BESCHWERDEKAMMERN DES EUROPÄISCHEN PATENTAMTS

BOARDS OF APPEAL OF THE EUROPEAN PATENT OFFICE

CHAMBRES DE RECOURS DE L'OFFICE EUROPEEN DES BREVETS

Publication in the Official Journal Yes / No

File Number: T 159/91 - 3.2.2

Application No.: 86 309 600.4

Publication No.: 0 227 376

Title of invention: Coding boxes

Classification: B41K 3/08

D E C I S I O N
of 15 January 1992

Applicant: R.E. BOWERS & FREEMAN LIMITED

Headword:

EPC Article 56

Keyword: "Inventive step - yes (after amendment)"

Headnote

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number : T 159/91 - 3.2.2

D E C I S I O N
of the Technical Board of Appeal 3.2.2
of 15 January 1992

Appellant : R.E. BOWERS & FREEMAN LIMITED
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Representative : SERJEANTS
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Decision under appeal : **Decision of Examining Division 2.3.04.086 of the European Patent Office dated 1 October 1990 refusing European patent application No. 86 309 600.4 pursuant to Article 97(1) EPC.**

Composition of the Board :

Chairman : G.S.A. Szabo
Members : W.D. Weiss
J.H. van Moer

Summary of Facts and Submissions

I. European patent application No. 86 309 600.4, filed on 10 December 1986, published under No. 0 227 376, was refused by a decision of the Examining Division, dated 1 October 1990.

II. The reason given for the decision was that the then pending independent Claim 1, which had been filed with a letter dated 19 August 1988, failed to involve an inventive step having regard to the documents

(D1) US-A-3 916 783,
(D2) FR-A-497 756, and
(D3) US-A-4 453 468.

III. A Notice of Appeal was filed against this decision on 19 November 1990 and the appeal fee paid simultaneously. The Statement of Grounds was filed on 8 January 1991.

IV. In response to a communication issued by the Board, the Appellant filed an amended set of three claims on 7 August 1991. An amended version of this Claim 1 was submitted by telecopy on 8 January 1992. This Claim 1 reads as follows:

"1. A coding box suitable for a hot foil printing machine, which comprises a frame (12) for attaching to the printing machine, a number of print wheels (14) rotatable about a shaft (16) with respect to the frame (12), each print wheel (14) having a number of outward-facing peripheral flats bearing indicia; a first rod (20) extending parallel to the shaft (16) and radially offset therefrom, the rod (20) being securable to the frame (12) in a set position to set the wheels (14) in desired orientations with respect to the frame;

characterized by each wheel (14) having a through-hole (18) corresponding to each flat, said through-holes (18) being located and adapted for the first rod to pass therethrough when being in the said set position, the said first rod (20) passing through a first through-hole in the frame and being axially movable between the said set position and a retracted position in which the said wheels are free to rotate about the said shaft (16), means for locking the first rod (20) in its set position, a second rod (24) fast with respect to and parallel to the first rod (20) and having an enlarged distal end (24a), and a second through-hole in the frame (12) radially offset from the shaft and adapted and located for the said second rod to be axially movable therethrough and for engagement with the said enlarged distal end (24a) to prevent complete removal of the first rod (20) from the frame (12) and to define its retracted position."

The dependent Claims 2 and 3 relate to particular embodiments of the coding box according to Claim 1.

V. The Appellant has brought forward the following arguments on behalf of an inventive step:

The document (D2) concerned a hand stamp and, therefore, constituted a state of the art remote to and incompatible with a coding box which is to form an integral part of a hot foil printing machine. If nevertheless it would be considered to use the disclosure of (D2) to modify a coding box as disclosed in either (D1) or (D3), the resulting device would not comprise all the features of Claim 1 and not solve the basic technical problem of the application in suit.

VII. The Appellant requests grant of the patent on the basis of the following documents:

Claims: Claim 1 filed by telecopy on 8 January 1992 and confirmed by letter received on 13 January 1992; Claims 2 and 3 filed on 7 August 1991 with letter dated 30 July 1991;

Description: Pages 1, 3, 4, and 5 as originally filed, page 2 filed by telecopy on 8 January 1992 a confirmed by letter received on 13 January, and pages 2a, and 6 filed on 7 August 1991 with letter dated 30 July 1991;

Drawings: Sheets 1/5 to 5/5 as originally filed.

Oral Proceedings were requested on an auxiliary basis.

Reasons for the Decision

1. The Appeal is admissible.

2. Amendments

The amended Claim 1 is based on the features of the originally filed Claims 1 and 2 which have been completed by features which are explicitly disclosed in the description of the "Best Mode". The additional feature that the first and second rods are positioned radially offset from the shaft is clearly and unambiguously derivable from the Figures 2b and 4 as being essential for the intended locking function.

Dependent Claims 2 and 3 are identical with the original Claims 3 and 4.

Therefore, the current version of the claims does not contravene Article 123(2) EPC.

3. State of the Art

Of the documents cited in the Search Report, only the documents (D1) and (D3) concern coding boxes for a hot foil printing machine, which comprise a frame for attaching to the printing machine. All the other documents relate to hand operated stamping devices.

Document (D3), however, functions on the basis of replaceable types which are held in a side-by-side position by a permanent magnet acting on their bases. Document (D1) discloses a coding box which comprises all the features of the preamble of Claim 1.

The Board is, therefore, in agreement with the Appellant that document (D1) is the closest prior art.

4. Novelty

The coding box disclosed in document (D1) has none of the characterising features of Claim 1. In particular, this coding box does not have a second rod fast with respect to and parallel to the first rod which interacts with the frame to define a retracted position.

The coding box disclosed in document (D3) (in particular Figures 6 and 7) does not have print wheels which are rotatable about a shaft, but print type blocks (53) are fixedly connected to a rotatable print head (51). Here the message to be printed is not changed by rotation of a respective print wheel relative to its neighbours and to the print head, but by replacement of the respective type

block which is held in its position on the print head (51) by magnetic means (62).

The other documents cited in the Search Report disclose hand operated stamps and not a coding box which is intended to form the part of a hot foil printing machine. The stamp comprises features which are very different from those now operative in the machine in the present case.

Thus the subject-matter of Claim 1 is novel in view of all the documents cited.

5. Problem and solution

Document (D1) (in particular Figures 18 to 20, column 8, line 48, to column 9, line 38) discloses a coding box which comprises all the features in the first part of Claim 1. Here the print wheels are locked relative to the frame in their respective printing position by a locking spindle (326) which, removably extending from a through hole in the frame, rests in peripheral grooves one of which corresponds to one peripheral flat of the respective print wheel.

The Appellant explains (EP-A-0 227 376, column 1, lines 14 to 26) that the vibratory and hot conditions under which these coding boxes have to operate when being bolted on a hot foil printing machine tend to wear the centring mechanism which warrants that the printing be even. It follows that in the particular case of the coding box disclosed in document (D1) the peripheral grooves may be gradually widened by abrasion and or deformation thus resulting in an unclear print image due to a slack of the respective print wheel.

Coding boxes of the type disclosed in document (D1) serve to print information on the respective article which

information, like production date and times as well as material specifications, have often to be actualised and therefore require an easy but precise handling of the readjustment mechanism of the print wheels. It is evident that the completely removable locking spindle (326) of the known coding box is unsatisfactory also in this respect.

The application under Appeal aims at avoiding these disadvantages of the prior art.

The characterising features of Claim 1 essentially solve this problem by providing a second rod which is fast with respect to and parallel to the first rod and which has an enlarged distal end. The first rod is adapted to pass through a through-hole in the frame and through through-holes corresponding to each flat in each print wheel, whereas the second rod is adapted to pass through a second through-hole in the frame, which is radially offset from the central shaft, which through-hole engages with the enlarged distal end of the second rod to prevent the complete removal of the first rod from the frame and to define its second (retracted) position. Locking means avoid the unintentional withdrawal of the rods from their first (set) position.

6. Inventive Step

Document (D2) relates to a hand operated stamp which comprises a frame (f^1) a number of print wheels (k) rotatable about a shaft (i) with respect to the frame, each print wheel (k) having a number of outward-facing peripheral flats (k^1) bearing indicia. The stamp comprises a first rod extending parallel to the shaft (i) and radially offset therefrom, the first rod passing through a first through-hole in the frame and being securable to the frame (f^1) in a set position to set the wheels in desired

orientations with respect to the frame. Moreover, the print wheels (k) of this known stamp have a through-hole (k^2) corresponding to each flat (k^1) which is adapted for the first rod to pass therethrough when being in the set position and is axially movable to be completely removed from the stamp to leave the wheels free to rotate about the said shaft (i). The stamp further comprises a second rod having an enlarged distal end (m^1) which enlarged distal end serves for locking the first rod in its set position.

Hand operated stamps of the kind disclosed in document (D2) are historical predecessors of the coding boxes for hot foil printing machines, because they have served to manually imprint product information on goods before the hot foil printing machines were developed which enabled the automatisation of this function. Therefore, the Board shares the view of the Examining Division that a person skilled in the art will principally take into consideration construction elements known from the development of hand operated stamps insofar as he or she is confronted with similar problems when constructing a coding box for a hot foil printing machine.

A stable printing position of the indicia and an easy and precise handling for the adjustment procedure is also a requirement for hand operated stamps although the working conditions are harder for coding boxes integrated in hot foil printing machines. Therefore, the person skilled in the art, when looking for a solution of the problem originating from the coding box disclosed in document (D1) (see point 5 above), would also arrive at document (D2) in the course of his search.

The coding box of document (D1) if amended by the use of constructional elements disclosed in document (D2) should comprise a second rod fast with respect to and parallel to

the first rod and having an enlarged distal end, but would lack all the other characterising features of the valid Claim 1.

Since the enlarged distal end of the second rod in document (D2) exerts the function of "a means for locking the first rod in its set position" and does not cooperate with a second through-hole, this document completely fails to suggest a well defined retracted position in the sense of Claim 1. Therefore document (D2) does not involve an adjustment procedure for the print wheels which is more comfortable than that of document (D1).

Moreover, the measure that in the stamp disclosed in document (D2) the second rod is passes through the centre of a hollow shaft and not radially offset therefrom and through a second through-hole in the frame as suggested in Claim 1 may be sufficient to lock the print wheels of a hand operated stamp, but is not reliable enough to avoid slack of the print wheels under the hot and vibratory conditions present in a hot foil printing machine. Because document (D2) does not relate to this particular application there is also no reason why it should suggest measures to meet such more challenging conditions.

Consequently, a coding box which could be constructed in an obvious manner by modifying the coding box disclosed in document (D1) using features disclosed in document (D2), would not comprise the entire combination of features contained in Claim 1 but lack a plurality of features which are indispensable for a complete solution of the problem on which the application under appeal is based.

The other documents cited in the Search Report fail to contain teaching in this respect either.

For the reasons set out above, the subject-matter of Claim 1 in the Main Request and consequently also of the claims appended thereto, involves an inventive step as defined in Article 56 EPC, and the claims are allowable under Article 52(1) EPC.

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 an order to grant a European patent on the basis of the following documents:

Claims: Claim 1 filed by telecopy on 8 January 1992 and confirmed by letter received on 13 January 1992;
Claims 2 and 3 filed on 7 August 1991 with letter dated 30 July 1991;

Description: Pages 1, 3, 4, and 5 as originally filed, page 2 filed by telecopy on 8 January 1992 and confirmed by letter received on 13 January 1992, and pages 2a, and 6 filed on 7 August 1991 with letter dated 30 July 1991;

Drawings: Sheets 1/5 to 5/5 as originally filed.

The Registrar

N. Maslin

The Chairman

G. Szabo

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