COMMISSIONER'S DECISION

CLAIMS BROADER THAN DISCLOSURE: Cleaning Automotive Castings

Original claims specified a plurality of cages moving through a blast cabinet. Applicant filed a later application using a single cage and due to subsequent conflict proceedings is now attempting to have the single cage arrangement claimed in this (earlier) application.

Rejection: Affirmed.

This decision deals with a request for review by the Commissioner of Patents of the Examiner's Final Action dated February 4, 1975, on application 989,192 (Class 51-4). The application was filed on April 28, 1967, in the name of Ardee H. Freeman et al, and is entitled "Method And Means For Continuous Surface Treatment." The Patent Appeal Board conducted a Hearing on December 1, 1976, at which Mr. P. Beck represented the applicant.

This application relates to a process and apparatus for cleaning heavy metal articles such as automotive engine castings. The article is moved through a blast cabinet where particulate material is directed against the surface by centrifugal blasting wheels located within the cabinet. While moving through the blast cabinet the article is rotated, thereby ensuring that all surface areas will be treated to remove foundry sand, dirt and scale. Figures 1 and 2 (below) show how the process is conducted.

Fig. 1

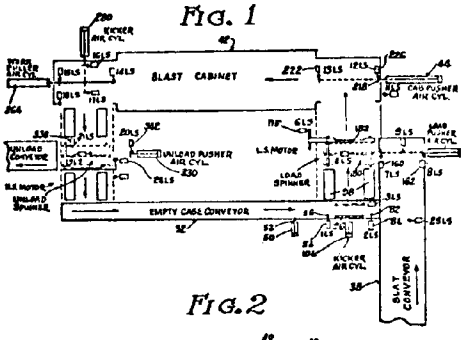
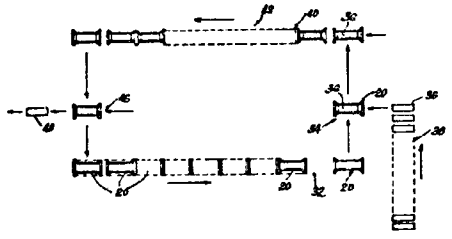


Fig. 2



Dans la figure 2, le numéro 36 désigne la pièce en fonte qui doit être nettoyée, le numéro 20 indique une cage pour transporter cette pièce tandis que le numéro 48 représente une pièce déjà nettoyée.

En bref, il s'agit de placer les pièces en fonte dans une série de cages ouvertes qui tournent sur elles-mêmes tandis qu'elles passent dans la chambre de décapage de façon que toutes les surfaces soient exposées au jet nettoyant. Le procédé sur lequel porte la revendication 1 a une portée plus large que cela, étant donné qu'il n'est aucunement fait mention de la cage. L'examinateur a rejeté les revendications 1-3 parce qu'elles étaient trop larges et a déclaré:

> 1) leur portée est plus étendue que l'invention décrite dans le mémoire,
>
> 2) il leur manque au moins une des caractéristiques essentielles du procédé décrit dans le mémoire.

Dans sa décision finale, l'examinateur a déclaré (notamment):

> Les caractéristiques essentielles qui sont absentes dans les revendications ci-dessus et ainsi font que ces mêmes revendications ont une portée plus étendue que l'invention telle que décrite sont:
>
> 1) que les pièces sont placées dans une cage ouverte et supportées par elle, et
>
> 2) que la cage ouverte et les pièces qu'elle contient pivote sur elle-même tout en avançant dans la chambre.
>
> L'invention telle que décrite surmonte certains problèmes retrouvés dans les réalisations antérieures pour le traitement de surface de pièces de métal lourdes, comme par exemple les culasses de moteur pour véhicules automobiles, pour enlever le sable, les saletés, les barbures, etc. Dans les réalisations antérieures, ces pièces de métal étaient installées sur un axe pour pouvoir ainsi pivoter au cours du nettoyage. Le chargement et le déchargement de ces pièces lourdes prenaient beaucoup de temps et les surfaces n'étaient pas complètement exposées au jet.
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> Pour surmonter ces problèmes, le demandeur a conçu une invention en vertu de laquelle toutes les opérations de manipulation des pièces seraient mécaniques et automatiques (voir le dernier paragraphe de la page 5).
>
> Cette disposition est décrite en détail et illustrée par 25 figures et esquisses qui illustrent les pièces dans leurs cages qui avancent dans la chambre et pivotent. Il faut remarquer que le mémoire descriptif ne précise pas que les cages ne sont pas nécessaires ou que les pièces peuvent être nettoyées sans cages.

> Applicant has argued in the above letter and others prior thereto that the inclusion of the above essential characteristics limits applicant to the specific preferred embodiment described in detail in the disclosure. This is not true and therefore not acceptable. There are numerous details described in the disclosure which are not recited in the claims and not required therein. The cages however are not seen and have not been described as an obvious detail. They stand out as essential, yes, even central to the method and apparatus disclosed. As applicant has stated on page 6, line 5, "in the practice of this invention, use is made of a plurality of open cages which are adapted to be transported for recycling through the machine with the cast metal block supported therein".
>
> Applicant has further argued that the main method object of his invention is to fully expose the workpieces to the abrasive blast media. In support of this he refers to the paragraph commencing on page 2, line 28 and terminating on page 3. The assumed deduction to be made from this statement of object being that no cages are required as they are not mentioned in the said statement. However, it is pointed out that in the descriptive part of the disclosure the completeness of exposure is described at all times in conjunction with workpieces supported in cages. Several variations of cages are discussed on pages 6 and 7 to make maximum exposure of the workpieces to the blast media possible. Again, nowhere is it stated that as an alternative and for the purpose of full exposure, no cages are necessary. Neither, is there any discussion as to how workpieces without cages would be supported and rotated while passing through the abrasive blast zone. Therefore, applicant's argument with respect to the broad method object of his invention is not acceptable. The rejection of process claims 1, 2 and 3 therefore is maintained.

In a brief response to the Final Action the applicant withdrew rejected claims 1 and 3 and replaced them with new claims 1 to 4. He stated (in part):

> By the present amendment, the applicant has included an essential characteristic which was requested by the Examiner. That characteristic is the open cage or barrel, and by its inclusion the scope of the claims has been restricted to overcome the broadness objection raised by the Examiner. The barrel or cage itself does not have any longitudinal movement but merely has rotational movement. The presence of a cage was considered an obvious detail and it is conceded that such an element is essential to the successful operation of the invention. However, the claims do not call for a plurality of cages and a plurality of said cages is not essential to the operation of the invention.

New claim 1 reads:

> A continuous cleaning apparatus comprising an elongated barrel, said barrel having an open feed end and an open discharge end to permit the axial movement of parts therethrough, feed means for delivering parts to said feed end one at a time, discharge means for receiving parts from said discharge end one at a time, cleaning means positioned along said barrel and external thereto for cleaning a part carried therein, said barrel being of skeletal form with open

> portions in its periphery to permit cleaning media from said cleaning means to enter and pass through said barrel, means for advancing a part past said cleaning means, rotation means connected to continuously rotate said barrel to cause a part therein to continuously rotate as it is cleaned and advanced past said cleaning means, and means at said feed end for removing a part from said feed means and disposing it in said barrel.

Mr. Beck stated that the new claims submitted in response to the Final Action now include the essential characteristics, and that this overcomes the examiner's objection relating to the absence of essential elements.

The only question to be considered is whether the new claims are broader in scope than the invention described.

At the Hearing Mr. Beck emphasized that the rejected claims are nearly identical to claims 35, 36 and 37 as originally filed. He reasoned that the applicant's inventive concept was expressed in the originally filed claims, and submits that this serves as a basis for amending the disclosure to support them. If such claims, as properly read, did in fact disclose the broad invention, he would be entitled to amend the disclosure to include that broad invention.

Original claim 35 is an independent claim, with claims 36 and 37 dependent thereon. It reads as follows:

> In a process for the surface treatment of articles of large dimension or weight by throwing particulate treating material onto the surfaces of the articles, the steps of advancing the articles in lengthwise alignment along a linear path from an entrance area through a blast area to an exit area, throwing particulate treating material onto the articles during movement linearly through the blast area, and rotating the articles about an axis parallel and aligned with the direction of movement during passage through the blast area uniformly to expose the surfaces of the articles to the particulate treating material thrown thereon during passage thereof through the blast area.

It is established law that a specification is to be read and construed as a whole. Therefore in construing original claim 35 with reference to the entire specification we must consider the whole disclosure and drawings as originally filed.

The objectives of the invention set out in the disclosure are found on pages 2 and 3. They are said to be increased efficiency of operation and "an assembly capable of automatic operation." Further reading of the disclosure outlines the "concepts" of the invention at pages 5 and 6 where we find:

> The concepts of this invention reside in the construction and arrangement of equipment for mechanically handling the metal parts throughout the operation and which is automated for substantially continuous operation to provide for a high speed process which makes use of a minimum amount of manual labor and materials thereby materially to reduce the cost of processing per unit output of the machine.
>
> In the practice of this invention, use is made of a plurality of open cages 20 which are adapted to be transported for recycling through the machine with the cast metal block supported therein during travel of the cages from the loading section to the unloading section and through a blast section in between. (underlining added)

As for the drawings, all 25 figures relate to an arrangement utilizing a plurality of cages moving through a blast cabinet.

In support of his rejection, the examiner directed the applicant's attention to Leithiser v Pengo-Hydro Pull (1974) 2 F.C.R. 954 which held certain claims to be broader in scope than the invention disclosed. At the Hearing Mr. Beck countered with the Burton Parsons v Hewlett Packard Supreme Court Decision 1976 S.C.R. 555, a more recent decision of a Higher Court which he submitted is authorative on this topic. He also referred to Osram Lamp Works Ltd. vs. Pope Electric Lamp Company Ltd. (1917) 34 R.P.C. p. 369 @ 391. Mr. Beck emphasized that these decisions dictate that it is necessary to look at the whole specification, including disclosure and claims, to determine what the applicant considers to be his invention. We must, of course, agree that the whole of the specification must be considered in order to ascertain the inventive concept, and will proceed below to determine what invention the specification "as a whole" did disclose.

Mr. Beck reviewed the prosecution of this application and stated that the applicant submitted an amendment to the disclosure on Jan. 16, 1973, in which he had "limited this description of the concepts of the invention more specifically recited in the broad claims."

This amendment was refused by the examiner in a report dated April 5, 1973, because "in the proposed amendment applicant has inserted broader statements re invention to bring the scope of the disclosure in line with the scope of the above claims [1, 23, 25 through 32]."

The added paragraph which the applicant submitted on January 16, 1973 reads:

> In a broad aspect, the method of the invention resides in the advancement of articles to be surface treated along a linear path from an entrance area, through a blast area to an exit area, while throwing particulate treating material onto the articles during their movement linearly through the blast area, and while continuously rotating the articles about an axis parallel and aligned with their direction of movement so as to uniformly expose the surfaces of the articles to the particulate treating material thrown thereon. The apparatus comprises a barrel of skeletal construction which is rotatable about its longitudinal axis, and open at both ends to permit the passage of an article therethrough. Continuously driven roller means are engageable with the barrel to continuously rotate it about its longitudinal axis, the barrel being long enough to hold an article and shaped to hold the article so that it rotates with the barrel. Abrasive blast means is provided alongside the barrel for projecting abrasive particles through the skeletal barrel wall at the articles in the barrel, and loading means is provided at one end of the barrel to supply articles into the barrel.

Following the direction of the Court in Burton Parsons that the specification be read and construed as whole, we agree with the examiner that, "the amendment to the disclosure is not acceptable because the scope of the alleged invention is broadened thereby."

We think it also useful to refer to copending application 993116 filed by this applicant which has a common inventor (Hubert Davidson) with the application before us. Reference to the copending application was made in the applicant's letter dated April 17, 1970, in which he stated that the "applicant believes that the conflict application identified by the Examiner in the Office Letter of Feb. 20th. in application Serial No. 993,116 should also be placed in conflict with this application, with particular reference to the newly added claims 25 through 32." What the applicant is indicating here is that his copending application is in conflict and he believes that this application (89192) should be added to the conflict.

The copending application (993,116) refers to this application on page 2 in this way:

> In the copending application, Serial No. 989,192, filed Apr. 28, 1967, and entitled "Method and Means for Continuous Surface Treatment", description is made of a new process and equipment for surface treatment of heavy metal objects in a continuous cycle, wherein use is made of a plurality of open cages supported at their ends on ring members to enable the cages continuously to be rotated. The cages are cycled to a loading station wherein heavy metal objects are inserted into the cages and the loaded cages are displaced onto the leading end of a roller conveyor. The roller conveyor is formed of a pair of laterally spaced apart turning rolls which extend continuously through an enclosed blast zone having one or more centrifugal throwing wheels for projecting particulate material at high speed onto the loaded cages as they are advanced along the roller conveyor from the entrance and through the blast cabinet to the exit end of the conveyor.
>
> The rolls of the conveyor are turned continuously to cause the loaded cages continuously to turn as they are advanced along the conveyor through the blast cabinet whereby maximum surface exposure is made of the castings to the particulate material.
>
> In the aforementioned copending application, the loaded cages are advanced along the loaded conveyor through the blast cabinet by incremental displacement of each loaded cage as it is deposited on the leading end of the conveyor thereby to align the cages in end to end relation for advancement in a single column through the blast cabinet. Beyond the blast cabinet, the loaded cages are displaced from the roller conveyor to an unloading station where the surface treated castings are displaced endwise from within the cage and the empty cage is returned by another conveyor to the head end of the machine for use in another cycle of operation.
>
> While the apparatus described is capable of continuous operation for the treatment of such heavy metal objects at relatively high speed and with uniform coverage of the surface, thereby to provide increased output per unit time, it is desirable still further to reduce the number of operating steps embodied in a complete cycle thereby to reduce the amount of equipment, space and costs of the entire operation. (underlining added)

There is no doubt but that the inventive concept of the copending application relates to the use of one cage for the surface treatment of articles. This is evident from the above statements, taken from the disclosure as well as the drawings and related description thereto. It is moreover emphasized in copending application 993116 that the applicant recognized that the inventive concept of this application (989,192) involves the use of a plurality of cages operating in a continuous loop for surface treatment of articles.

By construing the application "as a whole" as originally filed, and utilizing the evidence of what the applicant says elsewhere, we conclude that the only inventive concept envisaged in original claims 35, 36 and 37 is one which relates to the use of multiple cages. To rephrase the wording of the Osram Lamp case (supra) at p. 391, those to whom the specification was addressed would, from the specification as a whole have concluded that multiple cages were a necessity, and to the extent that original claims 35-37 did not make this clear, they were defective. Consequently we agree with the examiner that the interpretation which the applicant places on claims 1, 2 and 3 (now claims 1, 2, 3 and 4) is broader in scope than the invention described in the specification, and recommend that the Final Action be affirmed.

G. A. Asher
Chairman
Patent Appeal Board, Canada

I have considered the prosecution of this application and the recommendations of the Patent Appeal Board. My decision is that claims 1 - 3 now on file (and proposed claims 1 - 4) be refused. The applicant has six months within which to remove the claims or to launch an appeal under Section 44 of the Patent Act.

J.H.A. Gariépy
Commissioner of Patents

Dated at Hull, Quebec

this 11th.day of February, 1977

Agent for Applicant

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