

NOVELTY ASPECT OF PATENTABILITY OF INVENTIONS DEALING WITH RANGES

One of the primary requirements of patentability is “novelty”. A claim in a patent application is said to be novel if it is not anticipated by prior art. Prior art may be broadly defined as information available in public domain prior to an effective date of a patent claim. The type of analysis applied to judge whether a claim is anticipated or not varies based on the nature of claim being examined. Often claims recite ranges in order to seek a broad scope of protection, as opposed to protection that may be sought by reciting a specific value instead of a range. Patent examiners follow several guiding principles while examining whether ranges are anticipated by prior art. Some of the guiding principles are listed below:

1. A specific example in the prior art which is within a claimed range anticipates the range
2. Prior art which teaches a range overlapping or touching the claimed range anticipates if the prior art range discloses the claimed range with “sufficient specificity”
3. Prior art which teaches a value or range that is very close to, but does not overlap or touch, the claimed range does not anticipate the claimed range

A specific example in the prior art which is within a claimed range anticipates the range

Under the instant principle, a claim reciting a range is held to be anticipated if a prior art discloses a specific value which is within the claimed range.

Titanium Metals Corp., Appellee, v. Banner is a case that is known for having dealt with anticipation of ranges, while also dealing with various other aspects of anticipation. The claim under examination in this case recited a titanium base alloy having 0.6-0.9% of nickel (Ni) and 0.2-0.4% molybdenum (Mo). A prior art reference, a Russian article, presented graphs disclosing a titanium base alloy containing 0.75% by weight Ni and 0.25% by weight Mo. 0.75% by weight Ni is within the claimed range of 0.6-0.9% of Ni and 0.25% by weight Mo is also within the claimed range of 0.2-0.4% Mo. Hence, the claim was held to be anticipated by the prior art reference.

Prior art which teaches a range overlapping or touching the claimed range anticipates if the prior art range discloses the claimed range with “sufficient specificity”

The interpretation of the phrase “sufficient specificity” is the key to judge whether a prior art reference anticipates a range. The interpretation of the phrase may vary based on the facts of the case. Broadly there can be two scenarios in which this principle may be applied.

In a first scenario, a prior art reference may disclose a range, as an example, 10 minutes to 20 minutes, whereas the claim may recite a range, 5 minutes to 15 minutes. In this scenario, the reference “overlaps” the recited range of the claim. In such a scenario, the range recited by the claim may be anticipated by the overlapping range disclosed by the reference, as long as the reference discloses the claimed range with “sufficient specificity”.

In a second scenario, a prior art reference may disclose a range, as an example, 10 minutes to 20 minutes, whereas the claim may recite a range, 9 minutes to 19 minutes. In this scenario, the reference “encompasses” the recited range of the claim. Conventionally, in such a scenario, the recited range of the claim may be said to be obvious in light of the prior art reference. However, there have been instances where a range recited by a claim is said to be anticipated by a reference that discloses a range that encompasses, especially when the claimed range is not “critical” to the claimed invention.

Prior art which teaches a value or range that is very close to, but does not overlap or touch, the claimed range does not anticipate the claimed range

Providing a similar example, a prior art reference may disclose a range, as an example, 10 minutes to 20 minutes, whereas the claim may recite a range, 21 minutes to 30 minutes. In this scenario, the range disclosed in the reference is close to, but does not overlap or touch, the range recited in the claim. In such a scenario, the reference does not anticipate the range recited in the claim. In such scenarios, the rejection may be based on obviousness by taking differences into account.

In *Titanium Metals Corp., Appellee, v. Banner* one of the dependent claims under examination recited 0.8% Ni and 0.3% Mo, whereas the prior art reference disclosed 0.75% Ni and 0.25% Mo. Although the prior art range is close to the claimed range (value), the prior art range did not touch or overlap the claimed range (value). Hence, the dependent claim was not held to be anticipated by the prior art reference.

In conclusion, it is often tempting to claim a broad range so that the range, if granted, provides a broad scope of patent protection. However, claiming broad ranges also increases the risk of the range being anticipated by prior art. Hence, while dealing with inventions that



involve ranges, claims of a patent specification have to be carefully crafted to provide varying scope of protection and the description of the invention should also be drafted by considering issues relating to patent prosecution, infringement and patent invalidation.

I hope you find this article helpful. Check our [patent services](#) page to find out if we cater to your needs.

Also, feel free to [contact us or ask us](#) a question and have it answered within 24 hours. This work is licensed under a [Creative Commons Attribution-NonCommercial 3.0 Unported License](#)