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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte GUNNAR FOSS and PER BULL HAUGSOEN

Appeal 2010-012130
Application 11/630,869
Technology Center 3600

Before GAY ANN SPAHN, HYUN J. JUNG, and WILLIAM A. CAPP,
Administrative Patent Judges.

JUNG, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Gunnar Foss and Per Bull Haugsoen (Appellants) appeal under 35 U.S.C. § 134 from a rejection of claims 1-8. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

THE CLAIMED SUBJECT MATTER

Sole independent claim 1 is reproduced below:

1. A device for a diagonal strut connection between a pipe and an adjacent structure wherein the pipe has a circular shape and further wherein the pipe has horizontal and vertical forces, the device comprising:

an annular plate attached to the pipe wherein the annular plate encircles and projects radially from the pipe; and

at least two diagonal struts attached to the pipe and the annular plate wherein each of the diagonal struts has a central axis wherein the horizontal forces in the pipe are transmitted to the diagonal struts by means of a first set of shear forces along an attachment of the diagonal struts to the annular plate wherein the vertical forces in the pipe are transmitted to the diagonal struts by means of a second set of shear forces along an attachment of the diagonal struts to the pipe wherein the central axis of the diagonal struts extends through or proximate to an intersection of the first set and the second set of shear forces.

THE REFERENCES

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Rogers '710

US 546,710

Sep. 24, 1895

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| | | |
|-------------|--------------|---------------|
| Skelskey | US 4,403,916 | Sep. 13, 1983 |
| Rogers '423 | US 4,495,423 | Jan. 22, 1985 |

THE REJECTIONS

Appellants seek our review of the following rejections:

Claims 1-5, 7, and 8 stand rejected under 35 U.S.C. § 102(b) as anticipated by Rogers '710. Ans. 3-4.

Claim 6 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Rogers '710 and either Skelskey or Rogers '423. *Id.* at 4.

ANALYSIS

Anticipation

The Examiner finds that Rogers '710 discloses a device for a diagonal strut connection between a pipe and an adjacent structure. Ans. 3-4. In particular, the Examiner finds that Rogers '710 discloses a device between a pipe (vertical tube 23) and an adjacent structure comprising an annular plate (platform 29) and diagonal struts (braces 30) attached to the pipe (vertical tube 23) and the annular plate (platform 29), wherein a central axis of the diagonal struts extends through or proximate to an intersection of a first set of shear forces that transmit horizontal forces in the pipe and a second set of shear forces that transmit vertical forces in the pipe. Ans. 3.

Appellants argue that Rogers '710 does not disclose that a central axis of a diagonal strut extends through or proximate to an intersection of first and second sets of shear forces as required by claim 1. App. Br. 8. The Examiner responds that a combination of horizontal and vertical shear forces would be along the angular brace 30 which would have a central axis extending through or proximate an intersection of the shear forces. Ans. 5.

The Examiner does not find Rogers '710 explicitly discloses that vertical and horizontal forces in the vertical tube 23 are transmitted to the braces 30 by shear forces and that a central axis of the braces 30 extends through or proximate to an intersection of those shear forces, as required by claim 1. *See* Ans. 3 and 5.

Rogers '710 discloses that the vertical tube 23 is secured intermediate of its ends at the top of the tower by a turn-table support or base 24. Rogers '710, p. 2, col. 1, ll. 20-26 and figs. 1 and 4. The turn-table support 24 is provided with clamping-screws 28 that engage the vertical tube 23. *Id.* at 2, col. 1, ll. 31-37 and figs. 1, 4, and 5. The turn-table support 24 is also provided with a flange 26 with openings 27 to straddle the top horizontal bars 3 and is secured to those horizontal bars 3 by screws. *Id.* at 2, col. 1, ll. 25-31 and figs. 4 and 5. The horizontal bars 3 are then secured to the vertical bars 2 by rivets 5. *Id.* at 1, col. 2, ll. 50-54 and figs. 4 and 5.

The platform 29 is supported by angular braces 30. *Id.* at 2, col. 1, ll. 38-41 and figs. 1 and 2. The braces 30 consist of a horizontal arm extending beneath the platform 29 and an inclined bracing portion extending from the outer edge of the platform downward. *Id.* at 2, col. 1, ll. 46-50 and fig. 2. The horizontal arm and inclined bracing portion of the brace 30 extend from a vertical bar 2. *Id.*

Thus, vertical forces in the vertical tube 23 may be transmitted by a set of shear forces where the clamping-screws 28 engage the vertical tube 23 and where the rivets 6 secure the horizontal bars 3 to the vertical bars 2. Also, horizontal forces in the vertical tube 23 may be transmitted by a set of shear forces where the rivets 6 secure the horizontal bars 3 to the vertical bars 2. However, the arrangement of the vertical tube 23, the platform 29, and the braces 30 in Rogers '710 does not unambiguously indicate that a

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combination of horizontal and vertical shear forces due to forces in the vertical tube 23 would be along the brace 30, as determined by the Examiner. Therefore, we cannot state that, by a preponderance of the evidence, Rogers '710 discloses brace 30 has a central axis that extends through or proximate to an intersection of shear forces that transmit forces in the vertical tube 23.

Accordingly, on the record before us, we cannot sustain the rejection of claims 1-5, 7, and 8 under 35 U.S.C. § 102(b) as anticipated by Rogers '710.

Obviousness

For claim 6 which depends indirectly from claim 1, the Examiner finds that Rogers '710 discloses all the limitations except for central lines of main columns that intersect at or close to a point on a central axis of a turbine. Ans. 4. The Examiner finds that either Skelskey or Rogers '423 discloses such central lines. *Id.* Thus, the Examiner does not rely on Skelskey or Rogers '423 for any finding that cures the deficiencies discussed *supra*.

Accordingly, we cannot sustain the rejection of claim 6 under 35 U.S.C. § 103(a) as unpatentable over Rogers '710 and either Skelskey or Rogers '423.

DECISION

For the above reasons, the Examiner's rejections of claims 1-8 are reversed.

REVERSED

peb