

LKC  
KE  
2919  
.E7  
1996  
Suppl.

IC

**APPENDIX TO A STUDY ON THE PATENT  
LAW STANDARD OF NON-OBVIOUSNESS**

**Judy A. Errat, Ph.D.**

**Gowling, Strathy & Henderson**

**Prepared for:  
Intellectual Property Policy Directorate  
Industry Canada  
February 2, 1996**

**APPENDIX TO A STUDY ON THE PATENT  
LAW STANDARD OF NON-OBVIOUSNESS**

**Judy A. Errat, Ph.D.**

**Gowling, Strathy & Henderson**

**Prepared for:  
Intellectual Property Policy Directorate  
Industry Canada  
February 2, 1996**

This study was funded by the Intellectual Property Policy Directorate, Industry Canada. The study represents the opinions of the author who is solely responsible for its contents. It does not necessarily represent government policy.

## **TABLE OF CONTENTS**

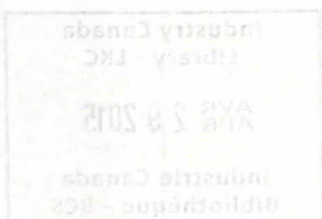
|            |   |           |
|------------|---|-----------|
| <b>1.</b>  | <b>CANADIAN INDUSTRIAL PROPERTY OFFICE</b> .....  | <b>1</b>  |
| <b>1.1</b> | <b>Mechanical</b> .....   | <b>1</b>  |
| 1.1.1      | Claims Accepted .....   | 1         |
| 1.1.1.1    | <i>Solution to a Problem not Posed in the Prior Art</i> .....   | 1         |
| 1.1.1.2    | <i>Advantages from the Claimed Combination</i> .....  | 3         |
| 1.1.1.3    | <i>Commercial Success/Long Felt Want</i> .....  | 15        |
| 1.1.1.4    | <i>Substitution Involving Inventive Ingenuity</i> .....   | 17        |
| 1.1.1.5    | <i>Surprising Results</i> .....   | 19        |
| 1.1.2      | Claims Rejected .....   | 20        |
| 1.1.2.1    | <i>Workshop Improvement</i> .....   | 20        |
| 1.1.2.2    | <i>New Use of an Old Process/Analogous Use, Where<br/>There is No Novelty or Invention in the Adaptation of<br/>the Old Process</i> ..... | 25        |
| 1.1.2.3    | <i>Substitution in an Obvious Manner</i> .....  | 27        |
| 1.1.2.4    | <i>Combination Does Not Provide a Result; Mere<br/>Aggregation</i> .....  | 32        |
| <b>1.2</b> | <b>Chemical</b> .....   | <b>34</b> |
| 1.2.1      | Claims Accepted .....   | 34        |
| 1.2.1.1    | <i>Advantages From the Claimed Combination</i> .....  | 34        |
| 1.2.1.2    | <i>Commercial Success/Long Felt Want</i> .....  | 34        |
| 1.2.1.3    | <i>Surprising Results</i> .....   | 35        |
| 1.2.2      | Claims Rejected .....   | 36        |
| 1.2.2.1    | <i>Workshop Improvement</i> .....   | 36        |
| 1.2.2.2    | <i>Substitution in an Obvious Manner</i> .....  | 37        |
| 1.2.2.3    | <i>Combination Does Not Provide a Result; Mere<br/>Aggregation</i> .....  | 39        |
| <b>1.3</b> | <b>Biological</b> .....   | <b>39</b> |
| <b>1.4</b> | <b>Electrical</b> .....   | <b>41</b> |
| 1.4.1      | Claims Accepted .....   | 41        |
| 1.4.1.1    | <i>Solution to a Problem Not Posed in the Prior Art</i> .....   | 41        |
| 1.4.1.2    | <i>Advantages of Claimed Combination/Improvement</i> .....  | 43        |
| 1.4.1.3    | <i>Commercial Success</i> .....   | 46        |
| 1.4.1.4    | <i>Substitution Involved Inventive Ingenuity</i> .....  | 48        |

**Industry Canada  
Library - LKC**

APR 29 2015

**Industrie Canada  
Bibliothèque - BCS**

|            |   |           |
|------------|---|-----------|
| 1.4.2      | Claims Rejected   | 50        |
| 1.4.2.1    | <i>Workshop Improvement</i>   | 50        |
| 1.4.2.2    | <i>New Use of an Old Process/ Analogous Use, Where There is No Invention in the Adaptation of the Old Process</i>             | 51        |
| 1.4.2.3    | <i>Substitution in an Obvious Manner</i>  | 52        |
| <b>2.</b>  | <b>CANADIAN COURT</b>   | <b>55</b> |
| <b>2.1</b> | <b>Mechanical</b>   | <b>55</b> |
| 2.1.1      | Validated Mechanical Patents  | 55        |
| 2.1.1.1    | <i>Solution to a Problem Not Posed in the Prior Art</i>   | 55        |
| 2.1.1.2    | <i>Advantages from the Claimed Combination</i>  | 60        |
| 2.1.1.3    | <i>Commercial Success/Long Felt Want</i>  | 65        |
| 2.1.1.4    | <i>Substitution Involving Inventive Ingenuity</i>   | 67        |
| 2.1.1.5    | <i>Surprising Results</i>   | 70        |
| 2.1.2      | Invalidated Mechanical Patents  | 71        |
| 2.1.2.1    | <i>Workshop Improvement</i>   | 71        |
| 2.1.2.2    | <i>New Use of an Old Process/Analogous Use, Where There is No Novelty or Invention in the Adaptability of the Old Process</i> | 76        |
| 2.1.2.3    | <i>Commercial Success Does Not Always Show Invention</i>  | 79        |
| 2.1.2.4    | <i>Combination Does Not Provide a Result, Mere Aggregation</i>  | 82        |
| <b>2.2</b> | <b>Chemical</b>   | <b>83</b> |
| 2.2.1      | Validated Chemical Patents  | 83        |
| 2.2.1.1    | <i>Advantages From the Claimed Combination</i>  | 83        |
| 2.2.1.2    | <i>Commercial Success/Long Felt Want</i>  | 86        |
| 2.2.1.3    | <i>Surprising Results</i>   | 87        |
| 2.2.2      | Invalidated Chemical Patents  | 88        |
| 2.2.2.1    | <i>New Use of an Old Process/Analogous Use, Where There is No Novelty or Invention in the Adaptation of the Old Process</i>   | 88        |
| <b>2.3</b> | <b>Biological</b>   | <b>91</b> |
| 2.3.1      | Validated Biological Patents  | 91        |
| 2.3.1.1    | <i>Substitution involving inventive ingenuity</i>   | 91        |



|            |   |    |
|------------|---|----|
| <b>2.4</b> | <b>Electrical</b> .....   | 92 |
| 2.4.1      | Validated Electrical Patents .....  | 92 |
|            | 2.4.1.1 <i>Advantages from the Claimed Combination</i> .....  | 92 |
|            | 2.4.1.2 <i>Solution to a Problem Not Posed in the Prior Art</i> ....  | 93 |
|            | 2.4.1.3 <i>Commercial Success/Long Felt Want</i> .....  | 96 |
| 2.4.2      | Invalidated Electrical Patents .....  | 98 |
|            | 2.4.2.1 <i>Workshop Improvement</i> .....   | 98 |
|            | 2.4.2.2 <i>New Use of an Old Process/Analogous Use, Where<br/>            There is No Novelty or Invention in the Adaption of<br/>            the Old Process</i> ..... | 99 |

# 1. CANADIAN INDUSTRIAL PROPERTY OFFICE

## **1.1 Mechanical**

### **1.1.1 Claims Accepted**

#### **1.1.1.1 Solution to a Problem not Posed in the Prior Art**

- 1) **July 3, 1973**  
**RE APPLICATION NO. 067,761 29 C.P.R. (2d) 116-123**

The applicant sought to obtain a patent for a machine for stacking thin sheets of paper such as the print-out from computers at high speeds. The Examiner rejected all claims over the disclosure of a prior patent alleging that any improvement over the prior art came within the normal skill in the art. However, on appeal, it was decided that the applicant overcame a problem associated with stacking flexible documents, which was different from the problems of the prior art. The means and specific arrangements used to overcome these problems were different from that which went before. Thus, the Commissioner of Patents allowed the claims stating that:

In our view the applicant has made an advance in the art which is the result of a sufficient element of ingenuity to warrant allowance of the application: *Merco Nordstrom Valve Co. et al. v. Comer* ((1941), 1 C.P.R. 75 at p. 93, [1941] 2 D.L.R. 10, [1942] Ex. C.R. 138 at p. 155). The problems with which he was concerned were different than those of the citation, and the means and specific arrangements he has used to overcome those problems differ from what went before.

- 2) **May 15, 1979**  
**RE APPLICATION NO. 196,769 (NOW PATENT No. 1,082,652) 58 C.P.R. (2d) 95-100**

The applicant sought a patent for a self-propelled material-handling vehicle. The examiner relied on prior art patents to show that no advance had been made in the prior art. However, at the appeal, it was noted that the prior art did not provide any teaching of what the applicant argued was his advance in the art, i.e., the manoeuvrability of his machine to operate "below grade surface". The decision stated in part:

We must remember that the inventive step may be in the idea or concept, or in the means of carrying out the idea or concept, or in a combination of both. We think that this application falls in the latter category and we are not persuaded, in view of the complete lack of teaching or even a suggestion of what the applicant regards as the advance in the art, that the applicant has not made a patentable advance in the art. It is without doubt a novel structure and in our view there is ingenuity present.

3) **December 31, 1979**  
**RE COLGATE-PALMOLIVE CO. APPLICATION No. 259,159, 56 C.P.R. (2d)**  
**285-288.**

The applicant sought to obtain a patent on an invention relating to flexible walled dispensing tubes. The examiner rejected the application, on the basis of a prior art patent, as being obvious.

At appeal, the applicant argued that the prior art did not contain any teaching of improved deadfold properties in laminate heat-sealed joints, and the problems attended thereto. The Patent Appeal Board and the Commissioner agreed with the applicant noting that the prior art was not concerned with this problem, and thus gave no solution to it. It was stated:

As mentioned above, Friedrichs was not concerned with this problem and it follows that he gave no solution for it.

To summarize, we find that there is present a novel combination and we are satisfied that there is ingenuity in the invention, because the several elements of the claimed combination co-operate to produce a highly desirable new result which, in our view, is not obvious.

4) **May 7, 1981**  
**RE APPLICATION FOR PATENT OF NORSK HYDRO A.S. (NOW PATENT**  
**No. 1,112,612), 67 C.P.R. (2d) 272-279**

The applicant sought a patent for claims to an invention for a large sack made by double folding a single piece of woven material, folded over a transverse centre line, the fold line having a slit to provide a filling opening, and which is located between two parallel side edges. The prior art cited against the application were patents related to shopping bag construction. In this regard, the examiner stated:



Certainly, the mere use of a different material with obvious and known properties to construct a bag with a known structure cannot be considered inventive. Tying the bag with a cord at the top is indeed a well-known and old bag sealing method.

The examiner's final rejection was overturned in this decision, wherein it was stated:

At first blush the cited art appears to be very close to the present invention, but we must realize that the problems facing a person requiring a sack to hold up to "several tons" is quite different from those required for a single shopping bag.

The declarations by Messers. L.S. Hansen and E. Mykehust show the problems faced by the inventor, what was common in the art and the advantage and commercial success of the present invention.

#### **1.1.1.2 Advantages from the Claimed Combination**

- 1) July 17, 1974**  
**Re APPLICATION No. 005,341 (NOW PATENT No. 1,006,418) 32 C.P.R. (2d) 62-66**

The patent application related to backings for carpets. Ribbon-shaped warp yarns were interwoven at right angles with round-shaped weft yarns to form the carpet backing. The Examiner refused the claims over a Belgian patent disclosing a carpet backing of the same or similar materials. The Patent Appeal Board found that the prior art cited by the Examiner did not teach or suggest the combination explicitly defined in the claims. They further found that several important and unobvious advantages flowed from the concept of employing a relatively flat cross-section multifilament yarn in the weft. They thus allowed the claims.

There are no reasons apparent why we should disagree with the applicant's argument that several important and unobvious advantages flow from the concept of employing a relatively "flat cross section" yarn for the warp, and a relatively "round cross section" multifilament yarn in the weft. For example, the applicant maintains that his backing has a lower weight per unit area, a lower cost, a better balance of strength and the fact that the piercing of the tufting needle will occur only, or substantially only, in the

warp or flat yarns which can withstand the force much more readily than the round weft yarns.

2) **June 28, 1976**  
**RE APPLICATION NO. 150,074, (NOW PATENT No. 1,025,904), 41 C.P.R. (2d) 232-239**

The applicant sought a patent for a pipe coupling arrangement wherein a sleeve ring of double sided emery cloth assists in retaining the two pipe members in position. The Examiner rejected the application based on the ground that the invention claimed was obvious having regard to the disclosure in earlier patents. The question before the Board and the Commissioner, which acknowledged that the applicant had developed a novel combination, was whether this novel combination involved an exercise of inventive ingenuity. On this point it was stated:

It has been authoritatively stated that the art of combining two or more parts into a new combination whether they be new or old, or partly new and partly old, so as to obtain a new result, or a known result in a better, cheaper, or more expeditious manner, is valid subject-matter if there is sufficient evidence of thought, design, ingenuity in the invention, and novelty in the combination. In a recent and as yet unpublished decision, *Omark Industries Inc. et al. v. Sabre Saw Chain (1963) Ltd.* April 14, 1976 [since reported 28 C.P.R. (2d) 119] for example, the Federal Court of Canada, in holding an improved saw chain to be patentable said, at p. 18 [p. 133 C.P.R.]:

The subject invention is simple, but is an improvement which eliminated "hooking" and substantially reduced "kickback" in the operation of a saw chain; and has enjoyed substantial commercial success. Neither the Cox nor the Merz patents show a safety or guard link (and this is admitted by the defendant) and do not constitute anticipation. On the evidence, the subject-matter of the subject patent is an advance in the art and therefore an inventive step.

It is also settled law that the matter of obviousness is to be judged by reference to the "state of the art" in the light of all that was previously known to persons versed in the art: see

*Allmanna Svenska Elektriska A/B v. Burntisland  
Shipbuilding Co. Ltd.* ((1952), 69 R.P.C. 63 at p. 69).

The Applicant's combination was simpler and could be assembled more easily. Thus it was stated that simplification can constitute an exercise of inventive facility, sufficient to warrant the grant of a patent.

3) **January 28, 1976**  
**RE APPLICATION No. 115,016, (NOW PATENT No. 1,006,323), 39 C.P.R. (2d)**  
**68-76**

The applicant sought a patent for prefabricated shingle panels which can be assembled in courses to form a roof or a sidewall. The Examiner refused the application based upon the prior art and common general knowledge.

The Board found that there was no teaching or suggestion in the prior art of the large "overhang of the shingles on the backing board" used by the applicant to satisfy functional purposes. The slight overlap by the prior art was for "aesthetic reasons". On the other hand the applicant's larger overhang was a "key feature" of his invention.

It was thus stated:

It has been authoritatively stated that the art of combining two or more parts into a new combination whether they be new or old, or partly new and partly old, so as to obtain a new result, or a known result in a better, cheaper, or more expeditious manner, is valid subject-matter if there is sufficient evidence of thought, design, and *ingenuity in the invention*, and novelty in the combination: See *Merco Nordstrom Valve Co. et al. v. Comer* ((1941), 1 C.P.R. 75 at p. 93, [1941] 2 D.L.R. 10, [1942] Ex. C.R. 138 at p. 155).

We are satisfied, therefore, that claim 1 is directed to subject-matter which satisfies the requirement of sufficient evidence of ingenuity in the invention, and novelty in the combination. Nothing essential to the invention and necessary or material for its practical working and real utility can be found substantially in the prior publications: *The King v. Uhlemann* ((1949), 11 C.P.R. 26, [1950] Ex. C.R. 142, 10 Fox Pat. C. 24, p. 105-106). Claim 1 in our view should be allowed.

- 4) **March 5, 1980**  
**RE HAROLD H.A. DEBOR APPLICATION No. 284,006, 50 C.P.R. (2d) 105-113.**

The applicant sought to obtain a patent relating to a discharger mechanism for discharging solids from beneath a pile of material within a hopper. The examiner rejected the application on the ground that no inventive improvement was evident in the application over the cited prior art.

At appeal, it was found that the applicant had overcome certain problems in the prior art using his novel combination. It was stated:

He basically overcomes these problems by using two stoker-rod mechanisms arranged side by side and reciprocating out of phase. In other words, the several elements of the claimed combination co-operate to produce a highly desirable improved result, which, in our view, is not obvious, because the claimed combination is clearly novel and, we believe, there is ingenuity in the invention.

- 5) **April 15, 1980**  
**RE STODDARD & SONS LTD., APPLICATION No. 274,857, 52 C.P.R. (2d) 130-135**

The applicant sought to obtain a patent on an invention relating to an endless conveyer including a pulley arrangement for removing particulate material from the inner face of an endless belt in the conveyer. The examiner rejected the application on the grounds that it did not disclose an inventive step over the prior art.

The applicant amended the claims to include the limitation that the helical flights start at a different angular position about the shaft. To this amendment it was stated:

While this may roughly be shown by Bevan in a snow plough, it is new in the present combination, and for a totally different use. Another feature of the claims is that the flights define an unrestricted annular clearance about the shaft. This is not shown by the cited art.

To summarize, it is clear that the combination is novel and we are satisfied that the claims properly define the scope of monopoly of an invention described in the disclosure and illustrated in the drawings. It is our view that the several elements of the claimed combination co-operate to produce

a highly desirable improved result which we believe is not obvious from the cited references.

- 6) **July 17, 1980**  
**RE APPLICATION OF FURNESS (NOW PATENT No. 1,110,036), 60 C.P.R. (2d) 281-285**

The applicant sought a patent on a method of repairing the opening in the top of a bottle top mould. The examiner rejected the claims as obvious from the prior art.

In the decision at appeal, it was stated:

On the *record before us*, there is clearly a novel product produced, and in our view, there is ingenuity in the idea or concept of the invention because, the applicant has produced a highly desirable improved result not taught, or suggested, by the cited art.

- 7) **November 6, 1980**  
**RE APPLICATION FOR PATENT BY OCE-VAN DER GRINTEN N.V. (NOW PATENT No. 1,099,226), 69 C.P.R. (2d) 255-260**

The applicant sought a patent for a claim directed to a collator for the collection of sheets, wherein the collating apparatus was placed above the working surface of the copying machine. The examiner refused the application based on prior art which taught a printing machine with an added collator. The applicant argued that a collator *per se* was well known in the art, but that the present combination was new and constituted an invention.

The Patent Appeal Board and the Commissioner agreed that the combination was patentable.

In our view there is sufficient ingenuity in thought and design of the present apparatus and the claim properly defines the scope of monopoly of an invention described in the disclosure and illustrated in the drawings.

**8) November 24, 1980**  
**RE APPLICATION FOR PATENT BY CAMPBELL (NOW PATENT No. 1,108,804), 69 C.P.R. (2d) 279-286**

The applicant sought a patent for an invention relating to a combination wash basin and toilet fixture, in which the wash basin is hingedly mounted and adapted to swing over the toilet bowl. The Examiner rejected the application on the grounds that the invention was obvious.

At appeal, the applicant emphasized the advantages of his structure with respect to the plumbing, since there was no need for complex swivel joints to connect the tap to the water supply, such as was needed in the prior art. In response, it was decided:

Applicant's cabinet-mounted plumbing supply is consequently a simpler arrangement than that used in the cited art.

While it is a relatively simple step to use stationary water supply connection for a pivoting basin, still the art cited utilizes a complex swivel joint arrangement for this purpose. Consequently these may now present the necessary scintilla of invention to justify a patent, and we recommend that the final action be withdrawn.

**9) January 19, 1981**  
**RE APPLICATION OF WEIN (NOW PATENT No. 1,101,914), 60 C.P.R. (2d) 138-143**

The applicant sought a patent on an invention relating to a refrigeration box-like structure made from panels of synthetic foam material. A slot extending longitudinally at the joint between two panels allows a strip of aluminum to be inserted to prevent diffusion. The examiner rejected the application as obvious over the prior art.

At appeal, it was concluded:

We have carefully reviewed the prosecution and studied the cited references. While Lackey does show a refrigeration box, the Monroe citation is concerned with strengthening the corners of a pallet box. Neither of these patents teaches or suggests the present claimed combination. In our view there is sufficient ingenuity in thought and design of the present apparatus and the claim properly defines the scope of

monopoly of an invention described in the disclosure and illustrated in the drawings.

**10) April 28, 1981**  
**RE APPLICATION OF RICHARDSON et al. (NOW PATENT No. 1,117,302),**  
**71 C.P.R. (2d) 268-273**

The applicant sought a patent for an evaporator assembly for use in a vapour compression thermal transfer unit such as a heat pump. The decision reversed the examiner's rejection of the claims as being obvious over the prior art. In the decision it was stated:

There is clearly novelty in the combination and *on the record before us*, especially in view of the points raised by Mr. O'Gorman, we are satisfied that there is ingenuity in the invention, because there is no teaching nor suggestion of the present combination. This combination overcomes the problem of "ice deposit" on the evaporator. It also provides a buffer between the heat source and the evaporator so that the evaporator can operate in a near "moisture free" environment in a thermally conductive hermetically sealed container, which according to the applicant is most advantageous. In other words we are not prepared to recommend to the Commissioner of Patents that the applicant is not entitled by law to a patent in the present circumstances.

**11) August 17, 1981**  
**RE APPLICATION OF JACOBS (NOW PATENT No. 131,596), 75 C.P.R. (2d)**  
**271-276**

The applicant sought to obtain a patent for an invention directed to a portable spraying apparatus where a pressure tank is carried by an operator and wherein the pressure is supplied by air pumps which are attached to the feet of the operator. The important aspect of the invention was the positioning of the foot pumps between the heel and the ball of the foot of the user. The examiner rejected the claims over prior art disclosing a foot operated pump. The examiner stated that to select the position between the heel and the ball was a matter of elementary design, and not invention.

The applicant, however, argued that the placement of the pump was a patentable advance in the art. The applicant discussed many advantages in the particular location of the pump on the foot. The applicant further discussed the commercial success of the new

combination. As a result the Patent Appeal Board and the Commissioner were satisfied that the application was directed to a patentable advance in the art.

As mentioned, none of the six references discussed at the hearing placed the pump in the instant location. The applicant claims many advantages from his new combination and also commercial success.

**12) April 6, 1982**  
**RE APPLICATION FOR PATENT OF PRINCE CORP. (NOW PATENT No. 1,140,241), 2 C.P.R. (3d) 223-228**

The applicant sought a patent for an invention relating to an automobile visor which houses a transmitter of a radio-controlled garage door operating system. The Examiner rejected the application on the grounds that the claims were directed to an unpatentable aggregation rather than to a patentable combination.

The Patent Appeal Board and the Commissioner reviewed the jurisprudence concerning an aggregation and a combination. An aggregation may be considered as a mechanism or arrangement of elements each giving its own result, but without any unitary results flowing from that arrangement, whereas in a combination the elements of the combination combine so as to produce a result to which all the elements of the combination contribute their part. In the decision, it was stated:

In the applicant's visor frame structure a recess is required to house the transmitter. There is also a switch arrangement on the visor to supply power from the car battery. Mounting the transmitter in the visor frame housing does yield certain advantages which were stated above. In our view this represents a combination where all the elements contribute their part to produce a unitary result, which is reflected in proposed claims 1 to 6.

**13) August 20, 1982**  
**RE APPLICATION OF CARI-ALL INC. (NOW PATENT No. 1,157,063) 1 C.P.R. (3d) 568-576**

The applicant sought a patent for a shopping cart having at one end an end gate with leg openings for children seated in the carts, and a collapsible seat frame construction. The panel was provided on the seat frame and was held in an upright position to cover the leg openings when no one was seated in the cart by the action of a spring means attached to the frame and the panel. The examiner rejected the claims based on prior art disclosures.



In the decision it was stated:

While we agree with the examiner that the straight-forward expedient of providing springs to retain something opened or closed is in everyday use, we must remember that improvements to known things may contribute towards a final combination which is a patentable advance in the art.

The Commissioner felt that certain claims should be considered allowable as the prior art did not disclose the aspects of the displacement and attachable portions of the coil spring means in a seat frame. Certain other claims, however, were rejected. These claims merely including the spring means without defining the inter-relationship of the structure were needed to achieve the desired result.

**14) May 17, 1983**

**RE APPLICATION FOR PATENT OF EVANS PRODUCTS CO. (NOW PATENT No. 1,164,274), 2 C.P.R. (3d) 569-576**

The applicant sought a patent for an invention relating to a freight-bracing system in a cargo-transporting vehicle. The applicant admitted that his device was simple in retrospective and referred to a number of court cases relating to simple inventive steps. These cases are summarized below:

Referring to a number of court cases in his text, Canadian Patent Law and Practice, Fourth Edition, Fox makes the following statement on page 65:

There may be invention in what, after all, is only simplification. Simplicity is, in itself, no objection to a patent: indeed, it may be actually a recommendation. The courts look with favour upon any slight change whereby an improvement is effected and find invention in it if they can, for slight alterations and improvements may produce important results and may disclose great ingenuity.

In the Federal Court Case, *O'Cedar of Canada Limited v. Mallory Hardware Products Limited* (1955), 15 Fox Pat. C 134, at page 152 [24 C.P.R. 103 at p. 123, [1956] Ex. C.R. 299], Thorson P. summarizes a number of decisions in

supporting his findings that simplicity does not negate invention, as follows:

Consequently, there is help to be found in decisions indicating what should not be considered as a negation of inventive ingenuity. As examples of what I have in mind I refer to decisions to the effect that the simplicity of a device is not proof that it was obvious and that inventive ingenuity was not required to produce it. This negation of a common attack on the validity of a patent is found in many cases. An early leading statement was made in *Vickers, Sons and Co. Limited v. Siddell* (1890), 7 R.P.C. 272 where Lord Herschell said, at page 304:

If the apparatus be valuable by reason of its simplicity, there is a danger of being misled by that very simplicity into the belief that no invention was needed to produce it. But experience has shown that not a few inventions, some of which have revolutionized the industries of this country, have been of so simple a character that when once they were made known it was difficult to understand how the idea had been so long in presenting itself, or not to believe that they must have been obvious to every one.

\* \* \* \* \*

It may be that the invention is a small one, but slight differences in these cases sometimes produce large results. [*Patent Exploitation*

*Ltd. v. Siemens Bros. N Co.*  
(1904), 21 R.P.C. 541 at p.  
549 *per* Lord Davey.]

T h o u g h  
simple, his  
device cannot  
be said to have  
been obvious.  
[*Electrolier*  
*Mfg. Co. v.*  
*Dominion*  
*Mfrs. Ltd.*,  
[1934] 3  
D.L.R. 657 at  
p. 661, [1934]  
S.C.R. 436 at  
p. 441 *per*  
Rinfret J. (as  
he then was).]

In the case on point, the Commissioner agreed with the applicant's arguments and decided that the claims were directed to a patentable invention.

...that the narrower, lighter stanchion system should be considered as an inventive departure from the know devices.

15) **January 10, 1989**

**RE APPLICATION OF HEIDELBERGER DRUCKMASCHINEN  
AKTIENGESELLSCHAFT (NOW PATENT No. 1,257,051) 28 C.P.R. (3d) 377-  
384**

The applicant applied for a patent for an invention for a motor drive for a rotary offset printing presses. The new combination eliminated elements in the prior art devices and retained effective results. However, the examiner rejected the application on the basis of a prior patent owned by the applicant.

At the appeal, the decision in *Canadian General Electric Co., Ltd. v. Fada Radio, Ltd.*, [1930] 1 D.L.R. 449 at pp. 451-2, [1930] A.C. 97, R.P.C. 69 at pp. 88-9, was discussed wherein it stated:

The law on this subject is, in their Lordships' opinion, accurately summarized by Maclean, J., in his judgment. His statement is as follows, [1927] 2 D.L.R., at p. 917:-

There must be a substantial exercise of the inventive power or inventive genius, though it may in some cases be very slight. Slight alterations or improvements may produce important results, and may disclose great ingenuity. Sometimes it is a combination that is the invention; if the invention requires independent thought, ingenuity and skill, producing in a distinctive form a more efficient result, converting a comparatively defective apparatus into a useful and efficient one, rejecting what is bad and useless in former attempts and retaining what is useful, and uniting them all into an apparatus which taken as a whole is novel, there is subject-matter. A new combination of well-known devices, and the application thereof to a new and useful purpose may require invention to produce it, and may be good subject-matter for a patent.

The examining staff regarded the new combination as no more than a simplification of the patented structure by merely removing one gear and the actuating mechanism. However, it was decided in view of the direction provided in the case of *Canadian General Electric Co., Ltd. v. Fada Radio, Ltd.* ([1930] 1 D.L.R. 449 at pp. 451-2, [1930] A.C. 97, R.P.C. 69 at pp. 88-9), that

... the applicant has demonstrated independent thought and ingenuity in producing a combination that produces useful results. We believe there has been exercise of the inventive faculty to improve upon the known apparatus by changing from what had been accepted as the norm in the printing art to an arrangement that dispenses with previously required elements to achieve unexpected results. Moreover, the new combination produces effective results with reduced costs.

### **1.1.1.3 Commercial Success/Long Felt Want**

- 1) **October 24, 1974**  
**RE APPLICATION NO. 048,296, (NOW PATENT No. 955,716), 32 C.P.R. (2d)**  
**32-37**

The applicant sought to obtain a patent for an apparatus for detachably mounting an auxiliary wheel coaxially to a vehicle wheel. Independently releasable clamps secured the auxiliary wheel rim to the vehicle wheel rim and a spacer ring was inserted therebetween. The Examiner rejected the application in view of the disclosure contained in prior issued patents.

On appeal it was noted that the type of rim used by the applicant had a different configuration from that of the prior art patents. At the hearing, the applicant emphasized that his device had been commercially successful as evidenced by sales, and by the fact that it had completely replaced prior devices. It was stated that:

While evidence of commercial success by itself does not necessarily demonstrate invention, the step taken by the applicant indicates that it must have fulfilled to some degree "a long felt want", for the French Patents are over 60 years old.

On the matter of commercial success, it was stated by Thorson, P., in *The King v. American Optical Co.* (1950), 13 C.P.R. at p. 113, [1950] Ex. C.R. 344, 11 Fox Pat. C. 62 at p. 89:

I agree ... that the main reason for its success was that it was superior to the older constructions...

Under all the circumstances, I am of the view that the *commercial success* of [the invention] is *strong evidence* that its production was the result of *an inventive step* ...

(Emphasis added.)

The Board is therefore satisfied that there is present a degree of ingenuity which was the result of thought and experiment on the part of the applicant.

- 2) **June 16, 1975**  
**RE APPLICATION No. 038,715, (PATENT No. 985,521), 35 C.P.R. (2d) 195-201**

The applicant sought a patent for a lower-body garment or pantyhose, which was knitted in a single intricate tubular form seamless throughout its length. The Examiner refused the application for patent based in part on prior art.

At the hearing, the applicant agreed to combined claim 1 and 2 to overcome the prior art objection. The Board stated in part:

We are fully satisfied that the claims before the examiner at the time of the final action were objectionable, and quite properly refused. The Board however has been presented with the additional affidavitory evidence, testifying to the unexpected results flowing from the applicant's invention (when fully defined). That invention has won wide acceptance, and as indicated previously, 31 licences under it have been taken out by competitors. It has had early and extensive success commercially. All of these considerations persuade us that inventive ingenuity has been exercised.

- 3) **December 4, 1979**  
**RE APPLICATION No. 173,735, 49 C.P.R. (2d) 255-262**

The applicant sought a patent for a wall assembly where the wall panels were fastened to the studs by an adhesive tape which quickly permits easy installation and dismantling of the walls. The examiner rejected the application upon prior art patents.

At the hearing, the applicant presented arguments over the prior art and emphasized that his device had been very commercially successful, and referred to its extensive use. On the issue of commercial success the Board stated:

While evidence of commercial success by itself does not necessarily demonstrate invention the results obtained by the applicant company indicates that it must have fulfilled, to some degree, a "want" for this type of panel fastening arrangement. While the concept of removable panel means is shown in the British patent, we are unable to find any indication of commercial use of the magnetic attraction attachment means taught in it. There is no doubt that building material supply industry is very competitive and since applicant is a relatively small company it would not

have had the capacity either to monopolize this field or to push expensive sales campaigns. Nor are the users of the invention likely to be influenced by advertising pressures. We have come to the conclusion consequently, that a major reason for the commercial success of this invention is its practical success, one which results in significant labor-saving costs during removal and reinstallation.

#### **1.1.1.4 Substitution Involving Inventive Ingenuity**

**1) May 16, 1974  
RE APPLICATION No. 010,866 (PATENT No. 973,863) 32 C.P.R. (2d) 105-113**

The applicant sought to obtain a patent on claims directed to the use of a plurality of seamless gores of unwoven spunbonded fibrous material having substantially equal elongation in all direction in response to tension and means for connecting the gores to form a parachute canopy. The Examiner rejected the claims based on the grounds that the application was directed to a mere substitution of materials.

In this decision guidelines were set forth as to the criteria for determining whether a substitution of one material for another involved inventive ingenuity. Inventive ingenuity may be present if:

1. A change or variation in the construction of an article or apparatus is rendered necessary by reason of the use of a particular kind of material not previously used for the purpose in mind.
2. The use in a particular article or apparatus of a known material not previously used for the purpose is due to a hitherto unknown and unsuspected property of the material.
3. The adaptation of the known material to a particular article or piece of apparatus, leads to a new departure in the technique of the production of the article or apparatus; or
4. A known material is used in an article or apparatus when it had not previously been so used, and such utilization depends on previously known properties of the material, provided the new use results in an

unexpected advantage, or unexpectedly avoids a known disadvantage."

In the case on point, criteria number 4 was relevant. The applicant submitted that the discovery that spunbound material could be successfully used in making parachutes would be contrary to expectations. In the Patent Appeal Board decision the rationale of the Court in *Van Heusen Products Inc. et al. v. Tooke Bros. Ltd.*, [1929] Ex. C.R. 89 at p. 97 was referred to, wherein it was stated:

There is no invention in a *mere* adaption of an idea in a well known manner for a well known or clear purpose in a well known art, *without ingenuity*...

(emphasis added) and at p.99 [quoting Lord Lindley in *Gadd and Mason v. Mayor, etc., of Manchester* (1892), 9 R.P.C. 516 at p.524]:

A patent for the *mere new use* of a known contrivance, without any additional ingenuity in overcoming fresh difficulties, is bad, and cannot be supported. *If the new use involves no ingenuity, but is in manner and purpose analogous to the old use*, although not quite the same, there is no invention.

(Emphasis added)

The Board went on to say:

... that substitution of material in which there is *served no function or purpose different from the old use*, does not merit the distinction of a patent monopoly unless the inventor is the first to see practical difficulties overcome (or advantages gained) as a result of his own ingenuity: see also *Somerville Paper Boxes Ltd. et al. v. Cormier et al.*, (1939), 2 C.P.R. 181 [1941] Ex. C.R. 49. In the instant application the purpose and function of the "spunbonded material" is different from any previous suggested use for it, and therefore the application does not fail for this reason.



- 2) **May 29, 1981**  
**RE APPLICATION FOR PATENT OF S.E.R.A. HUSSON SOCIETE**  
**D'ETUDES ET REALISATIONS AERODYNAMIQUES (NOW PATENT No.**  
**1,124,964), 71 C.P.R. (2d) 258-263**

The applicant sought a patent for an invention for a system of connecting an exchanger tube to a perforated plate by means of a ring of resilient material. The examiner found that the device in the present application was similar in shape and performed its tasks in a similar manner to that of the prior art. The examiner acknowledged that the slight change such as resilience of material of construction and the degree of sealing were such things that would be of an expectant skill of one in the art, and hence not of patentable significance.

The Patent Appeal Board and the Commissioner stated:

We appreciate the examiner's concern with the substitution of the material question that arises due to applicant's selection of resilient material over the applied reference. However, applicant's structure adds the feature that the second sleeves bear laterally one against another to achieve a non-sagging disposition of the rings, while at the same time sealingly retaining the tubes. This feature is not present in either the Swiss patent, or in the Gustafson patent.

We have considered the arguments made and are of the opinion that the combination of resilient rings positioned in a plate both to support tubes and to contact one another to prevent sagging under operating conditions cannot fairly be construed from the references of record before us. This produces special advantages which we believe render the invention patentable over the art cited, and which is not obvious from that art.

#### **1.1.1.5 Surprising Results**

- 1) **March 11, 1990**  
**RE APPLICATION FOR PATENT BY TURNER (PATENT No. 1,093,051) 59**  
**C.P.R. (2d) 260-264**

The applicant sought a patent for a ceramic catalyst support for use in automotive pollution control systems. The examiner rejected the claims and relied upon a prior art patent having the same object as the applicant, namely, the production of a high surface to

weight structural component as a catalyst support for use in automotive pollution control systems.

At appeal, it was noted that the applicant stated in his disclosure that:

All prior art attempts at producing closely packed ducts in cordierite articles have produced articles that exhibit a transverse strength of about 50 PSI along one transverse axis."

In the decision, it was concluded that in view of the surprising results, the application should be accepted. Specifically, it was stated:

This, in our view, is surprising and in the absence of any evidence to the contrary, we believe we should accept the applicant's statement. ... Applicant does not, of course, have to know the reason why he gets greater strength, only that he does.

## **1.1.2 Claims Rejected**

### **1.1.2.1 Workshop Improvement**

#### **1) October 12, 1972 RE APPLICATION 063,607 12 C.P.R. (2d) 148-152**

The patent application was directed to a control system for a dryer apparatus. According to the disclosure, after the supply means and belt means were shut off, the blower fans were shut off before the suction fans. The object of the invention was to prevent dispersal of fibers, thus the thrust of the alleged invention related to the sequence of operating the fans. In the decision, the Commissioner reviewed the decision of *Somerville Paper Boxes Ltd. et al. v. Cormier et al.*, (1939), 2 C.P.R. 181 [1941] Ex. C.R. 49, which stated that:

In order that a new use of a known device may constitute the subject-matter of an invention, it is necessary that the new use be quite distinct from the old one and involve practical difficulties which the patentee has by inventive ingenuity succeeded in overcoming; if the new use does not require any ingenuity but is in a manner and purpose analogous to the old use, although not exactly the same, there is no invention.

The Commissioner went on to say that there is no patentable subject matter in adapting a known device to an analogous use, even if the adaptation has utility, and a certain degree of novelty, unless there are difficulties to be overcome or advantages to be gained and there is ingenuity in making the adaptation (*Burt Business Forms v. Autographic Register*, [1932] Ex. C.R. 39).

The Commissioner recalled the question of obviousness put forward in *Vickers, Sons and Co. v. Siddell* (1890), 7 R.P.C. 292, wherein it was stated:

Is the invention so obvious that it would *at once* occur to anyone acquainted with the subject and *desirous* of accomplishing the end?"; and in *Savage v. Harris* (1896), 13 R.P.C. 364 at 370 in which the question to be considered is whether the alleged discovery lies so much out of the track of what was known before or not *naturally* to suggest itself to anyone thinking on the subject. It must not be the obvious or natural suggestion of what was previously known. (emphasis added)

In the decision, the Commissioner considered:

... that the solution claimed by the applicant is one that would naturally have occurred to persons of ordinary intelligence and acquainted with the subject-matter who gave his mind to the problem. It is merely an exercise of expected skill, even though the idea might well be a meritorious one, for a person versed in the art to operate the fans in a manner to prevent dispersal of the fibers, and it falls within the category of patent which concerned the Supreme Court in the above quotation from *Crosley Radio Corp. v. Can General Electric Co.* ([1936] 3 D.L.R. 737, [1936] S.C.R. 551).

**2) July 7, 1975**  
**RE APPLICATION No. 103,770 35 C.P.R. (2d) 241-246**

The applicant sought to obtain a patent for a stove having a carriage including an oven door, slidable into and out of the oven, wherein the stove was provided with a ballast weight in the form of a flat rectangular member mounted between two upright frame members at the rear of the appliance. The Examiner rejected the claims on the basis of common general knowledge and the prior art.

The Board and the Commissioner refused the application stating that:

When the applicant created the problem of instability, he selected one of the many obvious solutions to overcome that problem. It is a fact that both simple and complex counterweights are used in nearly every mechanical art to provide stability. In our view, therefore, any inventive step would have to reside in the use of an inventive skill to overcome the installation problem.

and

He has overcome the instability of the stove by adding ballast in the same manner as is employed in any mechanical art, and which was shown in the cited reference. The function and use of counterweights are well known and any technician with ordinary skill in his art would use a counterbalance if it serves his purpose better or more economically than other obvious alternatives.

The applicant argued that there was a long felt want for the invention in question, and that the invention had a commercial success. It was recognized that commercial success can be dependent upon many factors. On this point it was stated:

In our view the appearance of the stove in general, colour, lights, dials, etc., and the pull-out oven feature would enhance the sale of the stove. It would not result from a concealed counterweight, about which most buyers would be unaware. In any event the claims do not relate to a pull-out oven, nor does the applicant deem this a novel feature.

**3) October 22, 1979  
RE APPLICATION NO....118, 50 C.P.R. (2d) 136-144**

The applicant sought to obtain a patent for a wrench having two gripping heads at opposite ends of the handle, each head being secured to the handle by universal joints. The examiner rejected the applicant's wrench as obvious in view of the prior art. The Examiner argued that it was merely a matter of expected skill to provide the second pivot axis in the place where applicant had provided it.

The decision stated in part:

We have considered all the arguments presented and have carefully reviewed the application in an effort to find a description of subject-matter which can be considered as an invention. In our view the differences, as discussed above, are such as can fairly be held to be within the stride of a competent technically qualified practitioner in the relevant art applying his mind to the problem, if indeed any problem existed in view of the cited patents, especially the patent to Meldrum. We are therefore not persuaded that a patentable advance in the art has been made. It follows that the claims, which must characterize any invention described in the disclosure, fail to define patentable subject-matter and no patent may be granted.

- 4) **May 15, 1980**  
**RE APPLICATION OF GENERAL ELECTRIC CO. (PATENT No. 1,106,628),**  
**60 C.P.R. (2d) 248-254**

The applicant sought a patent relating to a heat-exchange device applicable to a refrigeration system suction line/capillary tube assembly providing heat exchange between the cool gaseous refrigerant conveyed by the suction line and the warm liquid refrigerant conveyed by the capillary tube. The Examiner rejected the claims as obvious.

The reported decision acknowledged that the combination claimed as an apparatus was novel, but it did not define patentable subject matter. The use of dissimilar metals to reduce the cost would be obvious to one skilled in the art, and could not support the apparatus claims. The use of ribs in the suction tube which may be deformed to grasp the capillary tube was also well known in the art. The location of the capillary tube within the suction line was also disclosed in the prior art.

- 5) **April 6, 1982**  
**RE APPLICATION FOR PATENT BY MAZELIE, 73 C.P.R. (2d) 129-136**

The applicant sought a patent for an invention relating to a smoker's lighter which had a chamber for receiving the ashes of a cigarette. The examiner rejected the application on the ground that the claims defined an aggregation and failed to claim a patentable advance over the prior art.

In the decision various jurisprudence was reviewed relating to the question of a workshop improvement. These comments are found below:

...we think the comments of Justice Jockett in *Leithiser et al. v. Pengo Hydra-Pull of Canada Ltd.* (1974), 17 C.P.R. (2d) 110 at p. 115, [1974] 2.F.C. 954, 6 N.R. 301, are applicable when he stated:

...there is a further requirement that the thing claimed as an invention must be the result of inventive ingenuity and not a mere "workshop" improvement or development. See *Com'r of Patents v. Farbwerke Hoeschst Aktiengesellschaft vormals Meister Lucius & Bruning* (1963), 41. C.P.R. 9, [1964] S.C.R. 49, 25 Fox Pat. C. 99.

This view was also expressed by Justice Maclean in *Niagara Wire Weaving Co. v. Johnson Wire Works Ltd.* (1939), 1 C.P.R. 229 at p. 243, [1939] Ex. C.R. 259 at p. 273, [1939] 3 D.L.R. 285, where he said:

Small variations from, or slight modifications of, the current standards of construction, in an old art, rarely are indicative of invention; they are usually obvious improvements resulting from experience and the changing requirements of users.

and at p. 246 C.P.R., p. 276 Ex. C.R.:

No step is disclosed there which could be described as invention. There is not, in my opinion, that distinction between what was known before, and that disclosed... that called for that degree of ingenuity requisite to support a patent. If those patents could be supported it would seriously impede all improvements in the practical application of common knowledge.

**1.1.2.2 New Use of an Old Process/Analogous Use, Where There is No Novelty or Invention in the Adaptation of the Old Process**

- 1) **November 8, 1971**  
**RE APPLICATION No. 002,722, (NOW PATENT No. 935,889), 15 C.P.R. (2d) 245-249**

The application was directed to an improved method of continuously fabricating an elliptical waveguide for electrical apparatus from a generally round tubing. The Examiner rejected the claims over prior art, stating that there was no invention in making an elliptical-shaped tube from circular-shaped stock by using conventional methods of tube forming.

In the decision of the Patent Appeal Board and the Commissioner it was stated:

It is well-established that a patent cannot be granted for a new use of an old process unless there be some novelty or invention in the adaptation of the old process to the new use, or the overcoming of some difficulty which lay in the way of such application. I am satisfied that the mere reference to a waveguide in the claim does not impart novelty to the process, as the process, with the same ingredients, does exactly what it has done before in the forming of tubing.

- 2) **March 1, 1974**  
**RE APPLICATION NO. 079,635 31 C.P.R. (2d) 260-268**

The applicant sought a patent on an invention relating to a valve for closing a passage in a connection socket or box, the passage communicating with a suction system. The Examiner rejected the application for lack of an inventive step over three prior art references. The claims sought by the applicant referred to a spring biasing the valve flap which was not shown in the main reference. However, it was shown in a secondary reference and, therefore, was considered common knowledge in the art.

The Board of Appeal and the Commissioner stated as follows:

In view of the prior knowledge disclosed in the art, and in view of the similarity of purpose and mode of application of the applicant's invention and the prior art, (*Pope Appliance Corp. v. Spanish River Pulp & Paper Mills, Ltd.*, [1926] 3 D.L.R. 902 at p. 915, [1927] Ex. C.R. 28 at p. 42 [affd [1928] 1 D.L.R. 313, [1928] S.C.R. 20; revd in the result [1929] 1 D.L.R. 209, [1929] A.C. 160, 46 R.P.C. 23]) the Patent

Appeal Board was satisfied that the applicant had not made a patentable advance in the art. While the idea might be creditable it lacks the prerequisite of inventive ingenuity. It comes within the category of a matter to which the Supreme Court referred in *Crosley Radio Corp. v. Can. General Electric* ([1936] 3 D.L.R. 737, [1936] S.C.R. 551), when it is stated: "...we do not think 'the inventive element necessary to constitute subject-matter is made sufficiently evident'".

3) **July 16, 1975**  
**RE A METHOD OF REMOVING LEAD FROM STEAM STILLs, 35 C.P.R. (2d), 262-266.**

The application was directed to a method for removing a lead deposit formed on the surface of a steam still by means of a water jet wherein the velocity of the stream of between 400 and 1,300 ft. per second. The Patent Appeal Board and the Commissioner rejected the claims stating that the invention is an obvious extension of state of the art of cleaning a variety of surfaces using a jet of liquid. Although the prior art cited was directed to a different use, the use is analogous. It was stated in part:

If one works with a hard deposit he will use a high pressure jet of fluid. This, in our view, is an obvious extension of the state of the prior art of cleaning a variety of surfaces using a jet of liquid. It is not denied that the prior art is directed to a different use. The use, however, is analogous and expected skill in view of the wide range of common use of high pressure fluid jets for cleaning. Workman using a jet of fluid to clean any surface should normally experiment with pressures, angle of the jet, velocities and distances to get the best results. The applicant is concerned with the removal of a "lead ring" from the walls of a still. The applied references, however, describe the application of a high pressure jet of liquid employing comparable ranges of pressure and velocity of the jets, and similar way of its application in the removal of various deposits of comparable hardness and tenacity. It is therefore obvious that this method could be applied to any deposit whether it is a lead ring or other incrustated materials.



### **1.1.2.3 Substitution in an Obvious Manner**

- 1) **October 13, 1971**  
**RE APPLICATION No. 021,626, (NOW PATENT No. 914,401), 10 C.P.R. (2d) 79-83**

The applicant sought to claim a linear measuring instrument with means for magnetically holding a crank arm. The Applicant argued that the use of a magnet as a securing device when applied to the known winding tape measure under the circumstances was not obvious.

The Patent Appeal Board and the Commissioner stated in part:

This, in my opinion, is clearly mere substitution in an obvious manner, and is merely taking advantage which is to be expected as a result of the well known purpose to which magnets may be used. This is, the action or effect of none of the elements embraced by the combination is modified in any material way by the fact that a magnetic means has been used instead of the spring means.

The applicant stated that the device had been commercially successful, however on this issue it was stated:

Commercial success may assist in determining the presence of invention in cases of substantial doubt, but in all cases it must be viewed with caution as such success may well be due to causes extraneous to the invention.

- 2) **October 2, 1974**  
**NIXON v. COMMISSIONER OF PATENTS, 18 C.P.R. (2d) 54-59.**

The application related to a wheel balancing device comprising a tube of rectangular cross-section containing a number of cylindrical weights and a dampening fluid. The tube was attached to the peripheral rim of a wheel so that when the wheel rotates the weights are free to roll in the tube, responsive to centrifugal forces to correct any imbalances. The Examiner refused the application for lack of inventive ingenuity.

In the decision of the Patent Appeal Board and the Commissioner it was stated that all the applicant had done was to:

...select an alternative that would naturally occur to a competent person desiring to provide an increased weight/damping fluid mass ratio to correct an amount of static imbalance, and the greater the imbalance the greater the weight/damping fluid mass ratio (or *vice versa* as in Louden [the prior art]).

and

...appellant's specification involved no exercise of inventive ingenuity and was an obvious alternative for one skilled in the art to try for the purpose of increasing the weight of the mass at the point where counterweight is required and improving on the operating qualities of currently available devices.

In arguing the case the applicant tried to rely on the commercial success of the device. To this it was said:

While the commercial success may assist in determining the presence of invention in cases of substantial doubt, jurisprudence has viewed it with caution as such success may be due to causes extraneous to the invention.

**3) December 18, 1975**  
**RE APPLICATION No. 140,805, (NOW PATENT No. 1,008,335), 37 C.P.R. (2d)**  
**173-179**

The applicant sought to obtain claims relating to an apparatus which contains a breathable mixture of gas for a prolonged period. The apparatus was directed to a combination of hollow coil of pressure resistant tubing containing a breathable gas at high pressure, and a pressure gauge and means of controlling the output of gas to the user.

The combination was shown to be old by the prior art patents. The decision in part stated:

We are satisfied that claims 1, 2 and claim 4 in so far as claim 4 is dependent upon claim 1, fail to disclose a patentable advance in the art. The applicant has achieved a result with a change only in form, doing the same thing in the same way, by substantially the same means, as is taught in the prior art (*Lowe-Martin Co. Ltd. et al. v. Office Specialty Manufacturing Co. Ltd.* [1939] Ex. C.R. 181).

4) **January 6, 1976**  
**RE APPLICATION No. 055,435, (NOW PATENT No. 998,663), 38 C.P.R. (2d)**  
**19-25**

The applicant sought a patent for a method and apparatus for mixing molten liquids with a reciprocating paddle which moves quickly in one direction and slowly in another. The rejection was based on the ground that the invention claimed was not patentably different from the prior art.

The Board found that the essential difference of the application from the prior art resided in the shape of the plunger. The applicant argued that the particular shape of his plunger promoted the desired rectilinear and unidirectional flow of the liquid. The Board, however, stated:

The shape of a device, however, only has patentable merit when such shape results in some "unobvious" functional effect or result.

and

We think that the following quotation of Maclean, J., in *Niagara Wire Weaving Co. Ltd. v. Johnson Wire Works Ltd.* (1939), 1 C.P.R. 229, [1939] 3 D.L.R. 285, [1930] Ex. C.R. 259, [affirmed 1 C.P.R. 246, [1940] 4 D.L.R. 576, S.C.R. 700] at p. 243 C.P.R., p. 273 Ex. C.R., is pertinent.

Small variations from, or slight modifications of, the current standards of construction, in an old art, rarely are indicative of invention; they are usually obvious improvements resulting from experience, and the changing requirements of users.

and at p. 246 C.P.R., p. 276 Ex. C.R.:

No step is disclosed there which could be described as invention. There is not, in my opinion, that distinction between what was known before, and that disclosed by Lindsay, that called for that degree of ingenuity requisite to support a patent. If those patents could be supported it would seriously impede all improvements in the practical application of common knowledge.

The comments of the Court, in *Lowe-Martin Co. Ltd et al. v. Office Specialty Mfg. Co. Ltd.*, [1930] 4 D.L.R. 918 at pp. 922-3, [1930] Ex. C.R. 181 at p. 187, are also of interest: "The mere carrying forward of the original thought, a change only in form, proportion or degree, doing the same thing in the same way, by substantially the same means, with better results is not such an invention as will sustain a patent" (p. 922 D.L.R., p. 187 Ex. C.R.), and "It is always necessary to consider the rights of the general public to avoid monopolies on such simple devices as would occur to anyone familiar with the art."

5) **January 4, 1979**  
**RE APPLICATION OF LEYKAM-MURZTALER PAPIER U. ZELLSTOFF**  
**A.G., 57 C.P.R (2d) 110-115**

The applicant sought a patent for an invention for a timber chute made of plastic material rather than a conventional wood or steel chute. The examiner refused the application on the grounds that it was obvious to substitute plastic for conventional materials used in a timber chute.

The various jurisprudence relevant to the case was reviewed, and guideline were stated for determining whether a substitute of one material for another material has involved the exercise of inventive ingenuity. The criteria is set forth below:

1. a change or variation in the construction of an article or apparatus is rendered necessary by reason of the use of a particular kind of material not previously used for the purpose in mind;
2. the use in a particular article or apparatus of a known material not previously used for the purpose is due to a hitherto unknown and unsuspected property of the material; or
3. a known material is used in an article or apparatus when it had not previously been so used, and such utilization depends on previously known properties of the material, provided the new use results in an unexpected advantage, or unexpectedly avoids a known disadvantage.

6) **December 14, 1979**  
**RE APPLICATION FOR PATENT BY KURT A.G. JACOBSSON (PATENT No. 1,094,790) 56 C.P.R. (2d) 128-134**

The applicant sought a patent for a thread-supply device for textile machines. The examiner rejected the application as not inventive over the prior art. In part, the examiner stated that the thread-control element described in the rejected claims, was only a mechanical equivalent of the prior art, and thus not a patentable advance.

At appeal, the Patent Appeal Board and the Commissioner agreed with the Examiner and stated:

We are not satisfied that the change in location of the thread-control element and the selection of a horizontal pivoting movement in lieu of the vertical pivoting movement is directed to subject-matter which can be considered as a patentable advance in the art. If there was a problem to be solved, for example to save space, a person skilled in the art should be able to solve it without any degree of inventive skill. This claim, in our view, should be refused for the reasons stated.

7) **September 3, 1976**  
**RE APPLICATION No. 108,271, 46 C.P.R. (2d) 100-109**

The applicant sought a patent for a fare box for use in public transportation systems wherein the fare box had a cash box receptacle area which was adapted to receive a removable cash box. The box was designed to prevent pilfering as it was automatically locked on removal from the fare box. The examiner rejected the application based on two prior U.S. patents.

The Patent Appeal Board and the Commissioner agreed that increased security may flow from putting a plurality of devices where previously only one device existed. This increased security, however, flows from an idea lacking any patentable merit. On this point, the Commissioner referred to *Drysdale and Sidney Smith & Blyth Ltd. v. Davey Paxmon & Co.* (1939), 55 R.P.C. 95 at p. 113, where Luxmoore, J. said:

An attempt was made to displace the argument that the invention lacked subject-matter by setting up a number of advantages which were alleged to result from the user of the device: but no ingenuity is involved in the application of the idea, no amount of proof of its practical utility can save it from being invalid for want of subject-matter.

The comments of the court in *Lowe-Martin Co. Ltd et al. v. Office Specialty Mfg. Co. Ltd.*, [1930] 4 D.L.R. 918 at pp. 922-3, [1930] Ex. C.R. 181 at p. 187, were also pertinent:

The mere carrying forward of the original thought, a change only in form, proportion or degree, doing the same thing in the same way, by substantially the same means, with better results is not such an invention as will sustain a patent" and "It is always necessary to consider the rights of the general public to avoid monopolies on such simple devices as would occur to anyone familiar with the art.

#### **1.1.2.4 Combination Does Not Provide a Result; Mere Aggregation**

- 1) **April 28, 1975**  
**RE APPLICATION No. 115,583 (PATENT No. 993,739, 24 C.P.R. (2d) 165-171**

The applicant sought to obtain a patent on an automated poultry feeder for providing a predetermined quantity of feed at prescribed periods during the day. Although the combination was novel, it was not felt that the claims displayed any inventive ingenuity.

The Board recognizes that when assessing an alleged invention the combination of a claim as a whole must be considered. None the less even if the combination in the claims be novel, it in our view lacks the prerequisite of inventive ingenuity. No result has been achieved which can be considered to have flowed from an inventive step.

- 2) **February 1, 1977**  
**RE APPLICATION FOR A SWAGING TOOL BEING APPLICATION No. ---**  
**573, 56 C.P.R. (2d) 120-128**

The applicant sought to obtain a patent for a hose-coupling apparatus for swaging a fitting to the hose end. The examiner relied upon a prior art disclosure of the use of a hand operated swaging arrangement for coupling a hose end and fitting.

On appeal, it was stated:

In our own view the structure recited in the claims comes within the interdiction expressed by Maclean J. in *Niagara Wire Weaving Co. Ltd. v. Johnson Wire Works Ltd.* (1939),

1 C.P.R. 229 at p. 243, [1939] 3 D.L.R. 285, [1939] Ex. C.R. 259 at p. 273 [affirmed 1 C.P.R. 246, [1940] 4 D.L.R. 576, [1940] S.C.R. 700]:

Small variations from, or slight modifications of, the current standards of construction, in an old art, rarely are indicative of invention; they are usually obvious improvements resulting from experience and the changing requirements of users.

And at p. 246 C.P.R., p. 276 Ex. C.R.:

No step is disclosed there which could be described as invention. There is not, in my opinion, that distinction between what was known before, and that disclosed by Lindsay, that called for that degree of ingenuity requisite to support a patent. If those patents could be supported it would seriously impede all improvements in the practical application of common knowledge.

The applicant emphasized the commercial success of his device, however, it was stated:

We must remember, however, that commercial success by itself, without the solution of a problem in an inventive manner, is not sufficient to establish subject-matter: see *The King v. Uhlemann Optical Co.* (1949), 11 C.P.R. 26, [1950] Ex. C.R. 142, 10 Fox Pat. C. 24 [affirmed 15 C.P.R. 99, [1952] 1 S.C.R. 143, 12 Fox Pat. C. 65].

It was decided that no new result had been achieved in the patent nor any results which could be considered to have flowed from an inventive step, and thus, the examiner's final action was affirmed.

## **1.2 Chemical**

### **1.2.1 Claims Accepted**

#### **1.2.1.1 Advantages From the Claimed Combination**

- 1) **November 24, 1980**  
**RE APPLICATION FOR PATENT OF LUMMUS CO. (NOW PATENT No. 1,109,388) 59 C.P.R. (2d) 228-233**

The applicant sought a patent for claims to the liquefaction of natural gas. The examiner rejected the application based upon disclosures in the prior art. One prior art patent, unlike the application at issue, was concerned with the liquefaction of lean natural gas. The other patent relied upon by the Examiner was addressed to a process that prepared natural gas for a pipeline which was to remain in the gaseous phase rather than the liquid phase.

In the decision at appeal, the Patent Appeal Board and the Commissioner, in reviewing the prior art, acknowledged that the recovery with the prior art was approximately 45% as compared to a yield of 90% recovery with the present application. They thus stated:

Clearly then this represents a highly desirable improvement and, in our view, shows sufficient ingenuity to justify a patent. For these reasons, we believe the Commissioner ought not to refuse a patent: *Crosley Radio Corp. v. Canadian General Electric Co. Ltd.*, [1936] 3 D.L.R. 737 at pp. 743-4, [1936] S.C.R. 551 at p. 559.

#### **1.2.1.2 Commercial Success/Long Felt Want**

- 1) **December 30, 1980**  
**RE APPLICATION FOR PATENT OF PEACOCK LABORATORIES, INC. (NOW PATENT No. 1,108,021), 58 C.P.R. (2d) 193-196**

The applicant sought a patent containing combination claims directed to an invention whereby silver salts were reduced to silver in the presence of polyhydric alcohols. The examiner relied upon the disclosure in a prior document which was directed generally to an oxidative decomposition of polyhydric alcohols in an ammoniacal silver solution.



It was stated in the decision of the Patent Appeal Board and the Commissioner, on appeal, that there was no evidence that the combination of the prior art would work in the applicant's process.

It is our view that none of the above combinations are taught by the cited reference. In other words, the rejected claims define novel compositions and the novel practical application of a discovery which the applicant has made. In the circumstances this is all that is required of the applicant.

### **1.2.1.3 Surprising Results**

**1) February 5, 1981  
RE APPLICATION OF LIPHA, LYONNAISE INDUSTRIELLE  
PHARMACEUTIQUE (NOW PATENT No. 1,116,076)**

The applicant sought a patent for an invention directed to a rodenticidal composition. The examiner rejected the application in view of prior art.

The effective compound was mixed with a volatile co-solvent miscible with glycol. The applicant amended the claims to recite a particular useful co-solvent. The applicant argued that the claims were directed to a selection-type monopoly which resulted in excellent and unexpected results. The cited reference did not teach the use of the co-solvent, and thus the claims were allowed. The decision stated in part:

The co-solvent is defined in a weight ratio selected to provide a greater solubility of the compound than when used with glycol alone. The cited reference does not teach the use of a co-solvent.

The evidence produced by Mr. Marcoux during the hearing shows that the active ingredients have low solubility in other glycols which are used as solvents in this application, and that the presence of a second solvent such as acetone does indeed increase the concentration with out sacrificing the stability. These claims, in our view, avoid the cited references.

- 2) **August 27, 1982**  
**RE APPLICATION OF LILLY INDUSTRIES LTD. (NOW PATENT No. 1,156,851), 2 C.P.R. (3d) 162-167**

The applicant sought a patent relating to a combination of two known herbicides and an inert carrier. The examiner rejected the application on several grounds. One being that the herbicides were known and the disclosure did not establish a synergistic effect in combining these known compounds.

At appeal, the Patent Appeal Board and the Commissioner stated in part:

We find no indication in either of the cited references that the known active compounds described individually, one in each reference, would provide an enhanced effect when used together and we find no suggestion that they should be so used. Since we accept the applicant's statement that there is, in fact, such an unpredictable and surprising effect in light of the knowledge of the separate effects of the active constituents, the board is of the opinion that the rejection of claims 1 to 5 and 7 to 10 for lack of invention should not be upheld.

## **1.2.2 Claims Rejected**

### **1.2.2.1 Workshop Improvement**

- 1) **May 25, 1973**  
**RE APPLICATION No. 056,234, 31 C.P.R. (2d) 60-64**

The applicant sought a patent containing claims for a process for dewaxing fresh coffee. The examiner rejected the claims in view of two prior art references. On appeal the Commissioner agreed with the examiner that the claims did not represent an advance in the art. In part it was stated:

Furthermore, taking into consideration the teaching of the two cited patents, and the teaching of Sivetz which discusses thoroughly the coffee processing technology, we find that the step claimed by the applicant of removing undesirable elements, which are known to produce clogging, from a solution prior to usage in a freeze concentration process is obvious to one skilled in the art. Likewise, it is also held to be obvious to one skilled in the art to remove substances from the extract which have formed during a holding period

and are liable to cause the extract to spoil. Moreover, the Sivetz reference discusses completely the effect, of not only the substances mentioned by the applicant, but also many others such as oils, carbon, colloids, and ashes.

2) **May 2, 1985**  
**HERCULES INC. V. COMMISSIONER OF PATENTS, 4 C.P.R. (3d) 289-297.**

The applicant sought to obtain a patent for a method of inducing lightwood formation in pine trees by increasing the amount of resin that can be recovered from pine trees. The method claimed included treating of the hole of the tree with a solution of a substituted bipyridylium salt in one treatment, permitting the tree to grow until an average increment of resin is obtained of at least twice the amount produced before treatment, or until the resin in the treated area reaches 10%, and the determination of the increment being made in a four-foot section of the tree above the treatment site. The examiner refused the application on the grounds that the invention was disclosed in a prior patent.

The Patent Appeal Board and the Commissioner agreed with the examiner that the subject matter claimed in the application lied entirely within the ambit of the prior art. They went on to say:

... we think that a person skilled in the art would have no difficulty in applying the process described in the patent to his own requirements, based on his local conditions, without the benefit of further invention. As we have said, this is the view we take of the subject-matter now being claimed.

**1.2.2.2 Substitution in an Obvious Manner**

1) **May 3, 1976**  
**RE APPLICATION No. 126,631 (NOW PATENT No. 1,015,133), 39 C.P.R. (2d) 88-94**

The applicant sought a patent relating to the conversion of metal halides represented by  $MX_4$ , to the corresponding oxides  $MO_4$  at temperatures from 600°F to 1600°F using a vaporized alcohol as a dehalogenating agent. The examiner rejected some of the claims on the basis of a prior art patent. The prior art references was directed to a two-step method of conversion of a halide to an oxide. The process involved heating in the presence of a hydrolysing agent, followed by a calcination step conducted at a substantially higher temperature than the hydrolysing step. A two-step process was not involved in the present application.

At appeal, the Patent Appeal Board and the Commissioner decided that the one-stage heating cycle was not patentably significant over a two-stage heating cycle, and thus refused the claims, wherein it was stated:

The prior art technique has a practical utility substantially equal to that of the process in the impugned claims which encompass the same reaction for the same purpose. The claims do not effect a patentable advance in the art.

2) **October 13, 1981**  
**RE APPLICATION FOR PATENT OF MENENDEZ ET AL. (NOW PATENT No. 1,223,126), 17 C.P.R. (3d) 528-537**

The applicant sought a patent for an invention directed to the separation of iron by a combined ferrite dissolution-jarosite precipitation process in a highly acid medium. The examiner rejected the claims alleging that there was no inventive step over the disclosure in prior art patents.

At appeal the Patent Appeal Board and the Commissioner considered the claims as being so similar to the prior art that they could not be allowed. It was stated in part:

It is our view that claims C1 and C2 are so similar to the teachings of the prior art that the following finds of the court in *Niagara Wire Weaving Co. Ltd. v. Johnson Wire Works Ltd.* (1939), 1 C.P.R. 229 at p. 243, [1939] 3 D.L.R. 285, [1939] Ex. C.R. 259 at p. 273 are pertinent:

Small variations from, or slight modifications of, the current standards of construction, in an old art, rarely are indicative of invention; they are usually obvious improvements resulting from experience and the changing requirements of users.

Additionally, the comments of the court in *Lowe-Martin Co. v. Office Specialty Mfg. Co. Ltd.*, [1930] 4 D.L.R. 918 at pp. 922-3, [1930] Ex. C.R. 181 at p. 187, are of interest:

The mere carrying forward of the original thought, a change only in form, proportion or degree, doing the same thing in the same way, by substantially the same means, with

better results, is not such an invention as will sustain a patent.

and "It is always necessary to consider the rights of the general public to avoid monopolies on such simple devices as would occur to anyone familiar in the art".

### **1.2.2.3 Combination Does Not Provide a Result; Mere Aggregation**

- 1) **May 24, 1972**  
**RE APPLICATION No. 948,406 (PATENT 968,176), 22 C.P.R. (2d) 245-248**

The applicant sought a patent relating to a method for controlling growth of suckers in tobacco plants comprising a mixture of an effective amount of a suitable emulsifying agent and at least one lower alkyl ester of a C<sub>6</sub> to C<sub>18</sub> fatty acid. The examiner rejected the claims alleging that the claims define obvious mixtures of known compounds with emulsifying agents. In the decision, the Commissioner stated in part:

It is well established that if an invention is in the discovery of an unexpected and unobvious property of the particularly known substance, appropriate claims may set out the novel mode of giving effect to the newly-discovered property as a novel method of using that substance, or as a *novel* composition comprising the particular substance, including mixtures with carriers suitable for the new use.

In the case on point, however, the Commissioner was satisfied that the subject matter of the compound and the emulsion mixtures were substantially taught by the prior art, and thus refused the claims.

## **1.3 Biological**

There are very few cases for review, both Patent Appeal Board decisions and Canadian Court decisions, dealing with the issue of obviousness. As a result the decisions have not been categorized as above, but are simplified summarized below.

- 1) **July 24, 1975**  
**RE APPLICATION NO. 056,232, 35 C.P.R. (2d) 282-286**

The applicant sought to obtain a patent on claims relating to the production of a particular yeast by cultivation on a hydrocarbon-containing nutrient medium in the absence of added growth factors. The examiner rejected the application on the grounds that the

claims did not define an inventive step over the prior art. The Patent Appeal Board and the Commissioner of Patents upheld the examiner's decision and concluded that the results of minor experimentation are not inventive.

The Board, in finding that there was no inventive ingenuity in the applicant's patent, stated:

Apart from the fact that the chemical abstracts reference made no mention of the addition of growth factors, it is clear that, in the process of the cited patents the provisions of these substances was optional rather than mandatory and their exclusion does not therefore represent a patentable advance in the art.

Upon reviewing all the evidence presented to us, we have concluded that the most that has been done by the applicant is mere verification. We cannot see that there has been any exercise of the inventive faculty. It is settled law that minor experimentation does not amount to invention."

2) **August 15, 1975**  
**RE APPLICATION NO., 086,556 (NOW PATENT NO. 999,546) 35 C.P.R. (2d)**  
**56-62**

The applicant sought to obtain a patent for claims relating to a novel human liver cell line and cultures thereof. The Patent Appeal Board, as confirmed by the Commissioner of Patents, refused claims to the actual cell line, but not for obviousness, and thus, this aspect of the appeal will not be discussed any further.

The application also contained claims to a method for culturing the cell line, and these claims were rejected for lack of inventive ingenuity over the prior art reference. During the appeal, however, evidence was brought forward that the cell lines differed from the prior art in their morphology and biochemical properties. The Patent Appeal Board, as confirmed by the Commissioner, agreed that the morphological and biochemical activity of the new cell line was extremely surprising. Thus, they allowed the applicant a method of use claim on the basis of his discovery of an unexpected utility of a known compound. Specifically, it was stated:

The applicant did however discover an unexpected result. The morphology and biochemical activity of the new cell line is "extremely surprising". We would, therefore, allow the applicant a method of use claim on the same basis as if he discovered an unexpected utility of a known compound.

3) **April 27, 1972**  
**RE APPLICATION 957,123, 6 C.P.R. (2d) 29-32**

The applicant sought to obtain a patent on a perforated collagen sponge that was useful in surgical procedures. The sponge contained perforations that permitted excess blood to flow into and through the sponge during clot formation to avoid the floating-away phenomenon and to improve hemostasis of actively oozing tissue surfaces. The examiner rejected the claims in view of the prior art. However, it was found during the appeal that the prior art did not address the same problem addressed by the present application. The objective of the prior art was to increase the absorbency of the pad, and not for flow liquid through the pad, as this would completely defeat the purpose of the pad. Concerning the distinction between the present application and the prior art, it was stated:

It is clear that the purpose of the perforations in the sponge as disclosed in this application is to allow blood to flow completely through the sponge thereby preventing floatation of the sponge and at the same time does not prevent coagulation at the surface. If the Biederman's device was to be used for hemostasis purposes, then coagulation would be a desired result. However, on the contrary. Biederman is concerned with preventing coagulation to achieve maximum capacity and thus seeks the opposite of hemostasis.

Thus the Patent Appeal Board, and as confirmed by the Commissioner, were satisfied that the applicant had made an advance in the art.

## **1.4 Electrical**

### **1.4.1 Claims Accepted**

#### **1.4.1.1 Solution to a Problem Not Posed in the Prior Art**

1. **December 18, 1981**  
**RE APPLICATION OF AMP INC. (NOW PATENT NO. 1,129,515) 80 CPR**  
**(2d) 275 (PATENT APPEAL BOARD)**

The applicant sought a patent for an invention relating to an electrical connector of the pin and socket type. The examiner refused to allow the application because of the prior art.

At the appeal it was determined that the claims were a combination that represented a patentable improvement over the prior art. The prior art showed some similarity to the claims but it addressed a different problem.

The Patent Appeal Board stated:

In the patent (prior art) the socket is contained within the seal while in the application the seal is located in the passageway within the socket. While both the reference and the application relate to a seal for an electrical connection, the manner in which it is assembled in the connection is not the same. We are inclined to agree with the applicant that we are dealing with a seal for a different type of connection.

**2. June 2, 1983**

**RE APPLICATION FOR PATENT OF NOUNEN ET AL. (NOW PATENT NO. 1,179,713) 4 CPR (3d) 280 (PATENT APPEAL BOARD)**

The applicant filed an application for patent relating to an invention to a closed fuse of the type used in high-tension electric systems. The examiner rejected the application as being obvious.

The Patent Appeal Board held:

We can see from the art that O-rings are well known sealing means in fuses, and we can appreciate therefore how the agent and examiner assumed during prosecution that a seal is shown in Triplette and in Lindell. Nevertheless, the agent established at the hearing that the cited patent to Triplette shows a split-ring, not a seal as had been assumed. Further, the applicant argued in his response, and stressed at the hearing, that the invention lies in the recognition of the value of sealing a fuse against ingress of outside moisture.

Thus, the cited art did not address the improvement of the applicant and the prior art was not concerned with prevention of atmospheric air from entering the fuse interior.



### **1.4.1.2 Advantages of Claimed Combination/Improvement**

- 1. September 1, 1971**  
***Application No. 030,681 (Now Patent No. 935,532) 14 CPR (2d) 128 (Patent Appeal Board)***

The applicant applied for a patent relating to a portable radio device. The examiner rejected the claims on the bases of obviousness.

The Patent Appeal Board held:

It is well established that a new combination of well-known elements may be patentable. The question is not whether the elements are new but whether the combination of elements, with its arrangements of parts is new, useful and resulted in inventive ingenuity.

Applicant on the other hand is concerned with mounting an antenna of a specific type (similar to Haas) on a radio body and protecting the antenna from mechanical damage by locating it within the projected outline of body of the radio, the location being specifically defined. He also encases the antenna in a dielectric for the dual purpose of completing the outline of the radio body and increasing the electrical length of the antenna.

I feel that while each of the elements used by the applicant may be known or obvious and the principles employed may also be known, nevertheless applicant has brought them together in such a matter as could be considered a new combination.

In the circumstance, therefore, I am of the opinion that an advance in the art has been made, and that it would not be obvious to arrive at the applicant's combination from the prior art relied upon by the examiner. I am also satisfied that the applicant has made a *prima facie* showing of inventive ingenuity.

**2. October 14, 1980**  
**RE APPLICATION OF WARKENTIN ET AL. (PATENT NO. 1,106,800) 60**  
**CPR (2d) 242 (PATENT APPEAL BOARD)**

The applicant sought a patent for an invention for an apparatus for automatically sorting fruit by colour or weight. An electromechanical weighing means was incorporated in a track along which the fruit was moved in caps and in which a series of drop-out locations allowed the fruit to be discharged into a particular storage area. The examiner rejected the claims on the bases of prior art disclosures.

The Patent Appeal Board held:

We have carefully reviewed the prosecution of this application and especially all the points raised at the hearing. There is clearly novelty in the combination found in claim 1 and it is our view that there was sufficient ingenuity in thought and design to warrant the allowance of claim 1, because the applicant has produced a highly-desirable new result neither taught nor suggested by the cited art. In other words, it is our view that there is ingenuity in the invention, and that the objection made against claim 1 be withdrawn.

**3. December 18, 1981**  
**RE APPLICATION FOR A PATENT OF CLABBURN ET AL. (PATENT NO.**  
**1,139,931) 74 CPR (2d) 281 (PATENT APPEAL BOARD)**

The applicant sought a patent for an invention related to connectors used for electrical components. The examiner refused the application on the basis that there was no inventive ingenuity in utilizing memory metals as electrical conductors as evidence by the state-of-the-art.

The Patent Appeal Board found for the applicant and stated:

Therefore we find that the improved degree of dimensional change obtained in a memory metal by combining resilient recovery with thermal recovery is not taught in the cited patents and the claims are, in our view, allowable over them.

4. **August 29, 1984**  
**RE APPLICATION FOR PATENT OF SOCIETE NATIONAL ELF**  
**AQUITAINE (NOW PATENT NO. 1,190,311) 6 CPR (3d) 9 (PATENT**  
**APPEAL BOARD)**

The applicant filed an application for a patent on an invention in the field of seismic exploration. The examiner rejected the application on the ground that it was directed to non-patentable subject-matter and on the bases of obviousness.

Regarding the question of obviousness, the Patent Appeal Board held that the claims were directed to an improvement in methods of seismic exploration.

5. **October 15, 1985**  
**RE APPLICATION FOR PATENT OF REID (NOW PATENT NO. 1,195,412)**  
**8 CPR (3d) 137 (PATENT APPEAL BOARD)**

The applicant filed an application for a patent for an invention relating to an electronic device for automatically changing and controlling the ambient temperature in a building. The examiner refused the application on the bases that there was no inventive step over the prior art. On appeal to the Patent Appeal Board the rejection of the examiner was withdrawn.

The Patent Appeal Board held:

We find no difficulty in understanding the claim when considered with the disclosure and the drawings. In our opinion applicant has presented a combination of elements which obtains results different from the results that may be achieved by the Haydon patent and which may not fairly be said to be encompassed by Haydon. We would agree that applicant's device is directed to an advance in the art in view of the sample of the device and the arguments presented at the hearing, and the affidavits submitted subsequently thereto.

**6. August 9, 1990**  
**RE APPLICATION FOR A PATENT BY N.V. PHILIPS GLOEILAMPEN**  
**FABRIEKEN (NOW PATENT NO. 1,281,368) 35 CPR (3d) 316 (PATENT**  
**APPEAL BOARD)**

The applicant applied for a patent for an invention providing an electrical circuit for regulating the luminous intensity of at least one discharge lamp by means of one non-capacitive impedance. The examiner rejected two claims as being obvious in light of prior art. The applicant appealed to the Patent Appeal Board. The Patent Appeal Board recommended that the applicant make certain amendments to its claims. The Board stated:

From a comparison of the amended claim to the rejected claims, the Board believes the safety feature disclosed has been clearly identified. By setting out that the second winding is electrically conductively isolated from the first and third windings, and that the non-capacitive manually variable impedance and the diode are in series with the second winding, the single amended claim presents an improvement in protection against the risk of manual contact with the power supply portion of the known DC/AC converter. The Board is satisfied that the single amended claim overcomes the obviousness rejection.

**1.4.1.3 Commercial Success**

**1. November 19, 1979**  
***Re Texas Instruments Inc. Application No. 177,075 50 CPR (2d) 118 (Patent***  
***Appeal Board)***

The applicant sought to obtain a patent for claims directed to an integrated circuit package capable of being produced by automation. The examiner rejected the claims on the bases that a prior publication disclosed the invention to a person skilled in the art and possessed of the common knowledge in the art.

The Patent Appeal Board held that:

Evidence of commercial success of the applicant's process is outlined in the affidavit of Mr. K. Wolford, which was submitted at the hearing. This affidavit states that assembly line production embodying the invention has been commercially successful for a period of more than five years. It also indicates that the S.E. Scrupski apparatus was not capable of commercial operation at that time.

This claim specifies a process of fabrication of integrated circuit assemblies, *where* chips are attached to a dielectric film having corresponding conductive interconnect patterns of rolled copper laminated thereon. This includes the steps of continuing the advancement of the punching means and bringing the punch means and heated bonding tool in close proximity for a time sufficient to temporarily reflow the low melting metal, thereby completing the bond. The cited art does not teach this specific combination, and in view of the statements in the affidavit, we do not find it obvious therefrom."

**2. August 20, 1983**  
**RE APPLICATION OF SONY CORPORATION (NOW PATENT NO. 1,152,211) 2 CPR (3d) (PATENT APPEAL BOARD)**

The applicant sought a patent for an invention related to a method of recording an information signal and control signal on magnetic tape for use in cassette systems. The examiner rejected the claims on the bases that since the magnetic tape was known and the method of simultaneous recording or reading signals on at least two tracks of a magnetic tape was known, the invention could only be in the idea of using known tape in a certain manner and that the prior art rendered this idea non-inventive. The Patent Appeal Board upheld the examiner's rejection of the applicant's claims. However, the system of the applicant, in which control means and non-standard head structures were used, had achieved commercial success and a quality result. The application should not be rejected as the applicant should have the right to claim the patentable features disclosed in the application. The Patent Appeal Board stated that:

At the hearing Mr. Wickham described the operation of the Elcaset System, in which control means and non-standard head structures are used. We have been impressed by the qualities attributed to the Elcaset System, and its apparent commercial success. It may well be that these other features are patentable, and to the extent that they are disclosed in the drawings and disclosure of this application, could be claimed. ...For that reason we do recommend rejection of the application as a whole, as proposed by the examiner, but only of the present claims.

#### 1.4.1.4 Substitution Involved Inventive Ingenuity

1. **October 27, 1980**

***Application For Patent By Westinghouse Electric Corp. (Patent No. 1,104,650) 60 CPR (2d) 238 (Patent Appeal Board)***

The applicant sought a patent for an invention directed to a capacitive voltage transformer with improved compensating reactor arrangement. The application was refused by the examiner on the bases of the disclosure in the prior art.

The Patent Appeal Board held:

This leads us to the arguments relating to the type of steel used in the reactor. The final action states that it is "not patentably distinguishing to use the Okamura *et al.* device while specifying that the steel be of low-cost high-saturation type, since nothing in the Okamura *et al.* precludes the use of just that kind of steel". Okamura does not indicate the type of steel used for his circuit components. The application before us describes the advantages gained by using the lower cost silicon steel, and illustrates the voltage curves in fig. 2 of the drawings. Mr. Fox argues that "Okamura does not teach the advantages of the application of a ceramic oxide varistor to simulate a high mu core in the reactor". Clearly, the applicant, by using a limiter, can construct the reactor of ordinary transformer steel to obtain the sharp saturation characteristic of high mu steel. This is considerably more economical than the prior art which required the mu metal.

Ceramic oxide varistors, as shown in the Matsuoka citation, are not new. Replacing the voltage dependant resistor in Okamura's circuit with the Matsuoka-type varistor is not really the issue before us. We believe that the recognition by the applicant that he can obtain the sharp characteristics of high mu steel from ordinary transformer steel by this replacement shows sufficient ingenuity for invention."

**2. December 24, 1981**  
**RE APPLICATION FOR PATENT OF WARNE (NOW PATENT NO. 1,128,621) 67 CPR (2d) 240 (PATENT APPEAL BOARD)**

The applicants sought a patent for an insulated, high amperage cable connector for use in a sea water environment. The inventive concept lay in the selection of the metal niobium for the two main body parts of the connector with an inert metal such as platinum at one or both of the mating interfaces of the main body parts. The prior art electrodes were fully coated with platinum and would permit undesirable leakage into the surrounding water.

The Patent Appeal Board held:

We now have the benefit of a hearing, at which clarifying statements have thrown new light on the connector device under consideration. The essence of the invention, as is now apparent, is that the main portion of the connector is niobium which quickly oxidizes and therefor is non-conductive, and only the connecting surfaces are platinized to permit conductance from one lead to the other, but not into the surrounding sea water. By contrast the prior art electrodes more fully coated with platinum, and would permit undesirable leakage into the surrounding water.

We are of the opinion that the questions raised by the examiner have been satisfactorily overcome by the applicant's clarifying explanation and by the supporting evidence. We consider that the applicant's structure may not fairly be refused as we are persuaded that the thought and the design that produced applicant's connector structure should not be considered as lacking inventive ingenuity in view of the art of record before us.

The use of the niobium as a connector was considered an unobvious use.

**3. March 23, 1990**  
**RE APPLICATION OF HOLLANDER (NOW PATENT NO. 1,273,383) 32 CPR (3d) 233 (PATENT APPEAL BOARD)**

The applicant applied for a patent relating to deicing means for a dual plastic lens visor in a helmet. The examiner rejected the application on the ground that there was no inventive step claimed over the prior art. The applicant claimed that the invention related to the application of a metallic ink to carry current through the visor. The examiner stated:

In summary, as shown by the references, double-lens plastic shields have been used for some time. Senne had taught the usefulness of resistance wires to prevent shields from fogging. When the Hysol product came on the market, which specifically points to use with plastic materials, it became very plain to use the ink in an improved application that had been thought of earlier with more complex materials. Applicants efforts thus lacked ingenuity and are better described as workshop improvements.

The Patent Appeal Board held that there was invention:

Mr. Murphy pointed out the features of the applicant's invention that resulted from laying down a pattern of circuitry using metallic ink having the characteristic of carrying only a small current in comparison to the circuits and currents taught by the cited art.

The Board acknowledged the presents of inventive matter in the application with respect to the circuitry and vision aspects provided by the metallic ink.

## **1.4.2 Claims Rejected**

### **1.4.2.1 Workshop Improvement**

- 1. July 17, 1980  
RE APPLICATION FOR A PATENT OF S & C ELECTRIC CO. (NOW  
PATENT NO. 1,094,618) 67 CPR (2d) 161 (PATENT APPEAL BOARD)**

The applicant for patent sought claims to a fuse with housing end caps secured by magnetic pulse forming. The examiner rejected the claims as being obvious to a competent workman in the art and relied on a prior patent that disclosed a fuse having a non-metallic tubular housing with recesses at its ends, onto which metallic end caps were fitted and each cap comprised a relatively thick end wall and a thinner flange compressed in the recess of the housing.

The Patent Appeal Board held:

In amended claim 1 the applicant is merely using, for alleged novelty, a functional means claim to state the obvious solution to a supposed problem. It is clear that the relative thickness of the ferrules and housing will depend upon the strength of the material used and on the external forces



expected to act on these walls. It is at least of interest that Brandt shows the end wall thicker than the flange in his fuse arrangement, although it is not discussed in the disclosure. Further, it is our view that any skilled person in this particular art will use the required thickness of material which will satisfactorily do the job without regard to the need for any inventive ingenuity.

#### **1.4.2.2 New Use of an Old Process/ Analogous Use, Where There is No Invention in the Adaptation of the Old Process**

##### **1. October 21, 1976**

##### ***Re An Application For A Relay With A Surge Suppressor 47 CPR (2d) 215 (Patent Appeal Board)***

The applicant applied for a patent relating to a relay having means for suppressing voltage surges. The examiner refused the application on the basis that the relay claimed was identical to the relay in the cited reference, except that one of the contact modules was replaced by a surge suppressor module having a housing which was structurally the same as that of the contact module.

The Patent Appeal Board held that:

The specific issue is whether that development involves such an exercise of the creative faculties of the human mind as to merit the distinction of invention and a claim to monopoly. It has been authoritatively stated that the art of combining two or more parts into a new combination whether they be new or old, or partly new and partly old, so as to obtain a new result, or known result in a better cheaper, or more expeditious manner, is valid subject-matter if there is sufficient evidence of thought, design, ingenuity in the invention, and novelty in the combination. ...And it is also settled law that the manner of obviousness is to be judged by reference to the "state-of-the-art" in light of all that was previously known to persons versed in the art.

The applicant also points out that "one of the best tests for a technically sound and commercially desirable invention is that it solves a previously unresolved problem and appears so simple and fitting that one wonders why it was not conceived previously". We are not persuaded, however, that the applicant has found a solution to an unresolved problem. As

previously shown it was well known in the art how to solve the problem of preventing harmful voltage surge in inductive apparatus, such as an electromagnetic relay. We agree, nonetheless, that the applicant has a new arrangement in his "surge suppressor assembly". But the applicant's device, in our view, is merely a re-arrangement of an old combination in accordance with an old principle *i.e.*, in a modular form.

2. **September 3, 1980**  
**RE APPLICATION OF WESTINGHOUSE ELECTRIC CORP. (NOW PATENT NO. 1,111,888) 68 CPR (2d) 271 (PATENT APPEAL BOARD)**

The applicants for patent sought claims directed to a linkage for aligning and supporting portions of a circuit-breaker apparatus. The examiner rejected claims based on the disclosures in the prior art.

The Patent Appeal Board held:

Aldrich shows a lock means between planar surfaces rather than at the side surfaces as in Soled. Since Soled shows both a shear-resisting lock means and an adjustable joint through an oversized hole with a bolt we agree with the examiner that it is obvious to make Aldrich's joint adjustable with oversized holes for the bolt. Consequently there is no invention in an adjustable joint having a lock means between two planar members.

**1.4.2.3 Substitution in an Obvious Manner**

1. **August 11, 1972**  
**RE APPLICATION NO. 053,265 (NOW PATENT NO. 936,101) 13 CPR (2d) 289 (PATENT APPEAL BOARD)**

The applicant applied for a patent entitled "self test apparatus for facsimile graphic communications system". The examiner held that the fact that the applicants substitutes a particular acoustic type coupler, combined with a "dummy telephone hand set for coupling the audio signals" which was nothing more than a form of commonly used air tube; as apposed to an electric coupler; does not, *per se*, amounted to invention over the prior art.

**2. October 3, 1975**  
**RE APPLICATION NO. 901,145 37 CPR (2d) 109 (PATENT APPEAL BOARD)**

The applicant sought to obtain claims relating to a process for purifying white firing clay suitable for use in the manufacture of ceramic articles using electromagnetic means to remove impurities. The examiner rejected the claims on the bases of obviousness.

The Patent Appeal Board held that:

The limitations placed on claim 1, such as the restriction to "kaolinitic" material and the reference to the intensity of the magnetic field, are minor alterations. It would be obvious to modify the Lynd process by using stronger magnets when they became available, and to use it with different types of clay.

The Board is therefore satisfied that claim 1 does not teach an advance in the art over the cited references, or even over the Lynd patent itself when we add to it the admissions made in the disclosure about British Patent No. 768,451.

**3. October 15, 1982**  
**RE APPLICATION FOR PATENT BY LAWRENCE ET AL. (NOW PATENT NO. 1,175,803) 3 CPR (3d) 427 (PATENT APPEAL BOARD)**

The applicants sought a patent for an invention for charging hoppers for concrete mixtures used on trucks to deliver ready-mixed concrete to building sites. The examiner rejected the claim which described a fluid piston and cylinder arrangement as an obvious alternative to the hand wheel gear and lever system disclosed in a prior art patent.

The Patent Appeal Board dismissed the appeal and found there was no ingenuity involved in replacing the mechanical arrangement of the prior art by the use of hydraulic power.

The Patent Appeal Board held:

An analysis of this claim shows that the component elements and their arrangement with respect to one another is similar to Broberg except for the actuator means which is described. This claim describes a fluid piston and cylinder (hydraulic) arrangement to move the charging hopper, whereas the Broberg patent has a handwheel gear and lever arrangement

for this purpose. We cannot find any ingenuity in replacing the mechanical arrangement of Broberg by use of hydraulic power, and therefore fail to find any patentability in new claim 6 over the Broberg citation.

## 2. CANADIAN COURT

### **2.1 Mechanical**

#### **2.1.1 Validated Mechanical Patents**

##### **2.1.1.1 Solution to a Problem Not Posed in the Prior Art**

1. *CurlMaster Manufacturing Co. Ltd. v. Atlas Brush Limited* (1967), 48 C.P.R. 67 (Ex. Ct.) June 11, 1965.

The plaintiff sought relief from infringement by the defendant for a patent relating to a new type of curling broom. The original patent had been the subject of reissue. The Court held that the original patent was valid and possessed inventive ingenuity. However, the court found that the reissue patent was invalid as the claims did not define an invention.

With respect to the original patent the Court at page 86, stated that:

...the broom that Marchessault put on the market in the fall of 1955 was the embodiment of an invention in which Marchessault was the inventor. Leaving aside the element of the short outer skirt as a protection against the breaking of the sweeping straws at the bottom factory binding and as a support for the sweeping straws, in my opinion, the loose lower cord around the sweeping straws a substantial distance down the broom from the factory bindings (which I have already described), by virtue of its effect of keeping the sweeping straws in a compact bundle without interfering with the flexibility, created the curling broom which was substantially different from the brooms previously used by curlers and definitely more satisfactory to them. It was not anticipated in my view by any of the earlier patents or by Ken Watson's personal practice of putting a loose string an inch or so below the factory binding (Ken Watson himself admitted that Marchessault deserved the credit for getting the loose string "down there" although he thought his loose string involved the same principle). The new element was relatively simple, it is true. It resulted, however, in a radically different broom that was so much more useful (judged by the assessment of those who use curling brooms) that it immediately came into great demand. There was no doubt in my mind that it was an "invention" within the

meaning of the *Patent Act* in the sense that it was "new" and "useful". It was an inventive step forward. I also find that the combination of the element of the loose lower binding and the element of the short outer skirt as a means of protecting a loose lower binding from where also constituted an invention for the same reasons.

2. ***Deere and Co. v. Commissioner of Patents (1982), 59 C.P.R. (2d) 1 (F.C.A.) November 17, 1981.***

The appellant appealed to the Federal Court of Appeal the refusal of the Commissioner of Patents to issue a patent on an invention relating to harvesters for root crops such as sugar beets. The refusal was based on, *inter alia*, lack of inventiveness.

The Court at page 6, ruled in favour of the plaintiff that there was inventive ingenuity in the plaintiff's invention:

In my view, the combination of a retractable cross conveyor with one-sided elevation of the root products making it possible to achieve storability of the cross conveyor thus narrowing the implement for transport so that it is in vertical alignment with the size of the main frame, discloses inventive ingenuity, not taught by the earlier patents, which is properly the subject matter of a patent.

3. ***Riddell v. Patrick Harrison and Co. Ltd. (1958), 28 C.P.R. 85 (Ex. Ct.) December 20, 1957***

The plaintiff sought damages and an injunction for infringement of a patent relating to mechanical mucking operations in a mine shaft.

The court at page 103, phrased the issue thusly:

It was alleged, in effect, on behalf of the defendant that the plaintiff's apparatus was not patentable, that its component parts were old, that their use in mine shaft sinking practice was well known and obvious, that such use required merely the exercise of mechanical skill and that, consequently, there was no invention.

The court at page 106, held that there was inventive ingenuity in the invention and stated:

I do not see how it could reasonably be contended that the plaintiff's combinations were obvious. If it had been, an apparatus for mechanized mucking would have been developed long before the plaintiff's apparatus was devised, for there had been many attempts to solve the problem that mucking by hand presented and they had not succeeded. The fact that the advent of the Riddell Mucker was hailed as a remarkable achievement is a strong indication that it was not a mere workshop improvement over the prior art. The problems involved in devising a mucking machine that could effectively and safely be used at the bottom of a mine shaft were difficult ones. Quite apart from the statutory presumption in favour of the validity of the plaintiff's patents, I have no hesitation in finding that there was inventiveness in the plaintiff's concept that the elements that he used could be combined for use down in a mine shaft in such a way as to accomplish the mechanization of mucking and his effect and safe embodiment of it.

4. ***Proctor and Gamble Co. v. Bristol-Myers Canada Ltd.* (1979), 39 C.P.R. (2d) 145 (F.C.T.D.), September 15, 1978.**

The plaintiff sued for infringement of a patent relating to a pre-measured piece of cloth that removes static cling in an ordinary domestic household electric clothes dryer.

The court found that the previously used softeners and aerosol sprays had disadvantages leading to considerable research to find better methods without success. The defendant failed to discharge the onus of showing of lack of inventive step.

The court at page 152, stated that:

The many disadvantages of rinse-added liquid softeners or any other types of dryer-added softeners such as aerosol spray, etc., have for some time been apparent to those in the industry and caused them certain concern, resulting in considerable research being made in an attempt to find better methods and products for home-fabric softening. The evidence, which I accept, as to the obvious added convenience for the housewife of the new method and product, as to their immediate acceptance by the domestic

market and as to their being more effective at removing static electricity and only slightly less effective than the liquid softeners in imparting softness to fabrics in domestic washing and drying processes, all demonstrates most convincingly the inventive ingenuity of both the method and the product.

5. ***Saunders et al v. Air Glide Deflectors Ltd. et al* (1981), 50 C.P.R. (2d) 6 (F.C.T.D.) July 15, 1980.**

The plaintiff took action for infringement of two claims to a combination of an air deflector unit with a tractor trailer vehicle. There were four defendants all of whom asserted that the patent was invalid on the bases of, *inter alia*, lack of inventive ingenuity.

In holding that the defence of obviousness failed, the court at page 23, stated that:

...all the prior art taught something different in principle from that disclosed by the invention. Different therefore from the prior teaching the invention discloses and teaches separation of the air flow, and the process by which the advantageous result of decreasing drag on the trailer in the tractor-trailer combination can be accomplished, namely, by what occurs in the gap or area between the area of tractor and trailer so that the air flow reattaches to the trailer top and sides at the trailer front.

6. ***Cooper and Beatty v. Alpha Graphics Limited* (1980), 49 C.P.R. (2d) 145 (F.C.T.D.) July 29, 1980.**

The plaintiff claimed infringement of a patent relating to a photomechanical image that permits the use of ordinary printing inks to produce highly satisfactory proofs in anticipation of press runs.

The invention was a combination of inks, photo resists, lacquer, talc and actinic lights.

The court at page 159, held that the plaintiff's invention was inventive and stated:

Bearing in mind that the stated purpose of the use of dyes in these patented processes was not to yield a colour image but rather, in the first instance, to facilitate removal of the unhardened resist from the lithographic plate support and, in



the second, to secure the adherence of the resist to the glass support, the possibility seen by Dr. Materazzi is not, in my view, so evident as to meet the test of obviousness. The possibility would not likely occur to an unimaginative technician however apparent it might have been to a man of Dr. Materazzi's skill, unaided by hindsight, had he directed his mind to developing what its commercial success has proved to be a useful process.

7. ***Baxter Travenol Laboratories of Canada Ltd. et al v. Cutter Ltd. (1981), 52 C.P.R. (2d) 163 (F.C.T.D.), December 11, 1980.***

The plaintiffs sued the defendant for the infringement of a patent relating to parenteral fluid administration equipment systems. The defendant alleged that the patent was invalid for obviousness and denied infringement.

The court held that the commercial application of the invention had been substantial. The patented mechanism was practical and workable. Prior devices had certain limitations which were overcome by the patented invention.

The court at page 169, stated that:

Any instructions given, which might direct one as to how to overcome the said limitations referred to above, by Semple, Nosik, Hervo patents and by other patents referred to in ex. D-1, in my view, would not have assisted in arriving at the solution afforded by the essential features of the Bellamy mechanism and therefore would not have led an ordinary skilled workman directly and without difficulty to the solution obtained.

As a consequence, the defence of obviousness or lack of inventive ingenuity has not been established.

### **2.1.1.2 Advantages from the Claimed Combination**

1. ***DeFrees and Betts Machine Co. v. Dominion Auto Accessories Ltd. (1966), 44 C.P.R. 74 (Ex. Ct.), October 23, 1963. upheld on appeal to the S.C.C. (1965), 47 C.P.R. 12, June 7, 1965.***

The plaintiff claimed relief from infringement by the defendant of a patent relating to a removable sealing device for vehicle marking lights. The defendant attacked the validity on the grounds of, *inter alia*, absence of invention.

The Court at page 110, held that the plaintiff's invention contained inventiveness and stated:

Now although the defendant, as we have seen, asserts that the patent in suit is not a new combination, such is not the case. Indeed, it is a combination of a particular sealing method not entirely similar to those found in the prior art, whether that be the vehicle light or the enclosure art, transferred to the sealing together with two well-known parts, a slightly cupped lens and cupped housing, but in a different manner and with an entirely different purpose or object than it accomplished when sealing ... an enclosure. This, in my opinion, definitely make it a new combination.

Now the combination of old and commonly known items is regularly held to be patentable and, in fact, virtually most patents are combinations of elements which are well-known and old, the patent being for combining them for some new purpose and inventive ingenuity being used in combining and adjusting existing devices and thereby achieving new and valuable results. However, in the present case, we have this ingenious combining, but we have also something more, i.e., a completely different disposition of the component parts and these parts themselves are different.

2. ***Omark Industries (1960) Ltd. v. Gouger Chainsaw Co. et al (1966), 45 C.P.R. 169 (Ex. Ct.) April 17, 1964.***

The plaintiff claimed relief for infringement by the defendants of a patent relating to a tooth of a saw chain adapted for cutting wood. The defendant claimed the patent was invalid on the grounds that it was, *inter alia*, lacking inventiveness.

The Court at page 219, held that the plaintiff's patent was inventive and stated:

It, therefore, is not permissible to characterize the invention as a series of parts because the invention lies in the fact that they were put together and I might even add here that the invention may well reside here in the very idea itself of arranging a tooth such as that of the patent ensued in a manner where its configuration will allow not only easiness of filing and maintenance, but will also give excellent cutting.

...

In my opinion, the mere fact here of flattening the toe and giving a dimension such as to provide guideposts for filing within itself would be sufficient to add the attribute of inventiveness.

3. ***Reliable Plastics Co. Ltd., v. Louis Marx & Company Inc. et. al.* (1958), 29 C.P.R. 113 (Ex. Ct.) April 11, 1958.**

The plaintiff sought to impeach a patent issued to one of the defendants relating to a plastic pinball game. The plaintiff sought to invalidate a number of the defendants patents on the grounds that they were mere workshop improvements being the application of common knowledge.

The court at page 126, phrased the issue thusly:

The main attack on the validity of the patent was that the game lacked the essential elements of invention and that is was merely a workshop improvement over the prior art that would be obvious to any person skilled in it and that it did not involve the exercise of any inventive of ingenuity on the part of the alleged inventor. It was contended that the game was not an inventive advance over the prior art or the common knowledge of persons skilled in it.

The court at page 127, held there was inventive ingenuity in the patent and stated:

I have no hesitation rejecting the submissions thus put forward on behalf of the plaintiff in finding that there was inventive ingenuity in Mr. Lohr's game.

4. *Rodi & Wienerberger A.G. v. Watch Straps Inc. and Dolansky* (1959), 30 C.P.R. 8 (Q.S.C.) September 10, 1958.

The plaintiff sought damages and a permanent injunction alleging that the defendant infringed its patent relating to extendable watch bracelets.

The court at page 14, found in favour of the plaintiff and stated:

The court examined the plaintiff's patent to determine the question as to whether it is invalid for lack of invention or lack of novelty as pleaded by the defendant and after consideration of evidence adduced considering the prior art in this field, considering the functions, uses, advantages and disadvantages of the invention disclosed in the plaintiff's patent and after consideration of the prior patents and prior publications cited in evidence, the court comes to the conclusion that the combination of elements shown by the specification and by the third claim of the patent would not be obvious to a person skilled in the art at the time the application for patent was filed, that the said combination constitutes a step in advance in the art and it was at the time and there is disclosed the necessary "scintilla" of invention required to support a patent.

5. *Ernest Scragg & Sons Ltd. v. Leeson A Corp.* (1966) 45 C.P.R. 1 (Ex. Ct.) February 28, 1964.

The defendants claimed that the patents at issue were invalid based on a lack of any inventive ingenuity.

The court at page 90, held:

The question whether an alleged invention was obvious or not is exclusively a matter for the Court. It is not within the competence of a witness, whether an expert or not, to express his opinion on the subject. Moreover, the question is on fact.

...

...the issue is not whether the alleged invention would have been obvious to him [the trial judge] but whether it would have been obvious to person of ordinary skill in the relevant art.

and at page 95:

The issue is not whether the integers in a combination invention were obvious but whether the invention of the combination was obvious, or, to put it in other terms, a patent for the invention of a combination should not be found invalid for obviousness of the invention for which it was granted unless it is shown to the satisfaction of the court that it was obvious that the integers of the combination should be combined as specified in the claim defining the invention. The unobvious nature of one integer of a combination may be such as to establish the unobviousness of the combination.

...

Moreover, the practical utility and commercial success of an invention may be material in determining whether it involved the exercise of inventive ingenuity.

6. ***Teledyne Industries Inc. et al. v. Lido Industrial Products Limited* (1980) 45 C.P.R. (2d) 18 (F.C.T.D.) November 14, 1979, upheld on appeal (1981), 57 C.P.R. (2d) 29, leave to appeal the Supreme Court refused 59 C.P.R. (2d) 183.**

The plaintiff sought relief from infringement of a patent for an invention relating to a spray nozzle. The defendant claimed that the patent was invalid due to, *inter alia*, lack of inventive ingenuity.

The court at page 32, held in favour of the plaintiff and stated that:

Although success on the marketplace is not by any means conclusive proof of inventive ingenuity, as that success may be attained notwithstanding a complete lack of inventive ingenuity regarding the product and may be due entirely to marketing ingenuity and effective sales promotion. However, commercial success can be good evidence of the inventive ingenuity involved in the creation of a device as well as of its practical utility: it may indicate a real need on the part of the public which had not been satisfied previously.

and, at page 34:

...the question then rises whether an engineer with the SM1 and Bowles shower head, and possessing a knowledge of the art as it existed immediately prior to the invention of the SM2, would have arrived directly in the normal course of events at the SM2 without exercising any inventive ingenuity.

...

...the SM2 patent represented more than a mere combination of the SM1 and the Bower patents.

7. ***Consolboard Inc. v. MacMillan Bloedel (Saskatchewan) Limited (1979)*, 39 C.P.R. (2d) 191 (F.C.T.D.) April 18, 1978, rev. on appeal for other reasons than obviousness (1979), 41 C.P.R. (2d) 94, restored on appeal to the Supreme Court of Canada (1981), 56 C.P.R. (2d) 145, March 19, 1981.**

The plaintiff sued for infringement of four patents. One patent related to a cross-cut woody flakes having tapered ends and useful in the making of waferboard. A second patent related to waferboard. The third patent related to a method and apparatus for felting fibrous elements on a moving collecting surface. The fourth patent related to an improvement on the method and apparatus for felting fibrous elements of the third patent.

The defendant claimed that the patents lacked any inventive ingenuity.

With respect to the first patent the court at page 210, stated that the patent possessed the requisite degree of inventiveness:

It was known, it is said, that flakes could be produced by a cross-cut process; and interfelting of several layers of material was well known; resins had been used to make particle board; resin content was the most expensive cost factor; those in the field constantly tried by experiment to lower the resin content, yet still produce a satisfactory product.

With that background an ordinary skilled, but un inventive, workman in the field would, it is urged, have easily seen that thicker crosscut woody wafers with tapered ends could be made, then interfelted using a comparatively low resin content, with a commercially satisfactory board the result.

and at page 211:

All this learning, it is submitted when put together in light on the common knowledge in the field, leads readily to crosscutting, small and larger pieces (with the thickness in length ranges of the wafers here), binding by resin and interfelting into boards.

It is often fairly easy for a defendant in an infringement suit, in hindsight, to thoroughly search and selectively unearth pieces of prior art in various fields, interfelt them with common knowledge, then say it was all very plain: an ordinary skilled workman would easily and readily have been led to what the "inventor" of the patent in suit now asserts.

### **2.1.1.3 Commercial Success/Long Felt Want**

1. ***Steel Company of Canada Ltd. v. Sivaco Wire and Nail Co. (1973), 11 C.P.R. (2d) 153 (F.C.T.D.) July 9, 1973.***

The plaintiff sought relief from infringement of its patent for the production of helically twisted wire used for nails. The defendant alleged that the patent was invalid due to an absence of inventive step.

The court at page 195, held that the plaintiff's patent was valid and infringed:

... it is relevant in this case to consider ... the surprise of the witness Garrett who as stated, was a practical expert in the wire drawing field for most of his lifetime, and also the commercial success of one product of the plaintiff's patent, the Ardox nail.

2. ***Visirecord of Canada v. R.S. Malton et al (1958), 29 C.P.R. 73 (Ex. Ct.) March 10, 1958.***

The plaintiff sought relief for infringement of a patent relating to a card register. The defendant alleged lack of invention.

The court at page 85, held that there was inventive ingenuity in the plaintiff's patent:

The late President of this Court, Mr. Justice MacLean in *Lighting Fastener Co. v. Colonel Fastener Co. et al...* wrote:

"Every trifling improvement is not invention and the industrial public should not be embarrassed by patents for every small improvement. A slightly more efficient way of doing a thing, small changes in size, shape, degree or quality in a manufacture or machine, even assuming novelty, is not invention. Something further is necessary to justify a monopoly. ...There must be sufficient ingenuity to make a useful novelty into an invention. A small amount of ingenuity may be sufficient, but there must be some ...

and at page 100:

Though unglamorous this fruitful enhancement of the art brought daily relief to hundreds engaged in filing or indexing tasks, easing of some tedious and tiresome motions, while intrinsically improving the speciality's, accuracy and durability. The combination at issue evinces, in my mind, sufficient degree of inventive acumen to uphold the patent. A simultaneous upsurge in sales enhances this opinion.

3. ***Teledyne Industries Inc. et al. v. Lido Industrial Products Limited (1980) 45 C.P.R. (2d) 18 (F.C.T.D.) November 14, 1979, upheld on appeal (1981), 57 C.P.R. (2d) 29, leave to appeal the Supreme Court refused 59 C.P.R. (2d) 183.***

The plaintiff sought relief from infringement of a patent for an invention relating to a spray nozzle. The defendant claimed that the patent was invalid due to, *inter alia*, lack of inventive ingenuity.

The court at page 32, held in favour of the plaintiff and stated that:

Although success on the marketplace is not by any means conclusive proof of inventive ingenuity, as that success may be attained notwithstanding a complete lack of inventive ingenuity regarding the product and may be due entirely to marketing ingenuity and effective sales promotion. However, commercial success can be good evidence of the inventive ingenuity involved in the creation of a device as well as of its practical utility: it may indicate a real need on the part of the public which had not been satisfied previously.



and at page 34:

...the question then rises whether an engineer with the SM1 and Bowles shower head, and possessing a knowledge of the art as it existed immediately prior to the invention of the SM2, would have arrived directly in the normal course of events at the SM2 without exercising any inventive ingenuity.

...

...the SM2 patent represented more than a mere combination of the SM1 and the Bower patents.

#### **2.1.1.4 Substitution Involving Inventive Ingenuity**

1. *Appliance Service Co. Ltd. v. Sarco Canada Ltd.* (1974), 14 C.P.R. (2d) 59 (F.C.T.D.) March 1, 1974.

The plaintiff sought to impeach the defendant's patent relating to steam traps for use in both high and low pressure steam systems on three grounds, one of which was obviousness, that is, that the invention was a mere workshop improvement.

The court at page 69, phrased the issue thusly:

It is clear, therefore, that it is my duty to determine, as a question of fact, whether or not the invention in the present case would be obvious as a workshop improvement to a person skilled in the art and did not involve any inventive step.

In finding that the defendant's patent possessed inventive ingenuity, the court at pages 69 - 70, stated:

The evidence of professor Hooper is to the effect that it was not an obvious, rational step to a person skilled in the art, seeking to eliminate or reduce the loss of steam in a trap, to utilize a solid disc instead of one providing a bleeder duct between the upper and lower chambers of the trap. ... I have reached the conclusion that the plaintiff has failed to discharge the onus on it to satisfy me that the Midgette invention was obvious, and I find as a fact that it was an invention. It is easy for anyone to say in retrospect that the

relatively slight change which was made in the disc was obvious but, in my opinion, all of the evidence leads to the conclusion that it was not obvious.

2. *Durkee-Atwood Co. v. Richardson et. al.* (1963), 39 C.P.R. 50 (Ex. Ct.) June 27, 1962.

The plaintiff sought relief from the infringement of two patents. The defendant admitted infringement, but denied the validity of each patent on the grounds that they were obvious and lacked inventive ingenuity.

The court at page 67, held that there was inventive ingenuity in the plaintiff's patents and stated:

Even if it were assumed that it was obvious that the wrinkles in the plastic protective covering of the gasket could be removed by the application of heat and pressure, it does not follow that the substitution of the continuous plastic protective covering of the gasket of ex. 10 for the eight pieces of the Holland cloth protective covering of ex. 9 was obvious or that the improvement of the frost shield of ex. 10 over that of ex. 9 was obvious. No one had ever thought of making the substitution before Mr. Walz did so and no one had ever thought of the advantages that would result from the improvement before Mr. Waltz did so. Moreover, the invention made by Mr. Walz was not obvious. I accept his evidence that the effect of the wrinkles in the protective plastic covering on the underlying adhesive of the gasket presented a problem to him. Heat had never previously been applied to the adhesive of such a gasket. He had done considerable test such as cold tests and ageing tests. The adhesive was perishable. It was of a rubber base, really a rubber cement, with oils and solvents mixed with the rubber. The solution of the problem that faced him was certainly not an obvious one. I have therefore, no hesitation rejecting the contention that the difference between the frost shield of ex. 10 and that of ex. 9 involved only a step that was obvious.

3. *Alloy Steel and Metals Co. v. A-1 Steel and Iron Founder Limited* (1966), 44 C.P.R. 216 (Ex. Ct.) January 29, 1964.

The plaintiff sought relief for infringement of a patent relating to an invention for a slushing scraper. The defendants attacked the validity of the patent on the basis that it was not inventive.

The court at pages 221 - 222, described the defendant's argument as follows:

In support of the plea that the alleged invention did not at the date thereof constitute proper subject-matter for the grant of a valid patent counsel for the defendant contended that all the changes that the plaintiff had made in its scraper could easily have been made by a mechanic. He relied on the evidence of Mr. Francis that the elements in the claims were individually not new and that the majority of them represented old, well-tried practices, and the evidence of Mr. Ross that the matter of buckets showed a long process of evolution, and the patents filed by him showing that all the buckets referred to by him were members of the same family.

However, the court at pages 223, held in favour of the plaintiff that there was inventive ingenuity in the plaintiff's patent:

The contention that the designing of such a scraper was obvious should be summarily rejected. The changes in the design from the drag scraper, to which I shall later refer, to the slusher scraper covered by the patent, with its resulting change of the character of the scraper was not obvious. It is not necessary, under the circumstances, to refer to the details of the changes that were made. The whole history of the plaintiff's slusher scraper, with its visits to mines, its discussions, the drawing of models, the experiments made, and the resulting achievement showed skill and imagination and a large measure of inventive ingenuity. The contention that the development could all have been made by a mechanic was wholly unjustified.

### 2.1.1.5 Surprising Results

1. *Steel Company of Canada Ltd. v. Sivaco Wire and Nail Co. (1973), 11 C.P.R. (3d) 153 (F.C.T.D.) July 9, 1973.*

The plaintiff sought relief from infringement of its patent for the production of helically twisted wire used for nails. The defendant alleged that the patent was invalid due to an absence of inventive step.

The court held that the plaintiff's patent was valid and infringed:

It is relevant in this case to consider ... the surprise of the witness Garrett who as stated, was a practical expert in the wire drawing field for most of his lifetime, and also the commercial success of one product of the plaintiff's patent, the Ardox nail.

2. *Visirecord of Canada v. R.S. Malton et al (1958), 29 C.P.R. 73 (Ex. Ct.) March 10, 1958.*

The plaintiff sought relief for infringement of a patent relating to a card register. The defendant alleged lack of invention.

The court at page 85, held that there was inventive ingenuity in the plaintiff's patent:

The late President of this Court, Mr. Justice MacLean in *Lighting Fastener Co. v. Colonel Fastener Co. et al.* wrote: "Every trifling improvement is not invention and the industrial public should not be embarrassed by patents for every small improvement. A slightly more efficient way of doing a thing, small changes in size, shape, degree or quality in a manufacture or machine, even assuming novelty, is not invention. Something further is necessary to justify a monopoly. ...There must be sufficient ingenuity to make a useful novelty into an invention. A small amount of ingenuity may be sufficient, but there must be some ..."

and at page 100:

Though unglamorous this fruitful enhancement of the art brought daily relief to hundreds engaged in filing or indexing tasks, easing of some tedious and tiresome motions, while intrinsically improving the speciality's, accuracy and

durability. The combination at issue evinces, in my mind, sufficient degree of inventive acumen to uphold the patent. A simultaneous upsurge in sales enhances this opinion.

## 2.1.2 Invalidated Mechanical Patents

### 2.1.2.1 Workshop Improvement

1. *Gibney et al (carrying on business as Projen Distributors) v. Ford Motor Company of Canada Ltd. (1968), 52 C.P.R. 140 (Ex. Ct.), April 21, 1967.*

The plaintiff sought a remedy for infringement against the defendant for a patent relating to a protector for a generator. Infringement was admitted by the defendant who challenged the validity of the patent on the ground of, *inter alia*, there was no inventive step made by the inventor.

The Court held that the patent was invalid, in that the "invention" was a mere workshop improvement showing to inventive ingenuity.

The Court stated at pages 165 - 166, that:

Reverting to the evidence herein, it appears from Anderson's testimony that all he did to solve the unidentified customer's generator problem was go to his shed, pick up a piece of old stove-pipe, mold it to go around the generator and then flair out the rearward portion thereof in order to ensure that the holes would be protected or shielded from direct splashes or that oil could not directed fall in, or that oil fumes and particles in the ambient air would be restricted somewhat in being drawn in by the impeller into the air cooling stream of the generator.

...

Quite apart, however, from the prior art submitted by the defendant and merely looking at the problem to be solved, how it could be solve and how the patentee solved it, it appears to me evident that the solution of an outwardly flared band attached to the generator would have been obvious.

and, at pages 167 - 168,

From this I must conclude that a competent workman at the date of invention, knowing that a rearward extension of the casing would shield rearward holes from the entry of contaminants, with the knowledge also of the teaching of Schneider, that if one makes the air undergo a change in direction an aerodynamic principle of reduction of particles, of contaminants, going into the generator will be realized, would have easily come up with a unit such as the progen unit and, therefore, I have here further reason to hold that the patentee's unit was a perfectly obvious, logical and reasonable solution to whatever problem existed at the time and, finally, that there was no invention in so doing.

2. ***Rowell v. S and S Industries Inc. (1966), 44 C.P.R. 260 (Ex. Ct.) September 9, 1964.***

The plaintiff sought a declaration that the patent issued to the defendant relating to a flat wire brassiere frame was invalid. The plaintiff claimed that the defendant's patent was, *inter alia*, lacking inventive step.

The issue that the court had to address was whether or not the quality on the metal used by the defendant, according to their patent, is of such a composition, or better still, offers to the interested purchasers a technical superiority deserving of the qualification, or at least, that of useful improvement in the art.

In reaching its conclusion that the defendant's patent lacked inventiveness and was a mere workshop improvement, the court at pages 269 - 270, stated:

...it does indeed seem that the formulas appearing in [the patent], for the preparation of wire frame steel, do not depart from a standard technique known to the industry for well over three decades. Therefore the element of novelty, if any, the step forward in this particular fabrication, in a word, the "scintilla of invention" must be sought for elsewhere...

3. *Langlois et al v. Roy* (1942), 1 C.P.R. 63 (Ex. Ct.) April 19, 1941.

The plaintiff sought relief in an action for infringement of a patent of invention relating to a dough-mixing machine. The invention related to improvements in mixing machines and, in particular, reference to a machine adapted for mixing and kneading dough.

The court held that the plaintiff's invention was a mere workshop improvement lacking invention. The court stated at pages 66 - 67:

The evidence discloses, and it has moreover being admitted, which for brevity I will call the industrial kneader, has been widely known for many years. Defendant's counsel contends that reducing the size and capacity of the industrial kneader to make a domestic kneader suitable for private families and replacing the mechanism operated by electricity, steam, or other motive power by a crank, operated by hand, assuming these to be the only changes effected, does not constitute invention, that at most they are the result of the ingenuity of an experienced mechanic....

...

...When the domestic kneader made its appearance on the market it was well received, and the evidence shows that a considerable quantity were sold in a short time. The commercial success of the Olivier kneader is clearly established, but while the commercial success of a product may demonstrate its utility, utility alone does not suffice to constitute an invention and warrant a patent.

Besides the commercial success which a product may have acquired and the utility which it may possess, in order that it may be patentable it must have solved a problem.

and at page 71:

The St. Anselme Foundry's industrial kneaders were motor driven; in place of the hand-crank found on the plaintiff's kneader there was a pulley operated by means of a belt or by a motor attached directly to the kneader. Motor and pulley have been replaced in the Olivier domestic kneader by a hand-crank. Does this change constitute invention? A hand-crank which sets in motion a gear wheel and a pinion is a

method universally known for a long time, and utilized in a multiple different machines. But contends plaintiff's counsel, the patent in question is one of a combination of elements, amongst the various elements the hand- crank is but one; and in a combination patent all the elements included are protected though if taken by themselves and one by one they may be known and in current use. I do not think that it can be concluded from that that a manufacturer may adopt all the elements of any machine in the public domain with the exception of one, replace this one by a different element, itself known and in current use, and obtained for his machine a patent of invention which is valid.

...

...I am inclined to think, however, that the machine produced by Hectorine Mercier constitutes an anticipation of the Olivier kneader. According to the witness, this machine, used in her family for 35 years, served only in the making of butter; it was a churn and not a kneader. It is evident nevertheless that this machine could readily transformed into a kneader; it was merely necessary to replace the wood roller with its paddles, and the container by a metal crankshaft, an operation which required no ingenuity or inventive faculty but which could be done easily and rapidly by a workman with at least a little experience.

4. ***International Vehicular Parking Limited v. Mi-Co Meter (Canada) Limited and Guelph (1949), 9 C.P.R. 97 (Ex. Ct.) November 19, 1948***

The plaintiff owned a patent for an invention relating to parking meters. The plaintiff sought an injunction and damages from the defendants for infringement. The claims at issue were directed to a combination of elements composed of signalling means set at a predetermined starting point indicating the passage of time in a timing apparatus. The defendants denied infringement and alleged that the patent was invalid.

The court at pages 97 - 98, held that the plaintiff's invention was a mere workshop improvement:

The art of parking meters was new. The improvement made was a simple one constituting a better way of securing an old result. It required no skill beyond that of a mechanic to make the necessary changes. There was no evidence that



knowledge of the alleged defect in the Magee meter, (namely, that a slight jar would release the latch and the control of the violation signal before the predetermined period had expired) had lasted for any period of time. There was no evidence of a search to remedy the defect. There was no evidence that the Magee meter was commercially unsuccessful or that the patented meter was a commercial success over the Magee meter.

Once the problem in the Magee machine became known to those skilled in the art the cause of the defect was obvious; namely, that the use of a spring urging the signal into view. The remedy was obvious, namely, the using of the spring urging the signal out of view. It was obvious that the improvement could be done and it was obvious to do it. Having regard to what was known and used in the art, there was no exercise of the inventive faculty. There was no invention or insufficient invention to support the patent which therefore lacked subject-matter and is invalid.

5. ***Campbell Manufacturing Co. Ltd.: v. Thornhill Industries Limited and Slazengers Canada (1936) Limited (1954), 19 C.P.R. 29 (Ex. Ct.) July 29, 1953***

The plaintiff sought relief from infringement of process claims contained in a patent for making badminton shuttlecocks of uniform weight. The defendant attacked the validity of the patent for lack of, *inter alia*, subject matter, and that there was no exercise of inventive ingenuity to bring the invention into existence.

The court held that there was no inventive ingenuity in the claims at issue and stated at pages 41 - 42:

...it must also be shown that in addition to the combination being a novel one it required the exercise of inventive ingenuity to bring it about. In my opinion, this essential requirement is missing in the present case. The idea of adding weight last to an object in order to bring it up to a predetermined weight is an obvious one. That being so, it seems to me that any person skilled in the art and having the knowledge which such a person ought to have, including the knowledge of the process disclosed in the Snow patent, would in the course of working on the problem of producing shuttlecocks of uniform weight obviously adopt the Snow patent process and add the necessary weight last or almost

last. Moreover, if Mr. Pollitt started with the idea of obtaining the desired uniform weight by adding the necessary weight last and knew of the other methods of applying weights, as a person skilled in the art should have done, it seems to me that he would obviously select the Snow patent process as one to adopt for the purpose of adding the necessary weight last or almost last.

Under the circumstances, I find no difficulty in concluding that claim 4 is invalid for the reason that it did not require any inventive ingenuity to devise the combination covered by it.

Counsel for the plaintiff relied upon the commercial success of the shuttlecocks produced by the process covered by the patent as evidence of invention... In my opinion, the evidence of the commercial success of the plaintiff's shuttlecock falls far short of the kind of evidence required.

#### **2.1.2.2 New Use of an Old Process/Analogous Use, Where There is No Novelty or Invention in the Adaptability of the Old Process**

1. *Peterson Electronic Die Co. Ltd. v. Plastiseal Inc.* (1973), 8 C.P.R. (2d) 222 (F.C.T.D) November 24, 1972 upheld on appeal, (1974), 14 C.P.R. (2d) 48, (F.C.A.) March 29, 1974.

The plaintiffs alleged that the defendant infringed a patent for a turned-in edge welded vinyl binder for books. The defendant claimed that there was no inventive ingenuity in the invention.

The court at pages 237 - 238, and page 242, in finding that there was no inventive ingenuity in the plaintiff's patent, reasoned that:

It has also been frequently held that a mere scintilla of inventive ingenuity is sufficient to support a patent. It has also been held that the practical commercial success of an article raises a strong presumption that inventiveness was necessary to product it for the first time. Furthermore, evidence of commercial success outside of Canada is admissible.

...

I have reached the conclusion on the evidence before me that the process in question and the type of cover achieved by the use of it was an obvious adaption of well-known principles and could have been done by anyone skilled in the art ... and hence that it was not properly patentable...

On appeal, the Federal Court of Appeal held at page 51, that:

Having regard to the history of the matter, in my opinion there was no "invention" in conceiving the idea that the way to eliminate the unsightly tear-seal edge of the thermoplastic tear-seal edge binder was to turn the outside vinyl covering over the filler boards and attach it on the inside. That was the traditional method of making book cases that it was desired to emulate. Similarly, in my opinion, there was no "invention" in conceiving the idea that the way to attach the outside cover on the inside was to have another piece of vinyl covering in the inside of the filler boards so that they two pieces could be fused together. That was the predominant feature of the tear-seal method which it was desired to improve.

2. ***Somerville Paper Boxes Ltd. et al v. Cormier et al* (1943), 2 C.P.R. 181 (Ex. Ct.)  
December 22, 1939**

The plaintiff sued the defendant for infringement of two patents relating to collapsible egg cartons and one patent relating to a machine for assembling egg cartons. The defendant claimed that the patents were invalid for lack of invention

The Court at page 201 reviewed the following proposition with respect to determining the inventiveness/obviousness of an invention:

These cases, and many others which might be cited establish the following propositions applicable to the present case.

1. A patent for the mere new use of a known contrivance, without any additional ingenuity in overcoming fresh difficulties, is bad, and cannot be supported. If the new use involves no ingenuity, but is in manner and purpose and analogous to the old use, although not quite the same, there is no invention; no manner of new manufacture within the meaning of the Statute of James.

2. On the other hand, a patent for a new use of a known contrivance is good and can be supported if the new use involves practical difficulties which the patentee has been the first to see and overcome by some ingenuity of his own. An improved thing produced by a new and ingenious application of a known contrivance to an old thing, in a manner of new manufacture within the meaning of the statute.

In finding that the plaintiff's invention lacked inventive ingenuity, the court at page 205 stated:

Questions of invention and anticipation are questions of fact. No general rule can be laid down to determine whether any particular instance involves invention or not or whether any prior publication constitutes an anticipation or not. Each case must be determined on its own merits. After carefully perusing the evidence and argument of counsel, I believe that the specification of the Schleicher patent was liable to disclose to Benoit the material elements and features found in patent no. 282,214.

...

Although to a certain extent differently constructed, being more effectual and producing a complete carton instead of merely inserting partitions through the slots of a blank, it contains the same characteristics as those set forth in the said patent and reproduced in the plaintiff's machine.

3. ***United Drug Co. et al v. Beck (1942), 1 C.P.R. 42 (S.C.C.) November 29, 1940***

The plaintiff sought relief for infringement against the defendant. The patent related to new and useful improvements in nursing bottles and the like in nipples on the nursing bottles. The defendant claimed that the patent lacked inventive ingenuity.

The Court of Appeal had held at page 58 that:

Regarding the internal annular beads projecting inwardly from the face of the band, I have reached the conclusion, after a careful perusal of the evidence and attentive examination of the patents relied upon by the defendant as anticipatory, that the plaintiff made a new and useful

invention. The plaintiffs invention, to my mind, involves ingenuity and novelty.

However, the Supreme Court at pages 62 - 63, reversed the judgement of the Court of Appeal stating that:

Having regard to the state of the art, at the time of the application of the respondent, we are unable to find in claim 6 that ingenuity and novelty which is essentially required to afford a good and valid subject matter for a patent of invention and validity to support the latter.

In our opinion there was no inventiveness in the article described by the respondent, at least in claim 6 of this patent. As there described, it is at most ... "an obvious development of something known".

### **2.1.2.3 Commercial Success Does Not Always Show Invention**

#### **1. *Rubbermaid (Canada) Ltd. v. Tucker Plastic Products Ltd. (1973), 8 C.P.R. (2d) 6 (F.C.T.D.) Pratte J. November 14, 1972.***

The plaintiff sought relief from infringement of a patent relating to a portable rotary tool caddy. The defendant claimed that the patent was obvious to an ordinary workman and the date of the invention.

The court held at pages 14 - 15, that the patent was invalid due to a lack of inventive ingenuity:

In determining whether, in this case, it required inventiveness to conceive the article described in claim 1 of the plaintiff's patent I shall, therefore, disregard the presumption. Moreover, in making this determination I also intend to disregard the commercial success enjoyed by the plaintiff in the marketing of its tool caddy. Indeed, the tool caddy that was put on the market embodied many features which were not described in claim 1 of the patent so that it can be said that the article which found favour with the public was not the one described in the claim that is attacked by the defendant.

2. *Langlois et al v. Roy (1942), 1 C.P.R. 63 (Ex. Ct.) April 19, 1941.*

The plaintiff sought relief in an action for infringement of a patent of invention relating to a dough-mixing machine. The invention related to improvements in mixing machines and, in particular, reference to a machine adapted for mixing and kneading dough.

The court held that the plaintiff's invention was a mere workshop improvement lacking invention. The court stated at pages 66 - 67:

The evidence discloses, and it has moreover being admitted, that the kneader driven by motive power and used by bakeries and communities, which for brevity I will call the industrial kneader, has been widely known for many years. Defendant's counsel contends that reducing the size and capacity of the industrial kneader to make a domestic kneader suitable for private families and replacing the mechanism operated by electricity, steam, or other motive power by a crank, operated by hand, assuming these to be the only changes effected, does not constitute invention, that at most they are the result of the ingenuity of an experienced mechanic....

...

...When the domestic kneader made its appearance on the market it was well received, and the evidence shows that a considerable quantity were sold in a short time. The commercial success of the Olivier kneader is clearly established, but while the commercial success of a product may demonstrate its utility, utility alone does not suffice to constitute an invention and warrant a patent.

Besides the commercial success which a product may have acquired and the utility which it may possess, in order that it may be patentable it must have solved a problem.

and at page 71:

The St. Anselme Foundry's industrial kneaders were motor driven; in place of the hand-crank found on the plaintiff's kneader there was a pulley operated by means of a belt or by a motor attached directly to the kneader. Motor and pulley have been replaced in the Olivier domestic kneader by a

hand-crank. Does this change constitute invention? A hand-crank which sets in motion a gear wheel and a pinion is a method universally known for a long time, and utilized in a multiple different machines. But contends plaintiff's counsel, the patent in question is one of a combination of elements, amongst the various elements the hand- crank is but one; and in a combination patent all the elements included are protected though if taken by themselves and one by one they may be known and in current use. I do not think that it can be concluded from that that a manufacturer may adopt all the elements of any machine in the public domain with the exception of one, replace this one by a different element, itself known and in current use, and obtained for his machine a patent of invention which is valid.

...

...I am inclined to think, however, that the machine produced by Hektorine Mercier constitutes an anticipation of the Olivier kneader. According to the witness, this machine, used in her family for 35 years, served only in the making of butter; it was a churn and not a kneader. It is evident nevertheless that this machine could readily transformed into a kneader; it was merely necessary to replace the wood roller with its paddles, and the container by a metal crankshaft, an operation which required no ingenuity or inventive faculty but which could be done easily and rapidly by a workman with at least a little experience.

3. ***Campbell Manufacturing Co. Ltd.: v. Thornhill Industries Limited and Slazengers Canada (1936) Limited, (1954), 19 C.P.R. 29 (Ex. Ct.) July 29, 1953***

The plaintiff sought relief from infringement of process claims contained in a patent for making badminton shuttlecocks of uniform weight. The defendant attacked the validity of the patent for lack of, *inter alia*, subject matter, and that there was no exercise of inventive ingenuity to bring the invention into existence.

The court held that there was no inventive ingenuity in the claims at issue and stated at page 42:

Counsel for the plaintiff relied upon the commercial success of the shuttlecock produced by the process covered by the patent as evidence of invention... In my opinion, the

evidence of the commercial success of the plaintiff's shuttlecock falls far short of the kind of evidence required.

#### **2.1.2.4 Combination Does Not Provide a Result, Mere Aggregation**

1. ***Rubbermaid (Canada) Ltd. v. Tucker Plastic Products Ltd. (1973), 8 C.P.R. (2d) 6 (F.C.T.D.) Pratte J. November 14, 1972.***

The plaintiff sought relief from infringement of a patent relating to a portable rotary tool caddy. The defendant claimed that the patent was obvious to an ordinary workman and the date of the invention.

The court at pages 14 - 15, held that the patent was invalid due to a lack of inventive ingenuity:

In determining whether, in this case, it required inventiveness to conceive the article described in claim 1 of the plaintiff's patent I shall, therefore, disregard the presumption. Moreover, in making this determination I also intend to disregard the commercial success enjoyed by the plaintiff in the marketing of its tool caddy. Indeed, the tool caddy that was put on the market embodied many features which were not described in claim 1 of the patent so that it can be said that the article which found favour with the public was not the one described in the claim that is attacked by the defendant.

...

It was conceded by counsel for the plaintiff that none of these integers were new. He submitted, however, that their combination required inventiveness. With this submission I cannot agree. In my view, any skilled handy-man would have thought of modifying the two-tiered turntable that was already on the market so as to use it as a rotary tool caddy.

2. ***Crila Plastic Industries Ltd. v. Ninety-Eight Plastic Trim Ltd. (1988), 18 C.P.R. (3d) 1 (F.C.A.) November 17, 1987.***

The patentee took action for infringement in respect of a patent for a pliable edge-protector used for protecting car doors. At trial, the Judge held that the patent was invalid as it was a mere aggregation and was obvious. The patentee appealed to this court.



In upholding the trial judgment, the Court stated, at p.1:

The trial judge correctly applied the law relating to the difference between an unpatentable aggregation and a patentable combination. The claims relate to an aggregation if each of the elements performs its own individual function, if any one element should be removed.

...

The trial judge made a proper analysis of the prior art. He did not make an objectionable *post facto* determination relating to obviousness.

The decision of the patentee to use glue to stick the edge-protector in place did not have a "scintilla of inventiveness."

## **2.2 Chemical**

### **2.2.1 Validated Chemical Patents**

#### **2.2.1.1 Advantages From the Claimed Combination**

1. ***General Tire and Rubber Co. v. Dominion Rubber Co. Ltd. and Phillips Petroleum Co.* (1968), 53 C.P.R. 168 (S.C.C.) June 26, 1967.**

The court, in reviewing the prior art, at page 174, stated that:

We, therefore, have the situation where an alleged inventor has used a known method, latex masterbatching, not previously used for that purpose to soften a known product High Mooney cold rubber with oil. Latex masterbatching had been used to combine other ingredients. Oil had been widely used to soften GRS and to soften High Mooney cold rubber but by milling or in the Banbury machine or by solution incorporation. Was what Dr. Howland did a patentable invention?

The court concluded, at page 176, in favour of the plaintiff that its patent was not obvious:

In the present case Howland applied the known method of masterbatching to a known substance, an oil softener, with a new compound, High Mooney cold rubber, at a time when

the process of making High Mooney cold rubber which resulted in the finished product being available to the market and immediately ready for processing into tires. Hitherto the tire manufacturer had had to soften his synthetic rubber whether GRS or the new High Mooney cold rubber in the Banbury machine or by one of the other two methods previously described.

In my opinion Gibson, J., was right in his finding that this was an invention and the evidence supports his finding.

2. ***Reeves Brothers Inc. v. Toronto Quilting & Embroidery Ltd. (1979), 43 C.P.R. (2d) 145 (F.C.T.D.) December 13, 1978.***

The plaintiff sought relief from the infringement of two patents. One patent related to a process of lamination of polyurethane foam to fabric by use of flame heat and to the product of the process. The second related to an apparatus for the carrying out of the process.

The court at pages 157 - 158, held that:

As I understand it also, in order for the prior defence of obviousness to succeed there must be a finding that there is no inventive step, the defence evidence must establish that the solution sought which gave rise to the alleged invention was "very plain", evident to an unimaginative technician, and must not be based on *ex post facto* analysis.

Employing these tests from the cases, in my view, in respect to the whole of the evidence and particularly as commented upon heretofore and for the reasons given in respect to it, the solution sought prior to this alleged invention was not very plain and not evident to an unimaginative technician, speaking generally. And speaking specifically, it was not plain or evident to Dr. Hager, to the inventor Grom, or to the defendant's expert witness, Wilson, three especially competent persons in their respective disciplines, none of whom could be judged by any standards as only unimaginative technicians. Instead, the solution was put forward based on *ex post facto* analysis.

3. *Farwberke Hoechst Aktiengesellschaft Vormals Meister Lucius & Bruning v. Halocarbon (Ontario) Ltd. et al.* (1979), 42 C.P.R. (2d) 145 (S.C.C.) June 21, 1979.

In allowing the appeal from the Federal Court of Appeal, the Supreme Court stated at page 155, that the Court of Appeal had put the test for inventive ingenuity too high in respect of its consideration of the first patent in stating that:

...the requirement of "inventive ingenuity" is not met in the circumstances of the claim in question where the "state of the art" points to a process in all that the alleged inventor has done is ascertain whether or not the process will work successfully.

Practically all research is done by looking at directions for the "state of the art" points.

The court erred in the test of anticipation in holding that the prior patent relied upon the respondent mapped out the reaction in a general way. The prior patent must give the same knowledge as or clear unmistakable directions as to the claim in suit.

4. *Lubrizol Corp et al. v. Imperial Oil Ltd.* (1991), 33 C.P.R. (3d) 1 (F.C.T.D.) September 17, 1990, upheld an appeal (1993), 45 C.P.R. (3d) 449 (F.C.A.)

The plaintiff took action for infringement of a patent improved succinimide dispersant additives for passenger car motor oils. The invention had achieved substantial commercial success. The defendant alleged that it held a licence, but the patent is not valid for lack of inventive ingenuity.

The court stated at pages 20 -21, that:

Of especial importance here, and in all chemical patents, are the remarks of Pigeon J. of the Supreme Court of Canada in *Farbwerke ... v. Halocarbon*:

In my view this statement of the requirement of inventive ingenuity puts it much too high. Very few inventions are unexpected discoveries. Practically all research work is done by looking in directions where "the state of the art" points. On that basis and with hindsight, it could be said in most cases that there was no inventive ingenuity in the new

development because anyone would then see how the previous accomplishments pointed the way.

### **2.2.1.2 Commercial Success/Long Felt Want**

1. *Eli Lilly & Co. v. Marzone Chemicals Limited et al* (1978), 37 C.P.R. (2d) 3 (F.C.T.D.) July 11, 1977. upheld on appeal, (1978), 37 C.P.R. (2d) 37 (F.C.A.) March 21, 1978.

The plaintiff sought relief from infringement of a patent for the invention of a new chemical substance known as trifluralin which acquired considerable commercial success as a pre-emergent herbicide to destroy germinating weeds in a selective manner without causing material harm to the desired crop.

In finding that there was no inventive ingenuity, the court stated that at pages 34 - 35:

Up until the date of the alleged invention, there was no solution to the serious and long standing problem of providing a herbicide to control grassy weeds and crops. As stated, up to that time the herbicides known and commercially used killed broad-leafed weeds; and the substantial and continued use of such herbicides cause an ecological shift so that the grassy weeds became the acute problem; and no adequate method of killing grassy weeds, except hand hoeing and using other unsatisfactory herbicides which also killed crops in whole or in part, had been found prior to the date of the invention as trifluralin.

As a consequence, prior to the date of the invention of trifluralin, there was a long standing need both in Canada and the United States for an effective selective grass herbicide. To satisfy this need, large companies ... had been actively searching for an effective herbicide for a number of years prior to the subject invention.

and at page 36:

... Soper had to make a choice out of selection of thousands of possible starting materials. He chose (and it would not have been obvious to a person skilled in the art to choose) the starting material that Yagupol'skii taught how to make.

Soper chose that starting material because he had decided to make the compound later called trifluralin, which compound he later found to have the herbicidal functions desired.

### *Commercial Success*

As the evidence indicates, commercial success of trifluralin has been outstanding and Eli Lilly has obtained a substantial percentage of the total market with the invented product trifluralin. This success and percentage has not been due primarily to extensive advertising or packaging or cosmetic effects of the product such as colour, packaging or price.

### *Inventive Step*

Finally, from the evidence, it is patent that there was an inventive step at the material time when Soper made trifluralin. Soper, a chemist, having substantial experience both scientific and practical, with imagination chose this certain starting material from thousands of other possible starting materials, to make the formula which is trifluralin.

#### **2.2.1.3 Surprising Results**

1. *Wellcome Foundation Ltd. et al. v. Apotex Inc. (1992)*, 39 C.P.R. (3d) 289 (F.C.T.D.) November 14, 1991.

The plaintiff took action for infringement of two patents containing claims relating to intermediates for the production of a pharmaceutical compound. The defendant denied infringement and attacked the validity of the claims of the patents on the grounds that they were obvious.

The court at page 353, stated that:

In assessing whether an invention was obvious, or whether it required the exercise of inventive ingenuity, a court must first of all define the nature of the invention claimed and then assess the whole of the prior art suggested as relevant to the invention, and assess its cumulative effect. ... Having done that, a court may then apply the test for obviousness. This test involves an assessment of whether a skilled and workmanlike technician would, in view of the state of the art

as it existed at the time of the invention, have been led inescapably to the invention.

and concluded at pages 357 - 358:

Where there is unexpected usefulness for a particular purpose, then the combined effect of new substances and unexpected usefulness will satisfy the requirements of inventive ingenuity.

## 2.2.2 Invalidated Chemical Patents

### 2.2.2.1 New Use of an Old Process/Analogous Use, Where There is No Novelty or Invention in the Adaptation of the Old Process

1. *Canadian Industries Limited and Canada General Electric Co. v. Sherwin-Williams Co. of Canada Limited* (1945), 5 C.P.R. 6 (Ex. Ct.) October 5, 1945

The plaintiffs as owner and exclusive licensee respectively of a patent relating to a resinous condensation product sued the defendant for infringement. The defendant claimed that the patent was invalid for lack of inventiveness. The court held that there were two factors relating to obviousness. The first is a lack of obviousness. However, the court added that that is not sufficient to establish invention. There must also be inventive ingenuity.

The court in finding that the patent was invalid for want of inventiveness, stated at page 21, that:

It was submitted on behalf of the defendant that there was not any inventive ingenuity in selecting fatty acids of linseed oil or linseed oil itself, since both have been put on an equivalent basis. The selection of linseed oil as the ingredient to modify the synthetic resin of Watson Smith was an accepted thing that a skilled worker in the art would do. It was urged on behalf of the plaintiffs that the selection of linseed oil or the acid thereof was not an obvious thing and that consequently its adoption constituted an inventive step.

and, at page 27:

The use of linseed oil must have been considered as the obvious thing to do by the skilled persons, familiar with commercial practise, who were working with Kienle at the

General Electric Co. The company nor any of its employee's made any attempt to obtain a patent on the new product or the process for making it. They did not produce it as an invention. They did nothing until it appeared that someone with the Dupont de Nemours Co. had filed an application for patent. In 1927 they made experiments and prepared the application for the patent ensued. This course of conduct does not indicate that these people in 1921 considered their deed as an invention.

The court at page 38, concluded:

This article shows that at the time under consideration therein it was the baked films that were sought for the purpose to which Callahan, Dawson, Arsem and Howell were directing their investigations and that, in case films were desired for other purposes where baking was not available, then linseed oil or somewhat similar ingredient would be used.

After careful perusal of the evidence and of the able and exhaustive argument of counsel I have reached the conclusion that there is lack of subject-matter in the patent in suit and that accordingly the said patent must be declared invalid, null and void and that it must be struck from the record.

2. ***Halocarbon (Ontario) Ltd. v. Farbwerke Hoechst A.G.* (1976), 28 C.P.R. (2d) 63 (F.C.A.) April 29, 1976.**

This was an appeal from a trial decision where it was held that a claim for a process of the manufacture of isohalothane was valid and infringed. The appellant claimed lack of inventive ingenuity.

The court, in reviewing the requirement of inventive ingenuity, stated at page 64, that:

There cannot be said to be any inventive ingenuity in discovering that the reaction to produce isohalothane can be brought about in the liquid phase. Mere confirmation or verification of what is indicated in a prior publication does not constitute an inventive step.

The court, in finding that the plaintiff's invention lacked inventive ingenuity, held at page 65, that:

The learned trial Judge appears to have proceeded upon the assumption that the requirement of "inventive ingenuity" is satisfied unless the "state-of-the-art" at the time of the alleged invention was such that it would have been obvious to any skilled chemist... "that he would *successfully* produce isohalothane (assuming the monomer used here and hydrogen bromide) in the liquid phase"... I do not think that the learned trial judge's assumption is correct as a universal rule. I would not hazard a definition of what is involved in the requirement of "inventive ingenuity" but, as it seems to me, the requirement of "inventive ingenuity" is not met in the circumstances of the claim in question where the "state-of-the-art" points to a process and all that the alleged inventor has done is ascertain whether or not the process will work successfully.

3. ***Commissioner of Patents v. Farbwerke Hoechst* (1964), 41 C.P.R. 9, (S.C.C.) November 15, 1963.**

The Commissioner of Patents appealed from the judgement of the Exchequer Court which allowed an appeal from his decision to reject an application for a patent on the grounds that there was no inventiveness.

The Supreme Court in reviewing the invention stated at page 13:

A person is entitled to a patent for new, useful and inventive medical substance but to dilute that new substance once its medicinal uses are established does not result in further invention. The diluted and undiluted substance are but two aspects of exactly the same invention. In this case, the addition of an inert carrier, which is a common expedient to increase bulk, and so facilitate measurement and administration, is nothing more than dilution and does not result in a further invention over and above that of the medicinal itself.



In finding that there was no inventive ingenuity in the plaintiff's invention, the court concluded at page 14:

Therefore, the primary error in the judgement of the Exchequer Court is two fold. The mixing of a patented chemical substance with a carrier is not new and it is not the result of inventive ingenuity.

## **2.3 Biological**

### **2.3.1 Validated Biological Patents**

#### **2.3.1.1 Substitution involving inventive ingenuity**

1. *American Cyanamid Co v. Charles Frosst & Co. (1966), 47 C.P.R. 215 (Ex. Ct.) March 16, 1965.*

The plaintiff sued for relief from infringement of process claims of a patent related to chlortetracycline. The defendant attacked the plaintiff's patent claiming that the patent was obvious.

The court, at page 314, in concluding that the plaintiff's patent possessed the required inventive ingenuity, stated that:

In order to find here that [inventive ingenuity] is missing in Minieri I would have to come to the conclusion that the new process in Minieri, in view of Duggar at the date of the Minieri invention of 1953, was so easy that very little reflection would have been required to find it. This I am not prepared to say because, having regard to what was generally known at the date of the patent at suit, it was not obvious without considerable experiment and research that the new process invented by Minieri could give tetracycline by direct fermentation and consequently I must, and do, hold that the attack made on this basis must and does also fail.

## 2.4 Electrical

### 2.4.1 Validated Electrical Patents

#### 2.4.1.1 Advantages from the Claimed Combination

1. *Printed Motors Inc. v. Tri-Tech Inc. (1968)*, 54 C.P.R. 200 (Ex. Ct.) July 17, 1968.

On appeal from a decision of the Commissioner of Patents, the plaintiff sought a declaration from the court that two of the claims of the defendant's re-issue patent, which were in conflict with the plaintiff's application, were invalid because, *inter alia*, it lacked inventive step.

In phrasing the issue, the court at page 238, stated:

The background against which I must judge whether there was inventive ingenuity in what Haydon did is, as I find it, that at the relevant period a skilled workman in the art would have known the physical laws of electrical and magnetic interactions but would not have known design procedures or have had design information that would permit him to design or manufacture the Haydon type motor with its rotor making use of printed circuit techniques.

In finding that the plaintiff's patent was valid in that it possessed inventive ingenuity, the court at page 238, stated:

Haydon combined the various parts to create a new operable and useful motor that was substantially different in construction and operation from what was on the market before that time. There was inventive ingenuity involved in what he did. It was more than merely the exercise of the skill of the art. If it was not a giant step forward, it was at least a significant step. I therefore find that Haydon made an invention within the meaning of the *Patent Act*...

2. *Philco Products Ltd. v. Thermionics Ltd. (1944)*, 3 C.P.R. 17 (S.C.C.) May 17, 1943.

The plaintiff (respondent) sought an injunction and damages from the defendants (appellants) for alleged infringement of two patents relating to improved electronic vacuum

tubes. The defendants (appellants) claimed that the plaintiff's patent was invalid as it failed to disclose inventive subject matter.

The majority of the Court agreed with the decision of the Exchequer Court that the plaintiff's patent was valid as it possessed inventive ingenuity, at pages 25 - 26:

There can be no doubt that it was obviously desirable that generally radio receiving tubes be operated, if possible, by commercial alternating current, and apparently that was an object that engaged the attention of prominent workers in the art prior to the date of Freeman. Freeman was the first to disclose a device which could use alternating current and at the same time eliminate the major alternating current hums or noises, and his device has been almost universally used for the purposes described and directed by him. ... My conclusion is that the Freeman patent is a true combination patent, a novel and useful device, almost universally used in all receiving and amplifying radio circuits using alternating current, and apparently it solved problems which were recognized, the solution of which was deemed desirable and sought for by others...

#### **2.4.1.2 Solution to a Problem Not Posed in the Prior Art**

**1. *Control Data Canada Ltd. v. Senstar Corp.* (1989), 23 C.P.R. (3d) 449 (F.C.T.D.) March 2, 1989.**

The plaintiff alleged infringement of its patent entitled "Perimeter Surveillance System Using Leaky Coaxial Cables". The defendant alleged that the patent was invalid alleging, *inter alia*, obviousness and lack of inventiveness. Specific grounds pleaded by the defendant with respect to obviousness were:

5. Nothing in fact was invented by the alleged inventor named in the patent. Any difference between the invention described in the patent and what was commonly known and used in the prior art or known to the inventor prior to the date of the invention, was merely a matter of ordinary skill expected of one skilled in the art and did not constitute a patentable invention;
6. The plaintiff itself admitted that the invention is obvious. The defendant relied on the plaintiff's

comment, regarding improvements listed as "use of a two cable sensors to reduce the effect of the fixed cable profile", that "these are only a few of the more obvious improvement techniques which will be considered".

The Court held that the plaintiff's patent was valid, and stated at page 461:

The patent does not fail on the basis of obviousness. In weighing all of the evidence, I have been influenced in large measure by the strong evidence of Beal [expert for the plaintiff].

The relevant excerpts from the Beal affidavit are at pages 463 - 464:

para.24. The paper [prior art] does not recommend the use of two separate leaky coaxial cables as a way of improving the system. Instead, it suggests a number of improvements to the signal processing, the power of the signal and type of cable used.

para. 25. In hindsight, the improvement by Dr. Harman [the inventor] not only solved the signal to clutter problem encountered by Dr. Mackay and Mr. Penstone but also gave advantages over other experimental systems with which I was familiar.

para. 27. Thus the two cable system [the invention] was more sensitive to its surrounding environment than the one cable system.

para. 29. In my opinion, Dr. Harman's invention which is described in the Patent was a significant breakthrough in the area of obstacle detection and an elegant solution to the problems encountered by others.

2. ***Burton Parsons Chemicals Inc. et al. v. Hewlett-Packard (Canada) Ltd et al.*** (1973), 7 C.P.R. (2d) 198 (F.C.T.D.) May 31, 1972.

The plaintiff sought relief for infringement by the defendant of its re-issue patent relating to an electrically conductive system for use in taking electrocardiograms. The defendant claimed that the original patent was invalid on the basis that the invention was obvious; a new use for an old product in which there is no invention; and, commercial success not indicating that there was inventiveness as there was no indication of long felt want.

The court upheld the validity of the patent in favour of the plaintiff. The court at pages 228 - 229 stated that:

There is no question that plaintiff's invention was not obvious. There is indeed evidence of unsuccessful attempts made by others, but particularly by the Sanborn Company of the Hewlett-Packard company to overcome the disadvantages of the pastes and jellies. There is also evidence of considerable commercial success of the plaintiff's cream which embodied these features and such success was not in any great measure due to the fact that more sophisticated machines were developed or produced.

The evidence also shows that after the introduction of EKG Sol (plaintiff's cream) the sales of the product increased very rapidly both in the United States and Canada and this occurred notwithstanding extensive publicity by Hewlett-Packard...

3. ***McPhar Engineering Co. of Canada Ltd. v. Sharpe Instruments Ltd. and Sharpe Geophysical Surveys Ltd.*** (1961), 35 C.P.R. 105 (Ex Ct.) November 10, 1960.

The plaintiff sought relief from infringement by the defendant of its patent relating to an electro-magnetic prospecting method and apparatus. The defendant claimed, *inter alia*, that the claims which were alleged to be infringed were invalid, claim 8 in particular, due to lack of inventive ingenuity.

The court found that there was inventive ingenuity and stated at page 135, that:

There is no merit in this complaint. ... What [the inventors] were seeking to accomplish was the maintenance of frequency stability in the case of the smallest motor that could provide adequate field strength and they accomplished

the desired result, not by throttling the motor, but by tuning the transmitter coil so that it imposed a sharply rising load in the generator that was greater than the power that the motor could supply, and thereby utilizing the maximum power of the smallest motor that would give an adequate signal to the operator of the receiver coil. It was the discovery of the principle of load control by the transmitter coil of the frequency of the generator to effect its frequency regulation so that it would be substantially constant that was the essence of the invention. ... The discovery made by the inventors involved ... a radical departure from the prior teaching of the art and was certainly not obvious.

#### **2.4.1.3 Commercial Success/Long Felt Want**

1. ***Preformed Line Products Co. et al. v. R. Payer & Compagnie Ltee.* (1976), 24 C.P.R. (2d) 1 (F.C.T.D.) November 5, 1975. upheld on appeal (1976), 34 C.P.R. (2d) 141.**

The plaintiffs sought relief from infringement of a patent relating to "dead-ends", being devices to be added to the end of wire cables to transmit a tensile load. The defendant alleged that the patent was invalid due to obviousness.

The court held in favour of the plaintiff and stated at page 7, that:

As to the inventiveness, it is at times difficult to distinguish between a true inventive step and a mere workshop improvement of an invention. To constitute an invention, there must be a substantial step forward. On the other hand, great care must be taken in examining an invention *ex post facto* to determine when there is that element of inventiveness required, for a very great number of extremely useful and truly ingenious inventions often appear to be perfectly obvious and devoid of originality when examined after they have been invented.

The simplicity of a device is not proof that it was obvious and that inventive ingenuity was not required to produce it and, if small differences create large results, then the scintilla of inventiveness required by law is in fact present...

In the case at bar, judging from the clear evidence of commercial success, a new tool was indeed invented.

and at page 8:

... The commercial success and the reasons therefore, other than mere sales promotion, were clearly established. Furthermore, there was no suggestion whatsoever in any of the evidence that sales promotion was in any way a governing factor of the success.

2. *Burton Parsons Chemicals Inc. et al. v. Hewlett-Packard (Canada) Ltd et al. (1973), 7 C.P.R. (2d) 198 (F.C.T.D.) May 31, 1972.*

The plaintiff sought relief for infringement by the defendant of its re-issue patent relating to an electrically conductive system for use in taking electrocardiograms. The defendant claimed that the original patent was invalid on the basis that the invention was obvious; a new use for an old product in which there is no invention; and, commercial success not indicating that there was inventiveness as there was no indication of long felt want.

The court upheld the validity of the patent in favour of the plaintiff. The court at pages 228 - 229, stated that:

There is no question that plaintiff's invention was not obvious. There is indeed evidence of unsuccessful attempts made by others, but particularly by the Sanborn Company of the Hewlett-Packard company to overcome the disadvantages of the pastes and jellies. There is also evidence of considerable commercial success of the plaintiff's cream which embodied these features and such success was not in any great measure due to the fact that more sophisticated machines were developed or produced.

The evidence also shows that after the introduction of EKG Sol (plaintiff's cream) the sales of the product increased very rapidly both in the United States and Canada and this occurred notwithstanding extensive publicity by Hewlett-Packard...

## 2.4.2 Invalidated Electrical Patents

### 2.4.2.1 Workshop Improvement

1. *Globe-Union Inc. v. Varta Batteries Limited* (1981), 57 C.P.R. (2d) 132 (F.C.T.D.) July 2, 1981.

The plaintiff took action for infringement of two patents. The first patent was a case patent which related to a combination of materials and manufacturing techniques applicable to storage batteries; and, the second patent was a connection patent relating to an invention to effect the electrical connection of adjoining battery cells.

On the case patent, the court held at page 140, that:

I also find that, in light of the prior art above referred to, including ex. D-33 if I am wrong in concluding that it anticipated Fiandt's development of the battery case of claims 2, 9, 10 and 11, the discovery was obvious. The relevant prior art, set aside from ex. D-33 does not deal with automotive batteries. It does, however, deal with multi-cells storage batteries with plastic cases having, in all their members' thicknesses under 0.100 inches made by injection molding. They, as well as ex. D-33, points so clearly to the purported invention that a skilled unimaginative technician faced with the problem making an automotive battery case with all its members' thicknesses, under 0.100 inches would have been lead directly behind without difficulty to the solution offered by the case patent. He would have had to experiment only to find what, if any, of the available plastics would have the necessary properties for a viable battery case. He would need a functional mold. Neither the discovery of suitable plastic nor the mold design are the patented invention however; the case itself is. Commercial success is often very good evidence of inventive ingenuity but, in this instance, all that was needed was the right plastic to become available at a cost that would render the obvious economically attractive.



### **2.4.2.2 New Use of an Old Process/Analogous Use, Where There is No Novelty or Invention in the Adaption of the Old Process**

- 1. *Lacal Industries Ltd. v. Slater Steel Industries Ltd. (1969), 59 C.P.R. 9 (Ex. Ct.) upheld on appeal to the S.C.C. (1971), 2 C.P.R. (2d) 105.***

The plaintiff sought to impeach the defendant's patent relating to suspension brackets for high voltage conductors. The defendant counterclaimed that the plaintiff infringed its patent. The plaintiff admitted infringement of the patent but alleged that the patent was invalid for, *inter alia*, obviousness having regard to the common knowledge of the art.

The court posed the issue as follows at page 30:

The question [to determine obviousness] is whether, having regard to the state of the art, the discovery of this bracket involved inventive ingenuity or whether it was what is sometimes described as a mere workshop improvement.

In finding that the plaintiff's patent was invalid for a lack of inventiveness, the court stated at page 31:

Indeed, I find the answer to the question of obviousness in the fact that McMurtrie, knowing that there were over-all advantages in shortening the suspension assembly, seemed to find it an obvious dictate of good design to ask for brackets that would put the conductors up by the insulators once it was decided to use a bundle conductor with the North American type of transmission line so that this was mechanically possible. If this were obvious to an engineer thinking of the principle that dictated keeping his suspension assembly as short as possible, I should have thought that it was equally obvious to an engineer thinking of the principle that dictated putting his conductors as close as possible to the lower insulators for the control of insulator corona.

- 2. *Philco Products Ltd. v. Thermionics Ltd. (1943), 3 C.P.R. 17 (S.C.C.) May 17, 1943.***

The plaintiff (respondent) sought an injunction and damages from the defendants (appellants) for alleged infringement of two patents relating to improved electronic vacuum tubes. The defendants (appellants) claimed that the plaintiff's patent was invalid as it failed to disclose inventive subject matter.

The majority of the court agreed with the decision of the Exchequer Court that the plaintiff's patent was valid as it possessed inventive ingenuity.

The dissenting opinion held at page 43, that:

The result in my opinion is that Freeman simply juxtaposed known contrivances, (the equipotential cathode, and the hair pin filament) to serve a known purpose, which is the elimination of the electrostatic, thermal and magnetic effects. It is on account of the use of alternating current that the necessity of juxtaposition arose; but it was common knowledge before, that this method was the proper and only one that could be used, when time came to heat cathodes with this additional source of current. Freeman's device may have the merit of having been the first to be assembled, but I do not think it is an invention within the meaning of the *Patent Act*.

