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Datasheet for the decision of 14 May 2025

Case Number: T 1710/22 - 3.5.01

Application Number: 16168882.5

Publication Number: 3104313

IPC: G06Q10/04, G06Q10/08, B65G57/09, B65G57/03, B65G61/00

Language of the proceedings: EN

Title of invention:
PALLET BUILDING SYSTEM

Applicant:
Symbotic LLC

Headword:
Pallet load/SYMBOTIC

Relevant legal provisions:
EPC Art. 56, 84
RPBA 2020 Art. 13(2)

Keyword:
Claims - clarity - main request (no)
Inventive step - placing shipping packages within a stack on a pallet on top of each other (no - obvious)
Amendment after notification of Art. 15(1) RPBA communication - taken into account (auxiliary request - no)

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Case Number: T 1710/22 - 3.5.01

D E C I S I O N
of Technical Board of Appeal 3.5.01
of 14 May 2025

Appellant: (Applicant)	Symbotic LLC 200 Research Drive Wilmington, MA 01887-4442 (US)
Representative:	Santarelli Tour Trinity 1 bis Place de la Défense 92400 Courbevoie (FR)
Decision under appeal:	**Decision of the Examining Division of the European Patent Office posted on 3 January 2022 refusing European patent application No. 16168882.5 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman	W. Chandler
Members:	L. Falò
	E. Mille

Summary of Facts and Submissions

I. This is an appeal against the examining division's decision to refuse European patent application No. 16168882.5.

II. The examining division refused the main request under Articles 123(2), 84 and 56 EPC. An auxiliary request was not admitted under Rule 137(3) EPC. The following prior art document was cited, among others, in the decision:

D6 Abdou ET AL: "*A systematic approach for the three-dimensional palletization problem*", International Journal of Production Research, vol. 32, 1 January 1994 (1994-01-01), pages 2381-2394, XP055363918.

III. In the statement setting out the grounds of appeal, the appellant requested that the decision under appeal be set aside and a patent be granted on the basis of the sole request filed therewith. Oral proceedings were also requested in case the Board intended to reject the appeal.

IV. In the communication accompanying the summons to oral proceedings, the Board informed the appellant that it was of the opinion that claim 1 of the sole request was unclear and lacked inventive step, and was therefore minded to dismiss the appeal.

V. With a letter dated 12 May 2025 the appellant filed an auxiliary request and provided further arguments in favour of the patentability of the main and auxiliary request.

VI. Oral proceedings were held as a videoconference on 14 May 2025.

VII. Claim 1 of the main request reads:

A pallet load of mixed consumer product shipping packages comprising:

more than one mixed consumer product shipping packages placed into more than one column on a pallet base arranged so as to cover the pallet base, where the pallet load has a predetermined maximum height;

characterized in that, each of the more than one column are positioned between the predetermined maximum height of the pallet load and a base surface upon which each of the more than one column is seated so that the more than one column are placed adjacent one another to collectively have a length and width that closely match a length and width of the base surface defined by horizontal bounds of a pallet frame of the pallet base so as to cover the base surface, each of the more than one column is a freestanding and non-intersecting stack that extends from the base surface independent of each other, and stable so as to be resistant to toppling or collapse when subjected to expected contact during build of the pallet load by an automated palletizer, between the base surface and the predetermined maximum height, at least one of the independent columns being formed of non-intersecting packages of different heights and having different package base dimensions.

VIII. Claim 1 of the auxiliary request adds to the same claim of the main request the following feature:

where an aspect ratio of height to width of each case in each level of the column is equal to or less than one

Reasons for the Decision

1. The invention concerns the arrangement of packages on a pallet. Conventional methods require placing packages or cases in layers or stacks. These known methods are said to place undesirable limitations on the way the pallet is loaded and/or to have a detrimental effect on the pallet stability, particularly if the cases or packages have different dimensions (description, paragraph [00013], Figures 1A and 1B).

2. To solve this problem, a pallet is loaded by arranging packages in several free-standing and non-intersecting stacks or columns placed adjacent to each other so as to cover the base surface of the pallet, wherein at least one column is formed of non-intersecting packages of different heights and base dimensions (see for example Figures 5, 5a, 5c).

Main request - Article 84 EPC

3. The Board agrees with the division that, in claim 1, the feature of each column being "*stable so as to be resistant to toppling or collapse when subjected to expected contact during build of the pallet load by an automated palletiser*" is unclear, as the use of the relative term "resistant" does not fully define the conditions under which a column can be considered stable.

4. The appellant argued essentially that the expression "stable" referred to a product stack or column and was clear and readily determinable by the skilled person, as exemplified in the video "*Outbound Cell: Palletize for Maximum Density*". Furthermore, the claim clearly defined stability as the resistance to toppling and collapse. Stability of the columns was not a result to be achieved, but a structural requirement well defined in the application, in particular on page 28, lines 22 to 26.

5. The Board finds these arguments unconvincing. While both in the claims and the description a stack is considered stable if it is resistant to toppling and collapse during the pallet load building, "resistance" is a relative concept as mentioned above. Any stack will offer some degree of resistance to toppling and collapsing. The passages indicated by the appellant provide a number of parameters which are or may be related to stack stability (stack height, stability of the stack level, stability of the interface between case levels), but it is not explained how these are combined to achieve a stack which can be considered sufficiently resistant in respect of the operations of an automatic palletiser. Hence, the wording of the claim fails to precisely define the subject matter being claimed.

6. In view of the above, the Board judges that claim 1 does not meet the requirements of Article 84 EPC.

Main request - inventive step

7. Document D6 is a suitable starting point for assessing inventive step. It concerns solving "palletization problems", i.e. the automatic loading of boxes of

different sizes on pallets either in different layers or in columns ("Introduction", first three paragraphs), the load having predetermined maximum height (page 2384, last two bullet points).

Within each layer, boxes are arranged in at least two adjacent stacks, at least one of which is formed of packages of different heights and base dimensions (Figure 3, a) to d), Figure 4, a) to b)) and selected so as to optimise the coverage of the pallet area (paragraph 4, "Illustrative example", in particular Tables 1, 7, 8 and 9 and Figures 2 to 3).

The Board interprets the expression "freestanding and non-intersecting stack that extends from the base independent of each other" in claim 1 as indicating that stacks are neither interlocked nor attached to or supported by other (external) elements, which is also the case for the stacks of Figures 2 and 3.

8. The further requirement of the stacks being "*stable so as to be resistant to toppling or collapse when subjected to expected contact during build of the pallet load by an automated palletizer*" is unclear, for the reasons discussed above. It is interpreted, in its broadest sense, as requiring that it is possible to build the stacks using an automated palletiser, which is disclosed in D6 (see Chapter 1, "Introduction", first paragraph).

9. D6 does not disclose the feature of the boxes being "mixed consumer product shipping packages". However, this feature does not define any technical characteristic of the boxes, but only expresses a non-technical requirement as to their content or intended use. Therefore, it cannot support an inventive step.

10. The appellant argued that the expression "non-intersecting packages" was to be interpreted in the sense that the packages in each stack were not "overlapped or fit together via projections or recesses". This excluded, in the appellant's view, interlocking or bridging packages within the same stack, and arguably also disposing packages next to each other within the same layer (see appellant's letter of 12 May 2025, point 1.3, in particular comments about Figures 3 and 4). In D6, on the contrary, the packages were either intersecting or had the same base dimension; hence, building a stack including non-intersecting packages having different base dimensions was not disclosed in the prior art. The overall technical effect was to make it easier for the automatic palletiser to build stacks.

11. The Board observes that, even when accepting the appellant's interpretation of the expression "non-intersecting package", this feature boils down to requiring that the packages within the same stack be placed on top of each other, rather than side by side. This is an obvious, if not the most obvious way of building stacks. The skilled person would readily appreciate its advantages (easier stack planning and building operations) as well as disadvantages (less stability and inefficient use of space). Using packages having different base dimensions within each stack does not provide any further or synergistic technical effect. Hence, no inventive step can be acknowledged in respect of this combination of features.

12. In view of the above, the Board judges that claim 1 of the main request lacks an inventive step over D6.

Auxiliary request - admissibility

13. The auxiliary request was filed after the notification of the communication under Article 15(1) RPBA. It shall, in principle, not be taken into account, unless there are exceptional circumstances which have been justified with cogent reasons (Article 13(2) RPBA).

14. In the present case, the appellant did not provide any reasons justifying the filing of the request at such a late stage of the proceedings, nor can the Board identify any exceptional circumstances which would justify the admission of the request.

15. Accordingly, the Board decides not to admit the auxiliary request in the appeal proceedings.

Conclusion

16. As the only admitted request (main request) is not allowable, the appeal must be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

T. Buschek W. Chandler

Decision electronically authenticated