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D E C I S I O N
of 25 November 1998

Case Number: T 0284/94 - 3.4.1

Application Number: 85110444.8

Publication Number: 0172561

IPC: G07B 17/00

Language of the proceedings: EN

Title of invention:

Thermal mechanism for printing fixed and variable information
and postage meter having such a mechanism

Patentee:

Pitney Bowes Inc.

Opponent:

Neopost Ltd.

Headword:

Thermal printing mechanism/ELECTRONIC POSTAGE METER

Relevant legal provisions:

EPC Art. 56, 84, 123(2), 123(3)

Keyword:

"Amendment (not allowable) of European patent application:
limitation of claims by introduction of technical features
selected from the description of an embodiment"
"Inadmissible generalizations (main first auxiliary and second
auxiliary requests)"
"Inventive step (yes) (third auxiliary request)"

Decisions cited:

T 0017/86, T 0416/86, T 0265/88, T 0118/89

Headnote:

- I. An amendment of a claim by the introduction of a technical feature taken in isolation from the description of a specific embodiment is not allowable under Article 123(2) EPC if it is not clear beyond any doubt for a skilled reader from the application documents as filed that the subject-matter of the claim thus amended provides a complete solution to a technical problem unambiguously recognizable from the application.

- II. Nor is an amendment allowable under Article 123(2) EPC which replaces a disclosed specific feature either by its function or by a more general term and thus incorporates undisclosed equivalents into the content of the application as filed.



Case Number: T 0284/94 - 3.4.1

D E C I S I O N
of the Technical Board of Appeal 3.4.1
of 25 November 1998

Appellant:
(Opponent)

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Respondent:
(Proprietor of the patent)

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Decision under appeal:

Decision of the Opposition Division of the
European Patent Office posted 16 February 1994
rejecting the opposition filed against European
patent No. 0 172 561 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: G. Davies
Members: H. K. Wolfrum
U. G. O. Himmler

Summary of Facts and Submissions

I. The mention of the grant of European patent No. 0 172 561 in respect of European patent application No. 85 110 444.8, filed on 20 August 1985 and claiming priority from the application US 642 214 filed in the United States of America on 20 August 1984 was published on 22 May 1991. The patent proprietor is Pitney Bowes Inc.

II. Notice of opposition was filed by Neopost, Ltd. on 24 February 1992 on the ground of lack of inventive step (Articles 52(1) and 56 EPC; Article 100(a) EPC). The opposition was supported by the following prior art documents:

D1: US-A-3 869 986,

D2: GB-A-2 102 740, and

D3: US-A-4 429 318.

In the procedure before the opposition division, the opponent further relied on document:

D4: US-A-4 447 818 mentioned in the European search report.

III. By interlocutory decision dated 16 February 1994 the opposition division rejected the opposition against the aforementioned European patent.

IV. On 5 April 1994 the opponent lodged an appeal against

the decision and paid the prescribed fee. On 6 June 1994 a statement of grounds of appeal was filed.

The appellant argued that the claimed subject-matter lacked inventive step and requested that the contested decision be set aside and the European patent be revoked. A request for oral proceedings was made.

V. By letters received on 26 April 1994 and on 22 December 1994, the respondent (patent proprietor) requested that the appeal be rejected. He requested the maintenance of the patent either as granted (main request) or on the basis of respective amended claims of one of five auxiliary requests filed on 22 December 1994. Oral proceedings were requested if none of the aforementioned requests could be allowed.

VI. Subsequently, the respondent filed amended versions of the auxiliary requests in reaction to objections concerning lack of clarity (Article 84 EPC) and added subject-matter (Article 123(2) EPC) raised by the appellant in various responses. Moreover, there was an exchange of arguments concerning the issue of inventive step. In this context, the respondent referred additionally to document D5: US-A-4 446 467, cited in the patent in suit.

VII. In a communication dated 7 September 1998 accompanying a summons to oral proceedings, the Board informed the parties of its provisional view that the subject-matter of the main request lacked an inventive step. As to the amendments put forward in the first to fourth auxiliary requests, the Board expressed concerns as to the

introduction of subject-matter extending beyond the content of the application as filed (Article 123(2) EPC). With respect to the fifth auxiliary request, the Board pointed to problems concerning lack of clarity (Article 84 EPC).

VIII. On 23 October 1998, the respondent filed an amended main request and first to third auxiliary requests.

IX. Oral proceedings were held on 25 November 1998.

The appellant requested that the decision under appeal be set aside and that the European patent be revoked.

The respondent requested that the appeal be dismissed and the patent be maintained in amended form on the basis of one of the following new requests filed during the oral proceedings:

main request: claims 1 to 12 with the description to be adapted; Figures 1 to 5 as granted;

first auxiliary request: claims 1 to 11 with description and Figures as for the main request;

second auxiliary request: claims 1 to 11 with description and Figures as for the main request; and

third auxiliary request: claims 1 to 11 and columns 1 to 4 and 7 of the description with columns 5 and 6 of the description and Figures as granted.

With regard to the respondent's requests, the matters

for discussion were clarity (Article 84 EPC), the question of introduction of subject-matter extending beyond the content of the application as filed (Article 123(2) EPC), and the question of extension of the protection conferred (Article 123(3) EPC). As a result of this discussion, the Board found that the main request and the first and second auxiliary requests did not comply with the requirement of Article 123(2) EPC and thus were not allowable.

With regard to the third auxiliary request, the issue of inventive step (Articles 52(1) and 56 EPC) was additionally discussed.

X. Independent **claims 1 and 2** of the **main request** read as follows:

"1. A thermal printing mechanism for the printing of indicia and numerical values in a respective fixed and variable format, said thermal printing mechanism comprising:

means defining a tape feed path (40);

means (21) for dispensing tape along said feed path;

a first thermal printing station (20) disposed along said feed path for printing fixed indicia upon said tape;

a second thermal printing station (30) disposed adjacent said first thermal printing station for printing variable information upon said tape, said second thermal printing station including thermal heating elements responsive to voltage impulses initiated by electronic signals related to a numerical

value; and

means (22) for dispensing a thermal ink transfer ribbon (23) between said first and second thermal printing stations and said tape to travel in conjunction with said tape along the tape feed path past the first and second printing stations, whereby ink from the ink transfer ribbon (23) can be transferred to said tape by each of said first and second thermal printing stations operable in sequence and in electrical and mechanical registration with each other to form a composite print on said tape."

"2. An electronic postage meter having a thermal postage printing mechanism for the printing of postage indicia and postal values in a respective fixed and variable format, said thermal postage printing mechanism comprising:

means for defining a postage tape feed path (40);

means (21) for dispensing postage tape along said feed path;

a first thermal printing station (20) disposed along said feed path for printing fixed postage indicia upon said postage tape;

a second thermal printing station (30) disposed adjacent said first thermal printing station (20) for printing variable postage information upon said postage tape, said second thermal printing station (30) including thermal heating elements responsive to voltage pulses initiated by electronic signals related to a postage value; and

means (22) for dispensing a thermal ink transfer ribbon (23) between said first and second thermal printing stations and said postage tape to travel in

conjunction with said tape along the tape feed path past the first and second printing stations, whereby ink from the (common) ink transfer ribbon can be transferred to said postage tape by each of said first and second thermal printing stations operable in sequence and in electrical and mechanical registration with each other to form a composite postage print on said tape."

The wording of independent **claims 1 and 2** of the **first auxiliary request** corresponds to that of claims 1 and 2, respectively, of the main request with the further features that the first thermal printing station includes "a heat source (34) and a rotatable printing drum (27) substantially surrounding said heat source and supporting a screen (33) around a circumferential portion of the drum and containing said fixed indicia". The wording of independent **claims 1 and 2** of the **second auxiliary request** corresponds to that of claims 1 and 2, respectively, of the first auxiliary request with the further feature that the printing mechanism comprises "means (31,26,32,38) to provide support for said tape and said thermal ink transfer ribbon to carry said tape and said thermal ink transfer ribbon into and out of contact with the circumferential portion of the printing drum".

Independent **claims 1 and 2** of the **third auxiliary request** read as follows:

"1. A thermal printing mechanism for the printing of indicia and numerical values in a respective fixed and variable format, said thermal printing mechanism

comprising:

means defining a tape feed path (40);

means (21,39,41) for dispensing lengths of tape along said feed path;

a first thermal printing station (20) disposed along said feed path for printing said fixed indicia upon said tape and including a heat source (34) and a rotatable printing drum (27) substantially surrounding said heat source and supporting a screen (33) around a circumferential portion of the drum and containing said fixed indicia;

a second thermal printing station (30) disposed adjacent said first thermal printing station for printing variable information upon said tape, said second thermal printing station including thermal heating elements responsive to voltage impulses initiated by electronic signals related to a numerical value;

means (22) for dispensing a thermal ink transfer ribbon (23) between said first and second thermal printing stations and said tape to travel in conjunction with said tape along the tape feed path past the first and second printing stations, whereby ink from the ink transfer ribbon (23) can be transferred to said tape by each of said first and second thermal printing stations operable in sequence and in electrical and mechanical registration with each other to form a composite print on said tape; and

an idler belt (31) carried by rollers (26, 32,38) to provide support for said tape and said thermal ink transfer ribbon to carry said tape and said thermal ink transfer ribbon into and out of contact with the circumferential portion of the printing drum."

"2. An electronic postage meter having a thermal postage printing mechanism for the printing of postage indicia and postal values in a respective fixed and variable format, said thermal postage printing mechanism comprising:

means for defining a postage tape feed path (40);

means (21,39,41) for dispensing lengths of postage tape along said feed path;

a first thermal printing station (20) disposed along said feed path for printing said fixed indicia upon said tape and including a heat source (34) and a rotatable printing drum (27) substantially surrounding said heat source and supporting a screen (33) around a circumferential portion of the drum and containing said fixed indicia;

a second thermal printing station (30) disposed adjacent said first thermal printing station (20) for printing variable postage information upon said postage tape, said second thermal printing station (30) including thermal heating elements responsive to voltage pulses initiated by electronic signals related to a postage value;

means (22) for dispensing a thermal ink transfer ribbon (23) between said first and second thermal printing stations and said postage tape to travel in conjunction with said tape along the tape feed path past the first and second printing stations, whereby ink from the ink transfer ribbon (23) can be transferred to said postage tape by each of said first and second thermal printing stations operable in sequence and in electrical and mechanical registration with each other to form a composite postage print on

said tape; and

an idler belt (31) carried by rollers (26, 32,38) to provide support for said tape and said thermal ink transfer ribbon to carry said tape and said thermal ink transfer ribbon into and out of contact with the circumferential portion of the printing drum."

XI. In support of its appeal, the appellant essentially relied on the following submissions:

Amendments

The amendments effected to the main and first to third auxiliary requests of the respondent were derived from the description of the specific embodiment. From this embodiment (cf. Figure 3 and in particular column 6, line 45 to column 7, line 1 of the patent specification) it was evident that it was not a "tape" in the meaning of a continuous entity of unspecified length but rather "tape segments" which were transported to and printed by the thermal printing stations. These tape segments were obtained by making use of cutting means disposed upstream of the first and second thermal printing stations. Since printing onto a continuous tape would not be technically feasible with **thermal** printing means, due to the fact that any portion of a tape not used for printing but remaining together with the ink ribbon in contact with a heated printing head would involve the risk of misprints, the printing of **tape segments** was an essential feature for the claimed mechanism. Thus, apart from the fact that the term "tape" was used in the claims of all requests in a confusing manner and that none of the independent

claims of any of the requests actually defined all the essential features of the printing mechanism so that the requirements of Article 84 EPC were not met, the independent claims defined subject-matter which had no basis in the application documents as filed contrary to the provisions of Article 123(2) EPC.

Inventive step

The closest prior art was document D1 which referred to a printing mechanism of a postage meter. The teaching of this document started from an art (cf. column 1, lines 15 to 26) in which fixed information was printed by a die plate, whereas variable information was printed by mechanically settable printing wheels. D1 replaced the settable printing wheels by an electronically controlled and actuated ink jet printer disposed within a rotating printing drum for printing the fixed information.

Starting from D1, the problem to be solved by the present patent was to be seen in the desire to replace the printing means used according to D1 by thermal printing means. However, neither the principal idea of replacing a mechanical printing drum or an ink jet printer by thermal printing means nor its realization as defined by the independent claims of the third auxiliary request had required the exercise of inventive skill.

The idea as such would have been obvious for instance from document D2 (cf. in particular Figures 3 and 6) showing the use of thermal printing means in an office

environment. When envisaging the use of thermal printing means for the postage meter known from D1, the skilled person would have been faced with a limited number of alternatives, comprising the use of a thermal printer for only one of the printing means while keeping the other, the replacement of both prior art printing means by a single thermal printer, or the replacement of the two prior art printing means by two separate thermal printers. The first alternative would not have been technically meaningful. It would have been for instance technically impossible to dispose a thermal printer within a mechanical printing drum, because such an arrangement would not allow for the required intimate contact between the tape, the ink ribbon and the thermal printer. With respect to the second alternative, the skilled person would have readily recognized that it would result in an unnecessary amount of electronic control, i.e. in a problem as referred to in column 1, lines 28 to 32 of the patent specification. Thus, the skilled person would have been inclined to favour the alternative of providing two separate thermal printing means. In doing so, he would have been aware of the fact that thermal printers cannot be arranged one within the other so that the natural choice would have been to place the two thermal printers adjacent to each other in electrical and mechanical registration to form a composite print. This was all the more true as the prior art referred to in D1 provided an example for the use of a common technology for two printers acting together for forming a composite print, and as it had been known from the prior art given by D3 or D4 to arrange two thermal printers adjacent to each other.

Furthermore, with respect to the provision of an ink transfer ribbon required for the thermal printing, the skilled person would have readily recognized that the provision of two separate ink transfer ribbons had unreasonably increased the expenditure for the apparatus so that, unless specific circumstances had demanded separate ribbons, as for instance the desire to print different colours (cf. D4), he would have used a single ink transfer ribbon travelling in conjunction with the tape past the two thermal printers. This recognition of an advantageous travelling of a single ribbon in synchronism with a tape past thermal printers had provided an additional incentive for placing the two thermal printers adjacent to each other and had even established a technical necessity for arranging the thermal printers to be operable in sequence and in electrical and mechanical registration with each other in order to obtain a proper composite print.

Should the invention now be seen in the specific construction of the first thermal printing station, then this would amount to misleading the public since nothing in the application or patent documents as published had led a skilled reader to think that such details would constitute the invention. This would even give rise to a demand for an additional search to be conducted. Apart from that, the use of a drum carrying a screen for printing the fixed indicia was known from D1. Moreover, any feeding of a tape and ribbon past a drum would have resulted in a contact with a circumferential portion of the drum.

The additional provision of an idler belt for supporting the tape and ribbon to bring it into contact with a thermal printer would have constituted one out of a plurality of possible technical measures for providing the necessary support. It actually did not add any functional aspect to the solution of the problem of replacing the printing means according to D1 by thermal printers so that it should be disregarded when assessing the issue of inventive step. On the other hand, when it came to the support of **tape segments**, an idler belt would have been an indispensable means so that its provision would have been readily taken into consideration by the skilled person. Moreover, the use of belts for the support of a printed sheet was well known in the art, as shown for instance by D2 (cf. belts 106a, 106b and 107a, 107b in Figure 3).

For these reasons, no exercise of inventive skill would have been required to devise a printing mechanism and a postage meter as defined in claims 1 and 2, respectively, of the third auxiliary request.

- XII. The respondent disputed the appellant's view, relying on the following arguments:

Amendments

Main request:

The term "station" for the thermal printing means found support throughout the description. With respect to the further amendments made in the final clause of claims 1 and 2, the basic concept of using a single ink transfer

ribbon common to both printing stations was included in original claims 1 and 21 by defining the dispensing of "a thermal ink transfer ribbon" and referring to "said ribbon". The feature "to travel in conjunction with the tape" was disclosed on page 7, line 29 to page 8, line 1 and page 10, lines 21 to 22 of the published application, corresponding to column 5, lines 35 to 36 and column 7, lines 11 to 12, respectively, of the patent specification. The feature that the printing stations are "operable in sequence and in electrical and mechanical registration with each other" was explicitly given on page 8, lines 15 to 18 and implicit to the information given on page 11, lines 1 to 2, of the published application, corresponding to column 5, lines 52 to 55 and column 7, lines 22 to 24, respectively, of the patent specification.

First auxiliary request:

This request incorporates all amendments made to the main request and defines in addition the structure of the first thermal printing station. This additional definition is a clarified version of the additional features given in original claim 3, corresponding to claim 4 as granted, the clarification being based on page 9, lines 11 to 12 of the application, corresponding to column 6, lines 22 to 24 of the patent.

Second auxiliary request:

This request incorporates all amendments made to the first auxiliary request and defines in addition "means to provide support for said tape and said thermal ink transfer ribbon to carry said tape and said thermal ink

transfer ribbon into and out of contact with the circumferential portion of the printing drum". Although, admittedly, there is no specific disclosure of such means in general, such means have a basis in the drawings and in the passage in page 9, lines 7 to 9 of the application, corresponding to column 6, lines 19 to 21 of the patent.

Third auxiliary request:

Based on the second auxiliary request, this request contains the additional definition of the means to support the tape and the ribbon being "an idler belt carried by rollers". This definition is disclosed on page 9, line 6 of the application, corresponding to column 6, line 17 of the patent.

Even if the amendments were mainly disclosed in the context of a specific embodiment, an applicant or patentee should not be restricted to amendments defining the embodiment as a whole or strictly the details thereof, since this would unduly deprive him of a fair and proper scope of protection. In such cases, it should still be possible to claim on an individual basis features which have a clear basis of disclosure, as was the case for instance for the main request on file, or to even generalize specific features from the disclosure of an embodiment by defining them in relation to their principles of operation, as was the case for the second auxiliary request. The main request on file addressed, in addition to the arrangement of two adjacent thermal printing stations for the formation of a composite print of fixed indicia and variable information, the aspect of a common movement

of the tape and the ink transfer ribbon in synchronism past the two printing stations. These measures would guarantee that an area of the ink transfer ribbon not used by the first printing station occurred at the thermal head of the second thermal printing station. The auxiliary requests additionally specified in increasing detail the aspect of "en-bloc" printing of the fixed indicia. Although the embodiment of Figure 3 of the patent specifically showed an idler belt for supporting the tape and the ribbon, the patentee should be allowed to make an amendment such as that made in the second auxiliary request, which also covered technical equivalents which would have readily come to a skilled person's mind when reading the patent specification.

As to the term "tape", it had the very broad meaning of a flexible, elongate, rectangular entity and clearly encompassed a tape provided for instance on a feed roll as well as long or short segments cut therefrom.

Inventive step

In the present case the claims of all requests involved several levels of inventive subject-matter. The object to be achieved by the combination of features comprised in the main request was to permit rapid thermal printing of complex information in an economical manner. The subject-matter of claims 1 and 2 of the main request, which went much beyond just placing two thermal printers adjacent to each other, was clearly distinguished from the prior art by

- the use of a tape dispenser and a tape feed path,
- the use of first and second thermal printing stations disposed adjacent to each other,
- the use of a common ink transfer ribbon for both printing stations, the tape and the ribbon travelling in synchronism with each other, and
- the arrangement of the printing stations in electrical and mechanical registration with each other so as to avoid double printing.

In contrast thereto, D1 taught the use of either an ink jet printer arranged within a mechanical printing drum or an ink jet printer alone for the printing of fixed and variable information. If a skilled person, starting from this teaching, had contemplated at all the use of thermal printing means he would have provided a thermal printer replacing the ink jet printer and being arranged adjacent the mechanical printing drum or he would have provided a single thermal printer for printing all information. But even if the skilled person had thought of using two separate thermal printers, he would have made use of two printers as disclosed by D2 with two different ink transfer ribbons. Nothing in the prior art had led him to the idea of using a single ribbon allowing for an economical printing by exploiting different areas of the ribbon for the printing of the fixed and variable information.

The subject-matter of the first auxiliary request was

even further distinguished from the prior art by the definition of a specific first thermal printing station which avoided the need for complex electronic control and, by allowing for en-bloc printing of the fixed indicia, resulted in an even further increase in printing speed. None of the prior art documents showed a thermal printing station as defined in the auxiliary requests nor did they give an indication as to thermal en-bloc printing at all.

Finally, the provision of specific means, as defined in the second and third auxiliary requests, for bringing the tape and the ink transfer ribbon in an extremely convenient, easy and efficient manner into contact with the first printing station had no example in the prior art.

Reasons for the Decision

1. The appeal complies with Articles 106 to 108 and Rule 64 EPC and, therefore, is admissible.
2. *Disclosure of amendments (Article 123(2) EPC) and extension of protection conferred (Article 123(3) EPC)*
 - 2.1 Main request
 - 2.1.1 The thermal printing mechanism and the postage meter according to claims 1 and 2, respectively, of the main request differ from the printing mechanism and postage meter according to respective independent claims 21 and 1 as originally filed in the two additional

requirements

- (a) that the means for dispensing a thermal ink transfer ribbon between first and second thermal printing stations and a tape dispense the ribbon so as "to travel in conjunction with said tape along the tape feed path past the first and second printing stations"; and
- (b) that the first and second thermal printing stations are "operable in sequence and in electrical and mechanical registration with each other".

2.1.2 These two amendments are not the subject of any original claim; nor are they disclosed as isolated features in those parts of the description which provide a general discussion of the aspects or merits of the invention. At best, they are included in the description of the specific embodiment according to Figure 3.

2.1.3 Under these circumstances, a careful examination is necessary in order to establish whether the incorporation into a claim of isolated technical features, having a literal basis of disclosure but being disclosed in a specific technical context, results in a combination of technical features which is clearly derivable from the application as filed, the technical function of which contributes to the solution of a recognizable problem.

As stated in Board of Appeal decision T 17/86, OJ EPO

1989, 297 (cf. reasons, point 2.3 of the decision), a technical feature claimed separately from the disclosed combination with others may be introduced into a claim without contravening Article 123(2) EPC, provided that it is "evident beyond any doubt to a skilled person reading the original description that this isolated feature on its own enables the object in view to be achieved". For a claim directed to a device, it should thus "be ascertained whether the application as filed indisputably disclosed all the technical features of the device covered by the amended claim and whether it is clear beyond any doubt to a skilled person that the device can function independently of any other added element to achieve the object of the invention as now claimed".

- 2.1.4 In following this decision, the object to be achieved by the subject-matter of the amended claim has to be established as well as whether the claims define all means necessary for achieving this object.

In the present case, the object disclosed by the introductory part of the description resides in the desire to provide a composite print or stamp in a rapid and secure manner. This is apparent from the description on original page 1, lines 15 to 20, referring to the problem that a thermal printing of indicia, such as an eagle stamp, is slow due to the large amount of electronic control required to print an eagle indicia. In the context of a discussion of disadvantages encountered in prior art solutions, the description contains on original page 3, lines 4 to 8, a statement that in the prior art "there is no

suggestion of the use, in addition to a thermal head to print variable printing information, of a separate etched screen printing mechanism that is sequentially operated along with said thermal head to provide a composite stamp in a rapid and secure manner". From this it is evident that the disclosure of the object to be achieved by the invention is closely related to a basic element of its solution, *i. e.* the provision of a specific thermal printing station having a printing screen for the printing of the fixed indicia. This finding is confirmed on page 2, lines 4 to 10 of the description, according to which the invention contemplates the thermal printing of fixed information "separately from the variable, electronically controlled data by another thermal printer having a fixed unalterable thermal printing screen carried by a rotatable drum". According to page 2, lines 14 to 20 of the description, such an "arrangement not only provides for a speedier thermal printing of postage, but also has the further advantage of providing better postage meter security", since the "indicia cannot easily be altered or modified within the course of normal postage meter operation". It is thus necessary to establish whether it is indisputably evident from the application documents as filed that the aforementioned features (a) and (b) achieve this object isolated from any other element not being included in the definition of claims 1 and 2 under consideration.

Because of the fact that features disclosed in the context of a specific embodiment and added to a claim may achieve in an unambiguously recognizable manner an object different from that presented in the

introductory part of a description, it should further be ascertained whether such a further object is disclosed and whether it is clear beyond doubt for the skilled person reading the application as filed that the added features on their own achieve this further object. In this respect the respondent referred to the more general object of properly forming a composite print by two adjacent thermal printing stations and including the aspect of a common movement of the tape and the ink transfer ribbon in synchronism past the two printing stations resulting in an economical printing by exploiting different areas of the ribbon as being addressed by the subject-matter of the main request. Although the desire to properly form a composite print is explicitly derivable from the description on page 8, lines 17 to 18, no indication is given as to the specific aspect of a synchronized movement of the tape and the ink transfer ribbon past the two thermal printing stations in order to allow for an economical printing by exploiting different areas of the ribbon forming part of the invention in general or being relevant to the specific embodiment.

- 2.1.5 With respect to aforementioned feature (a), the description on original page 7, line 25 to page 8, line 1 and on page 10, lines 20 to 22, forming part of the description of the specific embodiment according to Figure 3, refers to a thermal ink transfer ribbon travelling in conjunction with a thermal postage tape at the location of a thermal printing head of the **second** thermal printing station. There is, however, no **explicit** disclosure of the ribbon travelling in conjunction with the tape also at the location of the

first thermal printing station as included in feature (a). Feature (b) is to be found in the context of the description of the specific embodiment according to Figure 3 on original page 8, lines 15 to 18, as serving for the purpose of properly forming a composite or completed postage stamp.

In the absence of a definition of a screen for printing the fixed information from claims 1 and 2 under consideration, it is immediately apparent that neither features (a) and (b) nor claims 1 and 2 as a whole define subject-matter which would achieve the object of the invention as disclosed in the introductory part of the description.

Moreover, although the Board sees a clear and unambiguous basis of disclosure for the object of obtaining a proper composite print and for the fact that feature (b) constitutes an indispensable prerequisite for achieving this object, there is no unambiguous disclosure that the invention was aiming at a synchronized movement of the tape and ink transfer ribbon in common for both printing stations, and in particular not as isolated from the desire to form a composite stamp in a rapid and secure manner, nor of features (a) and (b) being the only measures sufficient for achieving a proper print. Therefore, the conditions set in decision T 17/86 for the allowability of amendments by technical features taken in isolation from the application as filed are not met.

2.1.6 Moreover, a ribbon travelling in conjunction with the tape past **both** printing stations, and thus feature (a) as given in claims 1 and 2 under consideration, is **not** disclosed by the cited occurrences on pages 7 and 10. It is only implicit to Figure 3 and the description on page 9, lines 5 to 9, of specific supporting means at the location of the first thermal printing station. These supporting means consist of an idler belt forming part of the first printing station and are capable of supporting a certain length of tape to bring the tape (and the ribbon) into and out of contact with the thermal printing drum of the first printing station. Feature (a) identified from claims 1 and 2 thus replaces disclosed specific structural features of a support for the ribbon and the tape by their function. With respect to the generalization of an existing feature, it is however established case law (cf. T 416/86, OJ EPO 1989, 309; T 265/88, Case Law of the Boards of Appeal of the European Patent Office, second edition, p. 155; and T 118/89, Case Law of the Boards of Appeal of the European Patent Office, second edition, p. 155,166) that replacing a disclosed specific feature in a claim by a broad general expression (e.g. by a functional feature) is not allowable under Article 123(2) EPC, since the introduction of a general expression for the first time implicitly associates further features with the subject-matter of the application, for example any equivalent, which, combined with the disclosed features, would create novel subject-matter as compared with the original disclosure.

2.1.7 For these reasons the Board finds that claims 1 and 2

of the main request are amended in such a way that they contain subject-matter which extends beyond the content of the application as filed. These claims thus do not comply with the requirement of Article 123(2) EPC and are, consequently, not allowable.

2.2 First auxiliary request

Claims 1 and 2 of the first auxiliary request comprise all amendments made to the main request and further define technical details of the first printing station. According to the respondent, the thus defined printing station allows for "en-bloc" printing of the indicia. Although the additionally claimed features are in part derived from original claim 3, corresponding to claim 4 as granted, the feature that the screen is supported "around a circumferential portion of the drum" is only disclosed in the context of the description of the embodiment of Figure 3 on original page 9, lines 10 to 12, corresponding to column 6, lines 22 to 24, of the patent specification. It is evident from this context that the screen on the circumference of the printing drum, when printing the indicia onto the tape, cooperates with the same idler belt which supports the tape at the location of the first printing station, and that it is only by this cooperation that "en-bloc" printing of the indicia becomes possible, whereas the provision of the screen alone clearly does not achieve this object.

Thus, in the absence of the definition of the idler belt from claims 1 and 2 of the first auxiliary request, the claimed subject-matter suffers from the same deficiencies with respect to the provision of Article 123(2) EPC as expounded for the independent claims of the main request. The first auxiliary request is therefore also not allowable.

2.3 Second auxiliary request

In addition to the first auxiliary request, claims 1 and 2 of the second auxiliary request define means to provide support for the tape and the thermal ink transfer ribbon to carry the tape and the ribbon into and out of contact with the circumferential portion of the printing drum. With respect to the support of the tape at the location of the first printing station, the application as filed exclusively refers to an idler belt carried by rollers (cf. page 9, lines 5 to 10 of the description as filed, corresponding to column 6, lines 16 to 21 of the patent specification), whereby it is evident from the context of Figure 3 and page 10, lines 1 to 12 of the description, corresponding to column 6, line 45 to column 7, line 1 of the patent specification, that the idler belt in fact does not support the tape as such but tape segments cut to desired lengths. The application as filed does not contain any further information as regards such a support for the tape at the location of the first thermal printing station, so that the additional amendment made to the second auxiliary request amounts to a substitution of the only disclosed technical means (idler belt) by a more general term (means to provide support). In analogy to the principles referred to in point 2.1.6 supra, this generalization of an existing feature results in an infringement of Article 123(2) EPC by the subject-matter of the second auxiliary request. For this reason, the second auxiliary request is also not allowable.

2.4 Third auxiliary request

In distinction to the second auxiliary request,

independent claims 1 and 2 of the third auxiliary request define the idler belt carried by rollers to provide support for the tape and ink transfer ribbon at the first thermal printing station. Moreover, the means for dispensing the tape are defined as dispensing "lengths of tape". As regards the issue of disclosure as discussed in detail in points 2.1.4 to 2.1.6, 2.2 and 2.3 *supra*, the Board is satisfied that the subject-matter of claims 1 and 2 of the third auxiliary request comprises those features in combination which enable the object in view, i.e. "en-bloc" printing of the fixed information, to be achieved. According to the principles discussed in points 2.1.3 and 2.1.4 *supra*, the isolation of these features from further technical details disclosed by the description of the embodiment of Figure 3 thus does not result in subject-matter extending beyond the content of the application as filed. Since the independent claims define the dispensing of **lengths** of tape, the Board is further satisfied that the amended claims also properly acknowledge the disclosed printing of tape segments and make a clear distinction between the terms "tape" and "length of tape". Consequently, the respective objections raised by the appellant with respect to clarity (Article 84 EPC) and added subject-matter (Article 123(2)) are considered to be unfounded as regards the third auxiliary request.

Moreover, due to the fact that the amendments made to the third auxiliary request restrict the scope of the claims as granted, the Board considers that the amendments do not extend the protection conferred by the patent in suit. Therefore, the third auxiliary request is found to comply with the provisions of Articles 123(2) and 123(3) EPC.

3. *Novelty (Articles 52(1) and 54(1)(2) EPC) and inventive step (Articles 52(1) and 56 EPC) for the subject-matter of the third auxiliary request*

3.1 The closest prior art is represented by document D1 (see in particular claim 1; column 1, line 40 to column 2, line 5; column 2, lines 48 to 66; and column 4, line 63 to column 5, line 56) which shows a printing mechanism and an electronic postage meter for the printing of (postage) indicia and numerical (postal) values in a respective fixed and variable format. First and second printing means are provided for separately printing the fixed indicia and variable information, respectively, on an envelope or label. The fixed indicia are printed by a mechanical drum printer (consisting of a printing plate carried by a rotatable drum), whereas an ink jet printing device, arranged within the rotatable drum to project ink droplets through apertures in the drum, is used for printing the variable information. Alternatively, the ink jet printing device may be used to print the entire information (i.e. the composite postage print). Since a "label" may be constituted by a "length of tape" within the broadest meaning of this term, the subject-matter of claims 1 and 2 differs from the known printing

mechanism and postage meter by the following features:

- (i) the printing stations are thermal printing stations which are disposed adjacent to each other;
- (ii) the provision of a first thermal printing station having a specific construction comprising a rotatable printing drum surrounding a heat source and carrying on a portion of its circumference a screen;
- (iii) the provision of means for dispensing a thermal ink transfer ribbon to travel in conjunction with the tape past the first and second thermal printing stations; and
- (iv) the provision of an idler belt carried by rollers providing support for the tape and thermal ink transfer ribbon to bring the tape and the ribbon into and out of contact with the circumferential portion of the printing drum.

3.2 The Board is of the opinion that the provision of features (i) and (iii) alone would have fallen within the competence of a skilled person. Printing mechanisms employing thermal printing stations were widely known at the claimed priority date as alternatives to mechanical and ink jet printing means. Such mechanisms are for instance shown in documents D2 (GB-A-2 101 740; cf. in particular Figures 1, 3, 6 and 9; page 1, lines 5 to 10 and 32 to 36; page 2, lines 83 to 107; and page 6, lines 57 to 76), D3 (US-A-4 429 318; cf. in

particular the abstract; Figures 4 and 5; and column 2, lines 27 to 68) and D4 (US-A-4 447 818; cf. in particular the abstract; the drawing; column 1, lines 6 to 54; column 2, lines 22 to 63; and column 4, lines 1 to 5). Wishing to make use of the properties and advantages associated with thermal printing stations, without abandoning the advantages known from D1 to be obtainable by the provision of separate printing stations for the printing of fixed and variable information, the skilled person would have readily thought of replacing in the mechanism of D1 the mechanical printing means as well as the ink jet printing means each by a thermal printing means. Following this idea, he would have been aware of the fact that conventional thermal printing means can only be arranged adjacent to each other, as is shown by each of documents D3 and D4. Moreover, unless specific requirements, such as, for instance, printing in different colours (cf. D4), had demanded the use of separate ink transfer ribbons, the skilled person would have been immediately aware of the fact that only a single ribbon would be needed for both printing stations and that the provision of more than one ribbon would have rendered the printing mechanism unnecessarily bulky and costly.

- 3.3 However, the Board cannot share the appellant's view that the provision of features (ii) and (iv) would also have been obvious to the skilled person. It is the combined effect of these two features which achieves the object of "en-bloc" printing of the fixed indicia and evidently results in a speedier and more secure printing of the indicia than would have been possible

with a conventional thermal printing station cooperating with a roller and printing on a line by line basis, as known from any one of documents D2 to D5. In fact, none of the available prior art documents even contains an indication as to the idea of "en-bloc" printing by **thermal** printing means, not to mention the claimed specific technical details of the first printing station defined by feature (ii) and their cooperation with a specific support for the tape and the ribbon defined by feature (iv). For these reasons, the skilled person would not have found in the prior art any suggestion for thermal "en-bloc" printing. Without such suggestion, however, he could have only arrived with the benefit of hindsight at the subject-matter of claims 1 and 2 of the third auxiliary request.

- 3.4 In the oral proceedings the appellant alleged that the public would be misled if the invention were to be seen in the specific construction of the first thermal printing station, since nothing in the application or patent documents as published had led a skilled reader to think that such details would constitute the invention. In this context, the appellant even considered the possibility of requesting an additional search be conducted. The Board finds this allegation to be unfounded because of the fact that at least some of the structural features of the first thermal printing station essential for performing "en-bloc" printing, namely the provision of a rotatable drum which supports a screen containing the fixed indicia, are the subject of dependent claim 4 as granted. Although the appellant attacked the patent in its entirety, no prior art

evidence was produced which would provide an indication as to a thermal printing mechanism showing these essential features.

3.5 For these reasons, independent claims 1 and 2 of the third auxiliary request define novel and inventive subject-matter and thus comply with the requirements of Article 52(1) EPC.

4. Dependent claims 3 to 11, which correspond to claims 3 and 5 to 12 as granted, respectively, relate to specific non-trivial embodiments of the postage meter and comply with the requirements of the EPC as well.

The description on file is in accordance with the wording of the allowable claims. Since even the closest prior art as given by document D1 does not show a first printing station of the claimed construction, the Board considers an amendment to the description by adding a reference to D1 to be superfluous. Thus, the Board is satisfied that the description too meets the requirements of the EPC.

Order

For these reasons it is decided that:

The decision under appeal is set aside.

The case is remitted to the first instance with the order to maintain the patent on the basis of the respondent's (patentee's) third auxiliary request.

The Registrar:

The Chairman:

M. Beer

G. Davies