

OPINION UNDER SECTION 74A

Patent	GB 2533869 B
Proprietor(s)	Positive Automation Limited
Exclusive Licensee	
Requester	Positive Automation Limited (represented by Bailey Walsh & Co LLP)
Observer(s)	AcePak UK Limited (represented by Venner Shipley LLP)
Date Opinion issued	20 December 2022

The request

1. The comptroller has been requested to issue an opinion as to whether GB Patent 2533869 B (the patent) is infringed by apparatus allegedly being sold in the United Kingdom by AcePak UK Limited.
2. The patent entitled, "Trolley loader" was granted on 8 April 2020 to Positive Automation Limited and is still in force in the UK.
3. The request was received on 28 September 2022 and was accompanied by a video showing operation of the alleged infringing apparatus together with screenshots taken from the video.

Observations

4. Observations were received on 18 November 2022 and observations in reply were received on 5 December 2022.

The patent

5. The patent relates to movement of articles, for example containers carrying a liquid such as milk, onto shelves of a trolley on which the articles are grouped and subsequently moved. Such a trolley typically includes a base, on which are provided castors or wheels that allow the trolley to be moved around, both side and rear walls extending upwardly from the base, and one or more door portions that can be moved between open and closed positions. The trolley includes vertically spaced shelves onto which the articles can be placed. When loaded, the trolley is typically used to transport the articles from the point of loading, through road transport, to the retail outlet at which the articles can be removed from the trolley.

6. Typically, the spacing between the trolley walls and between the shelves is relatively close to the available space required for the storage of the articles such that the articles are contained and maintained in position during transport with very limited movement. However, in loading of the trolley, there is very little tolerance or space available for manoeuvring the containers into position and very limited space for loading apparatus to be located within the trolley during a loading process. As a result, it is conventional for the containers to be loaded onto the trolley by hand, which is time consuming and relatively expensive in terms of labour costs.
7. It has been known to use automated apparatus to load the containers, but the known apparatus tends to be relatively bulky, expensive and requires the movement of the trolley as well as the containers during the loading process. Hence, the aim of the patent is to provide apparatus for use in the movement of containers into a trolley in an efficient manner.
8. The patent has 6 claims in total, including independent apparatus claim 1 and independent method claim 5. The independent claims define the following features (including the feature notation used by the patent proprietor in the request):
 1. a) *Apparatus for the movement of a plurality of containers, said apparatus including:*
 - b) *a trolley comprising a base, side walls, a rear wall and a front access opening and a plurality of vertically spaced shelves onto which the containers are placed in order to load said trolley;*
 - c) *a collating means including at least one collation module including a surface suitable to receive a group of said containers required to be moved onto a specific shelf of the trolley;*
 - d) *movement means in the form an inserter including a loading head and a lift and rotate unit for moving the said surface on which the said group of containers are located to the height of the said specific shelf of the trolley, and then moving the said group of containers onto the said specific shelf, and*
 - e) *wherein the said loading head includes a top guide element, a base locator to locate and clamp the said specific shelf in position with respect to said surface so that the same are substantially parallel and*
 - f) *side clamp element surfaces are provided to contact with opposing side walls of the trolley to move the same outwardly in advance of the movement of the group of containers onto the said specific shelf in order to allow the space at the opening into the trolley above the said specific shelf and through which the said group of containers are moved onto said specific shelf, to be temporarily enlarged by increasing the width and*
 - g) *said base locator, side clamp element surfaces and top guide element form a former or shoe for the said group of containers to be moved through the same and transferred onto the said specific shelf of the trolley.*

5. a) *A method of loading a trolley with a plurality of containers, said containers located on shelves of the trolley, said method comprising the steps of*
- b) *moving the trolley to be loaded to a loading position and*
- c) *securing the said trolley in a fixed position via a trolley locator,*
- d) *moving a number of the containers to a surface of a collation module of collating means to form a group of containers to be loaded onto a specific shelf,*
- e) *providing an inserter including a loading head and a lift and rotate unit and moving the surface on which the group of containers are located to the height of the said specific shelf; and*
- f) *wherein the said loading head includes a top guide element, a base locator to locate and clamp the said specific shelf in position with respect to said surface so that the same are substantially parallel and side clamp element surfaces, and*
- g) *moving said side clamp element surfaces to contact with opposing side walls of the trolley and*
- h) *moving the same outwardly in advance of the movement of the articles onto the said specific shelf in order to increase the width and temporarily enlarge the dimension of the opening into the trolley above the said specific shelf and through which the said group of containers are moved onto said specific shelf, and*
- i) *moving the group of containers onto the shelf, and*
- j) *said base locator, side clamp element surfaces and top guide element act as a former or shoe and moving the said group of containers through the same and onto the said specific shelf of the trolley.*

9. Figure 2 below illustrates the trolley of the claims having a base 20, side walls 14, 16, a rear wall 18 and a door 26 shown in an open position that can be moved into a closed position as indicated by arrow 28. A series of shelves 34 are provided onto which containers are placed.
10. Figures 3, 4 and 5 below illustrate the apparatus for loading containers onto the trolley. A collation unit 105 groups and orientates the containers and an inserter 104 provides linear movement of the containers into the loading head 102, which is movable under the influence of a lift and rotate unit 101 to allow surface 115 to be brought into alignment with a specific shelf 34 on the trolley. Most notably, as illustrated in figure 4, the loading head 102 includes a base locator 114, side wall elements 113 and top guide element 112 that act as a former or shoe as the container group is transferred into the trolley. The side wall elements 113 apply force to spread the trolley side walls apart to their maximum opening width as indicated by arrows 62 and 64 prior to transferring the group of containers onto the specific shelf of the trolley.

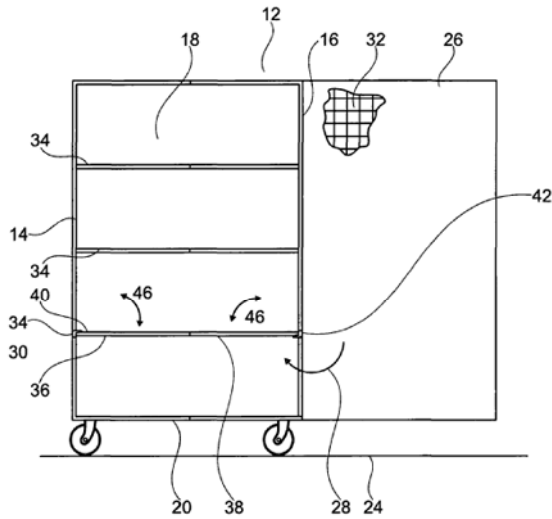


Fig. 2

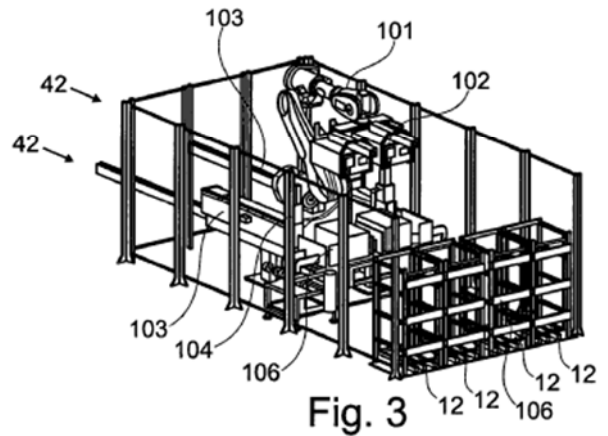


Fig. 3

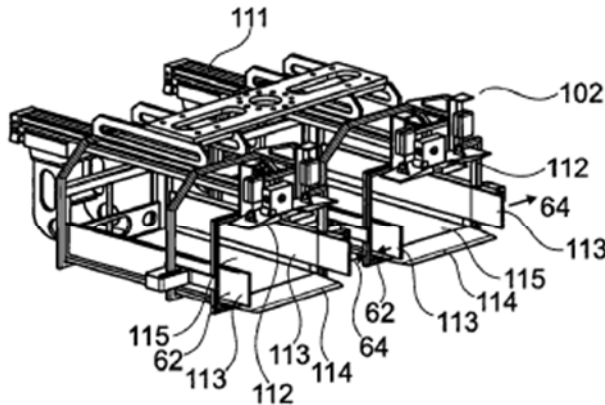


Fig. 4

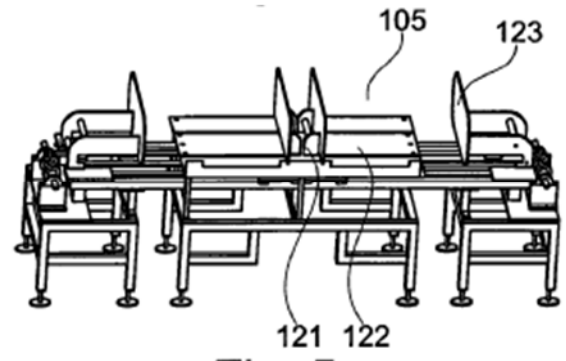
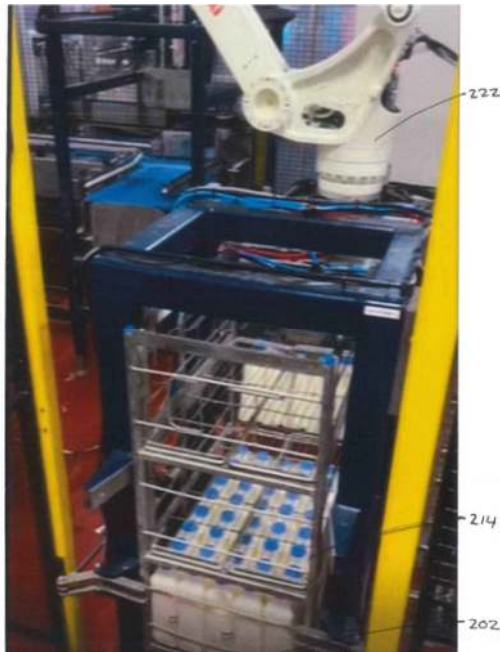
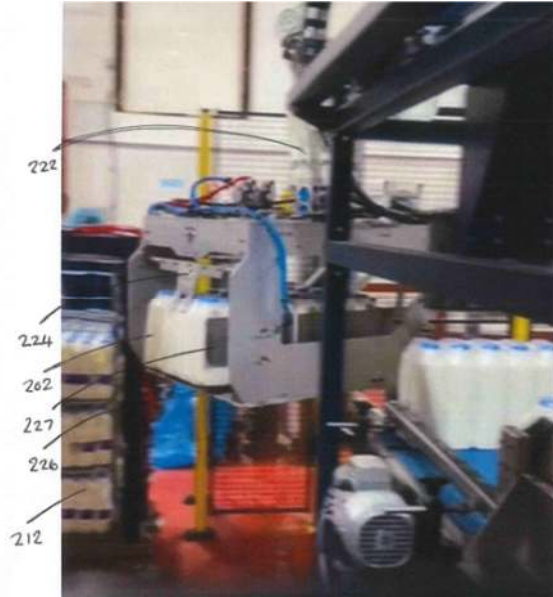


Fig. 5

The AcePak UK Limited apparatus

11. A video accompanying the request shows the AcePak UK Limited apparatus in operation. Various still frames from this video are also provided, some of which are reproduced below (with labels applied by the requester). Using the terminology of the claims, the frames below show a "collation module" 216 that receives a "group of said containers" 202 and a "lift and rotate unit" 222 for moving the surface on which the "said group of containers" 202 are located. A "top guide element" 224, "side clamp elements" 227 and "base locator" parts 226, 226' are shown as parts of a "loading head" as the "lift and rotate unit" 222 moves the "group of containers" 202 towards the "front access opening" 212 of the trolley. The lower frames below show front and rear view as the "containers" 202 are being moved onto the "specific shelf" 214 of the "trolley".



Infringement

12. Section 60 of the Patents Act governs what constitutes infringement of a patent:

(1) Subject to the provision of this section, a person infringes a patent for an invention if, but only if, while the patent is in force, he does any of the following things in the United Kingdom in relation to the invention without the consent of the proprietor of the patent, that is to say -

(a) where the invention is a product, he makes, disposes of, offers to dispose of, uses or imports the product or keeps it whether for disposal or otherwise;

(b) where the invention is a process, he uses the process or he offers it for use in

the United Kingdom when he knows, or it is obvious to a reasonable person in the circumstances, that its use there without the consent of the proprietor would be an infringement of the patent;

(c) where the invention is a process, he disposes of, offers to dispose of, uses or imports any product obtained directly by means of that process or keeps any such product whether for disposal or otherwise.

13. In the Supreme Court in *Actavis v Eli Lilly*¹, Lord Neuberger stated that the problem of infringement is best approached by addressing two issues, each of which is to be considered through the eyes of the notional addressee of the patent in suit, i.e. the person skilled in the relevant art. Those issues are:

(i) does the variant infringe any of the claims as a matter of normal interpretation; and, if not,

(ii) does the variant nonetheless infringe because it varies from the invention in a way or ways which is or are immaterial?

14. If the answer is “yes”, there is infringement; otherwise there is not.

Claim construction

15. Before I can determine whether the patent is infringed by the AcePak apparatus, I must first construe the claims. This means interpreting the claims in light of the description and drawings as instructed by section 125(1) of the Patents Act. In doing so, I must interpret the claims in context through the eyes of the person skilled in the art. Ultimately, the question is what the person skilled in the art would have understood the patentee to be using the language of the claims to mean. This approach has been confirmed in the High Court in *Mylan v Yeda*² and the Court of Appeal in *Actavis v ICOS*³.

16. Section 125 of the Act states that:

(1) For the purposes of this Act an invention for a patent for which an application has been made or for which a patent has been granted shall, unless the context otherwise requires, be taken to be that specified in a claim of the specification of the application or patent, as the case may be, as interpreted by the description and any drawings contained in that specification, and the extent of the protection conferred by a patent or application for a patent shall be determined accordingly.

17. Neither the requester nor the observer has provided a specific definition of the person skilled in the art. However, the patent specification provides background information, summarised in paragraphs 5 to 7 above, that could reasonably be attributed to the skilled person as their common general knowledge. Such a skilled person would be an engineer or technician working on automated loading and packaging apparatus.

18. The observer has highlighted the interpretation of some significant terms in the claims, which I will now outline in the light of the description:

¹ *Actavis UK Limited and Others v Eli Lilly and Company* [2017] UKSC 48

² *Generics UK Ltd (t/a Mylan) v Yeda Research and Dev. Co. Ltd & Anor* [2017] EWHC 2629 (Pat)

³ *Actavis Group & Ors v ICOS & Eli Lilly & Co.* [2017] EWCA Civ 1671

The “*top guide element 112*” is described, in the first paragraph of page 8, as ‘*controlling the height at which the container group is moved through into the trolley shelf*’;

The “*base locator 114*” is described, in the third paragraph of page 8, as ‘*locating the specific trolley shelf and clamps it to the underside thereby ensuring that the specific trolley shelf is parallel with the surface 115 from which the container group is being transferred*’;

The “*side clamp element surfaces 113*” are described, in the second paragraph of page 8, as (i) ‘*acting as a funnel as the containers are inserted into it by the inserter 104*’ and (ii) ‘*contacting with the side walls of the trolley which is to be loaded with the containers and apply force to spread the trolley side walls apart to their maximum possible opening width as indicated by arrows 62,64 prior to transferring the group of containers into the trolley and onto the specific shelf*’. Additionally, in paragraph 1 of page 10, reference is made to the “*side wall elements 113*”, which are evidently the same as the “*side clamp element surfaces 113*”. These “*side wall elements 113*” are described as ‘*advancing into the trolley ahead of the containers*’ and ‘*contacting the side walls of the trolley at and/or above the height of the shelf at which the containers are to be introduced so as to bow the side walls outwardly and increase the available space into the opening*’;

Finally, the second paragraph of page 8 describes, “*the base locator 114, side walls 113 and top guide element 112 to act as a former or shoe as the container group is transferred into the trolley*” and the fifth paragraph of page 9 adds, “*The sidewalls 113, base locator 114 and top guide element act, in conjunction, as a shoe or former which defines an aperture which is of a size which matches the size of the opening into the trolley shelf and therefore defines the available space for the containers to be moved onto the shelf. This therefore prevents any snagging of the containers on the trolley as they are moved into position*”.

Does the AcePak apparatus infringe the patent as a matter of normal interpretation?

19. Firstly, the observer notes that the AcePak apparatus does comprise a “*top guide element*” as part of a “*loading head*” but contends that it operates to stop the containers from sliding out before they have been located on the trolley shelf and it neither controls nor defines any height. However, whilst the patent application does describe the “*top guide element*” performing this function (as noted in paragraph 18 above), I note that this is not a limitation defined in either of independent claim 1 or independent claim 5. Hence, I am of the opinion that an infringing “*top guide element*” would not necessarily need to control or define a height.
20. The observer also notes that the AcePak apparatus comprises a “*base locator*”, but it does not provide a clamping function to the specific shelf. This clamping function is an essential feature of the invention as defined in feature e) of claim 1 and feature f) of claim 5. The requester states that the “*base locator*” element of the AcePak apparatus does clamp down onto the top surface of the shelf, highlighting a section of the video during which the surface from which the containers are being transferred

is aligned with the shelf to allow a smooth sliding movement of the group of containers onto the shelf. On the video, there is a noise just prior to the transfer of the containers onto the shelf that may be the base locator making contact with the shelf. But, there is no evidence that this contact is a clamping action. I believe that a skilled person would understand the term '*clamp*' as interpreted in the light of the description to require more than mere contact between the "*base locator*" and "*trolley shelf*" but, rather, require some means of temporarily securing or fixing between the two. Hence, based on the video of the AcePak apparatus, I do not believe that there is a "*base locator*" that '*clamps the said specific shelf in position*'.

21. The observer also admits that the AcePak apparatus has "*side clamp*" elements but suggests that there are no moving "*surfaces*" associated with them. In particular, the observer contends that there are no means whereby the space above the shelf and through which the containers are moved is temporarily enlarged by increasing the width of the trolley. The requester highlights sections of the video that show the "*side clamp*" elements of the AcePak apparatus moving inwardly, i.e. to hold the containers in place before being moved to the trolley shelf, and then moving outwardly before the containers are moved onto the trolley shelf. However, again I do not see any conclusive evidence in the video to show that these "*side clamp*" elements "*contact with opposing side walls of the trolley to move the same outwardly*" such that the "*space at the opening into the trolley*" is "*temporarily enlarged by increasing the width*" (as required by feature *f*) of claim 1 and feature *h*) of claim 5). Whilst it seems that the "*side clamp*" elements of the AcePak apparatus will necessarily make "*contact with opposing side walls of the trolley*", I do not believe that this "*contact*" is sufficient to "*move the [side walls of the trolley] outwardly*". As indicated in paragraph 18 above, a skilled person would understand that the "*contact... to move the [side walls of the trolley] outwardly*" would require applying force to spread the trolley side walls apart in advance of the containers being moved onto the trolley shelf and this is not shown in the video.
22. Finally, the observer contends that the "*top guide element*", "*base locator*" and "*side clamp*" elements of the AcePak apparatus do not form a "*former or shoe*" to assist in guiding the containers onto the trolley. The expression "*former or shoe*" can be interpreted in the light of the description to mean an aperture or opening of a size which matches the size of the opening into the trolley shelf and therefore defines the available space for the containers to be moved onto the shelf. As such, I believe that the "*top guide element*", "*base locator*" and "*side clamp*" elements of the AcePak apparatus do form a "*former or shoe*" to assist in guiding the containers onto the trolley.
23. Therefore, I am of the opinion that the AcePak apparatus does not infringe the patent as a matter of normal interpretation since the evidence presented does not clearly show features *e*) and *f*) of claim 1 or features *f*) and *h*) of claim 5.

Does the AcePak apparatus infringe the patent because it varies in an immaterial way?

24. In *Actavis v Eli Lilly*¹, the Court provided a reformulation of the three questions in *Improver*⁴ to provide assistance in determining whether a variant infringes. These reformulated questions are:

(i) *Notwithstanding that it is not within the literal meaning of the relevant claim(s) of the patent, does the variant achieve substantially the same result in substantially the same way as the invention, i.e. the inventive concept revealed by the patent?*

(ii) *Would it be obvious to the person skilled in the art, reading the patent at the priority date, but knowing the variant achieves substantially the same result as the invention, that it does so substantially the same way as the invention?*

(iii) *Would such a reader of the patent have concluded that the patentee nonetheless intended that strict compliance with the literal meaning of the relevant claim(s) of the patent was an essential requirement of the invention?*

25. To establish infringement in a case where there is no literal infringement, the answer to the first two questions would have to be “yes” and the answer to the third question would have to be “no”.

26. Considering the first variant – feature e) of claim 1 and feature f) of claim 5 – it could be argued that the “*base locator*” of the AcePak apparatus does achieve substantially the same result as the “*base locator*” of the patent, namely to ensure that the surface from which the containers are transferred and the shelf of the trolley “*are substantially parallel*”, and that this is done in substantially the same way, i.e. although no literal ‘*clamping*’ is performed by the “*base locator*”, it does necessarily make contact with the trolley shelf and prevents a certain degree of movement whilst the containers are being transferred. And, given that the patent specification as a whole provides very little detail about the ‘*clamping*’ function of the “*base locator*”, it could also be argued that a reader of the patent would have concluded that a strict compliance with the literal meaning was not intended by the patentee. Hence, in my view, the answers to questions (i) and (ii) above could reasonably be “yes” and the answer to question (iii) could be “no”.

27. However, considering the second variant – feature f) of claim 1 and feature h) of claim 5 – I believe that the “*side clamp*” elements of the AcePak apparatus do not achieve the same result as the “*side clamp surface elements*” of the patent, namely to “*move the [side walls of the trolley] outwardly in advance of the movement of the group of containers onto the said specific shelf*” and “*to increase the width and temporarily enlarge the dimension of the opening into the trolley*”. There is no evidence that the “*side clamp*” elements of the AcePak apparatus achieve this result and so it follows that a person skilled in the art would not consider the AcePak apparatus to be achieving this result in substantially the same way. Therefore, my answer to questions (i) and (ii) above would be “no”. For completeness, I also consider that a reader of the patent would conclude that the patentee intended strict compliance with the literal meaning of this variant, i.e. there must be a literal outward movement and increased width of the opening of the trolley by the applied force of the “*side clamp*” elements. Hence, my answer to the third question is “yes”.

28. Therefore, in my opinion, the AcePak apparatus does not vary from the patent in a way that is immaterial, particularly with respect to feature f) of claim 1 and feature h) of claim 5.

Opinion

29. It is my opinion that the AcePak UK Limited apparatus does not infringe the patent, GB 2533869 B.

Application for review

30. Under section 74B and rule 98, the proprietor may, within three months of the date of issue of this opinion, apply to the comptroller for a review of the opinion. An application for a review of the opinion may only be made on the ground that, by reason of its interpretation of the specification of the patent in suit, the opinion wrongly concluded that a particular act did not or would not constitute an infringement of the patent.

Dan Hickery
Examiner

NOTE

This opinion is not based on the outcome of fully litigated proceedings. Rather, it is based on whatever material the persons requesting the opinion and filing observations have chosen to put before the Office.