

## COMMISSIONER'S DECISION

### Obviousness - Animal Milking Apparatus

Some claims were refused for failing to disclose a patentable advance in the art. An amendment was suggested to independent claim 1. This amendment adds an important and essential part of the invention; claim 4 was accepted as it contained that feature. The remainder of the claims were accepted if made dependent on amended claim 1.

Rejection: Amended

This decision deals with a request for review by the Commissioner of Patents of the Examiner's Final Action dated August 26, 1974, on application 108333 (200-1). The application was filed on March 22, 1971, in the name of Mervyn L. Hicks, and is entitled "Animal Milking And/Or Treatment Apparatus." The Patent Appeal Board conducted a Hearing on November 26, 1975, at which Mr. B. Dudley represented the applicant. Mr. P. George from the United States and the inventor Mr. L. Hicks also attended as witnesses.

The application relates to an animal milking apparatus comprising a horizontal platform which is mounted on a base support for rotation about a central vertical axis and including prime mover means for rotating the platform.

In the Final Action the examiner refused claims 1 to 6, 9 to 11 and 14 to 17 as failing to define patentable subject matter over the following patents:

#### British

|           |               |                 |
|-----------|---------------|-----------------|
| 1,096,952 | Dec. 29, 1967 | Gascoignes Ltd. |
|-----------|---------------|-----------------|

#### German

|           |               |                 |
|-----------|---------------|-----------------|
| 6,752,792 | Mar. 13, 1969 | Gascoignes Ltd. |
|-----------|---------------|-----------------|

(corresponds to British Patent 1,175,588)

#### United States

|           |              |      |
|-----------|--------------|------|
| 3,095,854 | July 2, 1963 | Bott |
|-----------|--------------|------|

|           |                |           |
|-----------|----------------|-----------|
| 3,103,912 | Sept. 17, 1963 | Benedetto |
|-----------|----------------|-----------|

In that action the examiner stated (in part):

Applicant has failed in his arguments to convince the Examiner that applicant's concept represents a step forward in the art and that the concept was not previously known. The cited Gascoignes Ltd patent states that "... the cows are not "backed" onto or off the platform ..." (page 1 column 2 lines 66-67) as opposed to the arrangements shown in which the cows step onto the platform and leave it by walking in the same general direction since the former arrangement would be generally undesirable to the patentee. A person skilled in the art, having read that statement, would not attempt to utilize a design wherein cows back off the platform into the path of advancing cows but would, no doubt, utilize one of several obvious and known structures, such as a separate entrance and exit or one aperture with gates placed in appropriate locations to prevent a blockage and commotion, to carry out this concept. It is deemed that the concept is known and therefore unpatentable. The manner in which it is carried out is shown to be one of a number of obvious choices. The closed inner end walls fixed relative to the platform are mechanical equivalents of the inner wall disclosed in the cited Gascoignes Ltd patent and is not a patentable feature. Therefore claims 1, 2, 3, 5 and 11 are obvious in view of the knowledge exhibited by the cited Gascoignes Ltd. patent, and the cited Dyke et al Gebrauchsmuster.

...

The use of a wall gapped for two stall widths is known, as shown, for example, by the cited Bott et al or Dyke et al patents. The replacement of the wall by a rail is not a patentable feature. The wall and the rail serve the same basic purpose, to retain the animals upon the platform. The advantages of accessibility and visibility offered by the use of the rail are inherent characteristics of the rail, well known to persons skilled in the art. The simple replacement of one element by another element having well known characteristics in order to utilize these characteristics without a patentable modification of the device is obvious. Therefore claim 10 is obvious.

In response dated November 26, 1974 to the Final Action the applicant stated (in part):

The animal treating apparatus is particularly intended for use in milking animals and includes a horizontal platform of circular configuration mounted for rotation about a central vertical axis and driven either intermittently or at a slow rate by any suitable means. The area of the platform adjacent and inwardly of its periphery is divided into a plurality of animal receiving stalls which are disposed generally radially, or at a slight angle to the radial line, from the central vertical axis and opening to the periphery of the platform and directed inwardly thereof so that the hind quarters of the animals in the stalls are at the periphery of the platform so as to be accessible to an operator outside the platform. In the preferred construction and application of the invention as milking apparatus, each stall is provided with a milking claw

and cup assembly which is connected with milk collection pipe lines and air or vacuum pipe lines fixed relative to the platform and rotatable therewith. The milk collection and air or vacuum pipe lines can pass to milking apparatus located centrally of the platform and rotatable therewith, or the arrangement can provide for the rotatable milk collection and air or vacuum supply lines to connect either directly or by way of a milk receiving can with a central revolving gland unit which is in turn connected by fixed pipe lines to the remainder of the milking machinery and apparatus. The speed of rotation of the platform is preferably such that the milking of each animal will be finished by the time one revolution of the platform is completed so that an animal may pass forwardly through an entrance into a stall on the platform and when the revolution is completed and milking finished the animal may back out of the stall off the platform through an exit adjacent the entrance.

...

One of the reasons for the immediate, favorable reception of the present invention, is its simplicity in construction and operation. Simplicity of invention is not and should not be a bar to obtaining a grant of a Canadian patent. The Examiner has rejected the invention, as claimed in claim 1, as being obvious but it is submitted that the Examiner possibly is looking at applicant's claims in hindsight. The invention was not obvious to experts and knowledgeable people and experienced farmers in the dairy industry before the filing of the present application nor before the date of placing the examples of the present invention on the market. If it was obvious, it would have been made long before applicant's filing date by skilled artisans.

The Examiner has put much weight in a minor reference in British patent 1,096,952 (page 1, column 2, lines 66-67) which states that "the cows are not 'backed' onto or off the platform". However, applicant again refers to the following line which indicates that "this is a procedure which is generally undesirable". Therefore, this paragraph of British patent 1,096,952 not only teaches away from the use of constructions in which cows back off but may also be taken as evidence that knowledgeable stock men would not have previously believed cows would readily back off an elevated revolving platform into a comparatively narrow exit area. In the construction which is disclosed in British patent 1,096,952 it is just not possible to operate such a construction with the cows backing off. As pointed out by applicant in the responsive letter of March 1st 1974, the stalls on the Gascoignes' platform are only accessible at the outer periphery at one point by way of bridge 19 and gangway 41 over which the animals move forwardly. There is no provision for any other outer peripheral egress point whereby animals can back off the platform and if any attempt is made for an animal to back off at the bridge 19, this would be in the face of on-coming animals and would effectively cause commotion and a blockage preventing animal movement and operation of the apparatus.

The British patent (1,096,952) relates to milking installations comprising a rotatable platform with stalls adapted to house cows whilst being milked.

The platform is power-rotatable, at least during part of the milking period.

The cows enter and leave the platform stalls by movements made in the same forward direction.

The German patent (6,752,792) relates to milking installations comprising a rotatable annular platform, having a plurality of stalls on said platform adapted to house a cow during the time it is being milked. The cows step onto the platform and leave it by walking in the same general direction.

The Bott citation is directed to dairy apparatus comprising a rotatable annular platform having a plurality of stalls on said platform adapted to house a cow during the time it is being milked. The general layout requires the animal to walk on the rotatable platform and leave it by walking in the same general direction.

The Benedetto citation relates to a combined rotating and housing system which comprises moving stalls which form an annular shaped platform. The cows are stabled in these stalls which are placed radially around the periphery of said annular shaped platform. The stabled animals can be delivered at will to or from a milking station. Claim 1 of that citation reads:

A dairy system comprising a base, an enclosure, a silo for forage feed, an annular platform rotatably supported within said enclosure and around the axis of said silo, means operatively connected to said platform effecting rotation thereof, control means for effecting selective intermittent operation of said means, said platform having radial stall means dividing the same into a multiplicity of stalls each adapted to receive an animal therein, a stationary annular feed alley trough at the inner periphery of said platform, conveyor means providing communication between said silo and said trough for conveying forage feed to said trough, a manure gutter on said base at the outer periphery of said platform, a discharge opening through said base for communication with a collection station, a series of gutter cleaners carried by said platform for rotation therewith and extending into said gutter to convey manure from adjacent each stall to said discharge opening, a plurality of stall floor doors being hingedly attached to said platform so as to be moved to an "up" position from a gutter scraping position, said stall floor doors being located intermediate adjacent stalls so that when in an "up" position they are in position to restrain movement of animals juxtaposed thereto, and a milking and control station pit at the outer periphery of said platform.

This application relates to animal milking apparatus comprising a horizontal platform which is mounted on a base support for rotation about a central vertical axis and including prime mover means for rotating the platform. The platform

is provided on its upper side with a plurality of animal receiving stalls which are disposed radially inward towards the center. The platform includes the necessary animal milking equipment. The cows must enter and leave the stalls at the outer periphery and must walk on the platform by way of a peripheral entry opening and back off through a peripheral exit opening. Claim 1 reads:

Animal milking and/or treatment apparatus of the kind comprising a horizontal platform which is mounted on a base support for rotation about a central vertical axis and including prime mover means for rotating the platform, the platform being provided on its upper side with a plurality of animal receiving stalls and there being animal milking and/or treatment equipment at least part of which is mounted for rotation with the platform, characterised in that the animal receiving stalls have dividing walls and closed inner end walls which are fixed relative to the platform so as to be rotatable therewith and all stalls are of elongate formation and have their longitudinal axes directed inwardly from the platform outer periphery, the stall rear ends opening to the said outer periphery and each stall rear end being alignable in turn with an entry opening and an exit opening of a drafting race or yard adjacent said outer periphery so that the animals are prevented from entering and leaving the stalls by the stall inner ends and must enter and leave the stalls at the outer periphery and by way of said peripheral entry and exit openings, and so that in use of the apparatus the animals hind quarters are directed towards the platform outer periphery and are accessible at all times to an operator outside the platform, and there being retaining means to retain the animals in their respective stalls during rotational movement of the platform and whilst being milked and/or treated.

It is observed that the examiner did not refuse all the claims. Therefore, the question to be considered by the Board is the scope or breadth of monopoly which should be allowed in the claims.

A most informative hearing was held where the applicant, the inventor and a specialist in the art gave extensive information about the prior art, and the advance made in the animal-milking art. Six affidavits were submitted at the hearing in an attempt to substantiate the advance made, and the commercial success of the invention.

According to the inventor one of the most interesting aspects of the invention is that he devised a system having a practical application wherein the cows will adapt to backing off a continuously moving rotary platform under a specified set of conditions. The inventor stated, however, that he was "fully aware that cows are able to back out of conventional stationary bails or stalls in conventional stationary milking sheds or parlours...."

In the Final Action the examiner stated that: "Applicant has failed in his arguments to convince the Examiner that applicant's concept represents a step forward in the art and that the concept was not previously known. He goes on to refer to the disclosure of the cited German Patent where column 2, line 6, reads: "The cows step onto the platform and leave it by walking in the same general direction, that is, the cows are not "backed" onto or off the platform, a procedure which is generally undesirable." (underlining added) Surely this would lead one away from a "practical application" of successfully adapting the cows to back off a moving rotary platform rather than to a "holding of lack of novelty." In any event it is feasible for the inventor to have made a patentable advance in the art where the basic concept is known.

We also observe in reading the British Patent (Gascoigne) that column 4, line 15, states: "If desired, the cows may, of course, be backed out of the stalls after milking thereby avoiding release of the milked cows from the central enclosure by means of an overpass or underpass." In our view the word "backed" as used means an involuntary action on the part of the cows, and not a voluntary action as occurs in the instant application. The disclosure and claims, however, of that specification are directed solely towards a construction by which "cows enter and leave the platform stalls by movement made in the same general direction." The main claim 1 of that specification includes this feature. In any event there is no disclosure of a stationary breech rail arrangement which automatically allows the cows to voluntarily back off the rotating platform at a designated exit as in the present application. We believe that we should not place too much emphasis on the wording of these

minor obscure references in these specifications, because they are completely lacking in any teaching of a practical application to automatically effect such procedures. The inventor is satisfied that he is not "the first person to realize the advantages of arranging the stalls radially on a platform," but he is concerned with the total concept of a practical application in the form of a rotary platform having arrangements which automatically allows the cows to voluntarily back-off the rotating platform at a designated exit.

We will now consider the claims. The claims rejected in the Final Action were 1 to 6, 9 to 11 and 14 to 17. Claims 7, 8, 12 and 13 were not refused. The applicant did not amend claim 1. New claims 2 and 3 correspond to accepted claims 7 and 8; new claims 5 and 6 correspond to accepted claims 12 and 13; and new claims 4 and 7 correspond to refused claims 10 and 17. Therefore the only claims which the Board need consider extensively are proposed claims 1, 4 and 7.

All of the citations, except Benedetto, teach away from "the walk-on back-off idea," utilized in the present invention. While they show such basic features as a rotary milking platform, they provide that the cows are guided or directed forwardly onto platforms and into the stalls thereon, whether the stalls are arranged radially or tangential, and are subsequently, generally speaking, only allowed to leave the stalls by resuming their forward movement.

The Benedetto reference relates to a combined rotating and housing system which comprises an annular shaped platform having radially placed stalls around the periphery. This is not specifically a milking arrangement, but a housing system. The stabled animals can, however, be delivered by rotation of the platform to or from a milking station which is separate from the platform. At this station only two cows can be milked at one time, and then only when the platform is stationary.

That reference does show an annular moveable platform with radial stalls thereon. The animals are also prevented from entering or leaving the stalls by the stall inner ends, and must leave the stalls at the outer periphery. There is, however, no teaching whatsoever of the animal entering or leaving a moving rotatable platform.

It is observed that the applicant is not only concerned with the concept of cows backing off a rotary platform, but additionally has developed a particular apparatus adapted to utilize the unexpected action of the animal. The combination includes integers which individually may be old or known. We are satisfied, however, that in the total concept, the applicant has made a patentable advance.

There is however, an important feature necessary for the smooth operation and realization of the invention. That feature is "the stationary breech rail." In rejected claim 1 it is merely referred to as "...there being retaining means to retain the animals in their respective stalls...." In the application and in the literature presented at the hearing the retaining means is described as "a stationary breech rail arrangement" which not only retains the cows during the milking period, but automatically allows the cows to "voluntarily back-off at the designated exit without the need for any mechanical device or apparatus."

The applicant in his submission to the Board stated:

I comment that the outer peripheral stationary breech rail of the "Turn Style" apparatus is designed as a retaining means or barrier to prevent the cows backing off but it also provides a very desirable and necessary (for efficient operation) access to the cows udders and the teat cup assemblies...for easy access to the cows at all times ... an operator can in fact see a good way around the platform and partially between the legs of animals on the platform and so to have a relatively unobstructed view particularly in the initial and immediately following stages of milking operations....

Further the provision of an open breech rail arrangement facilitates cleaning of the platform....

That feature is referred to in the disclosure as a "preferred form" and is described as: "... an annular horizontally disposed rail (10) is provided at and above the periphery of the circular platform (1) and in juxtaposition



with the rear end of each stall (5) so as to be co-operable therewith in retaining an animal (26) in the desired position. The rail (10) does not rotate with the platform but must be maintained in position such as by hanger members (11) from the roof of the milking shed or from supports extending from the base or a wall thereto."

It is settled law that an applicant need not in all instances restrict his claim to the preferred embodiment, for he is entitled to make his claims to the invention as broad as the prior art and his disclosure warrants. In so far as the retaining means is concerned, however, Benedetto does in fact show retaining means to hold the animals in their respective radial stalls on a moveable platform. The retaining means referred to is the well known "stanchion" for fastening around the animals neck. Nonetheless it is a retaining means. We also note that the applicant's invention has achieved "world wide commercial success." However that success, according to the evidence submitted at the hearing, relates to a preferred embodiment including the "stationary breech arrangement."

It is thus apparent that the breech rail arrangement is both an important and essential feature of the invention. Claim 1, therefore, is too broad in scope, but would be allowable if amended, after the last line, to include: "said retaining means being a breech rail arrangement which automatically allows the cows to voluntarily back off at the exit station."

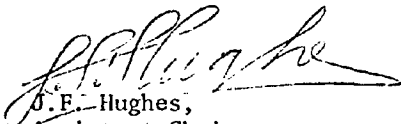
Claim 4, which includes that feature in more detail, is in most respects allowable. It would however, have to be rewritten to avoid ambiguity resulting from the amendments called for above to claim 1.

Claim 7 would be allowable if dependent on proposed claim 1, provided it covers an operable structure in all its applications. There is some doubt, however, whether all possible combinations will work. It is suggested that original claim 17 (which amended claim 7 replaced) is a more appropriate claim.

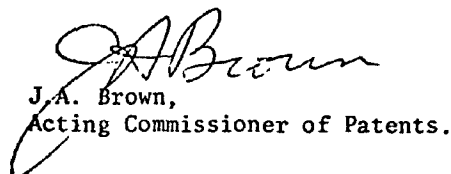
In summary we are satisfied that claims 1 and 7 now on file should be refused as failing to define a patentable advance in the art. Claim 4 relates to patentable subject matter, but requires amendment if the proposed amendment is made to claim 1.

The allowability of claims 2, 3, 5 and 6 was not referred to the Board. We question whether they add features which when joined to what is in present claim 1 make a patentable combination. If made dependent on the modified and patentable claim 1 suggested above however, they would overcome our reservations as to their allowability.

The Board recommends that the decision in the Final Action to refuse claims 1 and 17 (now claim 7) be affirmed. We consider that claim 10 (now claim 4) could be allowed. The Board also recommends that claim 1 should be accepted if modified in the manner suggested, and with it proposed claim 7.

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

I concur with the findings of the Patent Appeal Board and refuse to accept present claims 1 and 7. Present claim 4 is acceptable. I also agree with the proposed amendment to claim 1. The applicant has six months within which to delete or amend claims 1 and 7, or to appeal this decision under the provision of Section 44 of the Patent Act.

  
J.A. Brown,  
Acting Commissioner of Patents.

Dated at Hull, Quebec

this 15th.day of December, 1975