

LEAPFROG ENTERPRISES,  
INC., Plaintiff-Appellant,

v.

FISHER-PRICE, INC. and Mattel,  
Inc., Defendants-Appellees.

No. 06-1402.

United States Court of Appeals,  
Federal Circuit.

May 9, 2007.

**Background:** Patent holder brought action against competitor alleging infringement of patent directed toward interactive learning device. The United States District Court for the District of Delaware, Gregory M. Sleet, J., 2006 WL 891001, entered judgment of noninfringement and invalidity. Patent holder appealed.

**Holdings:** The Court of Appeals, Lourie, Circuit Judge, held that:

- (1) accused device could not practice “selection of a depicted letter”;
- (2) claim was invalid as obvious; and
- (3) substantial evidence of commercial success, praise, and long-felt need was inadequate to overcome final conclusion that claim in patent would have been obvious given strength of prima facie obviousness showing.

Affirmed.

**1. Patents** ⇌314(5), 324.55(5)

A district court’s determination of patent infringement is a question of fact that is reviewed for clear error.

**2. Patents** ⇌235(2)

Accused device could not practice “selection of a depicted letter,” which meant choosing particular depicted letter from depicted sequence of letters by contacting or coming into proximity to that particular depicted letter, as claimed in patent that

related to learning device to help young children read phonetically, and thus did not literally infringe upon claim in patent, since device allowed selection of words only rather than letters.

**3. Patents** ⇌324.5, 324.55(4)

Obviousness is a question of patent law, reviewed de novo, based upon underlying factual questions which are reviewed for clear error following a bench trial.

**4. Patents** ⇌16.29

Claim in patent relating to electronic learning device that helped young children read phonetically was invalid as obvious in view of prior art mechanical toy that taught reading based on association of letters with their phonemic sounds, modern electronics that were common at time of alleged invention, prior art electronic reading and speaking device, and knowledge of one of ordinary skill in the art concerning readers.

**5. Patents** ⇌16(1)

A determination that a patent was obvious is not the result of a rigid formula disassociated from the consideration of the facts of a case.

**6. Patents** ⇌36.1(3), 36.2(9)

Substantial evidence of commercial success, praise, and long-felt need was inadequate to overcome final conclusion that claim in patent for learning device would have been obvious given strength of prima facie obviousness showing.

**Patents** ⇌328(2)

3,748,748. Cited as Prior Art.

**Patents** ⇌328(2)

5,813,861. Invalid.

Ron E. Shulman, Wilson Sonsini Goodrich & Rosati, of Palo Alto, CA, argued for plaintiff-appellant. With him on the brief were Terry Kearney and Michael A. Berta.

James Galbraith, Kenyon & Kenyon LLP, of New York, NY, argued for defendants-appellees. With him on the brief were Richard L. DeLucia and John Flock; and John R. Hutchins, of Washington, DC. Of counsel was Jeffrey M. Butler, of New York, NY.

Before MAYER, LOURIE, and DYK,  
Circuit Judges.

LOURIE, Circuit Judge.

Leapfrog Enterprises, Inc. (“Leapfrog”) appeals from the order of the United States District Court for the District of Delaware entering judgment of noninfringement and invalidity of claim 25 of Leapfrog’s U.S. Patent 5,813,861 (“the ‘861 patent”) in favor of Fisher–Price, Inc. and Mattel, Inc. (collectively “Fisher–Price”). We affirm.

#### BACKGROUND

Leapfrog filed suit in October 2003, alleging that Fisher–Price’s PowerTouch product infringed claim 25 of the ‘861 patent. Leapfrog amended the complaint to add Mattel, Inc. as a codefendant in September 2004. The ‘861 patent relates to a learning device to help young children read phonetically. Claim 25 reads as follows:

An interactive learning device, comprising:

- a housing including a plurality of switches;
- a sound production device in communication with the switches and including a processor and a memory;

at least one depiction of a sequence of letters, each letter being associable with a switch; and

a reader configured to communicate the identity of the depiction to the processor,

wherein selection of a depicted letter activates an associated switch to communicate with the processor, causing the sound production device to generate a signal corresponding to a sound associated with the selected letter, the sound being determined by a position of the letter in the sequence of letters.

’861 patent, col. 10 ll.23–36.

In an April 7, 2005 Order, the trial court construed a number of terms from claim 25 of the patent. The court construed the phrase “selection of a depicted letter” to mean “choosing a particular depicted letter from the depicted sequence of letters by contacting or coming into proximity to that particular depicted letter.” *Leapfrog Enterprises, Inc. v. Fisher–Price, Inc.*, No. 03–927 (D.Del. Apr. 7, 2005).

The accused PowerTouch device consists of a hinged plastic housing containing electronics and a speaker that opens to lie flat. When so opened, a user places a book made for use with the device in a rectangular recess in the housing. The books contain large, colorful pictures that also show words associated with the objects shown in those pictures. The user may select one of multiple modes of operation. In phonics mode, when the user touches one of the words on the page, the device pronounces the word, then pronounces each phoneme of the word in sequence, and finally pronounces the entire word again. The device relies on a grid of “crosspoints” located in the area underneath where the books are placed to detect the location on the page being touched by the user. The processor in the device may be programmed to associate a particular

response with each crosspoint. Some of the words on the pages of the books are large enough that each letter of the word corresponds to a separate crosspoint. However, the phonics mode operates in the same manner for those words, with pronunciation of the word, the phonemes, and the word again, regardless which letter the user touches because each letter has been associated with the same response in the device's programming.

The case proceeded to trial, but the jury deadlocked on May 27, 2005. The parties stipulated that the case would be submitted to the trial court for decision, based on the record and the rulings made by the court at the time the case was submitted to the jury.

The trial court issued its decision on March 30, 2006, finding claim 25 of the '861 patent not infringed and invalid as obvious. The court found that the accused PowerTouch device could not practice the "selection of a depicted letter" because it only allowed selection of words rather than letters. The court thus found that the PowerTouch did not infringe claim 25. The court also concluded that claim 25 was invalid as obvious in view of the combination of U.S. Patent 3,748,748 to Bevan, the Texas Instruments Super Speak & Read ("SSR") device, and the knowledge of one of ordinary skill in the art as represented by the testimony of Fisher-Price's technical expert, Ronald Milner.

Leapfrog timely appealed. We have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

## DISCUSSION

### A. *Noninfringement*

[1] The district court's determination of infringement is a question of fact that we review for clear error. *Abaxis Bioscience, Inc. v. Mayne Pharm. (USA) Inc.*,

467 F.3d 1370, 1375 (Fed.Cir.2006). "Under the clear error standard, the court's findings will not be overturned in the absence of a definite and firm conviction that a mistake has been made." *Impax Labs., Inc. v. Aventis Pharm. Inc.*, 468 F.3d 1366, 1375 (Fed.Cir.2006) (quotation omitted).

[2] On appeal, Leapfrog does not challenge the district court's construction of the phrase "selection of a depicted letter," but argues that the court clearly erred in applying that construction to the facts of the case. More specifically, Leapfrog argues that the PowerTouch does allow "choosing a particular depicted letter" because in at least some cases each letter of a word corresponds to a separate crosspoint. Thus, the fact that the response of the device is the same, no matter which letter the user touches, is irrelevant because the user may still choose particular letters.

Fisher-Price also does not challenge the district court's claim construction, and Fisher-Price responds that the district court correctly determined that selection by choosing a particular letter is only meaningful if making one letter choice results in an outcome different from making a different letter choice. Fisher-Price argues that the district court correctly found that only the word can be selected if the choice of letter, within a particular word, is irrelevant to the response of the device.

We find no clear error in the district court's application of the claim to the essentially undisputed facts of this case. The court's conclusion that the Fisher-Price PowerTouch only allows selection of a word rather than "a depicted letter" comports with its construction of "selection" to mean "choosing." The ordinary meaning of choice requires that the alternatives from which the choice is made will result in different possible outcomes.

With the PowerTouch device, the same outcome results no matter which letter in the word the user touches. This understanding is also consistent with the way that selection of a depicted letter is described in the patent.

Every time the child depresses a letter key, the book will recite the phoneme of the letter associated with that letter, in the context that the letter is used in the word or phrase depicted on the card, here “ball.” Thus, for the example where the subject is “ball” as shown if the child depresses the correct letter key of “b” the processor will sound the phoneme “b” as “b” is pronounced in “ball.”

'861 patent, col.6 ll.17–23. Most importantly, this understanding of selection is also most consistent with the language of claim 25 itself. The PowerTouch device does not generate a signal corresponding to a sound associated with the selected letter, as the claim requires. A signal corresponding to a word is not the same as a signal corresponding to a letter. If the claim were meant to encompass a device that always enunciates all the letters of a word no matter which letter was selected, the claim language requiring that “the sound be] determined by a position of the letter in the sequence of letters” would be superfluous because no such determination would be necessary.

Leapfrog comes well short of supporting a definite and firm conviction that a mistake has been made, and we therefore affirm the district court’s entry of judgment of noninfringement in favor of Fisher–Price.

#### B. *Obviousness*

[3] “Obviousness is a question of law, reviewed de novo, based upon underlying factual questions which are reviewed for clear error following a bench trial.” *Alza*

*Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1289 (Fed.Cir.2006) (citing *Rwiz v. A.B. Chance Co.*, 357 F.3d 1270, 1275 (Fed.Cir. 2004)).

[4] Leapfrog argues that the district court engaged in improper hindsight in reaching its conclusion of obviousness by concluding that all of the limitations of the claim are found in the prior art. Leapfrog also argues that the court’s finding that the Bevan device has the same functionality as claim 25 was clearly erroneous because the components of Bevan’s device are mechanical, and thus different in structure and interrelation from the electronic components described in claim 25, and therefore cannot provide the same functionality. Leapfrog argues that there was inadequate evidence in the record to support a motivation to combine Bevan, the Texas Instruments SSR, and a reader to arrive at the invention of claim 25. Finally, Leapfrog argues that the district court did not properly consider the strong evidence of secondary considerations of nonobviousness.

In response, Fisher–Price argues that claim 25 is nothing more than the Bevan device, a toy that teaches reading based on the association of letters with their phonemic sounds, updated with modern electronics that were common by the time of the alleged invention. Fisher–Price also responds that particularized and specific motivations to combine need not be found in the prior art references themselves in the context of an improvement that arises from a desire to generally improve a known device (*e.g.*, to make the product smaller, lighter, or less expensive) using newer technology. Finally, Fisher–Price argues that the district court did give proper consideration to secondary considerations of nonobviousness, but simply concluded that those considerations were not sufficient to overcome the determina-

tion of obviousness based on primary considerations.

[5] We agree with Fisher-Price that the district court correctly concluded that the subject matter of claim 25 of the '861 patent would have been obvious in view of the combination of Bevan, the SSR, and the knowledge of one of ordinary skill in the art. An obviousness determination is not the result of a rigid formula disassociated from the consideration of the facts of a case. Indeed, the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others would not. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. —, 127 S.Ct. 1727, 1739, 167 L.Ed.2d 705 (2007) (“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.”). Thus, we bear in mind that the goal of the claim 25 device was to allow a child to press a switch associated with a single letter in a word and hear the sound of the letter as it is used in that word. In this way, the child would both associate the sound of the letter with the letter itself and be able to sound out the word one letter at a time to learn to read phonetically. Accommodating a prior art mechanical device that accomplishes that goal to modern electronics would have been reasonably obvious to one of ordinary skill in designing children’s learning devices. Applying modern electronics to older mechanical devices has been commonplace in recent years.

The Bevan patent was one of the pieces of prior art relied upon by the district court, and it describes an electro-mechanical learning toy. In the preferred embodiment of the Bevan device, a housing contains a phonograph record as a voice storage means, a speaker for playing sounds from the voice storage means, and an actuated electric motor to turn the

record. Uniquely shaped puzzle pieces fit into correspondingly shaped openings in the top of the housing. Depressing the puzzle pieces in the openings causes the motor to turn the record and brings phonographic needles into contact with the portions of the record where the sounds associated with the puzzle pieces are stored so that they can be played through the speaker. In one embodiment, each puzzle piece is imprinted with one letter from a word, and pressing each puzzle piece produces the sound of a single letter in that word. Thus, although it relies on an electric motor and mechanical structures rather than a processor and related electronics, Bevan teaches an apparatus that achieves the goals described above of associating letters with their sounds and encouraging children to sound out words phonetically through a similar type of interaction. We therefore see no clear error in the district court’s finding that the Bevan device has the same method of operation, viewed as a whole, as claim 25 of Leapfrog’s '861 patent.

A second piece of prior art relied upon by the district court was the Texas Instruments SSR. The SSR is a more modern type of prior art learning toy, constructed with electronic components, that has a slightly different mode of operation than Bevan. The SSR has a hinged plastic housing that opens to lie flat. Books for use with the toy fit into a recess in the housing. The housing contains switches that can detect when a child presses on different areas of the books’ pages. The housing also contains a processor, memory, and a speaker to produce sounds. In one mode of operation, the SSR allows the child to press the first letter of a word and hear the sound of that letter. The remainder of the letters in the word are grouped together and played together. For example, the child can press the letter “t” and

hear the t phoneme and then press “ug” to hear all the sounds in the word “tug.” Similarly, the child can press the letter “b” and then “ug” to hear the sounds in “bug.” The SSR does not include a reader that allows the processor to automatically identify the inserted book. Instead, the user can press a triangle printed on the first page of the book, and the processor determines from the location of the triangle printed on the page which book is inserted. Similarly, the user can press a star on each page of the book, and the processor determines from the location of the star on the page which page of the book is being viewed. Thus, the SSR provides a road-map for one of ordinary skill in the art desiring to produce an electronics-based learning toy for children that allows the use of phonetic-based learning methods, including the association of individual letters with their phonemes.

We agree with the district court that one of ordinary skill in the art of children’s learning toys would have found it obvious to combine the Bevan device with the SSR to update it using modern electronic components in order to gain the commonly understood benefits of such adaptation, such as decreased size, increased reliability, simplified operation, and reduced cost. While the SSR only permits generation of a sound corresponding to the first letter of a word, it does so using electronic means. The combination is thus the adaptation of an old idea or invention (Bevan) using newer technology that is commonly available and understood in the art (the SSR). We therefore also find no clear error in the finding of the district court that one of ordinary skill in the art could have utilized the electronics of the SSR device, with the method of operation taught by Bevan, to allow a child to press each individual letter in a word and hear the individual phonemes associated with each letter to sound out the words.

This combination of Bevan and the SSR lacks only the “reader” of claim 25 of the ’861 patent. The district court found that readers were well-known in the art at the time of the invention. As there is ample evidence in the record to support that finding, we find no clear error in the court’s determination. Furthermore, the reasons for adding a reader to the Bevan/SSR combination are the same as those for using readers in other children’s toys—namely, providing an added benefit and simplified use of the toy for the child in order to increase its marketability. Leapfrog presents no evidence that the inclusion of a reader in this type of device was uniquely challenging or difficult for one of ordinary skill in the art. *See KSR*, 127 S.Ct. at 1741. Nor does Leapfrog present any evidence that the inclusion of a device commonly used in the field of electronics (a reader), and even in the narrower art of electronic children’s toys, represented an unobvious step over the prior art. Our conclusion is further reinforced by testimony from the sole inventor at trial that he did not have a technical background, could not have actually built the prototype himself, and relied on the assistance of an electrical engineer and Sandia National Laboratory to build a prototype of his invention.

[6] Finally, we do not agree with Leapfrog that the court failed to give proper consideration to secondary considerations. The district court explicitly stated in its opinion that Leapfrog had provided substantial evidence of commercial success, praise, and long-felt need, but that, given the strength of the prima facie obviousness showing, the evidence on secondary considerations was inadequate to overcome a final conclusion that claim 25 would have been obvious. We have no basis to disagree with the district court’s conclusion.

In light of our review of the evidence and the lack of any clear error in the district court's factual findings, we agree with the district court's conclusion that claim 25 of the '861 is invalid as obvious in view of the combination of Bevan, the SSR device, and the knowledge of one of ordinary skill in the art concerning readers.

Fisher-Price's PowerTouch device does not infringe claim 25 of the '861 patent and that claim 25 of the '861 patent is invalid as obvious.

*AFFIRMED.*

#### CONCLUSION

For the reasons stated, we affirm the district court's grant of judgment that

