

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JAHANGIR RASTEGAR and THOMAS SPINELLI

Appeal 2008-1252
Application 11/303,189
Technology Center 3700

Decided: June 27, 2008

Before: LINDA E. HORNER, ANTON W. FETTING and
STEVEN D.A. McCARTHY, *Administrative Patent Judges.*

McCARTHY, *Administrative Patent Judge.*

DECISION ON APPEAL

1 STATEMENT OF THE CASE

2 The Appellants' appeal under 35 U.S.C. § 134 (2002) from the final
3 rejection of claims 1-11 and 21. We have jurisdiction under 35 U.S.C. § 6(b)
4 (2002).

The claims on appeal relate to manually operated rotatable impact tools such as impact wrenches. (Spec. 1, ll. 12-14). Independent claim 1 is typical of the appealed claims and reads as follows:

- 5 A manually operated rotatable impact
6 tool comprising:
7 a driven member having means for retaining
8 and driving a fastener about an axis, the driven
9 member further having at least one impact stop
10 offset from the axis;
11 a driving member rotatably connected to the
12 driven member for driving the driven member
13 about the axis to loosen or tighten the fastener;
14 an impact mass movable along a path in
15 communication with the impact stop;
16 a spring disposed in the path for storing
17 energy upon rotation of the driving member; and
18 energy releasing means for releasing the
19 stored energy and allowing it to be at least partially
20 transferred to the impact mass such that the impact
21 mass accelerates and strikes the impact stop upon
22 the release of the stored energy.

24 Claims 1-11 and 21 stand rejected under 35 U.S.C. § 102(b) (2002) as
25 being anticipated by Anderson (U.S. Patent 4,243,109).

26 We AFFIRM.

ISSUE

29 The issue in this case is whether the Appellants have shown that the
30 Examiner erred in rejecting claims 1-11 and 21 under § 102(b) as being
31 anticipated by Anderson. This issue turns on whether Anderson discloses a
32 manually operated rotatable impact tool with a spring disposed in the path of

1 travel of the impact mass as recited in claim 1 and an impact mass movable
2 along a path in communication with the impact stop of the driven member as
3 recited in claim 21.

4

5 FINDINGS OF FACT

6 The record supports the following findings of fact (“FF”) by a
7 preponderance of the evidence.

8 1. Anderson discloses a manually operative rotary impact
9 mechanism including an input member, an output member, an inertia
10 member and a power spring assembly. (Anderson, col. 3, ll. 54-67.)

11 2. The input member includes a cylindrical head portion and a
12 handle extending from the cylindrical head portion. The cylindrical head
13 portion has a cylindrical cavity closed at one end by a rear wall. (Anderson,
14 col. 4, ll. 4-8.)

15 3. The inertia member is journaled in the cylindrical cavity
16 (Anderson, col. 3, ll. 58-62) and includes a tubular hub portion journaled on
17 a cylindrical projection from a rear wall of the cylindrical head portion
18 (Anderson, col. 4, ll. 14-17.) The inertia member, in turn, has an axially
19 extending recess (Anderson, col. 4, ll. 18-19.)

20 4. The output member is journaled in the axially extending recess
21 of the inertia member coaxially with the inertia member and the input
22 member. (Anderson, col. 3, ll. 58-62 and col. 4, ll. 18-19.) The output
23 member includes a set of ratchet teeth. (Anderson, col. 4, ll. 19-25.)

24 5. The inertia member carries two pairs of pawls. Each pawl is
25 pivotally mounted in a radial recess and biased into the axially extending
26 recess of the inertia member. (Anderson, col. 4, ll. 19-30.)

1 6. The power spring assembly includes a spirally wound, flat
2 spring interconnecting the inertia member and the input member.
3 (Anderson, col. 3, l. 62 – col. 4, l. 4 and col. 4, ll. 50-56.)

4 7. Anderson's Fig. 5 shows that the spirally wound, flat spring of
5 the power spring assembly lies within the cylindrical cavity of the input
6 member on a sectional plane which passes through the tubular hub portion of
7 the inertia member.

8 8. When the input member moves angularly relative to the inertia
9 member, one pawl of each pair carried by the inertia member maintains
10 contact with a ratchet tooth of the output member. By this means, relative
11 motion between the input member, the inertia member and the output
12 member causes the power spring assembly to store energy. (Anderson, col.
13 4, l. 57 – col. 5, l. 2.)

14 9. When a cam carried by the input member rotates through a
15 predetermined angle relative to the inertia member, the cam disengages the
16 pawls carried by the inertia member from the ratchet teeth of the output
17 member. This disengagement frees the inertia member for rotation
18 independently of the input and output members by the force stored in the
19 spirally wound, flat spring. (Anderson, col. 5, ll. 2-15.)

20 10. When the inertia member rotates sufficiently relative to the
21 input member and the cam, the cam releases a pawl of each pair carried by
22 the inertia member so that the released pawls impact against the ratchet teeth
23 to rotationally drive the output member. (Anderson, col. 5, ll. 15-24.)

1 PRINCIPLES OF LAW

2 A claim is anticipated by a prior art reference under section 102(b) if
3 the reference explicitly or inherently discloses every limitation of the
4 claimed subject matter. *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir.
5 1997). In determining whether limitations recited in the claim are disclosed
6 by the reference, the language of the claim is to be given its “broadest
7 reasonable interpretation consistent with the specification,” construing the
8 claim language and specification as they would be understood by one of
9 ordinary skill in the art. *In re American Acad. of Science Tech Ctr.*, 367
10 F.3d 1359, 1364 (Fed. Cir. 2004) (quoting *In re Bond*, 910 F.2d 831, 833
11 (Fed. Cir. 1990)).

12

13 ANALYSIS

14 A. *The Rejection of Claims 1-11 Under § 102(b) as Being*
15 *Anticipated by Anderson*

16 The Appellants contend that claims 1-11 are patentable because
17 Anderson does not disclose a spring disposed in the path of travel of an
18 impact mass as recited in claim 1. More specifically, the Appellants contend
19 that:

20

21 Anderson clearly discloses that the spring (18) is
22 not disposed in the path that the impact member
23 moves in, it is disposed on a different plane than
24 the impact mass (since the impact mass is along
25 plane 4-4 and the spring is on plane 5-5 in Figure
26 1). Since the impact mass and spring are on
27 different planes, the spring cannot be disposed in
28 the path in which the mass moves.

29

1 (App. Br. 8.)

2 We disagree with the Appellants' characterization of the disclosure of
3 Anderson. The Appellants do not appear to contest the Examiner's finding
4 (Ans. 3) that the combination of Anderson's inertia member and pawls is an
5 "impact mass" as that term is used in claim 1. The spirally wound, flat
6 spring disclosed by Anderson is in the same plane as the tubular hub portion
7 of the inertia member. (FF 7.) Therefore, the spring lies in the same plane
8 as the combination of the inertia member and pawls which constitute the
9 impact mass. On this basis, we agree with the Examiner that the spirally
10 wound, flat spring is disposed in the path of the impact mass.

11 On the record before us, the Appellants have not shown that the
12 Examiner erred in rejecting claims 1-11.

13

14 *B. The Rejection of Claim 21 Under § 102(b) as Being
15 Anticipated by Anderson*

16 The Appellants contend that the Examiner erred in rejecting claim 21
17 for the same reason given by the Appellants with respect to the rejection of
18 claims 1-11. They also contend that Anderson does not disclose an impact
19 mass moving along a path to directly contact with an impact stop. (App. Br.
20 9). The Appellants do not appear to contest the Examiner's finding (Ans. 3)
21 that the combination of Anderson's inertia member and pawls is an "impact
22 mass" as that term is used in claim 21. They also do not appear to contest
23 the Examiner's finding (*id.*) that the ratchet teeth on the output member are
24 "impact stops" as that term is used in claim 21. After the cam carried by the
25 input member disengages the pawls from the ratchet teeth and then
26 subsequently releases two of the pawls, the released pawls move along the

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1 rotational path of the inertia member into direct contact with the ratchet
2 teeth. (FF 9-10.) On this basis, we agree with the Examiner that the impact
3 mass is movable along a path to directly contact with the impact stop.

4 On the record before us, the Appellants have not shown that the
5 Examiner erred in rejecting claim 21.

6

7 CONCLUSION

8 On the record before us, the Appellants have not shown that the
9 Examiner erred in rejecting claims 1-11 and 21 under § 102(b) as being
10 anticipated by Anderson.

11

12 DECISION

13 We affirm the Examiner's rejection of claims 1-11 and 21.

14 No time period for taking any subsequent action in connection with
15 this appeal may be extended under 37 C.F.R. § 1.136(a) (2007). *See* 37
16 C.F.R. § 1.136(a)(1)(iv) (2007).

17

18 AFFIRMED

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20

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22

23 LV:

24

25 THOMAS SPINELLI
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