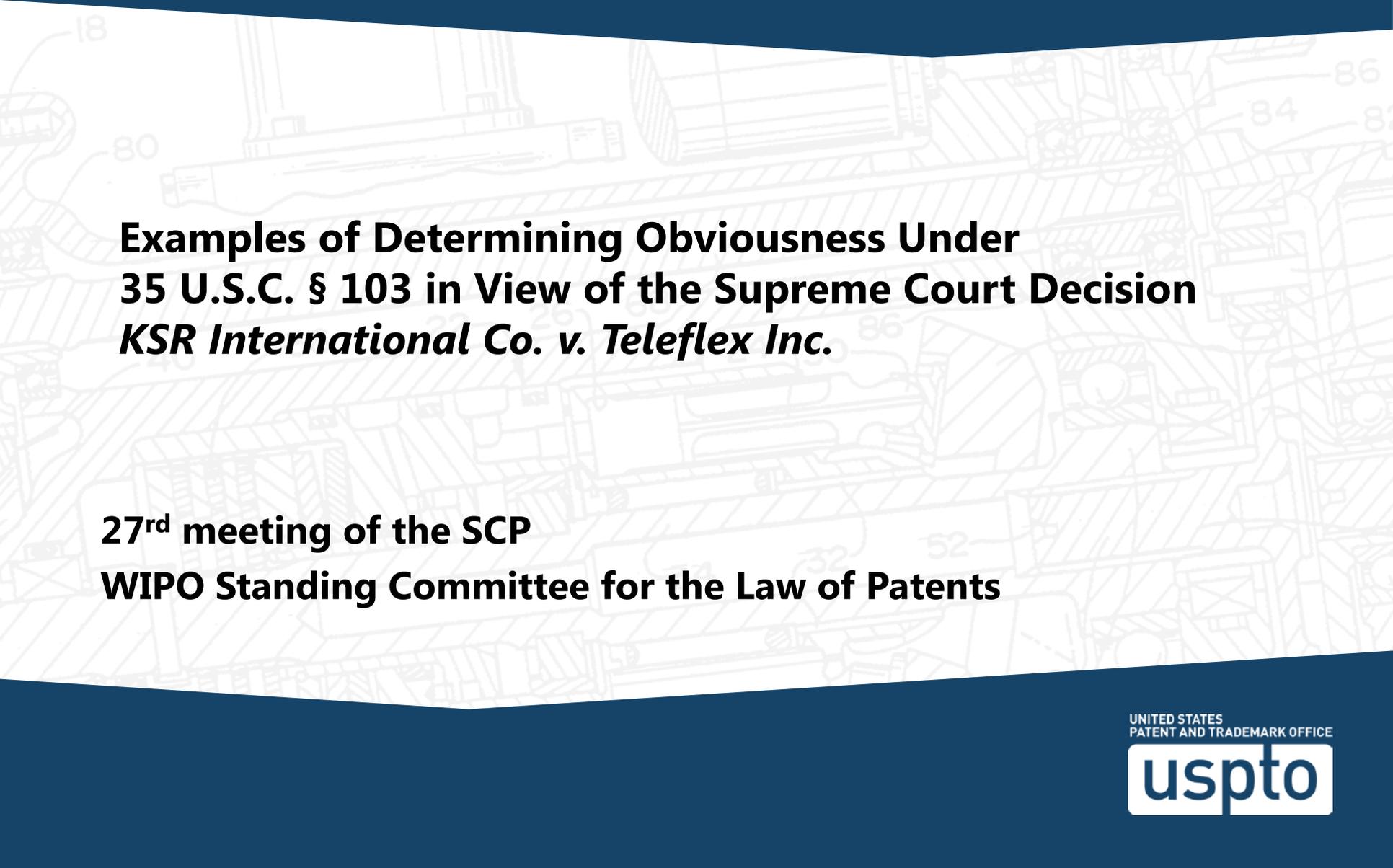


**UNITED STATES
PATENT AND TRADEMARK OFFICE**





**Examples of Determining Obviousness Under
35 U.S.C. § 103 in View of the Supreme Court Decision
*KSR International Co. v. Teleflex Inc.***

27rd meeting of the SCP

WIPO Standing Committee for the Law of Patents

UNITED STATES
PATENT AND TRADEMARK OFFICE



outline

- Review: The KSR decision;
- Examples of Determining obviousness;

35 U.S. Code § 103 - Conditions for patentability; non-obvious subject matter

- A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section [102](#), if the differences between the claimed invention and the prior art are such that the claimed invention as a whole **would have been obvious** before the effective filing date of the claimed invention **to a person having ordinary skill in the art** to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

One of Ordinary Skill in the Art

- Hypothetical person who is presumed to have known the relevant art at the time of the invention. Factors that may be considered in determining the level of ordinary skill in the art may include:
 - (1) type of problems encountered in the art
 - (2) prior art solutions to those problems
 - (3) rapidity with which innovations are made
 - (4) sophistication of the technology
 - (5) educational level of active workers in the field

- In re GPAC, 57 F.3d 1573, 1579, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995).

One of Ordinary Skill in the Art

- A person of ordinary skill in the art is also a person of ordinary creativity, not an automaton. In many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.
- Office personnel may also take into account “the inferences and creative steps that a person of ordinary skill in the art would employ”

KSR International Co. v. Teleflex Inc. (KSR), 550 U.S. 398, 82 USPQ2d 1385 (2007).

KSR International Co. v. Teleflex Inc., 550 U.S. 398 (2007)

- In the KSR decision, the Supreme Court reaffirmed Graham v. John Deere Co., 383 U.S. 1 (1966), as the controlling case on the topic of obviousness.

(GRAHM FACTORS)

- The Supreme Court stated that the Federal Circuit erred when it applied the well-known **teaching-suggestion-motivation (TSM)** test in an overly rigid and formalistic way.
- The **TSM** test reflected US law on obviousness before the KSR decision

KSR International Co. v. Teleflex Inc., 550 U.S. 398 (2007)

The TSM Test was the principal test before KSR

- Under the TSM test, a claimed invention is obvious when there is a **teaching, suggestion, or motivation** to combine prior art teachings. The teaching, suggestion, or motivation may be found in the prior art, in the nature of the problem, or in the knowledge of a person having ordinary skill in the art.
- According to the Supreme Court, the TSM test is one of a number of valid rationales that could be used to determine obviousness. It is not the only rationale that may be relied upon to support a conclusion of obviousness.

The Basic Factual Inquiries of Graham v. John Deere (GRAHM FACTORS)

- Determining the scope and content of the prior art;
- Ascertaining the differences between the claimed invention and the prior art;
- Resolving the level of ordinary skill in the pertinent art.

The examiner must consider objective evidence of nonobviousness, sometimes referred to as “secondary considerations,” when it is properly presented by applicants.

Rationale A. Combining prior art elements according to known methods to yield predictable results.

Examiners must articulate the following:

- 1) a finding that the prior art included each element claimed although not necessarily in a single reference;
- 2) a finding that one of ordinary skill in the art could have combined the elements as claimed by known methods and that in combination, each element merely would have performed the same function as it did separately; and
- 3) a finding that one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Rationale B. Simple substitution of one known, equivalent element for another to obtain predictable results

Examiners must articulate the following:

- 1) a finding that the prior art contained a device which differed from the claimed device by the substitution of some components with other components;
- 2) a finding that the substituted components and their functions were known in the art;
- 3) a finding that one of ordinary skill in the art could have substituted one known element for another and the results of the substitution would have been predictable.

Rationale C. Use of known technique to improve similar devices (methods, or products) in the same way.

Examiners must articulate the following:

- 1) a finding that the prior art contained a “base” device upon which the claimed invention is an improvement;
- 2) a finding that the prior art contained a comparable device that was improved in the same way as the claimed invention; and
- 3) a finding that one of ordinary skill could have applied the known “improvement” technique in the same way to the “base” device and the results would have been predictable.

Rationale D. Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results.

Examiners must articulate the following:

- 1) a finding that the prior art contained a “base” device;
- 2) a finding that the prior art contained a known technique that is applicable to the base device; and
- 3) a finding that one of ordinary skill in the art would have recognized that applying the known technique would have yielded predictable results.

Rationale E. “Obvious to try” – choosing from a finite number of predictable solutions.

Examiners must articulate the following:

- 1) a finding that there had been a recognized problem or need in the art including a design need or market pressure to solve a problem;
- 2) a finding that there had been a finite number of identified predictable potential solutions;
- 3) a finding that one of ordinary skill in the art could have pursued the known potential options with a reasonable expectation of success.

Rationale F. Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations would have been predictable to one of ordinary skill in the art.

Examiners must articulate the following:

- 1) a finding that the scope and content of the prior art, whether in the same or different field of endeavor, included a similar or analogous device.
- 2) a finding that there were design incentives or market forces which would have prompted adaptation of the known device.
- 3) a finding that the differences between the claimed invention and the prior art were encompassed in known variations or in a principle known in the prior art.
- 4) a finding that one of ordinary skill in the art, in view of the design incentives or market forces, could have implemented the claimed variation of the prior art, and the claimed variation would have been predictable.

Rationale G. TSM Test

Examiners must articulate the following:

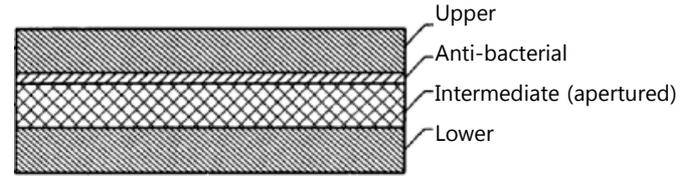
- 1) a finding that there was some **teaching, suggestion, or motivation**, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings;
- 2) a finding that there was reasonable expectation of success.

Example 1

Rationales A and E

- A. Combining prior art elements according to known methods to yield predictable results.
- E. “Obvious to try” – choosing from a finite number of predictable solutions.

Example 1



- Claim:
 - Claim 1. An antibacterial tissue including:
 - an upper planar shaped absorbent member;
 - an intermediate planar shaped absorbent member having a plurality of apertures formed therein coupled to the upper planar shaped absorbent member;
 - an antibacterial member formed on an upper surface of the intermediate planar shaped absorbent member between the upper planar shaped absorbent member and the intermediate planar shaped absorbent member; and
 - a lower planar shaped absorbent member coupled to a lower surface of the intermediate planar shaped absorbent member.

Example 1

Prior Art

- McAtee discloses:
 - personal cleansing articles with two paper-fiber outer layers having a cleaning substance, which may contain a biocide, between the two layers and that more than two plies may be used with any or all plies being apertured. The cleaning substance may be added onto any or all of the surfaces of the different layers.
- McAtee fails to specifically teach a 3-layered article or that a middle layer, in specific, should contain apertures therein or biocide thereon.

Example 1

Statements of Obviousness

- Examiner rejected claim 1 under § 103(a) as obvious in view of McAtee with the following:
 - Because McAtee discloses that two or more layers may be used, one of ordinary skill in the art would have reasoned that a structure with two outer layers and an intermediate layer was obvious in light of the reference.
 - By disclosing that any or all of the layers may contain apertures, McAtee suggests that the intermediate member may comprise apertures.
 - Because McAtee discloses that the cleaning substance may be coated onto any or all of the layers, one of ordinary skill would have reasoned that a biocide would be useful when placed on the top of the intermediate layer of a 3-layered article.

Example 1

Rationales A & E

- The above combinations of familiar elements, such as number of layers and location of apertures and biocide layers, according to the known methods taught by McAtee yields the predictable result of producing an effective cleansing product.
- It would have been obvious to choose (“obvious to try”) placement of the apertures and a layer of biocide in the intermediate layer as these represent a finite number of predictable solutions (apertures and biocide in layers 1, 2 and/or 3) identified by McAtee.

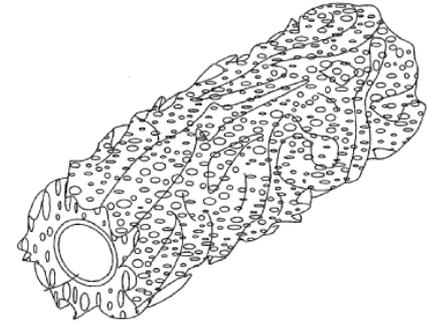
Example 2

Rationale A

- A. Combining prior art elements according to known methods to yield predictable results.

Example 2

Rationale A

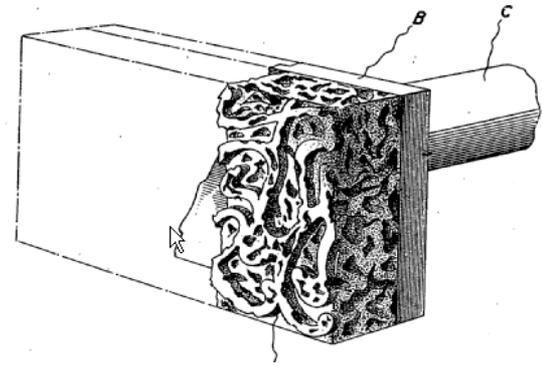


- Claim:
 - A patterned synthetic sponge, which comprises:
 - a synthetic sponge formed from an open cell elastomeric material and
 - bearing a pattern having ragged, torn edges, being at least about 0.5" in depth,
 - said patterned synthetic sponge simulating a natural sea sponge when creating faux paint finishes.



Example 2

Prior Art



- The “Australian Application” discloses
 - An artificial sponge of cellular structure for providing pattern effects on fresh paint
 - Any desired pattern character may be formed on the face of a sponge by removing portions of the face through cutting
 - The patterned face may be a shape complimentary to the pattern of floral or any other desired pattern.
- The Australian Application fails to teach the pattern having ragged, torn edges and the particular claimed pattern depth (0.5”)

Example 2

Statements of Obviousness

- Examiner rejected the claim under 35 U.S.C. § 103(a) over the "Australian Application" with the following:
 - One of ordinary skill in the art would have understood how to modify the pattern depth to achieve the desired pattern character.
 - One of ordinary skill in the art would have recognized that Australian application Figure 1 depicts a non-linear pattern and that the cutting of a sponge would produce a "torn" or "ragged" edge.

Example 2

Statement of Obviousness (cont.)

- One of ordinary skill in the art would have been able to implement the teachings of the Australian application and remove the material from the surface of the artificial sponge to produce any desired pattern, i.e., one would have understood that a smooth edge on a paint sponge leaves a different paint pattern from that of a paint sponge having torn edges. (If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability)

Example 2

Rationale A

- The combination of familiar elements (using artificial sponges with portions of the sponge face removed in place of natural sea sponges), according to known methods is likely to be obvious when it does no more than yield predictable results (reduced labor and material costs as compared to natural sea sponges).
- One of the ways in which subject matter can be proved obvious is by noting that there existed at the time of invention a known problem (providing a sea sponge pattern) for which there was an obvious solution (by removing the material on a synthetic sponge) encompassed by the claims.

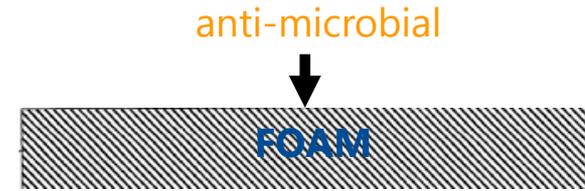
Example 3

Rationales A and C

- A. Combining prior art elements according to known methods to yield predictable results.
- C. Use of known technique to improve similar devices (methods, or products) in the same way.

Example 3

Rationales A and C



- Claim:
 - A vegetative produce handling machine, comprising:
 - at least one stationary vegetative produce-contacting surface; and
 - a foam padding covering at least a portion of said stationary vegetative produce-contacting surface of the machine, wherein said foam padding is intended to reduce bruising of the vegetative produce contacting the stationary surface and where said foam padding is formed with an anti-microbial agent to retard the growth of microbes on the padding.

Example 3

Prior Art

- Smith discloses
 - *a produce (egg) handling machine comprising a stationary produce-contacting surface (the feeder drum) on which is attached foam (sponge rubber) padding to protect the produce (eggs)*
- Smith fails to teach "said foam padding formed with an anti-microbial agent"

Example 3

Prior Art, continued

- Zabron discloses
 - *if a belting is intended to be used to convey food grade products, preferably an antibacterial agent is incorporated into the elastomeric material of the belt to inhibit bacterial growth and promote asepsis on the food-contacting surface*
 - *other textile layers associated with the belting can also have an antimicrobial agent incorporated therein*
- JP '841 discloses
 - *a method of conferring bacterial/fungal resistance to polyurethane foam by immersing the foam in an aqueous solution of an antibacterial agent*
 - *the well known necessity of conferring bacterial resistance to many types of products;*
 - *that polyurethane foams particularly are useful in many diverse fields "by virtue of their light weights and excellent cushion potentials"*

Example 3

Statements of Obviousness

- The Examiner rejected the claim under 35 USC 103 over Smith in view of Zabron and JP '841 with the following:
 - *Zabron shows that surfaces that come into contact with food may desirably contain an anti-microbial agent, and that one of ordinary skill in this art would have recognized the benefit of incorporating an anti-microbial agent into food-contacting surfaces.*
 - *JP'841 discloses foam padding with an anti-microbial agent incorporated therein to inhibit the growth of bacteria on surfaces is well known in the art.*

Example 3

Rationales A & C

- The claimed subject matter merely combines familiar elements (antibacterial agents and food contacting surfaces) according to known methods and does no more than yield predictable results.
- If a technique has been used to improve one device (adding antibacterial to surfaces), and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way (foam on feeder drum), using the technique is obvious unless its actual application is beyond his or her skill.

