

COMMISSIONER'S DECISION

OBVIOUS: Claims Fail to Define Advance in the Art.

The distinction between subject matter of the claims under rejection and the prior art involves the dispensing of an additive into a flowing fluid stream, from a disposable flexible walled dispenser having sealed closure before use, instead of a re-usable dispenser without closure means of the primary reference; combined closure and dispensing spouts on flexible containers being well known. Some proposed claims allowable if amended.

FINAL ACTION: Affirmed.

This decision deals with a request for review by the Commissioner of Patents of the Examiner's Final Action dated June 5, 1973 on application 086,014 (Class 50 - Subclass 8). The application was filed on June 19, 1970 in the name of Edgar P. Scragg and is entitled "Method Of Lubricating Pneumatic Machines And Apparatus Therefor." The Patent Appeal Board conducted a Hearing on June 12, 1974, at which Mr. A. Davidson represented the applicant.

The application relates to a method and apparatus for dosing a flowing fluid, which apparatus has particular utility in the field of lubrication where a lubricant is to be added to a flowing air stream. The lubricator consists of a casing which is connected into a fluid stream (usually air) and which includes a lubricant container. The lubricant container is a bag of flexible material upon which the fluid stream is caused to impinge so as to compress it and expel the lubricant through the nozzle into the stream.

In the prosecution terminated by the Final Action the examiner refused claims 1 to 6, 8 to 10, 12 and 21 to 23 as lacking patentable subject matter over the following references:

British Patents:

936,957	Sept. 18, 1963	Garwood et al
936,956	Sept. 18, 1963	Garwood et al

Canadian Patent:

619,486	May 2, 1961	Cl. 206-0.5	Akers
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United States Patent:

2,792,073	May 14, 1957	Cl. 183-8	Boss
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Claim 21 was also found objectionable for lack of support in the disclosure.

In the Final Action the examiner stated (in part):

The Garwood et al patents disclose a means and an apparatus for dosing a fluid with an additive, whereby a flexible-walled tube, inserted in a container, is deformed by fluid impinging upon the walls of the said tube as the fluid flows through; the said deformation of the tube causes an additive contained in the said tube to be deposited in the said flowing fluid.

The main distinction, between the matter claimed by the rejected claims and that taught by the Garwood et al patents, is a variation in the type of collapsible tube containing the additive; such a tube, however, is disclosed by the Akers patent; the Akers patent discloses a flexible tube having a sealed spout, which spout may be opened by cutting the sealed end. It is held that the mere replacing of the flexible tube containing the additive of the Garwood et al patents, with a tube such as that disclosed by the Akers patent is a simple expedient for one skilled in the art.

The Boss patent discloses the use of a filter in a device for dosing a flowing fluid. This patent is cited to show that the use of filters for such apparatus is known in the art, and the inclusion of such in an additive system cannot, in itself, be relied upon for novelty.

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Furthermore, regarding the length of bore 46.3 and the removable formation 46.4 (of the drawings) in the instant application, it should be noted that the Akers patent discloses a flexible tube having a sealed spout, which spout may be opened by cutting off the sealed end of the said spout. Furthermore, the sealed spout includes a notch near the tip of said spout; this notch represents the suggested place to cut the top off the spout in order to produce a preferred pouring rate from the said spout; the length of the bore within the said spout can be varied by cutting off the said tip at some other location as desired; varying the position of tip cut-off will vary the rate of discharge from the said container, hence it is of expected skill, for one in the art, that the rate of discharge can be controlled.

Furthermore, it is well known that fluid flow can be restricted by varying the diameter and length of the bore through which flow occurs, and therefore by friction, hence devising the bore to a specific length in order to obtain a desired discharge from a container is well within the expected skill of one in the art. The breaking off or cutting off the tip of the said spout is merely a way to control the discharge of fluid through the said spout.

It is therefore held that the replacing of the replaceable tube of the Garwood et al patents with a disposable tube or container of the Akers patent and making the necessary adaption alterations is well within the expected skill of one in the art.

The applicant in his response dated Aug. 31, 1973 to the Final Action cancelled claims 3 and 21, and submitted a proposed amendment to claims 1, 6, 8, 23 and 26 to indicate that the "bore" is a "metering bore." He also stated (in part):

As a separate ground for review of the final action, it is submitted that, in any event, the references do not render the claims obvious. This ground will be discussed under three separate heads:

- (a) whether the simple combination proposed by the Examiner is obvious as he contends;
- (b) whether, if the combination proposed by the Examiner would have occurred to a skilled man, it would have done so without the exercise of the inventive ingenuity; and
- (c) whether the combination proposed by the Examiner actually does give rise to the invention claimed.

On the first of these points, it is noted that the British specifications relied upon are 13 years old and the Canadian specification is 12 years old. Thus, there has been a significant period during which this combination, if so obvious, could have been made. The Examiner has been unable to point to a single document combining these disclosures and, in fact, neither the U.S. Patent Office Examiner nor the British Patent Office Examiner was able to show the combination claimed in any of the claims now in the application. Furthermore, the applicant himself is not aware of his invention ever having been proposed before. Castrol Limited, and their parent company Burmah Oil, have investigated this invention thoroughly and taken a licence having been unable to show that the invention was old. In its lubricating form, the invention has been put into practice in the goldmining industry in South

Africa, and by this time will either have entered service, or be about to enter service, in Canada and Australia. The almost instantaneous acceptance of the lubricator form of this invention seems to be irrebuttable proof that this invention has fulfilled a long existing need. Mines which have put it into practice have found that their maintenance costs drop drastically and that they get far better lubrication on substantially less lubricant.

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Turning now to the second point, and assuming that a combination of references such as that proposed by the Examiner is allowable, we must consider the position of the hypothetical man skilled in the art faced with the problem of accurately dosing a flowing fluid and having before him the prior specifications on which the Examiner is relying. The question to be answered is whether, in these circumstances, it would be obvious to that man, without exercising inventive ingenuity, to make the proposed combination. We submit that nothing in these documents would lead him to make this substitution unless (1) he had the disclosure of the present applicant before him as a guide or (2) he exercised his inventive faculty....

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In summary, applicant submits the following salient points:

- (a) that the combination of the teaching of unrelated documents not shown to be common knowledge should not be allowable to render obvious an invention;
- (b) that even if such combinations should be held to be allowable, it would not occur to a man skilled in the art to combine the Akers container with the devices of the two Garwood specifications;
- (c) that even if the thought did occur to a skilled man that he could replace the Garwood bags by the container of Akers, he would still have to exercise inventive ingenuity in altering the Garwood devices so that the metering function no longer takes place in the permanent structure but in the nozzle of the bag.

For the reasons set out above, it is believed that the amended claims should be found to be allowable.

The question to be decided is whether claims 1 to 5, 7 to 9, 11 and 20 to 22 as they would be amended in the latest proposal of the applicant lack patentable subject matter. Claim 1 as thus amended and claim 8 (which would become claim 7 by cancellation of claim 3) are representative of the rejected claims and read:

1. A method of dosing a flowing fluid which comprises the steps of:
 - (a) Packaging the additive with which the fluid is to be dosed in a disposable container comprising a bag and a nozzle, the bag being of flexible material which is impervious to the additive contained therein, and the nozzle including a bore leading from the interior of the bag and a formation blocking the end of the bore remote from the bag;
 - (b) Connecting in the line through which said fluid flows a casing having an inlet and an outlet and which can be opened to permit access to be had to means within the casing for temporarily and releasably locating one of said containers;
 - (c) Removing said formation to open said bore and leave behind a metering bore of predetermined length;
 - (d) Opening said casing;
 - (e) Removably locating the container with the open bore in the casing;
 - (f) Re-closing the casing; and
 - (g) Feeding said fluid through the container so that it impinges on the bag so as progressively to collapse the bag and expel additive through said bore into said flowing fluid.
8. A device for dosing a flowing fluid, the device comprising a disposable additive container and a casing, the casing having an inlet and outlet by means of which it can be connected into a fluid flow line, having means therein for temporarily and releasably locating one of said containers, and being such that it can be opened to permit access to be had to said means, and the container comprising a bag and a nozzle, the bag being of flexible material which is impervious to the additive contained therein, and further being such that when impinged upon by a flowing fluid with sufficient force it progressively collapses to expel additive from the nozzle, and the nozzle including a bore leading from the interior of the bag and a removable formation blocking the end of the bore remote from the bag which formation, when removed, leaves behind a metering bore of predetermined length, said casing being so formed that the fluid flow path therein is such that the fluid flowing therethrough impinges on said bag to collapse the same and expel additive which is then entrained in the flowing fluid.

Our first determination will be the scope and content of the prior art cited.

The Garwood patents disclose a means and apparatus for dosing a fluid with an additive, in which a flexible-walled tube, inserted in a container, is squeezed by fluid impinging upon the walls of the tube as the fluid flows around it. The squeezing of the tube causes an additive contained in it to be ejected into the flowing fluid. Claim 1 of Garwood (936,956) reads:

Liquid dispensing apparatus having a flow passage for a main stream of liquid between an inlet and an outlet of the apparatus, and comprising a valve disposed in said passage and spring-loaded in a sense to close the valve, and which valve is acted on by the pressure upstream of the valve in a sense to open the valve, and is adapted to vary the pressure drop across itself in dependence on the quantity of mainstream liquid flowing therethrough and a rigid vessel which is divided by a flexible wall into two separate spaces one of which spaces communicates with said passage upstream of the valve, and the other of which spaces is for a liquid concentrate and communicates through an orifice with the said passage at a location downstream of the valve, said pressure drop being such as to cause to flow through said orifice into the main stream of liquid a quantity of said liquid concentrate which is a constant fraction of the quantity of main stream liquid flowing through the said valve.

The Akers patent discloses a flexible tube having a sealed spout.

The spout may be opened by removing the sealed end. The Ross patent discloses a combined air filter and lubrication device which can be installed in an air line and which will simultaneously filter and eject lubricant into the air passing through the line.

From a consideration of the subject matter of claim 1 it is observed that the applicant has chosen to use a disposable bag and nozzle, where as in the Garwood reference (936,957) the bag and nozzle are reusable. Also, before the disposable bag is inserted

in the apparatus a portion of the nozzle is removed to provide an opening.

The applicant has proposed amending claim 1 by adding the term "metering" before the term "bore" at line 17. An arrangement of this type, however, is shown in the Garwood (936,957) reference in which page 2, column 2, line 9, reads: "Assuming the valve to be open the liquid detergent is caused by the pressure drop to flow through the drilling element 18 and to mix with the water...." This in effect is a metering device, for the size of the element 18 must be controlled in order for the device to function properly. This is further modified by the pin 23 which extends into the central drilling 18.

The applicant has argued that "the examiner is not entitled to add, to the disclosures of two British patent specifications, the disclosure of a completely unrelated Canadian specification in an entirely different field...." The basic difference, however, between claim 1 and the prior art is concerned with "a different dispenser." In this regard the Canadian reference (Akers) on page 2, line 6 reads: "Combined spout and closure structures are commonly used for dispensing virtually any known liquid or semi-liquid composition from bottles, collapsible tubes, etc." In the circumstance, therefore, we cannot agree that this reference (Akers) is taken from an entirely different field. It is common place to provide disposable dispenser which have to have a portion of the head or nozzle removed to provide an opening before they can be used. One such dispenser is shown in the Akers reference.

In summary, the main distinction between the subject matter of claim 1 and that taught by the Garwood patents is a variation in the type of collapsible tube containing the additive. Adverting to the above considerations this concept, in our view, lacks patentable subject matter.

Claim 2, which depends on claim 1 adds to it a reference to a venturi effect. This however, is shown in the Garwood references. Claim 3 has been cancelled. Proposed claims 3 and 4, which depend on claims 1 or 2, add the features of markings to the nozzle where it is to be cut before use. This is shown in the Akers citation (part 38). Accordingly, our comments with respect to claim 1 apply equally to claims 2, 3 and 4.

Proposed claim 5, which is somewhat more restricted than claim 1, relates more specifically to the structure of the casing to guide the flowing fluid in a converging pattern. The broad concept, however, is taught by the Garwood reference (936957) (see the structure designated as 24 and 26, both of which guide the flowing fluid in a converging manner). The applicant argues that "the converging pattern creates a reduced pressure and a region of turbulence." The same thing obviously happens in the Garwood reference (936957). Our comments regarding claim 1 also apply to claim 5 and, in our view, it lacks patentable subject matter.

Notwithstanding the above comments, however, this claim would avoid the prior art cited if the conclusion of part (b) was amended to read: "... in a converging pattern 'caused by the configuration of the casing and the tapered valve of the nozzle,' " or some variation thereof.

Proposed claim 7 (which is former claim 8 with amendments) covers the apparatus for dosing the flowing fluid. As the claim is now phrased, however, it merely states a collection of separate parts, viz., 1) a container with a frangible head; and 2) a casing for receiving the container when the head has been removed. In other words an apparatus and its refill. There is no functional relationship between these parts until the head is removed and the container is inserted in the casing. To properly claim the combination it would be necessary to claim the apparatus with the container (minus the head) therein, in which case the broad combination claimed would then be as disclosed in Figure 1 of the Garwood reference (936,957).

This claim (7) is substantially the same as rejected method claim 5 couched in apparatus terms. Accordingly our comments regarding claim 5 apply equally to this claim, and in our view claim 7 also lacks patentable subject matter. An amendment, however, such as that suggested for claim 5 would clear the prior art cited, (assuming also that the claim is re-written to cover a proper combination).


Proposed claim 8, which is dependent on claim 7, introduces a feature equivalent to part 10a of the Garwood reference (936957). Claim 9, which is dependent on claim 8, adds outwardly projecting formations. This too reads on the Garwood reference, as the reference shows screw threads for the same purpose. Consequently claims 8 and 9, in our view, fail to add any patentable subject matter.

Claim 21 was cancelled by the applicant after the Final Action. Proposed claim 20, which is dependent on claim 7 introduces the feature of the removable portion of the nozzle. This feature, as previously stated, is shown in the Akers reference.

Proposed claim 21 is substantially the same as method claim 5 except that it is in apparatus form. Our comments regarding claim 5, including the suggested amendment, apply equally to this claim. The comments regarding a true combination re claim 7 also apply.

The applicant has emphasized, specifically at the Hearing, that the "bore" of the nozzle acts as a "metering bore" and as such is an important feature. The disclosure, however, at the top of page 13 reads: "It will be understood that as the rate of lubricant flow is almost entirely dependent on the kinetic force exerted by the air or water on the bag, then the rate of flow of lubricant through the nozzle varies with the air or water flow." It would appear then that the "metering effect" is more correctly directed to the kinetic force exerted on the bag rather than to the "metering bore."

The Board is satisfied that the subject matter of the rejected claims is not a patentable advance in the art, and recommends that the decision of the examiner to refuse the claims be affirmed. It is also recommended that proposed claims 5, 7 and 21 be accepted if amended as indicated.


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

I concur with the findings of the Patent Appeal Board and I refuse to grant a patent on the subject matter of the rejected claims. The applicant has six months within to submit an amendment along the guidelines as set out by the Board or to appeal this decision under the provisions of Section 44 of the Patent Act.

Decision accordingly,


A.M. Laidlaw,
Commissioner of Patents.

Signed and dated in
Hull, Quebec this 28th.
day of June, 1974.

Agent for Applicant

Alex. E. MacRae & Co.