

Publication in the Official Journal Yes / No

File Number: T 439/88 - 3.2.5
Application No.: 85 306 323.8
Publication No.: 0 174 200
Title of invention: Sheet dispensing method and apparatus

Classification: B65H 7/12, B65H 1/02, B65H 3/06, G07D 1/00

D E C I S I O N
of 9 April 1992

Proprietor of the patent: De La Rue Systems Limited

Headword:

EPC Art. 56

Keyword: "Inventive step (yes, after amendment): combination of means"

Headnote



Case Number : T 439/88 - 3.2.5

D E C I S I O N
of the Technical Board of Appeal 3.2.5
of 9 April 1992

Appellant : De La Rue Systems Limited
De La Rue House
3/5 Burlington Gardens
London W1A 1DL
GB

Representative : Skone, James Robert Edmund
Gill, Jennings & Every
53-64 Chancery Lane
London WC2A 1HN
GB

Decision under appeal : Decision of Examining Division 2.3.08.084 of the
European Patent Office dated 21 April 1988
refusing European patent application
No. 85 306 323.8 pursuant to Article 97(1) EPC.

Composition of the Board :

Chairman : C. Payraudeau
Members : M. Liscourt
A. Burkhart

Summary of Facts and Submissions

- I. European patent application No. 85 306 323.8 (publication No. 0 174 200) was refused by decision of the Examining Division.

- II. The reason for the refusal was that the subject-matter of the two independent Claims 1 and 4 did not involve an inventive step within the meaning of Art. 56 EPC in view of the following document:

US-A-4 318 484 (D1).

- III. According to the Examining Division's opinion, the claimed method for sorting out sheets only differs from the method described in D1 in that the presence of a store is explicitly mentioned and in that the withdrawal of further sheets from the store is prevented while a sheet is still in the transport device.

Since it would be obvious to apply the method of D1 with a store for the sheets without any difficulty and since the skilled person would be aware of the problem of possible jamming, he would be led to adopt in a compact apparatus, the solution chosen by the Applicants.

- IV. The Appellants lodged an appeal against this decision.

- V. In their statement of grounds, they essentially submitted that the device of D1 forms part of a more complex feed system which is not disclosed, this being shown for example by the fact that the same common motor M1 drives the conveying rollers and belts. Therefore, a skilled person would not consider the device of D1 as constituting a self-contained device in its own right.

In particular, D1 does not disclose a sheet store nor any means for preventing the sheets from being withdrawn from the store nor the feature that if a further sheet is to be dispensed then steps a) etc. are repeated. It is to be noted that the step of preventing sheets from being withdrawn from the store is entirely new and is not mentioned or suggested in the other document cited during the examining procedure i.e. GB-A-1 532 019 (D2) which relates to a continuous flow through machine.

In support of their argumentation, the Appellants filed statutory declarations of Professor Wray, of Mr Clayforth-Carr and of the inventor Mr Martin as well as a letter of the British Department of Trade and Industry granting to the Company of the inventor a financial support to develop the invention.

VI. In a communication pursuant to Article 110(2) EPC, the Board of Appeal drew the Appellants' attention to document D2, the teaching of which could be combined with the teaching of D1 to arrive at the subject-matter claimed in the patent application in suit.

VII. In answer to this communication and to two further communications of the Board, the Appellants filed a new introduction to the description and a new set of 10 claims the only independent claim of which reads as follows:

"Sheet dispensing apparatus comprising a sheet store (1); first detection means (13, 13'); and a feed system (3, 16) for withdrawing single sheets from the store (1) and feeding them in a first direction to an output station (19) or, when an incorrect feed is detected by the first detection means, in a second direction to a reject position; wherein the feed system comprises first feed means (3) for withdrawing single sheets (2) from the store

(1) and second feed means (16) for feeding the sheets from the first feed means (3) in a first direction to an output station (19), characterised in that the arrangement is such that sheets are fed to the second feed means (16) by the first feed means; in that the first detection means comprises a pair of juxtaposed rollers (13, 13'); in that the second feed means (16) is reversible relative to the first feed means whereby, when an incorrect feed is detected by the first detection means, the or each incorrectly fed sheet is passed by the second feed means (16) in the second direction, opposite to the first direction, to the reject position (20); and in that the apparatus further comprises withdrawal prevention means controllable, when a fed sheet has been detected, to prevent withdrawal of a further sheet from the store (1) until the fed sheet has left the second feed means (16)."

VIII. The Appellants request with their letter dated 22 May 1991 the grant of the patent on the basis of the following documents:

Description: page 1 filed on 29 October 1990 with letter dated 25 October 1990,
page 2 filed on 23 May 1991 with letter dated 22 May 1991,
pages 3 to 8 as originally filed;

Claims: 1 to 3 filed on 23 May 1991 with letter dated 22 May 1991,
4 to 10 filed on 29 October 1990 with letter dated 25 October 1990;

Drawings: Figures 1 and 2 (sheet 1/3) filed with letter dated 25 October 1990 on 29 October 1990,
Figures 3 to 5 (sheets 2/3 and 3/3) as originally filed.

Reasons for the Decision

1. The appeal is admissible.

2. Novelty

2.1 The Board of Appeal is, contrary to the Examining Division, of the opinion that D2 and not D1 represents the closest state of the art because it discloses (see Figures 1A and 1B) a sheet dispensing apparatus comprising a sheet store 2, first detection means 4 and a feed system 3 for withdrawing single sheets from the store 2 and feeding them in a first direction to an output station 51 or when an incorrect feed (soiled or unidentifiable paper sheets) is detected by the first detection means 4, in a second direction to a reject position (by actuation of diverting gates 55 or 56 in other directions to reject boxes 52 or 53); wherein the feed system comprises first feed means 31, 36, 37 for withdrawing single sheets from the store 2 and second feed means 38a and 40 for feeding the sheets from the first feed means 3 in a first direction to an output station 51.

2.2 The apparatus as claimed in the present Claim 1 differs from the apparatus of D2 essentially in that the second feed means is reversible, in that the incorrectly fed sheets are passed by the second feed means in a second direction which is opposite to the first direction and in that it comprises withdrawal prevention means to prevent, when a fed sheet has been detected, withdrawal of a further sheet from the store until the fed sheet has left the second feed means.

2.3 The apparatus of D1, on the other hand, discloses a mechanism having a feeding system comprising a first feed means consisting of feeding rollers 5 and 6 and a second feed means constituted by co-operating belts 11 and 12, detecting means 8 for detecting the presence of more than one article between the belts and control means for reversing the motor driving the belts to feed the so detected articles rearwards and discharge them in a collecting box. Although D1 discloses the principle of reverting the feeding direction of the sheets to discharge them in a reject position, it does not show any storage means nor any means for controlling the feeding of the sheets from the store, the feed rollers as well as the feeding belts being driven by the same motor M1.

2.4 The apparatus which is the subject-matter of the present Claim 1 is therefore novel in the meaning of Article 54 EPC.

3. Inventive step

3.1 According to the application as filed, the purpose of the invention is to provide a very simple bank notes dispensing apparatus of relatively small dimensions which is nevertheless fully reliable and secure in its functioning.

3.2 Starting from D2 considered as representing objectively the nearest prior art, the aim of the invention may be seen in simplifying the construction of the apparatus and reducing its dimensions while insuring a fail-safe functioning and avoid jamming of the sheets which may happen in the feeding path of the apparatus of D2.

- 3.3 To this end the apparatus of the invention uses means for reversing the second feed means as taught by D1 which presents the advantages of reducing the dimensions of the apparatus since the length of the second feed means may therefore be reduced in comparison to the feed means of the apparatus of D2. Therefore one could consider that this feature results from the simple combination of D2 with D1 and would be obvious to the man skilled in the art. However, the apparatus as claimed in the present Claim 1 comprises the additional feature of withdrawal prevention means, controllable to insure that a new sheet is only fed when no more sheets are present between the belts of the second feed means. This feature allows the construction of a very compact apparatus since it allows to position the two feeding means very close to each other.
- 3.4 Neither D1 nor D2 discloses or suggest such a feature. It is also to be noted that the aim of the present invention i.e. to construct a simple and small but secure bank notes dispensing apparatus is not addressed by these documents of the prior art which relate to "usual" bank notes dispensing apparatus which need not be necessarily small and simple as rightly submitted by the Appellants.
- 3.5 The apparatus which is the subject-matter of Claim 1 satisfies therefore the requirements of Article 52(1) and 56 EPC.
- 3.6 Dependent Claims 2 to 10 deal with particular embodiments of the apparatus according to Claim 1. They are therefore also allowable, for the same reasons.

Order

For these reasons, it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to grant a patent on the basis of the documents as submitted by the Appellant in its request dated 22 May 1991 (see section VIII above).

The Registrar:

The Chairman:

A. Townend

C. Payraudeau