

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte LARRY DEMOSS and BRUCE G. BARMAN

Appeal No. 2006-0714
Application No. 10/238,083

ON BRIEF

Before FRANKFORT, OWENS and BAHR, Administrative Patent Judges.

BAHR, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's rejection of claims 1-19, 21-48 and 50.

We REVERSE AND REMAND.

BACKGROUND

The appellants' invention relates to a helical wire form coil and an innerspring. A copy of the claims under appeal is set forth in the appendix to the appellants' brief. Claim 1, which is representative of appellants' invention, is reproduced *infra* in the opinion section of this decision.

The Applied Prior Art

Flesher et al. (Flesher)	4,726,572	Feb. 23, 1988
Codos	5,868,383	Feb. 9, 1999

The Rejections

Claims 1-12, 14-19, 21-41, 43-48 and 50 stand rejected under 35 U.S.C. § 103 as being unpatentable over Codos.

Claims 13 and 42 stand rejected under 35 U.S.C. § 103 as being unpatentable over Codos in view of Flesher.

Rather than reiterate the conflicting viewpoints advanced by the examiner and the appellants regarding this appeal, we make reference to the examiner's answer (mailed July 5, 2005) for the examiner's complete reasoning in support of the rejections and to the appellants' brief (filed June 8, 2005) for the appellants' arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to the appellants' specification and claims, to the applied prior art, and to the respective positions articulated by the appellants and the examiner. As a consequence of our review, we make the following determinations.

Claim 1 is representative of the appellants' invention and reads as follows:

1. A helical wire form coil comprising a center convolution, at least two intermediate convolutions which extend from the center convolution, and an end convolution attached to each intermediate convolution, the coil having a length measured from one end convolution to an opposite end convolution in a range of six and three quarters to seven and one half inches, and being able to be compressed axially by a force in a range of 1.55 to 1.95 pounds per inch.

There does not appear to be any dispute that Codos discloses all of the features of appellants' independent claims, with the exception of the recited length within a range of six and three quarters to seven and one half inches. Codos discloses coil lengths of eight and three quarter inches (Figures 3, 4 and 7,8) and eight and one quarter inches (Figures 5, 6). These are the only coil lengths specified by Codos. Codos teaches that “[a] mattress or cushion may further be formed with one or more concave areas, such as concave regions by springs of different heights or by varying the spatial orientation of the connective matrix, or both” (column 11, lines 8-12) and that, “[p]referably, each of

the plurality of springs has a substantially uniform height, although springs of different heights may also be used" (column 11, lines 19-21).

Based on the teachings of Codos, as cited above, one of ordinary skill in the art of innersprings would certainly have found a suggestion to use coil lengths of less than the eight and one quarter inches and eight and three quarter inches specified by Codos, to form concavities, for example. What is lacking in the examiner's rejection, however, is any evidence as to the degree of variance from the particular coil lengths cited by Codos that would have been suggested to a person of ordinary skill in the art of innersprings and, more particularly, whether such a person would have found suggestion in Codos' teachings to use a coil within the range of six and three quarters to seven and one half inches, as called for in the claims.

The examiner's rationale in rejecting claims 1-12, 14-19, 21-41, 43-48 and 50 as being unpatentable over Codos is set forth on page 3 of the answer as follows.

It is well known in the art to design coil springs according to the desired mattress height and spring characteristics. It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine the coil spring height of Codos through routine design and experimentation to provide the optimal spring characteristics for the intended use.

Discovery of an optimum value of a result effective variable is ordinarily within the skill of the art. See In re Boesch, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980) and In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). However,

exceptions have been found where the results of optimizing the variable are unexpectedly good or where the parameter optimized was not recognized to be a result-effective variable. In re Antonie, 559 F.2d 618, 620, 195 USPQ 6, 8-9 (CCPA 1977).

In this instance, there is no indication in Codos that the height of the coil was considered to be a result-effective variable. While Codos clearly teaches that various coil heights can be used, as discussed above, and one of ordinary skill in the art would have certainly understood that the spring characteristics of the coils are determined in part by the height of the coil, Codos does not teach or suggest using overall coil height to provide multiple spring rates. Rather, Codos discloses varying pitches and diameters along the length of the coil to modify the spring rates. There is no indication in Codos that the height of the coil is intended to have any consequence on the coil or the innerspring other than coil height itself. As for coil height, as discussed above, the examiner's rejection is not supported by any evidence as to what range of coil heights (or mattress or cushion heights), outside of the particular ones specified by Codos, would have been considered desirable by one of ordinary skill in the art.

In light of the above, we conclude that the evidence adduced by the examiner in making this rejection is insufficient to support a *prima facie* case of obviousness of the claimed subject matter in this case. The rejection of claims 1-12, 14-19, 21-41, 43-48 and 50 as being unpatentable over Codos cannot be sustained.

The examiner's application of Flesher in rejecting dependent claims 13 and 42 provides no cure for the deficiency of Codos discussed above. Accordingly, the rejection of claims 13 and 42 as being unpatentable over Codos in view of Flesher also cannot be sustained.

REMAND TO THE EXAMINER

This application is remanded to the examiner, pursuant to 37 CFR § 41.50(a)(1), for consideration of the following.

As indicated in our decision above, what is lacking in the rejection put before us in this appeal is any evidence that mattress or cushion heights (see column 11, lines 5-21 of Codos) within the range recited in appellants' claims were known in the art at the time of the appellants' invention and would have been considered as being encompassed by Codos' description. Codos merely establishes that heights of eight and one quarter inches and eight and three quarter inches, and heights varying therefrom, were known at the time of appellants' invention. Thus, upon remand, the examiner should consider whether evidence is available that would indicate that one of ordinary skill in the art would have understood innerspring coil heights to be within the range claimed by the appellants within the context of Codos' invention.

Additionally, it is not apparent from the record in this case that the examiner fully appreciated the broad scope of appellants' claim 1, which requires neither different

pitches nor different diameters along the length of the coil. Any helical wire form coil, in any environment, having at least five convolutions and a length in a range of six and three quarters to seven and one half inches, capable of being compressed by a force within a range of 1.55 to 1.95 pounds per inch, would meet this claim. Accordingly, in response to this remand, the examiner is asked to review the prior art in light of the broad scope of claim 1.

CONCLUSION

To summarize, the decision of the examiner to reject claims 1-19, 21-48 and 50 is REVERSED and the application is REMANDED to the examiner as discussed above.

REVERSED AND REMANDED

CHARLES E. FRANKFORT)
Administrative Patent Judge)
)
)
)
)
)
)
) BOARD OF PATENT
TERRY J. OWENS) APPEALS
Administrative Patent Judge) AND
) INTERFERENCES
)
)
)
)
JENNIFER D. BAHR)
Administrative Patent Judge)

JAMES C. SCOTT, ESQ.
ROETZEL & ANDRESS
1375 E. 9TH STREET
ONR CLEVELAND CENTER, 10TH FLOOR
CLEVELAND, OH 44114

M/BM TEAM



APPEAL NO. 2006-0714
APPLICATION NO. 10/238,083

Copies:

 APJ BAHR

 APJ FRANKFORT

 APJ OWENS

DECISION: REVERSED AND REMANDED

PREPARED: Sep 7, 2006

2 Person Conf. Onbrief

PALM:

3 Person Conf. Onbrief

ACTS:

3 Person Conf. Heard

DISK (FOIA):

ELPH:

BOOK:

GAU:

44C2:

IFW in Mail Room: