UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BRENDA WICKSTROM and NIELS MOSSBECK

Appeal 2008-0556
Application 10/842,820
Technology Center 3600

Decided: March 19, 2008

Before WILLIAM F. PATE, III, HUBERT C. LORIN, and
JOHN C. KERINS, *Administrative Patent Judges*.

KERINS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Brenda Wickstrom and Niels Mossbeck (Appellants) seek our review under 35 U.S.C. § 134 of the final rejection of claims 1-18. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

SUMMARY OF DECISION

We REVERSE.

THE INVENTION

Appellants' invention is a foldable bedding foundation, such as a box spring, having first and second bases secured to a lower hinge, first and second upper wire grids, and a first and second plurality of wire struts pivotally secured to their respective bases and upper wire grids. The foldable foundation further has a plurality of braces extending between the first or second bases and selected ones of the wire struts, to provide support at the outer portion of the foundation by maintaining the selected wire struts in a vertical orientation.

Claim 1, reproduced below, is representative of the subject matter on appeal:

> 1. A foldable bedding foundation comprising:
>
> a first section having a first base, a first plurality of wire struts pivotally secured to said first base of said first section, a first upper wire grid pivotally secured to said first wire struts and braces extending between the first base and an outermost wire strut of the first plurality of wire struts;
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> a second section having a second base, a second plurality of wire struts pivotally secured to said second base of said second section, a second upper wire grid pivotally secured to said second wire struts and braces extending between the

second base and an outermost wire strut of the second plurality of wire struts; and

a lower hinge secured to and extending between the first and second bases.

THE REJECTION

The Examiner relies upon the following as evidence of unpatentability:

Miller	US 4,654,905	April 7, 1987
Rogers	US 6,012,190	January 11, 2000

The following rejection is before us for review:

1. Claims 1-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Miller patent, in view of the Rogers patent.

ISSUE

The issue before us is whether Appellants have shown that the Examiner erred in finding that the subject matter of Claims 1-18 is obvious, and therefore unpatentable, over the Miller and Rogers references. In particular, we must determine if the Examiner has established that it would have been obvious, in view of Rogers, to modify the Miller bedding foundation to include braces extending between a base and a pivoting wire strut that itself extends between the base and an upper wire grid.

FINDINGS OF FACT

The following enumerated findings are supported by at least a preponderance of the evidence. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1427

(Fed. Cir. 1988) (explaining the general evidentiary standard for proceedings before the Office).

1. The Miller patent discloses a collapsible bedding structure that employs wire struts 16 pivotally secured to both a base 10 and an upper wire grid 24, 40. (Martin, Fig. 1; Col. 4, ll. 8-59). The Rogers patent also discloses a collapsible bedding structure that employs wire struts 66 pivotally secured to both a base 54 and an upper wire grid 60. (Rogers, Figs. 1, 2; Col. 6, ll. 11-33).

2. The Miller patent does not disclose the use of braces extending between the base and the wire struts. (Miller, Figs. 1, 10).

3. In the Rogers patent, the upper wire grid 54 and wire struts 66 are not present at the endmost portion of the bedding structure when deployed. (Rogers, Figs. 2, 3; Col. 7, ll. 60-61).

4. In the Rogers patent, element 78 is a flexible fabric strap which operates in tension to aid (in conjunction with braces 72) in suspending a peripheral border wire 70 in a raised position when the bedding structure is opened, *i.e.*, when it is in its deployed condition. (Rogers, Figs. 2, 3; Col. 7, ll. 42-54).

5. Appellants do not provide any definition of the term "strut". The commonly accepted meaning of the term in the context of structural members is, "strut: **2.** [A] structural element used to brace or strengthen a framework by resisting longitudinal compression." The American Heritage® Dictionary of the English Language: Fourth Edition (2000).

6. Figures 3 and 4 of Rogers illustrate the movement of the structural components of the bedding structure from the open or deployed position to the collapsed or stowed position. Figure 4 illustrates that fabric strap 78 collapses and does not resist compressive forces as upper wire grid 60 is moved toward peripheral border wire 70. (Rogers, Figs. 3, 4; Col. 8, ll. 51-52).

7. Braces 72 in Rogers are formed integrally with peripheral border wire 70. Braces 72 are not attached to any wire strut or any other strut in the Rogers structure. (Rogers, Fig. 2; Col. 6, l. 65-Col. 7, l. 2)

8. The peripheral border wire 70 in Rogers, when raised into position, lies in the same plane as upper wire grid 60, and effectively serves as an extension of the upper wire grid. (Rogers, Figs. 2, 3; Col. 7, ll. 56-59).

PRINCIPLES OF LAW

"Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'" *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, (3) the level of skill in the art, and (4) where in evidence, so-called secondary

considerations. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 127 S.Ct. at 1734 (*Graham* factors continue to define the inquiry that controls).

In *KSR*, the Supreme Court emphasized "the need for caution in granting a patent based on the combination of elements found in the prior art," *id.* at 1739, and discussed circumstances in which a patent might be determined to be obvious. In particular, the Supreme Court emphasized that "the principles laid down in *Graham* reaffirmed the 'functional approach' of *Hotchkiss*, 11 How. 248." *KSR*, 127 S.Ct. at 1739 (*citing Graham*, 383 U.S. at 12), and reaffirmed principles based on its precedent that, "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.*

ANALYSIS

Among rejected claims 1-18, claims 1, 7 and 14 are independent claims, and Appellants argue separately for the patentability of each of these independent claims. In addition, Appellants argue that dependent claims 2, 4, 6, 8, 9, 10, 17, and 18 are each separately patentable and should not stand or fall with the claims from which they depend. We will first address the rejections of the independent claims.

The rejection of claim 1 under 35 U.S.C. § 103(a) relies in large part on the structure disclosed in the Miller reference. (Answer 3-4). The Examiner asserts that the Miller reference discloses all elements or

limitations set forth in claim 1, with the exception of the provision of "braces extending between the [first and second] base[s] and an outermost wire strut of the [respective first and second] plurality of wire struts". (Answer 4).[1] The grounds for rejection cite to the Rogers patent as providing a teaching of such braces, and the conclusion reached is that it would have been obvious to modify the Miller bedding foundation to include the same.

The Examiner regards elements 72 in the Rogers patent as being braces that extend between a base 54 and an 'outermost strut' 78. An assertion is made that incorporating these elements into the Miller structure would have been obvious in order "to provide the structure with additional load transferring members". (Answer 5).

While "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results," *KSR Int'l.*, 27 S.Ct. at 1739, here we find, however, that the claimed bedding would not be a predictable result of combining the elements 72 disclosed in Rogers, which are components of a structure that is different-in-kind to the Miller structure at the endmost section of the structures, with the Miller structure.

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[1] Appellants contend that additional elements called for in claim 1 (*e.g.*, a lower hinge, *see* Appeal Br. 6-7), are not present in the Miller bedding foundation. We find these arguments unpersuasive and agree with the Examiner that only the braces of claim 1, and the attendant connection of the braces to the bedding structure, are not disclosed in Miller.

Both the Miller patent and the Rogers patent employ wire struts pivotally secured to both a base and an upper wire grid, as called for in Claim 1. (Finding of Fact 1). However, in the Rogers patent, the upper wire grid and wire struts are not present at the endmost portion of its structure. (Finding of Fact 3). Consequently, the braces 72[2] in the Rogers patent do not extend between the base and an outermost wire strut, as required by Claim 1.

The Examiner's rejection implicitly recognizes this shortcoming in the Rogers disclosure, in asserting that element 78 of Rogers is an "outermost strut" (even though not a wire strut, as claimed), and that the braces 72 extend between the base and this "strut". Relying on this characterization of the Rogers structure, the Examiner concludes that it would have been obvious to include the Rogers braces on the Miller structure, with the braces extending between the bases and the outermost struts. (Answer 5).

We find persuasive Appellants' position that it is improper to regard element 78 of Rogers as a strut. The "strut" 78 identified by the Examiner is actually a fabric strap, which, in conjunction with lateral braces 72, operates in tension to suspend a peripheral border wire 70 in a raised position when the bedding structure is in its deployed condition. (Finding of Fact 4). A "strut", according to the commonly understood meaning of the term, is a

[2] Appellants argue that elements 72 are not braces. (See, e.g., Reply Br. 5-6). We disagree. Simply stated, Appellants urge a much narrower interpretation of that claim limitation than is justified by the actual language present in the claims.

structural element that is provided to resist longitudinal compression. (Finding of Fact 5). Strap 78 in Rogers does not do so. A comparison of Figures 3 and 4 of Rogers illustrates that, upon the collapsing of the mattress to return it to a stowed position, fabric strap 78 collapses and provides no appreciable resistance to the compressive forces experienced in this operation. (Finding of Fact 6).

In light of the significant structural differences at the periphery of the Miller and Rogers devices, an attempt to incorporate the braces 72 disclosed in Rogers into the Miller structure would not be achieved using known methods, in that Rogers does not attach its braces 72 to a wire strut, or a strut of any kind, but rather forms them integrally with a peripheral border wire. (Finding of Fact 7). Moreover, the peripheral border wire, in its raised and deployed position, is effectively an extension of the upper wire grid 60. (Finding of Fact 8). The inclusion of the Rogers braces 72 in the Miller structure, using known methods, would result in the braces being attached to the outer periphery of the upper wire grid, and not to the wire struts, as set forth in Claim 1.

In addition, because the combination would require further and significant structural modifications or alterations not disclosed in the two references, one of ordinary skill would not have been led to the claimed structure given the proposed combination. Accordingly, we will not sustain the rejection of Claim 1 under 35 U.S.C. § 103(a).

Independent Claim 7, in pertinent part, calls for, "braces [to be] pivotally secured to the bases and engaged with wire struts spaced from the hinges." (Appeal Br., Claims Appendix).

As discussed above with respect to claim 1, neither the Miller nor the Rogers patent discloses the use of braces that are pivotally secured to a base and are engaged with wire struts that are themselves pivotally secured to the bases and to upper wire grids. The Miller patent discloses no such braces (Finding of Fact 2), and the braces disclosed in the Rogers patent are pivotally secured to a base and to an (integral) peripheral border wire, with no engagement with wire struts, or struts of any kind. (Finding of Fact 7).

Our conclusion with respect to the outstanding rejection of claim 7 is as set forth above in the discussion of the rejection of claim 1. We will not sustain the rejection of Claim 7 under 35 U.S.C. § 103(a).

Independent claim 14, in pertinent part, recites that the, "braces [are] pivotally secured to the first and second bases and [are] slidably engaged with wire struts of the first and second sections of the bedding foundations furthest from said hinges wherein said bedding foundation may be collapsed only when said braces are lowered." (Appeal Br., Claims Appendix).

For the same reasons presented, *supra.*, with respect to claims 1 and 7, we conclude that Appellants have persuaded us that error was committed in rejecting claim 14 under 35 U.S.C. § 103(a). We will not sustain the rejection.

Claims 2-6 depend from independent claim 1, claims 8-13 from independent claim 7, and claims 15-18 from independent claim 14. We have determined that neither Miller nor Rogers discloses the limitations in the independent claims directed to the provision of braces extending between the bases and wire struts connected between the bases and upper wire grids. Further, we have concluded that the combined teachings of these references does not render obvious the subject matter of claims 1, 7, and 14. As each of these dependent claims includes the limitation found in its base claim directed to the braces, we will not sustain the rejection of these claims under 35 U.S.C. § 103(a).

CONCLUSIONS OF LAW

We conclude that Appellants have established that reversible error exists in the rejection of claims 1-18 under 35 U.S.C. §103(a).

DECISION

The decision of the Examiner to reject claims 1-18 is reversed.

REVERSED

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