

IN THE CANADIAN PATENT OFFICE  
DECISION OF THE COMMISSIONER OF PATENTS

Patent application 492,093 having been rejected under Rule 47(2) of the Patent Regulations, the Applicant asked that the Final Action of the Examiner be reviewed. The rejection 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 Applicant

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This decision deals with the applicant's request that the Commissioner of Patents review the Examiner's Final Action on application 492,093 (Class 154-41), filed October 2, 1985 entitled "WEATHER-RESISTANT LIGNOCELLULOSE OR OTHER ORGANIC OR INORGANIC MATERIAL BOARDS AND PROCESS FOR THEIR PRODUCTION". The applicant and inventor is Reinhard F. Hering. The Examiner in charge issued a Final Action on June 1, 1990 refusing all claims of the application for lack of inventive ingenuity. The agents of record, Marcus & Associates, requested an oral hearing which was later withdrawn on April 28, 1992.

The application relates to weather-resistant boards comprising a base material and a vulcanized weather-resistant, outer resilient synthetic elastomeric material covering layer which has been vulcanized thereon in-situ.

Rejected claims 1 and 8 (the independent claims) read:

1. A method for preparing a weather-resistant board comprising one of the following procedures:

(A) (a) laying down an impregnatable porous base material selected from the group consisting of

(i) a lignocellulose or other organic fibrous or particle material,

(ii) an inorganic mineral fibrous or particle material,

and (iii) a mixture of a lignocellulose or other organic fibrous or particle material and an inorganic mineral fibrous or particle material,

as a pre-formed batt on a movable charging platform, said batt including a binder material associated therewith,

(b) laying down thereon a vulcanizable weather-resistant elastomer material, thereby to provide a composite;

and (c) compressing said composite under conditions of high pressure and a temperature of at least 175°C.; whereby said outer material is converted to vulcanized form and is bound to and is both adhered to one surface of said base material and is penetrated into and impregnated into the said surface of said base material and is bound thereto for only a predetermined limited region in the vicinity of said outer surface of said base material and being vulcanized therein in situ;

or (B) (a) laying down a vulcanizable weather-resistant elastomeric material on a movable charging platform,

(b) laying down thereon on impregnatable porous base material selected from the group consisting of

(i) a lignocellulose or other organic fibrous or particle material,

(ii) an inorganic mineral fibrous or particle material,

and (iii) a mixture of a lignocellulose or other organic fibrous or particle material and an inorganic mineral fibrous or particle material on said vulcanizable weather-resistant elastomeric material which had been laid down on said movable charging platform,  
as a pre-formed batt, said batt including a binder material associated therewith, thereby to provide a composite;  
and (c) compressing said composite under conditions of high pressure and a temperature of at least 175°C.; whereby said outer material is converted to vulcanized form and is bound to and is both adhered to one surface of said base material and is penetrated into and impregnated into the said surface of said base material and is bound thereto for only a predetermined limited region in the vicinity of said outer surface of said base material and being vulcanized therein in situ.

8. A weather-resistant impregnated board possessed of surface elasticity and pliancy by means of a permanently-elastic covering layer, comprising:

(a) an impregnable porous base material selected from the group consisting of

- (i) a lignocellulose or other organic fibrous or particle material,
- (ii) an inorganic fibrous or particle material,
- and (iii) a mixture of a lignocellulose or other organic fibrous or particle material and an inorganic mineral fibrous or particle material, said base material including a binder material associated therewith;

and (b) a vulcanized outer covering layer constituted by a vulcanized, weather-resistant, resilient, synthetic elastomeric material which has been vulcanized therein in situ at a temperature of at least 175°C.; said vulcanized outer covering layer being bound to and both adhered securely to one outer surface of said base material, and, when in unvulcanized form, being penetrated into and impregnated below and into the same outer surface of said base material to be within the porous structure of said base material for only a predetermined limited region in the vicinity of said outer surface of said base material, and being vulcanized therein in situ at said temperature of at least 175°C. to be bound thereto for only said predetermined limited region.

In the Final Action the following Canadian Patent was cited:

1,150,465      July 26, 1983      R.F. Hering

Claim 1 of said patent, to the same inventor reads:

Weather resistant board comprising: an impregnable base material constituted by mixture of an organic and an inorganic base material in the form of at least one of fibres and particles and a curable resin; and an outer material constituted by a vulcanizable, weather-resistant elastomeric material; said outer material being in vulcanized form and being both adhered to one surface of said base material and penetrated and impregnated into the same surface of said base material.

In rejecting the claims the examiner, in his Final Action, said in part:

...

The reference of Hering relates to a weather-resistant impregnated board comprising "an impregnable base material constituted by a mixture of an organic and inorganic base material, e.g. lignocellulosic or otherwise prepared organic and/or inorganic raw material and a mineral material in the form of at least one of fibres and particles and a curable resin; and an outer material constituted by a vulcanizable, weather-resistant elastomeric material; the outer layer being in vulcanized form, and being both adhered to one surface of the base material and penetrated and impregnated into that surface of the base material"

...

"because the subject matter thereof lacks inventive ingenuity in view of Hering, as the difference thereover is held to be obvious to one of ordinary skill in the art to which the alleged invention pertains."

...

In response to the Final Action and to further communication with the Board, the applicant presented arguments and on January 6, 1992 submitted amended claims.

The submitted amended claims read:

"1. A method for preparing a weather-resistant board comprising one of the following procedures:  
(A) (a) laying down an impregnatable porous base material selected from the group consisting of  
    (i) a lignocellulose or other organic fibrous or particle material, and  
    (ii) an inorganic mineral fibrous or particle material,  
as a pre-formed batt on a movable charging platform, said batt including a binder material associated therewith,  
    (b) laying down thereon a vulcanizable weather-resistant elastomer material, thereby to provide a composite;  
and (c) compressing said composite under conditions of high pressure and a temperature of at least 175°C; whereby said outer material is converted to vulcanized form and is bound to and is both adhered to one surface of said base material and is penetrated into and impregnated into the said surface of said base material and is bound thereto for only a predetermined limited region in the vicinity of said outer surface of said base material and being vulcanized therein in situ;  
or (B) (a) laying down a vulcanizable weather-resistant elastomeric material on a movable charging platform,  
    (b) laying down thereon an impregnatable porous base material selected from the group consisting of  
    (i) a lignocellulose or other organic fibrous or particle material, and  
    (ii) an inorganic mineral fibrous or particle material,  
as a pre-formed batt, said batt including a binder material associated therewith, thereby to provide a composite;  
and (c) compressing said composite under conditions of high pressure and a temperature of at least 175°C; whereby said outer material is converted to vulcanized form and is bound to and is both adhered to one surface of said base material and is penetrated into and impregnated into the said surface of said base material and is bound thereto for only a predetermined limited region in the vicinity of said outer surface of said base material and being vulcanized therein in situ."

"8. A weather-resistant impregnated board possessed of surface elasticity and pliancy by means of a permanently-elastic covering layer, comprising:  
    (a) an impregnatable porous base material selected from the group consisting of  
    (i) a lignocellulose or other organic fibrous or particle material, and

(ii) an inorganic fibrous or particle material, and (b) a vulcanized outer covering layer constituted by a vulcanized, weather-resistant, resilient, synthetic elastomeric material which has been vulcanized therein in-situ at a temperature of at least 175°C; said vulcanized outer covering layer being bound to and both adhered securely to one outer surface of said base material, and, when in unvulcanized form, being penetrated into and impregnated below and into the same outer surface of said base material to be within the porous structure of said base material for only a predetermined limited region in the vicinity of said outer surface of said base material, and being vulcanized therein in situ at said temperature of at least 175°C to be bound thereto for only said predetermined limited region."

...

Regarding newly submitted claims 1 and 8 the applicant states (in part):

...

Claim 1: (This proposed amended claim deletes, as an alternative base material, the following:

- (iii) a mixture of a lignocellulose or other organic fibrous or particle material and an inorganic mineral fibrous or particle material).

Claim 8: (This proposed claim deletes, as an alternative base material, the following:

- (iii) a mixture of a lignocellulose or other organic fibrous or particle material and an inorganic mineral fibrous or particle material, said base material including a binder material associated therewith).

...

The applicant further adds:

...

The essential difference over the general prior art such weather-resistant boards is that only a limited inner region 3 in the vicinity of the surface of the base material 1 is impregnated with the elastomeric material of the coating 2, as is shown in Fig. 1 and described in connection therewith. Thus, the vulcanized outer covering layer is both adhered securely to one outer surface of the base material, and when in unvulcanized form, is penetrated and

impregnated below and into the same outer surface of the base material, to be within the porous structure of that base material for only a predetermined limited region in the vicinity of the outer surface of the base material, and being vulcanized therein in situ at a temperature of at least 175°C. The essential fact of such limited impregnation being near the surface is described with respect to Figure 1 at page 13 of the specification.

...

Canadian Patent 1,150,465, issued to the present applicant, was the precursor of the present invention. In that patent, the process is described as a process for producing weather-resistant panels or mouldings which consist of wood particles or wood fibres mixed with binding agents, and which are pressed together under the influence of heat. In the process of the cited patent, therefore, it is taught to be essential that the pre-formed batt must be formed of a mixture of wood particles or wood fibres and an inorganic material as well as a curable resin.

...

On the other hand, in the method claimed in the present application, the preformed batt may be formed from either

- (i) lignocellulose particles or fibres (e.g. wood chips);
- or (ii) inorganic mineral particles or fibres (e.g. fibre-glass).

This is a difference which is not believed to be "obvious to one of ordinary skill in the art" because of the unexpected advantage which occurs.

...

In cited Canadian Patent 1,150,465, the product produced is a weather-resistant panel comprising a body of wood particles or wood fibres mixed with an inorganic base material and a curable resin, the panels being pressed together under the influence of heat, to provide a permanently elastic covering layer over the wood particles or wood fibres and the binding agent, the elastic covering being on the surface of the latter and connected intimately to the body of the wood particles or wood fibres and the binding agent.

...

On the other hand, in the presently claimed process, the outer vulcanizable weather-resistant elastomeric material is converted to vulcanized form and is both adhered to one surface of the base material and is penetrated into and impregnated into that surface of the base material for only a predetermined limited region in the vicinity of that outer surface of the base material, and is vulcanized therein in situ. This penetration into, and impregnation into the base material for only a predetermined limited region is not "obvious to one of ordinary skill in the art".

...

The applicant then goes on to cite extensively from Canadian jurisprudence concerning obviousness and concludes:

...

It is therefore submitted that, in the absence of (a) Applicant's teachings and/or (b) EVIDENCE in the form of an affidavit by a person skilled in this art as to his "common general knowledge" AND "some other specified PRIOR literature or information", there is NOTHING in the cited reference which would teach the utility of the substitution of materials claimed now and to the novel product claimed herein. Moreover, the proposed amended claim does not overlap the scope of the claims which appear in the cited reference.

...

From the record it is CLEAR that the Examiner, HIMSELF, notes that the claims under rejection DIFFER in terminology from the teachings of the cited reference; if this statement were not true then the Examiner would have rejected the claims as being ANTICIPATED and not as being OBVIOUS.

...

The issue before the Board is whether or not the application and amended claims present patentable subject matter in view of the cited art. The applicant points to two features as distinctive, namely, the use of either organic or inorganic particles rather than a combination of these materials and the impregnation and bonding for only a predetermined limited region in the vicinity of the outer surface of the base material as compared to apparently strictly surface binding.



It is abundantly clear upon comparing the claims of instant application and the applicant's prior patent that the amended claims do not "read on" the prior art, because the combination of organic and inorganic materials is no longer part of the pending claims.

The second feature discussed by the applicant is the limited impregnation of the base material by the vulcanized elastomer. Applicant indicates that the penetration of the elastomer for a limited predetermined region of the outer surface of the material is not taught in the prior art. This point, however, was not raised by the examiner in his objection, so the Board will not go into it here.

Moreover, since it is decided that the objection the examiner did take to the base material was answered on the point of choice of the material, the question of the extent of the elastomer's penetration is not critical to the allowance of the claims.

A further consideration must be whether the claimed invention is obvious in view of the cited art and general knowledge. The Board turns to the following quotations for insight into the application of tests for obviousness.

...

Beloit Canada Limited v. Valmet OY (1986), 8 C.P.R. (3d) 289 at 294:

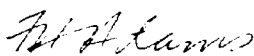
The test for obviousness is not to ask what competent inventors did or would have done to solve the problems. Inventors are by definition inventive. The classical touchstone for obviousness is the technician skilled in the art but having no scintilla of inventiveness or imagination; a paragon of deduction and dexterity, wholly devoid of intuition; a triumph of the left hemisphere over the right. The question to be asked is whether this mythical creature (the man in the Clapham omnibus of patent law) would, in the light of the state of the art and of common general knowledge as at the claimed date of invention, have come directly and without difficulty to the solution taught by the patent. It is a very difficult test to satisfy.

Technograph v. Mills (1969) R.P.C. 395 at 404:

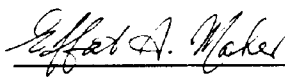
Counsel suggested that the proper question to ask was not, could the one be derived from the other, but would it be so derived? Would it in effect suggest itself? I think this is the right test.

In the present case, if the tests as outlined above are applied, the Board concludes that the applicant would not have inevitably be led to the invention claimed. No prior art is cited and apparently it is not part of general knowledge that the selection of either organic or inorganic material would so modify the properties of the base material (over that of the combination) as to produce an improved result. Certainly, the first wood fibre boards to be made were comprised of only organic materials with others added later to improve weather resistance; it would not be evident, in this case, to revert to the original wood fibre boards to achieve the allegedly improved product as claimed in the last submitted amendment.

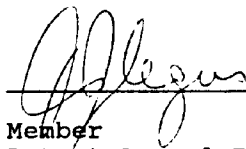
The Board recommends the acceptance of the amended claims submitted on January 6, 1992 as a result of the Final Action.



F.H. Adams  
Chairman  
Patent Appeal Board

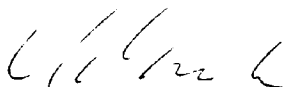


Member  
Patent Appeal Board



Member  
Patent Appeal Board

I concur with the findings and the recommendation of the Board. Accordingly I remand the application to the examiner for prosecution consistent with the findings of the Board.



M. Leesti  
Commissioner of Patents

Dated at Hull, Quebec  
this 7<sup>th</sup> day of December 1992