

COMMISSIONER'S DECISION

FUNCTIONAL CLAIMS

Claims expressed in terms of result rather than in terms of the steps to achieve the result are not acceptable. Basis for an acceptable claim suggested.

Final Action: Affirmed.

Patent application 259168 (Class 13-17), was filed on August 16, 1976, for an invention entitled "Process For The Production Of Coin Blanks." The inventors are Arthur G. McMullen et al, assignors to Sherritt Gordon Mines Limited. The Examiner in charge of the application took a Final Action on January 12, 1978, refusing to allow it to proceed to patent. In reviewing the rejection, the Patent Appeal Board held a Hearing on November 13, 1979, at which the Applicant was represented by Mr. R. Delbridge.

The application is directed to a process for the production of coin blanks which are suitable for minting coins. An inexpensive metallic core is electroplated with another metal to provide the desired finish. It was found that if electro deposition is carried out in a barrel under certain conditions a thicker deposit can be put on the edge of the core piece than on the face of the core piece. This is desirable because the edge is the part of greatest wear. Claim 1 of the application reads:

A process for the production of coin blanks suitable for minting into coins, including providing metallic core pieces, each core piece having opposed, substantially planar faces and a common side edge, loading said core pieces into a perforated container, placing the container in an electroplating bath, electroplating a metallic cladding on the core pieces, while moving the container angularly about a horizontal axis, until the metallic cladding has a thickness of at least about 0.05 mm on each face of each core piece and a thickness of at least 2 to 4 times the face thickness on the side edge of each core piece and removing the cladded core pieces from the container.

In the Final Action the Examiner refused all claims of the application for being functional at the point of invention. He contended that the process defined in the claims would not produce the desired result unless certain conditions were adhered to. More specifically he said, inter alia:

The question arises, is it enough to simply prescribe in the claims that the workpieces be kept in the barrel until the thickness of the cladding reaches 0.05 mm on each face and 2 to 4 times the face thickness on the side edge of each workpiece? The disclosure replies to this question by stating that "The ratio of nickel thickness on each face of the core piece to the nickel thickness on the side edge of the core piece is determined primarily by the ratio of the diameter of a core piece to the diameter of the container". (page 4, lines 1 to 5). This quotation shows that the claims are functional at the point of invention, since they only suggest the more or less obvious idea of producing thicker cladding, but do not describe the process by which this aim can be achieved. (underlining added)

In response to the Final Action Mr. Delbridge contended that from the information in the disclosure of the application, a person skilled in the art can readily carry out experiments to determine the required container diameter necessary in any particular situation. He also submitted an affidavit from a Mr. A.R. Moore of Canadian Hanson Limited, who has had long experience in barrel plating. He stated that barrel electroplating is not normally used commercially if one wishes to produce plating deposits more than 0.01 mm. thick because of the long time that would be needed.

The only question before the Board is to determine whether the claims properly define the invention.

At the Hearing Mr. Delbridge discussed the question of obviousness, but we see no need to go into that aspect of his submission. In his final action the Examiner did not rely on his earlier objections based on obviousness, and both he and we are satisfied that there is present a patentable invention.

The Applicant emphasized that the blanks are cladded in a metal barrel plating operation. We note that present claim 1 makes no mention of barrel plating. We believe this is an essential element which should be specified in the claim. Other essential elements are a perforated container made of an

inert material and a flexible cathode rod in the container.

In the Final Action the Examiner states that the claim is functional since it is expressed in terms of the result rather than in terms of the steps to achieve the result. That result is a layer of at least 0.05 mm. of metal on each face and 2 to 4 times that amount on the edge of each coin.

To achieve that result the disclosure shows on page 4 that the ratio of the diameter of the coin to the diameter of the container is a crucial element. We consequently believe it is important to include that aspect of the process in the claim. We do not believe however that the ratio is fixed, but varies with the coin and barrel diameter. Consequently the claim need not specify an exact ratio. From what was said at the Hearing we believe this was a main point of concern to Mr. Delbridge, and led to the arguments about functionality.

Another feature absent from the claim is a limitation to flexible cathode rods, which as is shown on page 3 at line 20 is another element of the invention.

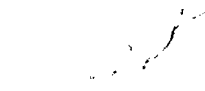
Mr. Delbridge indicated at the Hearing that he is prepared to amend the claims to more clearly define the invention. We would consequently recommend that both these features should be present in the claims. To make clear what we have in mind we suggest the following claim which, we believe, should form the proper basis for an acceptable broad claim.

1. A process for the production of coin blanks suitable for minting into coins which comprises placing metallic core pieces in an inert perforated electroplating container, said container being fitted with a flexible cathode, placing the container in an electroplating bath, and carrying out electrodeposition while moving the container angularly about a horizontal axis until the metallic deposit has a thickness of at least about 0.05 mm on each face of each core piece and the metal deposited on the edge of the blanks is at least 2 to 4 times the thickness on said faces of the blanks, the ratio of the two thicknesses being adjusted by varying the ratio of the diameter of the core pieces with the diameter of the electroplating container, the current density, and the number of blanks in the container.

We are satisfied that the claims on file are properly rejected for going beyond the invention, but would recommend the acceptance of the proposed claim, or one which includes the limitations included in it. The dependent claims 2 - 7 and 9 - 10 would also be acceptable if dependent upon allowable broad claims. Present claim 8 would require similar amendments to those proposed for claim 1.




G.A. Asher
Chairman
Patent Appeal Board, Canada



S.D. Kot
Member

Having considered the prosecution of this application and the recommendation of the Patent Appeal Board, I now reject claims 1 - 10 inclusive. The Applicant has six months within which to delete the claims and to amend them as proposed by the Board, or to commence an appeal under Section 44.



J.H.A. Gariepy
Commissioner of Patents

Dated at Hull, Quebec

this 16th day of January, 1980

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