

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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Ex parte ARLEN L. ROESNER and ERICK J. TUTTLE

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Appeal No. 2006-0027  
Application No. 10/287,889

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ON BRIEF

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Before McQUADE, CRAWFORD, and BAHR, Administrative Patent Judges.  
McQUADE, Administrative Patent Judge.

**DECISION ON APPEAL**

Arlen L. Roesner et al. appeal from the final rejection of claims 1-23 and 44-61. Claims 24-43, the only other claims pending in the application, stand withdrawn from consideration pursuant to 37 CFR § 1.142(b).

**THE INVENTION**

The invention relates to a system for securing an expansion card to a computer chassis, and to a method for manufacturing such a system. Representative claims 1, 11, 44 and 51 read as follows:

1. A card retention system, comprising:

a retainer adapted to apply an increasing level of retention force to an expansion card disposed in a chassis as a size of the expansion card increases; and

a support member adapted to support the retainer in a plurality of different locations relative to the expansion card.

11. A method for manufacturing a card retention system, comprising:

providing a support member adapted to be releasably coupled to a chassis;

coupling a retainer to at least one of a plurality of mounting locations disposed on the support member, the retainer adapted to apply an increasing level of retention force to an expansion card disposed in the chassis as a size of the expansion

card increases.

44. A card retention system, comprising:

a support member adapted to be coupled to a chassis adjacent at least one expansion card disposed in the chassis, the support member having a plurality of different mounting locations disposed relative to the at least one expansion card; and

a retainer adapted to be coupled to one of the plurality of different mounting locations, the retainer adapted to apply a varying level of retention force to the at least one expansion card based on a size of the at least one expansion card.

51. A method for manufacturing a card retention system, comprising:

providing a support member adapted to be coupled to a chassis adjacent at least one expansion card disposed in the chassis, the support member having a plurality of different mounting locations disposed relative to the at least one expansion card; and

coupling a retainer to one of the plurality of different mounting locations, the retainer adapted to apply a varying level of retention force to the at least one expansion card based on a size of the at least one expansion card.

THE PRIOR ART

The references relied on by the examiner to support the final rejection are:

Mobley	4,880,113	Nov. 14, 1989
Wong	5,268,821	Dec. 07, 1993
Jensen et al. (Jensen)	6,373,713	Apr. 16, 2002

THE REJECTIONS

Claims 1, 3, 4, 6-11, 13-18, 20, 21, 23, 44-46, 48-51 and 53-61 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Wong.

Claims 1-4, 6-11, 13-15, 17, 18 and 20-22 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Jensen.

Claims 5, 12 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jensen in view of Mobley.

Claims 47 and 52 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wong in view of Mobley.

Attention is directed to the main and reply briefs (filed August 22, 2005 and November 25, 2005) and the final rejection and answer (mailed October 20, 2004 and September 28, 2005) for the respective positions of the appellants and examiner regarding the merits of these rejections.<sup>1</sup>

#### DISCUSSION

##### I. The 35 U.S.C. § 102(b) rejection of claims 1, 3, 4, 6-11, 13-18, 20, 21, 23, 44-46, 48-51 and 53-61 as being anticipated by Wong

Wong discloses a tool 10 used with a card cage 50 for inserting and removing printed circuit boards 55. The tool 10 comprises a guide 20 fixed to the card cage, a slider 30 mounted on the guide for movement therealong, a rotating arm 40 pivotally connected to the slider for selective engagement with a printed circuit board, and a spring 49 disposed between the arm and the slider for biasing the arm to a vertical position when not in use. The arm includes an offset end 71 configured to cooperate

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<sup>1</sup> In the final rejection, claims 1, 11, 17, 49 and 58 also stood rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Upon further consideration, the examiner has withdrawn this rejection (see page 3 in the answer).

with a PC board during the insertion and removal operations. This offset end has a vertical groove 41 for engaging an edge of a board during insertion and an ejection pin 42 for engaging a slot 74 in the board during removal. As described by Wong,

To insert a PC board 55 using the present invention, PC board 55 is pushed manually into its slot 56 in card cage 50 until the connectors carried by PC board 55 and card cage 50 (not shown) meet. Next, slider 30 with arm 40 attached is moved along guide 20 until groove 41 aligns with the edge of the PC board, as shown in FIG. 1A. To insert PC 55 board fully, a tab 51 of arm 40 is pulled in the direction of arrow 72 (FIG. 1A) until groove 41 comes in contact with PC board 55. Further pulling causes PC board 55 to be pushed further into card cage 50 until the connector parts carried by PC board 55 mate with the corresponding backplane connector parts of card cage 50. Releasing tab 51 allows spring 49 to return arm 40 to its normal, vertical position.

In a similar fashion, when tool 10 is used to remove a PC board from the card cage, slider 30 is moved along guide 20 until arm 40 is to one side, to the right in FIG. 1B, of PC board 55 to be removed. Tab 51 is then lifted a small amount until pin 42 on arm 40 aligns with a slot 74 in PC board 55. Tab 51 is then lifted slightly so that pin 42 will fit into slot 74 on PC board 55. Once pin 42 is in position, pushing down on arm 40 causes the connectors to unmate, and PC board 55 moves in the direction of arrow 75 out from card cage 50. Slider 30 and arm 40 can then be moved out of the way and PC board 55 fully removed [column 2, lines 31-57].

Anticipation is established only when a single prior art reference discloses, expressly or under principles of inherency, each and every element of a claimed invention. RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir. 1984). In other words, there must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention. Scripps Clinic & Research Found. v. Genentech Inc., 927 F.2d 1565, 1576, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991). For purposes of the subject rejection, the examiner (see pages 3 and 4 in the final rejection) considers the combination of Wong's slider 30 and rotating arm 40 to meet (1) the limitations in independent claims 1 and 11, and the corresponding limitation in independent claim 17, requiring a retainer or means adapted to apply an increasing level of retention force to an expansion card as a size of the card increases, and (2) the limitations in independent claims 44 and 51, and the corresponding limitation in independent claim 57, requiring a retainer or retaining means adapted to apply a varying level of retention force to an expansion card based on the size of the card. Wong, however, does not contain any disclosure which would lead a person of ordinary skill in the art to view the slider 30 and

rotating arm 40 as applying any sort of retention force to a card or printed circuit board 55, let alone an increasing level of retention force as the size of the card increases or a varying level of retention force based on the size of the card. As indicated above, once Wong's tool 10 is used to insert a printed circuit card into card cage 50, spring 49 biases the rotating arm 40 to a vertical position away from, and out of contact with, the printed circuit board.

Thus, the examiner's determination that Wong discloses a retainer or retaining means of the sort recited in independent claims 1, 11, 17, 44, 51 and 57 is not well founded. Accordingly, we shall not sustain the standing 35 U.S.C. 102(b) rejection of independent claims 1, 11, 17, 44, 51 and 57, and dependent claims 3, 4, 6-10, 13-16, 18, 20, 21, 23, 45, 46, 48-50, 53-56 and 58-61, as being anticipated by Wong.

II. The 35 U.S.C. § 102(e) rejection of claims 1-4, 6-11, 13-15, 17, 18 and 20-22 as being anticipated by Jensen

Jensen discloses a mechanism for inserting and extracting a printed circuit board assembly (PCBA) relative to a slot in the chassis of an electronic system. The mechanism includes a face plate 110 secured to an edge of a PCBA 100, a handle 130 pivotally mounted on the face plate, upper and lower jaws 120 and 115 operatively linked to the handle for pivotal movement into and out of locking engagement with rails

400 on the chassis, a spring-biased latch pawl 144 for releasably engaging and holding the handle in a closed position, and a latch pawl release button 135. In use,

As handle 130 is rotated as illustrated by the double-headed arrow in FIG. 4, upper jaw 120 is also rotated. When chassis rail 400 (shown in cross section views) is located within the opening of upper jaw 120 and handle 130 is rotated to the closed and locked position, upper jaw 120 interlocks with chassis rail 400 to force PCBA 100 in to the electronic system. When handle 130 is locked in position by handle pawl 144, PCBA 100 is locked in the electronic system. Lower jaw 115 operates in a similar manner.

To release and remove PCBA 100 from the electronic system, latch release button 135 (not shown in FIG. 4) is depressed to release handle 130 from handle pawl 144. As handle 130 is rotated away from face plate 110, upper jaw 120 rotates, moving relative to chassis rail 400, allowing PCBA 100 to be removed from the electronic system. Lower jaw 115 operates in a similar manner [column 4, line 57, through column 5, line 5].

In applying Jensen against independent claims 1, 11 and 17, the examiner (see pages 4 and 5 in the final rejection) reads the limitations in these claims pertaining to the retainer or means adapted to apply an increasing level of retention force to an expansion card as a size of the card increases on Jensen's handle 130 and latch pawl 144. Arguably, Jensen's handle 130 does apply a retention force to a card or PCBA 100 once the card is inserted into the chassis. Jensen does not provide any reasonable basis, however, to find that the handle 130, taken alone or in combination with the latch

pawl 144, applies or is capable of applying an increasing level of retention force as the size of the card increases.

Consequently, the examiner's position that the subject matter recited in independent claims 1, 11 and 17 is fully met by Jensen is unsound. Therefore, we shall not sustain the standing 35 U.S.C. § 102(e) rejection of independent claims 1, 11 and 17, and dependent claims 2-4, 6-10, 13-15, 18 and 20-22, as being anticipated by Jensen.

III. The 35 U.S.C. § 103(a) rejections of claims 5, 12 and 19 as being unpatentable over Jensen in view of Mobley and of claims 47 and 52 as being unpatentable over Wong in view of Mobley

Even if the Mobley patent is assumed to be analogous art (the appellants argue that it is not), the disclosure therein of a clothes hanger trolley would not cure the above discussed deficiencies of either Wong or Jensen relative to the various independent claims on appeal. Hence, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of dependent claims 5, 12 and 19 as being unpatentable over Jensen in view of Mobley or the standing 35 U.S.C. § 103(a) rejection of dependent claims 47 and 52 as being unpatentable over Wong in view of Mobley.

SUMMARY

The decision of the examiner to reject claims 1-23 and 44-61 is reversed.

REVERSED

JOHN P. McQUADE )  
Administrative Patent Judge )  
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MURRIEL E. CRAWFORD ) BOARD OF PATENT  
Administrative Patent Judge ) APPEALS  
 ) AND  
 ) INTERFERENCES  
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JENNIFER D. BAHR )  
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**Comment [jvn1]:** Type or Paste Address

