

COMMISSIONER'S DECISION

Claims too broad: Battery package

The application relates to a battery with a two-part casing consisting of separate receptacles into which individual cells of the battery are placed offset to each other. Some of the claims were rejected because they failed to specify that the cells must be "co-planar and offset."

This decision deals with a request for review by the Commissioner of Patents of the Examiner's Final Action dated January 12, 1976, on application 115,927 (Class 319-125). The application was filed on June 17, 1971, in the name of Richard R. Clune et al, and is entitled "Battery Packaging Device." The Patent Appeal Board conducted a Hearing on September 7, 1977, at which Mr. N. Hewitt represented the applicant.

The application relates to a battery packaging device comprising a two-part casing consisting of separate receptacles into which individual cells of the battery are placed. The cells are offset to expose part of the cell so terminals may be welded to them while they are in the package.

Figure 2 shown below illustrates the battery package.



In the Final Action the examiner rejected claims 1, 2, 3 and 10 because they are "so broad that they are not restricted to the disclosed invention."

In that action he maintained his position (in part) as follows:

...

Applicant's invention consists of a two-part housing for a plurality of electrochemical cells connected in series. The two parts can be fitted together and sealed to form a unitary battery for insertion into a device such as a camera. Provision is made for access to the voltage of the battery. As disclosed

from line 23 of page 1 to line 24 of page 2, a feature of applicant's invention is the construction of one part of the two-part housing to hold and support the cells so as "to permit properly connecting them to each other, as a preliminary step in the manufacturing assembly". Regarding the said feature, as further disclosed, "That feature of the invention, involving the use of one half of the molded cartridge for supporting the cells as assembled therein, as a carrier to permit manufacturing operations on the cells, guides each cell to be seated in a receiving pocket in the half shell so as to expose sufficient area of a top plate terminal area on each of the cells, to permit access to such exposed area ... to enable welding operations to be easily performed on the cells after they are placed in their respective pockets".

This feature of the invention is not present in claims 1 to 3, and is only very vaguely suggested in claim 10. Claim 1 specifies a plurality of recesses for "receiving and accommodating" the cells. The quoted terms are very broad; they do not recite a construction whereby work can be done on the cells so as "to permit properly connecting them to each other, as a preliminary step in the manufacturing assembly". The phrase "at an angle" in line 8 of claim 1 is completely meaningless as angles are measured from zero degrees to any magnitude whatsoever, including ninety degrees. Clearly, then, claim 1 is excessively broad, and requires restriction to define the "angle" as being "an acute angle such as to expose sufficient area of the cells to permit a manufacturing operation".

Claims 2 and 3 are similarly too broad, and are refused for the same reasons.

Claim 10 specifies that the cells are offset, but contradicts this by also specifying that "the bottom surface of one cell overlies the next cell", thus in effect denying that there is an exposed area accessible for a manufacturing operation. Claim 10 therefore clearly fails to set forth the aforementioned feature of the invention. It is therefore suggested that claim 10 be amended on line 6 by changing "cell overlies the next cell" to "cell partly overlies the next cell so as to expose sufficient area of the cell to permit a manufacturing operation".

...

The applicant in his response to the Final Action had this to say (in part) as follows:

...

The Examiner's objections, although being various in detail, it is submitted come down to the question as to whether claims 1, 2, 3 and 10 should be limited to the feature that the cells are seated in the receiving pockets in the half shell to expose a sufficient area of the top plate terminal area on each of the cells to permit access of a welding tool and to permit welding operations to be duly performed on

the surface areas of the cells after placement in their respective pockets. The examiner takes the position that this exposure of the top plate terminal area of the cells in the receiving pockets of the half shell is a critical feature of the invention, and the Examiner refers to various parts of the disclosure to support his position. Applicants submit strongly that such a feature is not critical to the invention, and in particular, the particular arrangement of the cells in the pockets of the half shell is not of critical importance and that various arrangements are possible provided that the cells are relatively parallel in sequence and extend transverse to the longitudinal axis of the half shell and at an angle such that the bottom terminal surface of an appropriate cell in the sequence of said recesses when inserted in its recess in one half shell is substantially coplanar with the top terminal surface of the next succeeding cell in said sequence of said recess.

Applicants respectfully submit that the essence of the present invention as is clearly set forth in the disclosure is the use of one half of the molded cartridge for supporting the cells as assembled therein as a carrier to permit manufacturing operations on the cells. In this direction, attention is directed to the paragraph bridging pages 1 and 2, and the first paragraph on page 2, and also particularly to the paragraph bridging pages 12 and 13 of the disclosure. This feature is nowhere disclosed in the prior art and it will be well recognized that the Examiner has not issued a Final Action on the basis of prior art and in none of the prior art previously referred to by the Examiner has he attempted to assert that this feature is known in the art....

...

The Examiner then goes on to refer to the third paragraph on page 2, which refers to the cells being "seated in the receiving pocket in the half shell so as to expose sufficient area of a top plate terminal area on each of the cells to permit access to such exposed area...to enable welding operations to be easily performed on the cells after they are placed in their respective pockets." It is respectfully submitted that this feature is only a particular embodiment of the arrangement of the cells in the half shell and is not critical to the process and is not stated as such on page 2, and further, the indications on page 2, and particularly on page 13, first complete paragraph is that this feature is a preferred embodiment of the present invention.

In summary, applicants submit that the specific construction set forth in the drawings and referred to at various places of the disclosure in which each cell is seated in the receiving pocket of a half shell so as to expose sufficient area of a top plate terminal area on each of the cells to permit access to such exposed area with a small double-pronged spot-welding tool to enable welding operations to be easily performed on the cells after they are placed in their respective pockets is a particular embodiment of the invention, and is not a critical feature of the invention, the invention being irrespective of the arrangement of cells and is the use of one half shell of a molded cartridge for supporting the cells therein as a carrier to permit manufacturing operations on the cells.

...

We have carefully considered the points and arguments made at the Hearing by Mr. Howitt. The issue before the Board is whether or not claims 1, 2, 3 and 10 are broader in scope than the invention made. Claims 1 and 10 read as follows:

1. A battery comprising a two-part casing consisting of a pair of co-fitting molded trays elongate along a longitudinal axis and each tray having a plurality of recesses for respectively receiving and accommodating each unit primary cell of predetermined thickness with spaced bottom terminal and top terminal surfaces placed in each of said recesses, said recesses in said trays being disposed effectively relatively parallel in sequence and transverse to said axis at an angle such that the bottom terminal surface of a prior cell in the sequence of said recesses when inserted in its recess in one tray, is substantially coplanar with the top terminal surface of the next succeeding cell in said sequence of said recesses; and electrically conductive means electrically connecting the bottom terminal surface of a forward cell, in said sequence of recesses, to the top terminal surface of a subsequent cell in said sequence; said pair of molded trays being shaped to be engageable and mateable at relatively planar surfaces on each molded tray with corresponding related and facing recesses in said trays co-operating to enclose each unit primary cell.

10. A molded battery container having a hollow peripheral two part shell consisting of a pair of co-fitting molded trays with said peripheral shell having one end opening and with said peripheral shell including discrete cell chambers therein; a cell positioned in each discrete cell chamber; said cells having an offset relationship with each other, the bottom surface of one cell overlies the next cell, and being insulated each from its neighbor; a plurality of electrical connections between each of the cells to give a serial output voltage and output terminal connectors including one of said cells for obtaining an output therefrom.

At the outset we point out that a patent is granted to enable the originator of an idea capable of embodiments in articles or in acts adapted to bring an article into existence, to exploit it temporarily to his own benefit. The exclusive right granted, however, should be limited to embodiments of the idea, the inventive step, or invention that has been made (See Farbwerke Hoechst A.G. v. Commissioner of Patents (1962) 22 Fox Pat. (141 at 169).

Put shortly, a patent is not granted for an idea, but only for the embodiment of an idea (See also The King v Uhlemann Optical Co. (1949), 10 Fox Pat. C. 24 at 44). In other words it is only the practical embodiment of an idea or concept which constitutes subject matter. The applicant is entitled to make his claims as broad as the prior art and the scope of his disclosure permit. He need not, of course, specifically recite every modification which could obviously be made to his invention. Nor need the claims be limited to the preferred embodiment, though they must define the invention as disclosed with sufficient particularity and distinctness to comply with Section 36(1) of the Patent Act.

We first turn to a consideration of what is the invention described in the application? As mentioned, the application describes a battery having a two-part casing consisting of a pair of co-fitted molded trays. Each tray has a plurality of recesses which cooperate to hold a corresponding plurality of cells when the case is closed. The complete battery is intended for use in, for example, a camera, where space is at a premium. In assembling the battery, one tray is used as a jig to hold the cells, which are partially exposed (see Figure 2 supra) so as to permit work to be performed on the cells, this being essentially the welding of electrical connections between the cells.

It is clear that such use and disposition of the cells in the tray is disclosed as an important feature of this invention. Page 2, lines 3 ff., reads as follows:

Such utilization of the molded cartridge halves, for assembling and holding the cells in place during the manufacturing assembly and in place to permit manufacturing operations to be performed on the cells while they are being transported or held in the cartridge halves as trays, with the subsequent closing and sealing of the two halves as a final enclosing housing for the cells, simplifies the manufacturing operation, reduces the number of otherwise necessary manual operations, and greatly reduces the cost of the final product. Moreover, the quality of the final product will be uniform and optimum, insofar as the assembled positions and the relative arrangement of the cells constitute factors in proper assembly and operation of the cells as a complete battery.

Lines 16 ff.

That feature of the invention, involving the use of one half of the molded cartridge for supporting the cells as assembled therein, as a carrier to permit manufacturing operations on the cells, guides each cell to be seated in a receiving pocket in the half shell so as to expose sufficient area of a top plate terminal area on each of the cells, to permit access to such exposed area with a small double-pronged spot-welding tool to enable welding operations to be easily performed on the cells after they are placed in their respective pockets [emphasis added].

"That feature of the invention..." as noted above must refer to the paragraph beginning on page 1, lines 23 ff., which reads: "A feature of the present invention is that the molded cartridge, which is to serve the housing for the battery cells, is formed in two parts, so that the cells may be disposed and supported in one part of the housing in a manner to permit properly electrically connecting them to each other..." It is clear then that the two quoted paragraphs when taken together basically describes the essence of the invention. The limitation of space is a problem which the inventor must overcome (see lines 16 ff., supra). Thus the adjacent cells are so situated in the tray that the upper terminal of one cell is substantially co-planar with the lower terminal of an adjacent cell. Tab 38A and the top terminal of cell 34 are exposed in the tray so as to permit access of a welding tool thereto. It follows that the adjacent cells must be slightly offset.

The applicant argues that the feature "... seated in the receiving pocket in the half shell so as to expose sufficient area of a top plate terminal area on each of the cells to permit access to such exposed area ... to enable welding operations to be easily performed on the cells after they are placed in their respective pockets," is "only a particular embodiment of the arrangement ... this feature is a preferred embodiment of the present invention." As discussed above the evidence does not lay the factual foundation for that argument, and this is further made abundantly clear on page 13, lines 8 ff., which read:

This feature of utilizing part of the final housing as a working tray during manufacture, assures economy in the manufacturing and assembly operations, due to the minimum of manual operations.

The construction which permits disposing half of each cell in its pocket, while exposing a substantial area of the top terminal surface, permits welding the intercell tabs to those exposed top terminal areas as simple operating steps during manufacture, which is one of the important features of this invention [emphasis added].

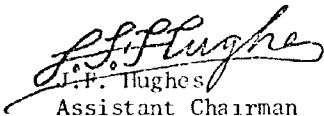
Any feature that is "one of the important features of this invention" can not by any stretch of the imagination be considered as "a preferred embodiment," or "embodiments of non-critical features." Furthermore, we cannot agree with the argument that "... the invention ... [is] irrespective of the arrangement of the cells." On the contrary, it is clear from the elaborate description in the disclosure that the arrangement of the cells is decidedly pertinent to the invention; there is no doubt, in our view, that the cells must be "co-planar and offset" (echelon stacked) for fruition of a practical application of the invention described.

It is trite law that the subject matter of an invention must be embraced or envisaged within the claims (see the King v Smith (1936) SC R at 238). The purpose of a claim is also to delimit the monopoly granted to an inventor with sufficient particularity and distinctness to comply with Section 36(1) of the Patent Act.

We have no quarrel whatsoever with the applicant when he states that the claims need not be limited to the preferred embodiment. In the present situation however, and which often happens, what the applicant now says is a preferred embodiment is really the invention. As mentioned above, the applicant is entitled to make his claims as broad as the prior art and the scope of the disclosure permit. On the other hand he should not expect to receive a monopoly in the form of patent claims greater than his contribution to the art.

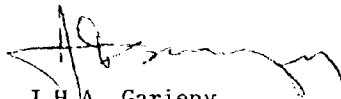
We find claim 1 excessively broad and, in our view, it goes far beyond the invention described in the disclosure and shown in the drawing. The claim must be amended in such a manner as to make it clear that the cells, when placed in the container, are "co-planar and offset one from the other." This amendment would also satisfy the requirement of claims 2 and 3 as they depend directly or indirectly on claim 1. Claim 10 could also be amended along the same lines as claim 1, or by changing line 6 of that claim to read: "... one cell partly overlies the next cell so as to expose a sufficient area of the cell to permit a manufacturing operation..." Claims 1, 2, 3 and 10 in their present form should, in our view, be refused.

In summary, we are satisfied that claims 1, 2, 3 and 10 go beyond the invention made by not being restricted to an arrangement where the cells are co-planar and offset. The claims as framed are broad enough to encompass substantially vertical stacking of the individual cells, an arrangement not even hinted at in the application as originally filed. We recommend that claims 1, 2, 3 and 10 should be refused.



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

I have studied the prosecution of this application and have reviewed the recommendation of the Patent Appeal Board. I concur with the recommendation of the Board and refuse to accept claims 1, 2, 3 and 10. I will however, accept claims when amended as suggested by the Board. The applicant has six months within which to amend the claims, or to appeal this decision under the provisions of Section 44 of the Patent Act.



J.H.A. Gariépy
Commissioner of Patents

Dated at Hull, Quebec
this 26th. day of September, 1977

Agent for Applicant

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