

IN THE CANADIAN PATENT OFFICE

DECISION OF THE COMMISSIONER OF PATENTS

Patent application 2,088,098 having been refused under subsection 47(2) of the Patent Rules, the applicants have asked that the examiner's Final Action be reviewed. The refusal has consequently been considered by the Patent Appeal Board and by the Commissioner of Patents. The findings of the Board and the ruling of the Commissioner are as follows.

Agent for Applicants

Lespérance & Associés

1440 Ste-Catherine Ouest

Montréal, Quebec

H3G 1R8

This decision deals with the Applicants' request for review by the Commissioner of Patents of the Final Action of application 2,088,098, International Patent Classification A61F 7/00, filed January 26, 1993 and entitled "Coussin thermothérapeutique" [heat therapy cushion]. The inventors are Yvon Gaudreault, Monique Lebeau and Rita Robitaille. A request was made to advance the examination of the application under section 39 of the Patent Rules. The examiner's Final Action was taken on December 19, 1994; it rejected the claims on the ground of prior art.

On February 27, 1995, the applicants submitted a reply in which they defended the rejected claims, filed a new claim 12 and requested a hearing by the Patent Appeal Board, which was held on May 10, 1995. The Board was composed of Murray Wilson, as Chairman, and Agnès Lajoie, as Member. Patent Agent François Martineau represented the applicants, and one of the inventors, Yvon Gaudreault, attended the hearing.

The application concerns a flexible thermal cushion that permits the transfer of heat or cold for a given length of time to parts of the body of a mammal. The components of the heat transfer device, which has a low manufacturing cost and is reusable and safe to handle, are entirely natural. The application also concerns a method of use of the heat therapy cushion.

In the Final Action, the examiner rejected all the claims and refused the application itself on the ground of a lack of inventive ingenuity in view of the following publications, which were submitted to the Commissioner of Patents by way of a protest received on May 2, 1994; the said protest was followed by a filing of prior art under section 34.1 of the Patent Act on June 7, 1994.

Publications

1. Revue d'ethnologie du Québec, 1976, pages 76 and 86, Séguin;
2. Composition of Foods: Raw, Processed Prepared Agriculture; Handbook No. 8, Agriculture Research Service, United States Department of Agriculture, 1975,

- A. Extract from the "État général des fonds et des collections des Archives du folklore", publication No. 14 of April 1990, published by Laval University;
- B. F. Saillant and G. Coté, "Se soigner en famille, les recettes populaires dans les familles québécoises du début du XXIème siècle," vol. I, published by Laval University's Centre de Recherches sur les services communautaires in August 1990;
- C. Grain Handbook for Western Canada, Appendix C;
- D. Drying Cereal Grain, published in 1974.

The examiner referred to documents A, B, C and D in the Final Action to corroborate publications 1 and 2, which were referred to in an earlier report.

Claims 1, 4 and 5, on which the other claims rejected by the examiner are dependent, read as follows

[TRANSLATION] 1. A heat therapy cushion, intended for the relief of parts of the body of a mammal, consisting of an envelope made of a flexible, smooth, porous sheet that is a thermal conductor, and a granular material containing no free liquid, the said granular material being enclosed in the said envelope and retained by it; characterized in that the said granular material consists of cereal grain, the said cereal grain being oat kernels that are non-saturated and not bound to each other, and have a water content of between 10% and 11% by weight of cereal grain, such that the kernels flow freely and evenly inside the said envelope when the cushion is folded so as to conform to the shape of a part of the body, the said cereal grain being characterized by high thermal inertia and high moisture inertia; and characterized in that the said sheet material of the envelope is cotton, the said cotton sheet being [folded and] sewn around its edge to form a closed envelope.¹

4. A method of using a flexible heat therapy cushion, the said cushion being of a type consisting of an envelope made of a material similar to cotton and a granular cereal material without any free liquid, enclosed within the said envelope and retained by it, the kernels of the said granular material being non-saturated and not bound to each other, such that the grain flows freely and evenly within the said envelope when it is folded, the said cereal grains being of a type having high thermal inertia and high moisture inertia², and the grain size of the said granular material remaining fairly constant even after the cushion has been folded many times, the said method consisting of the following steps:

(a) submit the said cushion to thermal stress selected from among the group including: heating the cushion in a microwave oven for a period of time sufficient to enable the cereal grain to attain a temperature that is high but not high enough to burn the skin, heating the cushion in a convection oven with the cushion covered with protective aluminum foil for a corresponding period of time, or freezing the cushion in a freezer for a period of time sufficient to enable the cereal grain to reach a temperature that is lower than the freezing point but not a temperature that can burn the skin;

(b) apply the cushion to a part of the body of a mammal that is to be treated, and

¹The French original reads rather strangely here this is what it appears to mean - Tr

²"inertie d'humidité" - Tr

(c) fold the cushion in a curve so that it conforms to the said part of the body and the cereal grain flows freely and evenly within the said cushion envelope, without creating voids where there is no grain.

5. A heat therapy cushion, intended for relief of parts of the body of a mammal, consisting of an envelope made of fabric that is resistant to a microwave oven and is a thermal conductor, porous, smooth and flexible, and a granular material contained in and retained by the said envelope; characterized in that the said granular material consists of cereal grain kernels, the said cereal grain kernels being non-saturated and not bound to each other and having a water content such that there is free and even flow of these cereal kernels within the said envelope when the cushion is folded so as to conform to the shape of a part of the body, the said cereal grain being characterized by high moisture inertia and high thermal inertia

In his Final Action, the examiner stated the following, *inter alia*:

[TRANSLATION] Claim 1 is rejected because the subject matter of the claim lacks inventive ingenuity, considering the publications cited. Essentially this claim defines a sheet of cotton that is folded and sewn to form an envelope into which oat grain having a moisture content of 10% to 11% is inserted. For the remaining content of the claim, it is the direct result of the limitations identified earlier.

The use of oats for heat therapy purposes has been known for a number of years, as shown by the publication "Revue d'ethnologie du Québec" More specifically, page 76 discussed empirical healers who applied poultices consisting of a bag of hot oats to a part of the body to be treated. Page 86 describes using heated oat poultices to treat lumbago. Those oat poultices were thus used for the same reason as the envelope in claim 1. to treat part of the body of a mammal Since the use of a bag of hot oats has been known for a very long time, it is obvious that the material used had to be cotton.

The only limitation that does not flow from the publication mentioned is the moisture content of the oats, which is limited to 10% to 11%, ensuring that the grain flows freely. Oats sold in stores has a moisture content of 10% (see Composition of Food, Processed, Prepared, Agriculture Handbook No. 8) so that it will keep longer. Oats having a moisture content higher than 10% tends to ferment.

Thus all the limitations in the claim are known and obvious. . . .

A second argument used by the applicants concerns the oat kernels themselves, which are clearly different from the grain mentioned in publication 2. Still according to the applicants, the grain in the present application is selected according to four criteria. moisture content, volume used,³ high thermal inertia and high moisture inertia.

The criteria stated cannot be accepted as the result of special prior preparation of the oats or other cereals used. Thus document C discusses the variation in moisture content of cereal grain. The moisture content of cereal grain can vary from 9.6% to 17%, depending on the variety This information is also given in document D, which establishes a correlation between moisture content and preservation of various cereal grain. . .

Therefore a moisture content selected within the range of 9% to 14%, and more specifically 10% to 11%, falls directly within the rates used for preserving cereal grain.

In conclusion, the moisture content of the grains as claimed adds nothing inventive to the state of the art.

As for the volume, thermal inertia and moisture inertia criteria, they follow directly from the intrinsic characteristics of the cereal grain.

³ volume de chargement¹ Appears to refer to the fact that the cushions are stuffed loosely so that they will fold easily however, that is not a criterion for selecting the grain - Tr

The examiner then explained the particulars of his reasons for rejecting dependent claims 2 and 3.

The examiner rejected claim 4 under section 2 of the Patent Act on the ground that it did not satisfy the novelty requirement. He added the following, *inter alia*:

[TRANSLATION] The claim describes a method of using a heat therapy cushion that consists of two operations: heating the cushion using the means available, and applying the cushion to the part of the body that is in pain. The "Revue d'ethnologie du Québec" discusses healers who heat oat bags and apply them to parts of the body needing relief. The other components of this claim are structural, so they cannot characterize the method.

As for claim 4, the applicants state in their letter of October 13, 1994 that in his report the examiner fails to discuss an important final step in the method. "fold the cushion in a curve so that it conforms to the said part of the body and the cereal grain flows freely and evenly within the said cushion envelope, without creating voids where there is no grain."

The applicants' argument is unfounded. The action of folding a cushion is obtained simply by applying the cushion to part of the body. All cushions function in this way, that is, they conform to part of the body.

Finally, the examiner rejected claim 5 under subsection 34(2) of the Patent Act on the ground that it is incomplete and of broader scope than the disclosure and is accordingly vague. He stated the following, *inter alia*:

[TRANSLATION] As for the grain used, the applicants have shown in their disclosure that only oats are suitable for this type of use. The claim must state that the cereal grain used is oat kernels.

Similarly, in their disclosure the applicants specify a moisture content of 10% to 11% for the oats to make certain that they flow freely and thus that the cushion works properly. That limitation must also be part of the claim.

All types of cereals discussed have significant disadvantages compared to oats that affect the free flow of the grain. Thus the disclosure tells us that oats are best suited to conforming to part of the body compared to the other types of cereal, because they flow freely within the cushion. For that reason, claim 5 must be limited to oats.

Also, there is a contradiction concerning the moisture content of the oats between what is stated in the disclosure and what is stated in claim 5. The applicants in their disclosure stress the importance of a specific moisture content, to ensure that the grain flows freely inside the cushion.

Claims 6 to 10 add limitations to claim 5 which give claim 5 a scope similar to that of claim 1

In their reply dated February 27, 1995 to the Final Action, the applicants discussed various characteristics of the product that in their opinion shows that the product described in the application is not obvious. The applicants further stated the following, *inter alia*:

[TRANSLATION] The Canadian examiner filed four new examples of prior art in support of his final rejection. Each of those examples essentially concerns poultices or paper bags containing hot oats, which are simply placed on a person's stomach or chest. There is never any discussion of controlling the moisture content of the cereal grain, or of controlling the volume of grain placed inside the envelope in order to obtain a "free and even flow of the grain within the cushion envelope", nor of reusing the bags. The inventive ingenuity consists in part of this quality control, which has not been applied in the art before this. . .

None of the examples of prior art cited by the Canadian examiner deals with the possibility of folding the cushion to conform to the shape of a part of the body, and that is the point where the free flow of the grain comes into play. The prior art cited relates only to a mass in an envelope that rests flat on the person's abdomen, chest or back. There is nothing to suggest that these envelopes contain a volume of grain such that they can be folded. . .

Claim 1 was rejected for lack of inventive ingenuity. However, we are of the opinion that the major commercial success of this product on the Canadian market, the fact that U.S. and European patent offices (PCT) have determined it to have inventive ingenuity, the fact that the heat therapy cushion can be reused many times and can be used either heated or frozen, and the unexpected and beneficial results described on pages 10 and 11 of the specification for the patent application concerning the criteria for the volume of grain in the cushion, the selection of the envelope material, the free flow of the grain, the flexibility of the cushion, and the controlled moisture content (between 10% and 11%) so as to obtain high thermal inertia and high moisture inertia, strongly suggest that there truly is inventive ingenuity.

The applicants then discussed the examiner's detailed reasons for rejecting claims 1 to 3.

The applicants also submitted that claim 4 satisfies the novelty criterion. The following is how they summarized their arguments:

[TRANSLATION] Once again, the examiner is downplaying the claim by saying that it merely involves heating a cushion and applying it to a painful part, and folding the cushion to conform to a part of the body and the cereal grain flows freely and evenly within the said cushion envelope, without creating voids where there is no grain.

There is no information about the six documents on the state of the art cited by the Canadian examiner that suggests that these known cushions can be folded to conform to the shape of part of the body, such as the neck, the nape of the neck or the ankle. On the contrary, we maintain that the cushion described in the invention could very well be applied, for example, around the neck, the nape of the neck or the ankle, with free distribution of the cereal grain around that part of the user's body. . . .

Also, please note that none of the references cited by the examiner discusses the possibility of treatment using cold, according to the steps mentioned in this claim, nor do they mention the reusability of the product. We would remind the examiner that industrial application (utility) is one of the three criteria for patentability, and the possibility of reusing such a heat therapy cushion strongly suggests that there are industrial applications, which is not the case for paper bags.

Finally, the applicants submitted that claim 5 is not of broader scope than the disclosure and that claims 6 to 11 are specific methods of application. The following is how they summarized their arguments:

[TRANSLATION] The examiner maintains that this claim 5 is of broader scope than the disclosure. Once again, the examiner has erred page 13 of the specification identifies a whole range of cereals other than oats (barley, wheat, rice and corn) that are acceptable for the desired purpose, though oats remain the preferred grain. Also, the statement "contenu en eau tel" [water content such that] in claim 5 can readily be interpreted and inferred from pages 11 and 12 of the specification, without it being necessary to specify the precise range of moisture content percentages. The water content extends beyond the 10% to 11% range, in our view, according to the specification, specifically between 9% and 14% (claim 6).

Claims 6 to 11, which are based on claim 5, are specific methods of application and should be accepted for the same reasons.

At the hearing, the applicants filed the following additional documents: affidavits attesting to the commercial success and effectiveness of the product for which the claims were being made, copies of the U.S. patent and the PCT international application. They also provided a list of cases and commentaries on the relevance of a product's commercial success to the evaluation of inventive ingenuity. Finally, the applicants provided specimens of the product for which the claims were being made.

The Board must decide whether claims 1 to 11, which were rejected by the examiner, are patentable in light of the publications mentioned above and whether the application describes a patentable invention.

The review of the state of the art shows that references 1, A and B cited in respect of the present application relate to the basic principle applied in the invention at issue. For example, the Revue d'ethnologie du Québec (reference 1) reads as follows at page 76:

[TRANSLATION] Pleurisy

Besides treatment by sudation, our empirical healers knew the power of a poultice consisting of a bag of hot oats applied to the back or stomach.

Reference A describes remedies as follows:

[TRANSLATION] Popular medicine
Inflammation of the lungs
Heated oats applied to the lungs
and
PNEUMONIA
Hot oats
Apply compresses
and
Stomach
A bag of hot oats for stomach ache

Place the oats (two pounds) in a paper bag. Heat the bag of oats in the oven. When the oats are quite hot, apply directly to the stomach. Keep the bag hot or change it several times.

Reference B refers at page 247 to [TRANSLATION] "bags of heated salt or oats".

Thus, it can be seen from the review of the state of the art that the basic principle of using heat or cold stored in cereal grains is already known. However, none of the references cited has the essential characteristics of the heat therapy cushion disclosed in this patent application, namely the fact that the cushion can be reused many times either heated or frozen, and the criteria for the volume of grain in the cushion, the selection of the envelope material and the free flow of the cereal grains, which makes the cushion flexible.

References 2, C and D cited by the examiner provide general information about the cereal grains and present certain intrinsic properties of the cereal grains that are not relevant to the invention in issue.

As for the rejection of claims 1 to 3 on the ground that they lack ingenuity, the Board agrees with the applicants that none of the references either includes or relates to the essential characteristics and parameters of the heat therapy cushion set out in claim 1. Reference 1 merely mentions a poultice consisting of a "bag of hot oats". The remedies in reference A include heated oats or a bag of hot oats applied to the lungs or stomach. Reference B refers only to a bag of heated oats.

Furthermore, the applicants stated at the hearing that their product had been commercially successful, as can be seen from the sales and activities of the infringers. Although commercial success is not proof of inventive ingenuity, it supports the fact that the application of an established principle that results in an improved product of high quality may be proof of a certain inventive ingenuity.

In *The Canadian Law and Practice Relating to Letters Patent for Inventions*, 4th ed. (Carswell), at page 73, Harold G. Fox made the following comment respecting commercial success:

Certain considerations may turn the balance in favour of a presumption of invention. The practical commercial success of a new article does not necessarily demonstrate the presence of invention, but it raises a strong presumption that invention was necessary to produce it for the first time even though no long-felt want be established

The Board has found that claim 1 and dependent claims 2 and 3 demonstrate inventive ingenuity.

As for the examiner's rejection of claim 4 on the ground that it lacks novelty, the Board considers that the method of using the heat therapy cushion does not satisfy the novelty criterion and that the use of the cushion is obvious. Steps (a) of submitting the cushion to thermal stress and (b) of applying the cushion to the part of the body to be treated are in no way novel or ingenious, as they form a part of the known subject matter that is to be applied, as described in publications 1, A and B. These steps are also included in the description of the state of the art at pages 1 to 3 of the specification. Step (c) is merely a consequence of step (b) and the cushion's intrinsic properties. At page 4 of the disclosure of the application, it is mentioned in the description of the state of the art that salt-based thermal cushions conform to the shapes of various parts of the body. Finally, the free and even flow of the grain in the envelope to enable the cushion to conform to the shape of a part of the body is obvious to anyone with knowledge of the flow of any material presenting a certain fluidity. Furthermore, we agree with the examiner that the inclusion of a structural component in the claim does not characterize the method of use of the cushion.

The Board considers that claim 4 does not involve a method that satisfies the criteria of novelty and ingenuity. The rejection of claim 4 is therefore upheld.

We now come to the rejection of claim 5 under subsection 34(2) of the Patent Act and of dependent claims 6 to 11. If we refer to page 7 of the specification, the use of oat grains, the specific water content varying from 10% to 11% by weight and the fact that the sheet material of the envelope is cotton are preferred elements of the invention. However, it is mentioned later in the specification that these essential characteristics of the invention may vary through either the use of other cereal grains (barley, wheat, buckwheat, rice or corn), variations in water content or the use of other types of material (linen, flannel or GORTEX). Thus, the Board is of the opinion that claim 5 and dependent claims 6 to 11 are not broader in scope than the disclosure and are supported by the disclosure

In their reply of February 27, 1995, the applicants also requested that a new claim 12 be added to the claims in the application. The subject matter of claim 12 is supported by the disclosure. The Board therefore recommends that the new claim 12 be entered.

In summary, the Board recommends that the examiner's rejection of claims 1 to 3 and 5 to 11 and refusal of the application itself be withdrawn.

(signed) _____

Murray Wilson

Acting Chairman

Patent Appeal Board

(signed) _____

Agnès Lajoie

Member

Patent Appeal Board

I concur with the findings and recommendations of the Patent Appeal Board. Accordingly, I concur with the opinion that the examiner's refusal of the application must be withdrawn and that claim 12 attached to the reply of February 27, 1995 should be entered. The application must be remanded to the examiner for prosecution.

(signed)

M. Leesti

Commissioner of Patents

February 2, 1996