

The opinion in support of the decision being entered today
is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GERALD HOHENBICHLER
and GERALD ECKERSTORFER

Appeal 2007-3581
Application 11/203,777
Technology Center 1700

Decided: September 26, 2007

Before EDWARD C. KIMLIN, THOMAS A. WALTZ, and
JEFFREY T. SMITH, *Administrative Patent Judges*.

WALTZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the Primary Examiner's final rejection of claims 22-43, which are the only claims pending in this application. We have jurisdiction pursuant to 35 U.S.C. § 6(b).

According to Appellants, the invention is directed to an apparatus for continuous production of a rolled metal strip comprising a strip-casting

device, at least one rolling stand, and a strip-diverting device along the path of the metal strip between the strip-casting device and the rolling stand, spaced at a distance of 1.0 to 10.0 times the width of the strip upstream of the rolling stand (Br. 2). Independent claim 22 is illustrative of the invention and a copy of this claim is reproduced below:

22. Apparatus for continuous production of a rolled metal strip comprising:

a strip-casting device for producing a cast metal strip having an initial strip thickness when produced of less than 20 mm, and the strip passing from the strip casting device along a path;

at least one rolling stand downstream of the strip-casting device along the path and the rolling stand is adapted for in-line roll deforming of the cast, undivided metal strip;

a strip-diverting device along the path of the metal strip between the strip-casting device and the rolling stand, wherein the strip-diverting device is spaced at a distance of 1.0 times to 10.0 times the width of the strip upstream of the rolling stand.

The Examiner has relied on the following prior art references as evidence of obviousness:

Takahara (JP '743), as translated	JP 63-157743	Jun. 30, 1988
Hasegawa (JP '359), as translated	JP 02-070359	Mar. 09, 1990
Ziegelaar (WO '612)	WO 01/58612 A1	Aug. 16, 2001

ISSUES ON APPEAL

Claims 22-43 stand rejected under 35 U.S.C. § 103(a) as unpatentable over WO '612 in view of either JP '359 or JP '743 (Answer 3).

Appellants contend that there is no disclosure in any applied reference as to the distance between the strip-diverting device and the rolling stand (Br. 3).

Appellants contend that even if the references are properly combined, they do not teach every feature of claim 22 on appeal (Br. 4). Appellants contend that the Examiner assumes the adjustable dams of the prior art have an infinite range of widths to satisfy the claim requirement, but the Examiner has not provided any evidentiary basis for this assumption (Br. 3-4; Reply Br. 2).¹

The Examiner contends that WO ‘612 shows every limitation of claim 22 on appeal but is silent with regard to the distance requirement (Answer 3). The Examiner further contends that either JP ‘743 or JP ‘359 shows that the width of the strip can be easily controlled, thus resulting in widths where the strip-casting device would be within the distance from the rolling stand as specified in claim 22 on appeal (Answer 3-4).

Accordingly, the issue presented from the record in this appeal is as follows: Would the distance between the strip-diverting device and the rolling stand have been obvious to one of ordinary skill in this art in view of the applied prior art evidence?

We determine that a prima facie case of obviousness has been established, which prima facie case has not been adequately rebutted by Appellants’ arguments. Therefore, we AFFIRM the sole ground of rejection presented in this appeal essentially for the reasons stated in the Answer, as well as those reasons set forth below.

¹ We note that Appellants, in addition to the arguments for the patentability of claim 22, present specific arguments regarding claims 25, 27, 30-32, and 33 (Br. 4-7; Reply Br. 2-4). Accordingly, we consider these claims separately in our remarks below.

OPINION

We determine the following factual findings from the record presented in this appeal:

(1) WO ‘612 discloses a strip-casting device for producing a cast metal strip of various thicknesses, a rolling stand downstream of the strip-casting device used for in-line deforming of the cast, undivided metal strip, and a strip-diverting device (steering device 14) between the strip-casting device and the rolling stand (Abstract; 1:9-14; 4:4-18; 5:6-25; and 6:20-33);

(2) WO ‘612 teaches the use of side dams to confine the casting pool and thus determine the width of the cast metal strip (1:22-24 and 7:3-9);

(3) WO ‘612 teaches the problem of “wandering” of the cast metal strip along its processing path, and the need for control of the direction and the tension of the cast metal strip along its path (Abstract; 1:29-34; 2:1-4; 2:18-23; 3:9-10; 3:15-21; 4:4-18; 8:23-34; 9:5-12; 10:16-11:12; and 12:28-33);

(4) WO ‘612 exemplifies the strip-diverting device in relation to the rolling stand as about four widths of the cast metal strip (*see* Fig. 4); and

(5) JP ‘359 and JP ‘743 both teach the use of side dams at the ends of the rolls so that the width of the cast metal strip may be varied (Answer 3; JP ‘359, 2 (last four lines); 4:1-2; 7 (second full paragraph); 8 (first full paragraph); 10 (last three lines); and Fig. 1; JP ‘743, 4 (second full paragraph); 5 (first paragraph); 7 (last full paragraph); and 8 (first three paragraphs)).

Under 35 U.S.C. § 103, the factual inquiry into obviousness requires a determination of: (1) the scope and content of the prior art; (2) the

differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) secondary considerations. *See Graham v. John Deere of Kansas City*, 383 U.S. 1, 17-18, 148 USPQ 459, 467 (1966). “[A]nalysis [of whether the subject matter of a claim is obvious] need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741, 82 USPQ2d 1385, 1396 (2007), quoting *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). *See also In re Hoeschele*, 406 F.2d 1403, 1406-07, 160 USPQ 809, 811-12 (CCPA 1969) (“[I]t is proper to take into account not only specific teachings of the references but also the inferences which one skilled in the art would reasonably be expected to draw therefrom...”). Although patent drawings need not be drawn to scale, this does not mean that relative proportions shown in the drawings should be disregarded. *See In re Mraz*, 455 F.2d 1069, 1072, 173 USPQ 25, 27 (CCPA 1972).

Applying the preceding legal principles to the factual findings of record in this appeal, we determine that a prima facie case of obviousness has been established by the reference evidence, which prima facie case has not been adequately rebutted by Appellants’ arguments. As shown by factual finding (1) listed above, and not contested by Appellants, we determine that WO ‘612 discloses the three required devices arranged in the same order as required by claim 22 on appeal. As shown by factual finding (2) listed above, we determine that WO ‘612 teaches the use of side dams. Therefore, we determine that one of ordinary skill in this art would have

employed any side dams, such as those of the secondary references, in the process and apparatus of WO ‘612, to produce cast metal strips of any width (*see* factual finding (5) listed above). We also determine that one of ordinary skill in this art would have been aware of the problem of “wandering,” and by routine experimentation located the strip-diverting device a sufficient distance away from the rolling mill to control the position and tension of the cast metal strip as it moved along the process path (*see* factual finding (3) listed above). This determination is reinforced by the drawing of WO ‘612, which shows the two devices approximately four strip widths apart, well within the large range required by claim 22 on appeal (*see* factual finding 4 listed above). We note that Appellants have not presented any evidence of criticality for the claimed range. *See In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

With regard to Appellants’ arguments concerning claim 25 (Br. 4), this argument is answered by our remarks above. With regard to the argument concerning claim 27 (Br. 4; Reply Br. 2), we note that control of the tension of the cast metal strip has been suggested by WO ‘612 (*see* factual finding (3) listed above). Accordingly, absent a showing of criticality, we determine that setting of a tension for the cast metal strip would have been well within the ordinary skill in this art. With regard to Appellants’ arguments concerning claims 30-32 (Br. 5; Reply Br. 3), we refer to and adopt the position of the Examiner (Answer 5). We note that this feature has been suggested by WO ‘612 (12:28-37). With regard to the argument concerning claim 33 (Br. 6-7; Reply Br. 3), we determine that adjusting the location of the strip-diverting device would have been within

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the ordinary skill in this art to control the tension and eliminate “wandering” as desired by WO ‘612 (*see* factual finding (3) listed above).

For the foregoing reasons and those stated in the Answer, we affirm the sole ground of rejection presented in this appeal. Thus, we affirm the decision of the Examiner.

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

AFFIRMED

clj

OSTROLENK FABER GERB & SOFFEN
1180 AVENUE OF THE AMERICAS
NEW YORK, NY 10036-8403