

Ottawa
1965
—
May 10-14,
17-21, 27-28,
31,
June 1-4,
8-11,
—
June 16
—

BETWEEN:

THE GENERAL TIRE & RUBBER COMPANY

PLAINTIFF;

AND

DOMINION RUBBER COMPANY LIMITED and
PHILLIPS PETROLEUM COMPANY

DEFENDANTS.

(by original action)

AND BETWEEN:

The said PHILLIPS PETROLEUM COMPANY

PLAINTIFF;

AND

The said THE GENERAL TIRE & RUBBER COM-
PANY and The said DOMINION RUBBER COM-
PANY LIMITEDDEFENDANTS.

(by counterclaim)

AND

BETWEEN:

PHILLIPS PETROLEUM COMPANYPLAINTIFF;

AND

DOMINION RUBBER COMPANY LIMITED and
THE GENERAL TIRE & RUBBER COMPANY

DEFENDANTS.

(by original action)

AND BETWEEN:

The said THE GENERAL TIRE & RUBBER COM-
PANYPLAINTIFF;

AND

The said PHILLIPS PETROLEUM COMPANY and
The said DOMINION RUBBER COMPANY LIM-
ITEDDEFENDANTS.

(by counterclaim)

*Patents—Infringement—Priority of invention—Validity determining mean-
ing of claims—Construing the claims of a patent—Verification of
plaintiff's product as embodying the claims of the patent—Prior art
to be compared with claims of the patent not with plaintiff's prod-*

uct—Definition in claims of patent—Novelty—Anticipation—Obviousness—Lack of invention—Prima facie validity of the patent does not extend beyond application date—Burden of proving earlier date of invention—Unpatentable claim—Allowance made pursuant to s. 45(7), s. 45(1)(a), s. 45(3), s. 28(1)(a), Patent Act, R.S.C. 1952, c. 203, s. 45(3).

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This is a conflict proceeding under subsection (8) of s. 45 of the *Patent Act*, R.S.C. 1952, c. 203, as amended, to determine the respective rights of the parties on their applications for a patent or patents containing claims which are numbered in these actions as C-4, C-5 and C-6.

The decision of the Commissioner of Patents in this matter was made on January 26, 1961, by which all of the subject conflict claims were awarded to Dominion.

In all of the claims it is provided that cold rubber be prepared by emulsion polymerization, so that the polymerization be completed before the latex resulting be co-coagulated with the latex of oil softener.

In other words, the alleged inventions in each of the claims call for the addition of the oil softener by a particular method, namely, by latex masterbatching.

The issues to be determined in this action are, firstly: "What was invented?" and secondly "Who was first in respect of each of the claims C-4, C-5 and C-6?"

The evidence showed that Dominion, through Howland the inventor, by the 12th of December 1947, had conceived and disclosed the idea of combining cold high Mooney rubber and oil by incorporating it through this method of co-coagulation; and that it would be obvious to Howland or to any other person skilled in the art that the scope of this invention would extend to any amount of oil loading by latex masterbatching to high Mooney rubber of anywhere from 75 to 200.

The evidence also disclosed that so-called cold rubber became generally available in the period 1946 and 1947; and that every other element of claims C-4, C-5 and C-6 in 1947 were part of the prior art.

Held:

A.

1. That it is clear on the evidence that Dominion was first in respect of each of the claims C-4, C-5 and C-6; and therefore is entitled as against General and Phillips to the issue of a patent including claims C-5 and C-6.

2. That there is nothing inventive in the selection of the precise amounts of either oil or Mooney measurements.

3. That claim C-4 is not inventively distinguishable from claim C-5 therefore it contains "substantially the same invention" and is "so nearly identical" with claim C-5 within the meaning respectively of s. 45(1)(a) and s. 45(3) of the *Patent Act*, and therefore claim C-4 is unpatentable.

4. That the proposed substitute claim C-9 submitted by General in the preliminary proceedings to this trial is also unpatentable because it is not inventively distinguishable from claim C-5.

B. That in respect to A-1178 the action of Phillips is therefore dismissed.

C. That the counterclaim of Dominion is allowed.

D. That the counterclaim of General is dismissed.

1965 GENERAL TIRE & RUBBER Co. v. DOMINION RUBBER Co. LTD. et al.	ACTION for infringement of patent. <i>Christopher Robinson, Q.C. and James D. Kokonis</i> for The General Tire & Rubber Company. <i>Gordon F. Henderson, Q.C. and David Watson</i> for Dominion Rubber Company Limited.
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Hon. C. H. Locke, Q.C. and Ross G. Gray, Q.C., for
 Phillips Petroleum Company.

GIBSON J.:—This is a conflict proceeding under subsection (8) of section 45 of the *Patent Act*, R.S.C. 1952, chapter 203, as amended, to determine the respective rights of the parties on their applications for a patent or patents containing claims which are numbered in these actions C-4, C-5 and C-6.

The General Tire & Rubber Company (hereinafter referred to as "General") is a corporation having its principal place of business in the City of Akron in the State of Ohio, one of the United States of America.

Dominion Rubber Company Limited (hereinafter referred to as "Dominion") is a company incorporated under the laws of Canada having its head office in the City of Kitchener in the Province of Ontario.

Phillips Petroleum Company (hereinafter referred to as "Phillips") is a corporation incorporated under the laws of the State of Delaware, one of the United States of America, having its principal office in the City of Bartlesville in the State of Oklahoma.

General is the owner by assignment of an alleged invention made jointly by Emert S. Pfau, Gilbert H. Swart, and Kermit W. Weinstock which relates to the manufacture of pneumatic tires of the type suitable for use on various types of motor vehicles, airplanes and the like, particularly relating to pneumatic tires having extruded tread portions of an exceedingly tough synthetic rubber.

Dominion is the owner by assignment of an alleged invention made by Louis H. Howland relating to improvements in the compounding of synthetic rubber.

Phillips is the owner by assignment of an alleged invention made jointly by Walter A. Schulze and William B.

Reynolds relating to elastomer compounding; relating in another of its more specific aspects to an improved method for compounding synthetic elastomers for high raw Mooney polymers; and in another of its more specific aspects relating to a method for producing an increased volume of vulcanizable elastomers; and in another of its more specific aspects relating to improved vulcanizable synthetic elastomers.

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The following is the relevant chronology in this case:

- Date of Invention*—Dominion, October 1947;
Phillips, January 19, 1948;
General, no earlier than April 1949.
- United States Filing Dates*
Dominion—November 9, 1951; Phillips—April 6, 1951;
Serial #255,747 Serial #219,766
General—November 20, 1950;
Serial #196,584
- Canadian Filing Dates*
Dominion—September 10, 1952;
Serial #636,139
Phillips—February 5, 1952;
Serial #626,519
General—February 14, 1951;
Serial #611,684

There were entered as exhibits at the trial the relevant applications which were filed in Canada and in the United States and also the applications of each of the parties in the form or condition each was at the date of the conflict decision by the Commissioner of Patents, namely:

- Canadian Applications as Filed:*

Exhibit G-31	Exhibit D-32
General—Serial #611,684	Dominion—Serial #636,139
Filed—February 14, 1951.	Filed—September 10, 1952
Exhibit P-1	
Phillips—Serial #626,519	
Filed—February 5, 1952	
- United States Convention Applications:*

Exhibit G-32	Exhibit D-31
General—Serial #196,584	Dominion—Serial #255,747
Filed—November 20, 1950	Filed—November 9, 1951
Exhibit P-34	
Phillips—Serial #219,766	
Filed—April 6, 1951	

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3. Applications as of Date of Conflict Decision

- | | |
|--------------------------|--------------------------|
| Exhibit G-1 | Exhibit G-2 |
| General—Serial #611,681 | Dominion—Serial #636,139 |
| Exhibit G-3 | |
| Phillips—Serial #626,519 | |

The decision of the Commissioner of Patents in this matter was made on January 26, 1961, by which all of the subject conflict claims were awarded to Dominion.

On July 27, 1961, General instituted against Dominion the action in this Court which is numbered A-169.

General did not join Phillips as a party.

In March of 1963 Phillips instituted its own action naming both General and Dominion as Defendants, which action in this Court is numbered A-1178.

Subsequent proceedings were taken whereby Phillips was made a party Defendant in the first action and the pleadings in each of the actions were amended so that in essence the same issues are raised in each and whereby it was ordered that these two actions be tried together. Both these actions, as a result, were tried together.

In my view the course of action adopted here was legally incorrect. By reason of section 45(8) of the *Patent Act*, it was incumbent upon General to have joined all persons who were parties to the conflict proceedings in the Commissioner of Patent's office at the time the Commissioner made his allowance pursuant to the provisions of section 45, subsection (7) of the *Patent Act*. As a result, in my view the first action commenced by General numbered A-169 is a nullity.

In the proceedings taken before this trial, General also sought to have certain substitute claims adjudicated upon at this trial, which substitute claims were not in the conflict proceedings before the Commissioner of Patents. The first of these two substitute claims numbered C-7 and C-8 were struck out of the pleadings of General on April 1, 1965; and on April 5, 1965 General sought to amend its counterclaim in action A-1178 by asserting substitute claim C-9 which the Court refused to permit. Appeals from the adjudication of this Court in respect to each of these matters taken by General to the Supreme Court of Canada were dismissed.

The proposed substitute claim, C-9, differs from claim C-4, which is in issue in this trial, in two respects only namely, in that the range of hydrocarbon softener is expressed as being from 20 to 50 parts instead of from 15 to 50 parts and the words "mineral oil" are inserted to qualify the words "hydrocarbon softener" as they appear in claim C-4.

Claim C-4 and the proposed substitute claim C-9 are set out hereunder from which it will be clear wherein the difference between them lies:

C4. The method of making a mass of polymeric material vulcanizable to a rubber-like state comprising forming an emulsion of monomeric material comprising at least one conjugated diolefin; polymerizing said monomeric material in said emulsion at a temperature below 15°C.; the resulting polymer having a raw Mooney value (ML-4) of at least 90; adding to a latex of said polymer a hydrocarbon softener as a dispersion in water, said softener being added in an amount of between 15 and 50 parts by weight per 100 parts by weight of rubber; and recovering resulting softened polymer

C9. The method of making a mass of polymeric material vulcanizable to a rubber-like state comprising forming an emulsion of monomeric material comprising at least one conjugated diolefin; polymerizing said monomeric material in said emulsion at a temperature below 15°C.; the resulting polymer having a raw Mooney value (ML-4) of at least 90; adding to a latex of said polymer a hydrocarbon mineral oil softener as a dispersion in water, said softener being added in an amount of between 20 and 50 parts by weight per 100 parts by weight of rubber; and recovering resulting softened polymer.

Note: Changes from claim C4 underlined.

Also set out hereunder are the other conflict claims C-5 and C-6.

C5. The process of making a mixture comprising a synthetic rubber and a processing oil which comprises coagulating and drying the coagulum of an aqueous mixture containing dispersed particles of a rubber processing oil and a synthetic rubber latex which has been emulsion polymerized at a temperature between -40°F. and +60°F. and the rubber content of which has an ML-4 Mooney viscosity in the range of 75 to 200.

C6. A mixture of a low temperature, viz, -40°F. to +60°F. aqueous emulsion polymerized synthetic rubber having an ML-4 Mooney viscosity in the range of 75 to 200, and a rubber processing oil, said processing oil having been co-coagulated with the synthetic rubber from a mixture comprising an aqueous dispersion of particles of the processing oil and synthetic rubber latex.

As is apparent, claims C-4 and C-5 and the proposed substitute claim C-9 are method or process claims and claim C-6 is a composition of matter claim in respect to the process claim set out in claim C-5.

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Claims C-4, C-5 and C-6 may be conveniently broken down in their constituent parts in this way:

CLAIM 4

METHOD CLAIM

—METHOD OF MAKING A MASS OF SOFTENED POLYMER CAPABLE OF VULCANIZATION

CO-COAGULATION

—POLYMERIZED MONOMERIC MATERIAL COMPRISING AT LEAST ONE CONJUGATED DIOLEFIN

—COLD RUBBER

—EMULSION POLYMERIZED

—MOONEY AT LEAST 90 ML 4

—A HYDROCARBON SOFTENER AS A DISPERSION IN WATER

—15-50 PTS SOFTENER TO 100 PTS RUBBER

CLAIM 5

PROCESS CLAIM

—FOR MAKING A MIXTURE OF A SYNTHETIC RUBBER AND A PROCESSING OIL

—CO-COAGULATION

1. RUBBER PROCESSING OIL IN THE FORM OF AQUEOUS DISPERSION

2. SYNTHETIC RUBBER LATEX

A. COLD RUBBER

B. EMULSION POLYMERIZATION

C. MOONEY 75-200

DRY THE COAGULUM

CLAIM 6

COMPOSITION OF MATTER CLAIM

MIXTURE

—SYNTHETIC RUBBER

—COLD RUBBER

—EMULSION POLYMERIZATION

—MOONEY 75-200

—RUBBER PROCESSING OIL IN THE FORM OF AN AQUEOUS DISPERSION

CO-COAGULATION

In all these conflict claims the relevant synthetic rubber is what is known as cold rubber. This is a product that became generally available in the latter part of 1946 or early 1947.

Prior to that, the synthetic rubber that was generally used, was what is known as GRS rubber by which is meant Government Rubber Styrene, a synthetic product produced by a hot process.

In all the said conflict claims the cold rubber employed is the synthetic rubber produced as a result of an emulsion polymerization carried out at a temperature of 41°F or below, having a Mooney viscosity of 75 to 200.

In all the said conflict claims also, an aqueous dispersion of oil is employed, and the oil is a rubber processing oil which is called, among other synonyms, a softener.

In all the said conflict claims also it is provided that there be two emulsions which are co-coagulated so that the oil is incorporated into the coagulum when the co-coagulation has been completed, so that in the result a unitary product is obtained, the oil remaining within the rubber, having been dispersed within it.

In all of the said conflict claims also, after the co-coagulation, the final step provided for is to cause the co-coagulent to dry which is done by mechanical means in an oven at 180°F.

In process claim C-5 and in the composition of matter claim C-6, there is no limitation as to the quantity of the processing oil or softener that may be used in terms of the amount of rubber, whereas in claim C-4 there is prescribed precise amounts of oil and precise Mooney measurements. However, the main distinction between claims C-4 and C-5 is the reference to the amounts of softener.

In all the claims it is provided that the cold rubber be prepared by emulsion polymerization, and that the polymerization be completed before the latex resulting be co-coagulated with the latex of oil softener.

In other words, the alleged inventions in each of the claims calls for the addition of the oil softener by a particular method namely, by latex masterbatching.

This was a well known process at all material times as were the other three known methods of incorporating oil into synthetic rubbers namely, by milling incorporation, by Banbury incorporation, and by solution incorporation.

It was well known and a practice followed at all material times also to incorporate oil softeners in the synthetic rubber GRS but such incorporation was done mainly by milling incorporation and by Banbury incorporation and not by latex emulsion or masterbatching since there were certain disabilities resulting from incorporation of the oil softener by the latter.

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The submission of Dominion is that claims C-5 and C-6 are claims for a combination invention. It concedes that such describe the application of a known method namely, latex masterbatching to a known material namely, cold rubber. But it submits that this method had not been previously applied to this known material, and it was not obvious to combine at any material time.

The submission of both Phillips and General in essence is that the invention lies in the concept of incorporating large amounts of oil softener into cold high Mooney rubber, and that the method of incorporation namely, by way of latex masterbatching is not necessarily a part of the invention.

The background of these alleged inventions which gives rise to these conflict claims may be briefly stated.

In the period 1940 to 1941, as a result of the worldwide war activity, rubber raw material from its natural sources, for the United States and Canada became unavailable. To provide a substitute product for rubber became the concern of the governments of the United States and Canada.

As a result, both governments embarked on a programme of experiment and investigation with a view to developing synthetic rubber for use in motor vehicle and other vehicle tires, among other things. In these reasons, only the programme in the United States is relevant.

In the United States of America under the Reconstruction Finance Corporation, there was set up an agency known as the Rubber Reserve which carried on its activities until the end of 1954 or the beginning of 1955. Through this agency all of the major rubber companies by mutual agreement were detailed to carry out certain specified research and development programmes. These programmes were in many instances suggested by the individual rubber companies to Rubber Reserve, but once they were approved, then each of these programmes was financed and paid for by the United States Government through Rubber Reserve agency. In other words, every company which embarked on any of these programmes was reimbursed by Rubber Reserve through Reconstruction Finance Corporation for all its costs and expenses incurred in carrying out any approved project.

Phillips, General and U.S. Rubber Company (by whom Howland the assignor to Dominion was employed) engaged in this programme of research and development of synthetic rubber for tires.

It is admitted by Phillips and Dominion that it was in the course of carrying out this programme that the named employees who are the respective alleged inventors of Phillips and Dominion made the inventions which are the subject of the claims in this conflict action. In the case of General, however, it alleges that the named employees who had knowledge at the material times of what is alleged to have been invented, obtained such knowledge outside the work they were doing in the Rubber Reserve programme.

General, however, does not allege that in law it is the inventor of the subject matter of claims C-4, C-5 or C-6.

General submits that in respect of claims C-5 and C-6, that they are not patentable because of obviousness, and that in respect to C-4, it admits it is an invention namely, "a method as defined in the said claim in which the hydrocarbon softener is a mineral oil and is added in various amounts between 15 and 50 parts by weight per 100 parts by weight of rubber, which was known by inventors named in General's said application" before such invention was invented by the inventors of Phillips, but that in respect to the claim in so far as it relates to the hydrocarbon softener being added in an amount of between 15 and 20 parts by weight per 100 parts by weight of rubber, General is not entitled to a patent containing claim C-4, because General's application did not disclose this narrow range of softener between 15 and 20 parts.

Dominion submits that claims C-5 and C-6 are for a patentable process claim and composition of matter claim respectively as a combination invention.

Phillips submits that claim C-4 is in respect to a patentable process which is "substantially" different from claim C-5 within the meaning of section 45(1)(a) of the *Patent Act* and also that claim C-4 is not "so nearly identical" to C-5 to be unpatentable within the meaning of section 45(3) of the *Patent Act*.

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The issues to be determined in this action are, firstly, what was invented, and secondly, who was first in respect of each of the claims C-4, C-5 and C-6.

Section 28(1)(a) of the *Patent Act* prescribes that the invention must not be known or used by any other person before the alleged inventor invented it; and the jurisprudence in respect to the issues herein prescribe that the inventor must describe his invention either orally or in writing, so as to afford the means of making that which was invented, but that he need not necessarily state at that material time all the examples within the scope of his invention or all the effects and advantages of his invention.

The evidence discloses, as previously mentioned, that so-called cold rubber became generally available in the period 1946 and 1947.

The evidence also discloses that every other element of claims C-4, C-5 and C-6 in 1947 were part of the prior art.

The evidence as to what was done in 1947 by the parties is most conclusive.

Phillips, in the period 13 October to 17 November, 1947, in Tire Test 123 which was the last practical tire test made prior to the alleged invention of Dominion, employed all the elements set out in all the conflict claims, and the specific amounts of the alleged important elements of conflict claim C-4 (namely, high Mooney cold rubber mixed with amounts of oil softener in excess of 15 parts per 100 parts of rubber) and incorporated the same in a Banbury, but not by latex masterbatching. It probably did this, it may be inferred from the evidence, because incorporating softener into GRS rubber up to that material time had proved to have disadvantages. It is therefore a reasonable inference from this evidence alone that those skilled in the art employed by Phillips, which personnel had very considerable capacity, did not consider it obvious to incorporate the oil into this new rubber namely, cold rubber, by way of latex masterbatching.

Dominion's alleged inventor, Howland, however, at least as early as the 12th of December, 1947, had conceived and

disclosed the idea of combining cold high Mooney rubber and oil by incorporating it through this method of coagulation. He did this and he prepared a report which was sent to Rubber Reserve and circulated it among the participants in the Rubber Reserve programme. This report was filed as Exhibit D-42 at the trial of this action.

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It is true that this report only discloses one example of how this alleged combination patent was carried out namely, a single 600 gram batch employing 125 Mooney rubber and 7 parts of paraflux resulting in a compound Mooney of 160. But, in my opinion, it would be obvious to Howland or to any other person skilled in the art that the scope of this invention would extend to any amount of oil loading by latex masterbatching to high Mooney rubber of anywhere from 75 to 200.

The example given produced the maximum advantages as the evidence discloses and it would be obvious to any person skilled in the art at that material time that the addition of more oil would cause all properties of this synthetic rubber to go down, and it would also be obvious to such persons that, because high Mooney cold rubber of 75 to 200 was employed, it could stand such diminution of properties and notwithstanding the resultant product would still be as good or better than the then available synthetic hot rubbers.

In my opinion, the concept of using high amounts of softener and incorporating the same in high Mooney cold rubber, was not inventive. Instead, as stated, what was inventive was the idea at the material time to combine the softener with the high Mooney cold rubber in a particular way, namely, by latex masterbatching.

In this, clearly on the evidence, Dominion, through Howland, was first.

In my opinion, therefore, Dominion is entitled as against General and Phillips to the issue of a patent including claims C-5 and C-6.

It was submitted that claim C-4 in any event was inventively distinguishable from claim C-5.

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To find that this is so, it must be determined that the reference to specific amounts of oil and precise Mooney measurements, but mainly the former, describes an inventive step.

In my opinion, there is nothing inventive in the selection of these precise amounts of either oil or Mooney measurements.

I am therefore of opinion that claim C-4 is not inventively distinguishable from claim C-5 and therefore it contains "substantially the same invention" and is "so nearly identical" with claim C-5 within the meaning respectively of section 45(1)(a) and section 45(3) of the *Patent Act*.

Claim C-4 is unpatentable therefore, in my opinion.

I am also of the opinion that the proposed substitute claim C-9 submitted by General in the preliminary proceedings to this trial is also unpatentable, because it also is not inventively distinguishable from claim C-5.

In respect to A-1178, the action of Phillips is therefore dismissed and the counterclaim of Dominion, in so far as these reasons extend, is allowed, and the counterclaim of General is dismissed.

Dominion, in respect to A-1178, is to have its costs against both Phillips and General.

In respect to action A-169, General is to pay to both Phillips and Dominion all costs which were necessitated by reason of General having brought that action.