COMMISSIONER'S DECISION

Obviousness - Press for coating thin chipboards with a lamination.

The laminate is pressed against the chipboard by a belt which is tensioned and is made to wrap partly around the foller of the press. A proposed amendment to claim 1 was accepted by the applicant.

Final Action - Affirmed - modification accepted

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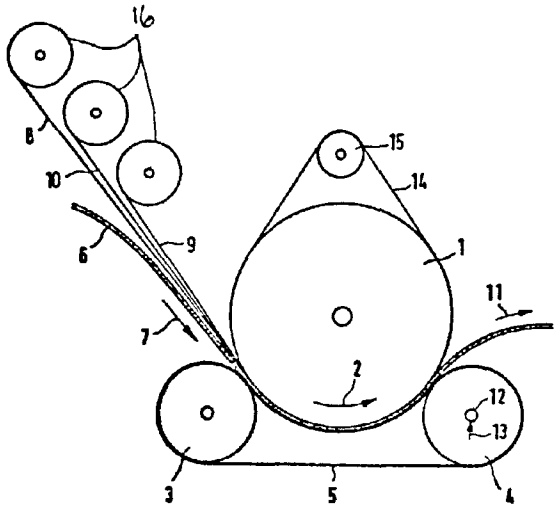
This decision deals with a request for review by the Commissioner of Patents of the Examiner's Final Action dated January 22, 1976, on application 158,764 (Class 154-29.00), and is entitled "Press for Coating of Thin Chipboards With Lamination."

The application relates to a press for the coating of thin chipboards with a laminated sheet or sheets comprising a roller into which a sheet laminate and the thin chipboard run. The laminate is pressed against the chipboard by a belt which is tensioned and is made to wrap partly about the roller. Figure 1 of the application, shown below, is representative of that arrangement.



In the Final Action the examiner refused claims 1 to 13 as "lacking inventive distinction" over the following references:

United States Patent 2,385,456	Sept. 25, 1945	Marcy
Canadian Patent 933,459	Sept. 11, 1973	Ettel

Additional References of Interest

Canadian Patent 791,679	Aug. 6, 1968	Roullard
United States Patent 3,307,993	Mar. 7, 1967	Gottwald et al

In that action the examiner had, inter alia, this to say:

> ...
>
> The applied references teach a vulcanizing press and a chipboard making press. They both are characterized by having a large heated drum with an endless flexible pressure belt trained around a portion of its circumference. The belt is trained around guide rollers which serve to press the belt against the drum and to tension it. All the essential features of applicant's apparatus can be found in the applied patents. In fact, the apparatus specified in claims 1-13 fails to differ patentably from the apparatus specified in applicant's Canadian patent No. 933,459.
>
> Applicant, in his arguments, seems to rely on the intended use of the apparatus to confer patentability on his claims. The examiner agrees with the applicant that Marcy discloses a vulcanizing press and that Canadian patent No. 933,459 a chipboard making apparatus. However, every feature of applicant's apparatus, except for the provision of a co-running belt consisting of a material exhibiting poor adhesion qualities, can be found in the applied patents. The provision of a co-running belt is an obvious way of preventing the laminate sheet and the shipboard from sticking to the drum. Furthermore, restrictions related to intended use or operational conditions such as temperature and pressure fail to confer patentability on an apparatus whose structural features can be found in the prior art.
>
> Further to the arguments presented by applicant relating to the Marcy patent and Canadian patent 933,459, in using Marcy's apparatus the positioning of the layers, that is the thermoplastic next to the drum as opposed to the chipboard next to the drum provides obvious procedural advantages but has no bearing on the structure of the apparatus. Similarly, even though Canadian patent 933,459 teaches the apparatus as a chipboard making apparatus, it is not patentably different, as far as structural limitations are concerned, from applicant's chipboard laminating apparatus.
>
> ...

In his response the applicant submitted new claims 1, 10 and 14 and made minor amendments to the disclosure. He also stated (in part):

> ...
>
> To elaborate on applicant's position with respect to Canadian Patent 933,459 which teaches an apparatus for the making of chipboards, applicant wishes to note that the patent describes several structural features not found in the present application. When employing an apparatus for the making of chipboard a layer of wood

chips combined with binders is scattered on a band of steel and therefore a scattering device as shown in the drawings is required over the band immediately before the mouth of the pressing gap. Such a scattering device prevents the insertion of manufactured chipboards between the belt and heated roller. Therefore, the apparatus of Canadian Patent 933,459 could not be used for laminating a sheet of thermoplastic material on a manufactured chipboard.

Furthermore, the layer of wood chips is brought into contact with the press roller. Such is not the situation with the apparatus as claimed in the present application which includes a means for positioning a laminate sheet between the chipboard and the heated roller. The purpose of the above-mentioned means is to avoid contact between the wood material and the heated roller in the manner as shown in the drawings.

...

One of the main aims of the present invention is to eliminate steam problems and to avoid the formation of bubbles and blisters in a laminated chipboard as previously discussed. Such a problem does not exist when employing a pressing apparatus for the manufacture of chipboards because the pressing forces are considerably higher than those used when employing applicant's claimed invention. When using the pressing apparatus of the reference the unmanufactured chipboard is in direct contact with the roller and is heated to temperatures above the boiling point of water. Therefore the moisture in the unmanufactured chipboard vaporizes. However, because the surface of the chipboard is not laminated, the water vapor escapes from the surface of the chipboard after the chipboard leaves the press. Therefore, there is a further inherent difference between a press for the manufacturing of chipboard and applicant's claimed invention in which a manufactured chipboard does not contact the heated roller and in which the areas of contact between a laminate sheet and the heated roller is such to overcome the problem of bubbles and blisters forming in the laminate sheet as discussed on page 5 of the response.

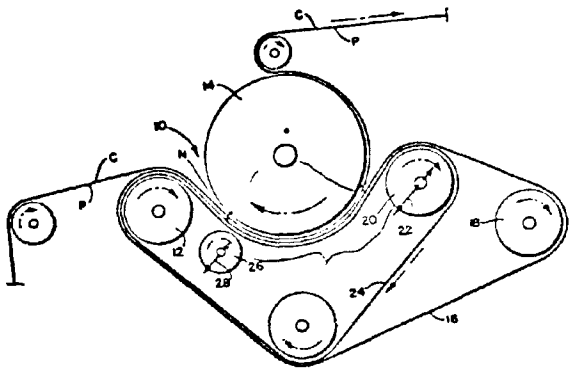
...

The same basic arguments apply to distinguish the present invention over the apparatus taught in United States Patent 3,307,993. The reference teaches a method and apparatus for the high speed coating of paper with an extremely smooth surface. Referring to the bottom of column 3, and the top of column 4, as well as the drawings, the method is accomplished by forcing a coating against the drum along a substantial portion of the drums surface for a sufficient time to dry the surface of the coating. More particularly taught in column 4, at line 52, the wrapping may be up to 270° around the drum. Furthermore, the dryer drum is heated to temperatures as high as 325°F. as taught in column 3, at lines 37 and 38. The apparatus taught in the reference could not be used for the laminating of thin chipboards and does not contain the inherent characteristics of a press for accomplishing this purpose. One of the main aims of applicant's claimed invention is to reduce the duration of contact between the heated surface and the laminate sheet. Such would not be the case if employing

> the apparatus as taught in the reference because the wrap around region is much too lengthy and the time required for drying the coating or duration of contact between the coating and the drum is completely inconsistent with a press for coating chipboard having the inherent characteristics as claimed by the applicant.
>
> ...

A Hearing on the merits of this application was set for November 2, 1977. On reviewing this application prior to the Hearing, however, the Board found that the most pertinent references was cited only as a reference of interest. Moreover it was cited for the first time in the Final Action. In this circumstance it was inappropriate for the Board to consider the Final Action. Consequently in fairness to the applicant, and with the applicant's approval, the Hearing was cancelled.

Messrs. Woodley and Johnson, the agents handling the application were, however, planning to visit the Office on other business and requested an interview with the Board. This took place on November 2, 1977. One solution to the problem was to return the application to the examiner for resumption of prosecution, which solution was repugnant to the wishes of the applicant for obvious reasons. Therefore, in order to expedite the prosecution, the Board made a complete study of the prosecution. The Board decided that claim 1, the only independent claim, was indeed too broad in scope in view of the references, more particularly in view of the Gottwald patent, which was cited as of interest only. That patent relates generally to a method and apparatus for high speed coating of paper. A belt means is provided for continuously maintaining the paper, and the coating against a dryer drum. That invention is illustrated by Figure 1, shown below, of the Gottwald patent:



With the valuable assistance of the examiner, a proposed new claim 1, which in our view is allowable, was suggested and presented to the agents. That claim, with the amendment underlined, reads:

> A press for coating chipboard with at least one thermo-plastic laminate sheet, said press comprising a heated roller over which said laminate sheet and said chipboard are run, a guide roller, a pressure application roller positioned down-stream of said guide roller, a flexible endless belt passing around said guide roller and said pressure application roller and means for positioning said laminate sheet between said chipboard and said heated roller, said guide roller and said pressure application roller being positioned to wrap said belt around a minor part of said heated roller where said laminate sheet and said chipboard pass between said belt and said heated roller with the pressure application roller positioned at the end of the wrap around region to complete lamination, said heated roller surface being a good heat conductor for rapid heat transfer and being heated to a temperature such that said thermo-plastic laminate sheet becomes plastic in the wrap around region, the limited extent of said wrap around region preventing damage and blistering to the coated chipboard and permitting take away of the coated chipboard from the heated roller upon completion of lamination.

On March 21, 1978 the applicant accepted the amended claim and made the appropriate amendment. At the same time he also cancelled claims 12 to 14.

In the circumstances we find it unnecessary to comment further because the amendment now overcomes the rejection in the Final Action. We recommend that claims 1 to 11 be accepted.

L.F. Hughes
Assistant Chairman
Patent Appeal Board, Canada

I have studied the prosecution of this application and I concur with the recommendations of the Patent Appeal Board. Accordingly, the application is returned to the examiner for resumption of prosecution.

J.H.A. Gariepy
Commissioner of Patents

Agent for Applicant

D.S. Johnson
133 Richmond St. W.
Toronto 1, Ont.

Dated at Hull, Quebec

this 13th. day of April, 1978