergency power. Appellants further point out that the limitation of the emergency power to lower the car and the mechanical latch at the gate in the absence of AC power is not taught by the prior art.

The Examiner on pages 8 and 9 of the answer argues that Gary teaches both mechanical and electrical latches. The Examiner further points out that Grove's battery is used to lower the car and open the doors during an emergency loss of AC power.

We find that Gary in col. 6, lines 26 through 37 teaches that the back panel 30 is kept in vertical position by a spring that is under tension through the hydraulic ram 90 which in turn is actuated by the electrical signal provided by the control switches on the car. The other gate 34 is taught in col. 7, lines 7 through 9 to be operated without any electrically actuated mechanism for latching the gate. Gary

Appeal No. 1997-2162
Application 08/280,430

in col. 6, lines 15 through 25 also provides for an emergency switch that permits the release of the hydraulic for lowering the platform in case of an emergency power failure. Shah teaches the control circuits for lowering and raising the jack in an elevator. Grove, in addition to the analysis made in regard to claim 7 above, in col. 5, lines 22 through 47 teaches that in the event of a power failure, the battery 64 provides power to a portion of the control circuit for emergency lowering of the elevator. The power from the battery causes the down-slow valve 46a to be actuated which permits the car to descend slowly to a reference floor so that the occupants can exit.

We find that Grove is concerned with providing a backup battery for an elevator that supplies power to the control system for lowering the elevator car in the event of power failure. The problem of AC power failure is also present in the mobile lifting device of Gary where an emergency switch lowers the platform. Therefore, the safety of the elevator user during an AC power failure provides sufficient suggestion or desirability to combine Grove's DC battery with the mobile lift of Gary and Shah so that the car can be lowered slowly

Appeal No. 1997-2162
Application 08/280,430

and the occupant leave the platform. Accordingly, we affirm the rejection of claim 22 under 35 U.S.C. § 103 over Gary, Shah, and Grove.

The decision of the Examiner rejecting claims 1 through 3, 7, 8, 10 through 16, 20, and 21 under 35 U.S.C. § 103 is reversed. The decision of the Examiner rejecting claims 18 and 22 under 35 U.S.C. § 103 is affirmed.

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

AFFIRMED-IN-PART

LEE E. BARRETT)	
Administrative Patent Judge)	
)	
)	
)	BOARD OF PATENT
MICHAEL R. FLEMING)	
Administrative Patent Judge)	APPEALS AND
)	
)	INTERFERENCES
)	
PARSHOTAM S. LALL)	
Administrative Patent Judge)	

Appeal No. 1997-2162
Application 08/280,430

Paul F. Wille
Cahill, Sutton & Thomas
155 Park One
2141 East Highland Ave.
Phoenix, AZ 85016

MRF/mds/dal

Appeal No. 1997-2162
Application 08/280,430