Paper No. 18

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte ANTHONY A. RUFFA

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Appeal No. 2002-0175
Application No. 09/090,225

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ON BRIEF

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Before PAK, LIEBERMAN, and PAWLIKOWSKI, **Administrative Patent Judges**.

PAWLIKOWSKI, **Administrative Patent Judge**.

DECISION ON APPEAL

This is an appeal from the examiner's final rejection of claims 9, 14, 15, 16, 19 and 21. Claims 1-8, 11-13, 17, and 18 have been withdrawn from consideration. Appellant states that claim 20 has been restricted.[1] Claim 10 has been cancelled.

The subject matter on appeal is represented by claims 9 and 21, set forth below:

> 9. A high-speed, puncture proof tire comprising:
> a tire casing having a tread portion and a pair of side wall portions, the tread and side wall portions defining an annular space therewithin; and

[1] On pages 3-4 of the brief, appellant objects to the restriction of claim 20. However, because this is petitionable subject matter under 37 CFR § 1.181 (as stated by the examiner on page 3 of the answer), and not appealable matter, we do not review this issue. We also note that claim 20 is indicated as being cancelled in the amendment filed on November 28, 2000.

at least one panel of film material resistant to shear forces disposed within the annular space to the tire casing, said panel being sealed lengthwise thereof to define a plurality of small diameter pressurized tubes such that adjacent tubes share a lengthwise seal, the tubes being fabricated from a high density heat sealable polyethylene film, each pressurized tube being further sealed crosswise along the length of the tube to define at least two puncture proof elongated compartments that contain gas under pressure.

21. A high-speed, puncture proof tire comprising:

a tire casing having a tread portion and a pair of side wall portions, the tread and side wall portions defining an annular space therewithin; and

at least one panel of film material resistant to shear forces disposed within the annular space of the tire casing, said panel being sealed lengthwise thereof to define a plurality of small diameter pressurized tubes such that adjacent tubes share a lengthwise seal, each pressurized tube being further sealed crosswise along the length of the tube to define at least two puncture proof elongated compartments that contain gas under pressure, the tubes being bonded to the tire casing.

The examiner relies upon the following references as evidence of unpatentability:

Lee	487,419	Dec. 6, 1892
Hibbert	1,643,848	Sept. 27, 1927
Conklin	2,142,962	Jan. 3, 1939
Wyman	4,310,042	Jan. 12, 1982

Claims 9, 14-16, 19, and 21 stand rejected under 37 U.S.C. § 103 as being unpatentable over Conklin or Lee in view of Hibbert, Gilbert, and Wyman.

Claims 9, 14-16, 19, and 21 stand rejected under 35 U.S.C.

§ 103 as being unpatentable over Hibbert in view Conklin or Lee, Gilbert, and Wyman.

For the reasons set forth in the brief, and below, we reverse each of the above-noted rejections.

OPINION

At issue is whether the combination of applied references teach or suggest a panel of film material being sealed length-wise thereof to define a plurality of small diameter pressurized tubes such that adjacent tubes share a lengthwise seal.

I. Claim Interpretation

The meaning of the phrase, "panel of film material being sealed length-wise thereof to define a plurality of small diameter pressurized tubes such that adjacent tubes share a lengthwise seal", is best defined with reference to Figure 4 of appellant's specification, reproduced below.

In Figure 4, there is panel 28 of a film material wherein the panel is sealed lengthwise to define a plurality of small diameter pressurized tubes 32 such that adjacent tubes 32 share

a lengthwise seal. Each pressurized tube 32 is further sealed crosswise along the length of tube 32 at location 34 to define at least two puncture proof elongated compartments 26 (as depicted in Figure 3, see below) that contain gas under pressure. Figure 3 shows tube 20 having a plurality of compartments 26 that contain pressurized gas and that are sealed at locations 24.

Given the above meaning of the aforementioned subject matter, we turn now to the prior art rejections.

II. The Rejection of Claims 9, 14-16, 19, and 21 under 35 U.S.C. § 103 as being unpatentable over Conklin or Lee, in view of Hibbert, Gilbert, and Wyman

On page 7 of the answer, the examiner states that Hibbert discloses a method of forming air-filled chambers for use in a tire, wherein the chambers are formed via the use of two sheets which are sealed lengthwise and crosswise to form spheres.

The examiner states that it would have obvious to form the tubes of Lee or Conklin by the method of Hibbert, because using sheets would make it easier to fill and pack the inside of the tire, resulting in quicker packing of the tire.

We find that Hibbert discloses a method of forming air-filled chambers. The chambers are formed by pressing together two sheets, using a press provided with numerous hemi-spherical cavities coinciding with one another when the press is closed, to form spherical cavities, each filled with compressed air. See lines 74-111, and Figure 1, of Hibbert. Because spheres are formed in the manner as described by Hibbert, each sphere is positioned next to another sphere in a manner that mirrors the position of each item 4 shown in Figure 1. The examiner has not explained how such positioning provides for chambers that are sealed lengthwise and crosswise to form spheres, as concluded by the examiner on page 7 of the answer. The examiner has not explained how such positioning provides for a panel of film material being sealed length-wise thereof to define a plurality of small diameter pressurized spheres such that adjacent spheres share a lengthwise seal.

Furthermore, the examiner's incorporation of Hibbert's teachings into Conklin or Lee is not well founded for the following reasons.

If one having ordinary skill in the art would begin with the invention of Hibbert, one would have a sheet containing a plurality of spherical cavities filled with compressed air (cell bands). One would then have to have been motivated to substitute this sheet of Hibbert for the tubular member(s) disclosed in Conklin or Lee, discussed in further detail below. Still yet, the examiner has not demonstrated that the substitution would arrive at appellant's claimed invention.

Figure 4 of Conklin shows that tubular body length 10 (which is depicted in Figure 2) is coiled at 14 upon wheel 15. The coiling is carried forth until the coil is of a desired size to fit within casing A shown in Figure 1. The examiner has not

explained how and why one of ordinary skill in the art would coil the sheet of spherical cavities filled with compressed air of Hibbert according to the method in Conklin, and arrive at appellant's claimed invention.

The examiner concludes it would have been obvious to form the tubes of Conklin by the method of Hibbert since using sheets would make it easier to fill and pack the inside of the tire resulting in quicker packing of the tire. However, we find this logic is not supported by the teachings of the references. We note that the examiner has not explained why the references themselves would have led one of ordinary skill in the art to combine their teachings as proposed by the examiner. See In re Rinehart, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976).

Lee forms an inflated tube, shown in Figure 1. Each tube is compressed or indented at intervals, e.g., at b, b of Figure 1. A number of such individual inflated tubes are placed together in the form a cable and an outer covering D is place around the formed cable, for example, as shown in Figure 2. The examiner has not explained how and why one of ordinary skill in the art would place together sheets of a plurality of spherical cavities filled with compressed air of Hibbert to form a cable as set forth in Lee, to arrive at appellant's claimed invention.

The examiner concludes it would have been obvious to form the tubes of Lee by the method of Hibbert since using sheets would make it easier to fill and pack the inside of the tire, resulting in quicker packing of the tire. However, we find this logic is not supported by the teachings of the references, and again refer to the case of In re Rinehart, 531 F.2d at 1051, 189 USPQ at 147 (CCPA 1976).

In view of the above, we **reverse** this rejection.

We note that the examiner relies upon Wyman and Gilbert for teaching the use of polyethylene as the material for use in making tires. These references do not cure the deficiencies of Conklin or Lee in view of Hibbert.

III. The Rejection of claims 9, 14, 15, 16, 19, and 21 stand rejected under 35 U.S.C. § 103 as being unpatentable over Hibbert in view of Conklin or Lee, Gilbert, and Wyman

We determine that this rejection is more unfounded than the above-discussed rejection, and we refer to appellant's statements made at pages 5-8 of the brief in support of this determination, and incorporate these statements herein. We provide the following for emphasis.

As mentioned, supra, Hibbert forms a sheet of a plurality of spherical cavities 10 filled with compressed air, using a press provided with numerous hemi-spherical cavities coinciding with one another when the press is closed, to form spherical cavities, each filled with compressed air. See lines 74-111, and Figure 1, of Hibbert. Because spheres are formed in the manner as described by Hibbert, each sphere is positioned next to another sphere in a manner that mirrors the position of each item 4 shown in Figure 1. The examiner has not explained how such positioning provides for spheres that are sealed lengthwise and crosswise to form spheres, as concluded by the examiner on page 7 of the answer. The examiner has not explained how such positioning provides for a panel of film material being sealed length-wise thereof to define a plurality of small diameter pressurized spheres such that adjacent spheres share a lengthwise seal.

Furthermore, the examiner has not explained how and why one of ordinary skill in the art would have substituted the tubular member(s) of Conklin or Lee into Hibbert to obtain a tire comprising a panel of film material being sealed length-wise thereof to define a plurality of small diameter pressurized tubes such that adjacent tube share a lengthwise seal as depicted in appellant's Figure 4.

As noted by appellant on page 6 of the brief, Hibbert deliberately has chosen spheres in order to form appropriately sized interstices between the outer faces of the cells, which are filled with a suitable thick solution and vulcanized to form a compact rubber tire. The examiner does not explain why one having ordinary skill in the art would have been motivated to substitute the tubular member(s) of Conklin or Lee for the spheres of Hibbert, especially in view of this disclosure of Hibbert.

The examiner states that "there is no indication that the cylinders could not be made to pack as tightly, i.e., by the sealing area between the tubes being equal to the width and length of the tubes". (answer, page 9). We again note that the examiner has not explained why the references themselves would have led one of ordinary skill in the art to combine their teachings as proposed by the examiner. See In re Rinehart, 531 F. 2d at 1051, 189 USPQ at 147.

Here, the examiner's unsupported logic leads us to conclude that the examiner, in making his Section 103 rejection, has fallen victim to the insidious effect of hindsight syndrome wherein that which only the inventor has taught is used against its teacher. W.L. Gore & Assocs. V. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

We therefore **reverse** this rejection also.

We note that the examiner relies upon Wyman and Gilbert for teaching the use of polyethylene as the material for use in making tires. These references do not cure the deficiencies Hibbert in view of Conklin or Lee.

IV. Conclusion

Each rejection is reversed.

REVERSED

CHUNG F. PAK Administrative Patent Judge	)	
PAUL LIEBERMAN Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
BEVERLY A. PAWLIKOWSKI Administrative Patent Judge	)	

SLD

OFFICE OF COUNSEL BLDG 112T
NAVAL UNDERSEA WARFAR CENTER
DIVISION-NEWPORT
1176 HOWELL STREET
NEWPORT, RI 02841-1708