BESCHWERDEKAMMERN DES EUROPÄISCHEN PATENTAMTS

BOARDS OF APPEAL OF THE EUROPEAN PATENT OFFICE

CHAMBRES DE RECOURS DE L'OFFICE EUROPEEN DES BREVETS

Internal distribution code:
(A) [ ] Publication in OJ
(B) [ ] To Chairmen and Members
(C) [X] To Chairmen
(D) [ ] No distribution

D E C I S I O N
of 24 February 2005

Case Number: T 0007/02 - 3.5.1

Application Number: 95117822.7

Publication Number: 0702317

IPC: G06K 7/10

Language of the proceedings: EN

Title of invention:
Mirrorless scanner with movable laser

Applicant:
Symbol Technologies, Inc.

Opponent:
-

Headword:
Scanner/SYMBOL TECHNOLOGIES

Relevant legal provisions:
EPC Art. 56

Keyword:
"Inventive step (no)"

Decisions cited:
-

Catchword:
-

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0007/02 - 3.5.1

D E C I S I O N
of the Technical Board of Appeal 3.5.1
of 24 February 2005

Appellant: Symbol Technologies, Inc.
116 Wilbur Place
Bohemia
New York 11716 - 3300 (US)

Representative: Wagner, Karl H., Dipl.-Ing.
WAGNER & GEYER
Patentanwälte
Gewürzmühlstraße 5
D-80538 München (DE)

Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 19. Juli 2001 refusing European application No. 95117822.7 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: R. S. Wibergh
Members: K. J. K. Bumes
B. J. Schachenmann

Summary of Facts and Submissions

I. This appeal is against the decision of the examining division to refuse European patent application No. 95 117 822.7.

II. The following documents will be referred to in the present decision:

D5: US-A-4 560 862
D6: US-A-2 392 447
D8: EP-A-0 036 781.

III. The basis for the decision appealed were claims 1 and 2 according to a main request and claim 1 according to an auxiliary request. The examining division held that D5 and D6 in combination rendered the subject-matter of claim 1 in both versions obvious.

IV. Claim 1 of the *main request,* filed on 19 February 2001, reads:

"1. A light scanning system for reading indicia having parts of different light reflectivity, said system comprising a scanner arrangement including:
(A) a housing having an interior and an exit port,
(B) a light source component in the interior of the housing, and operative for emitting a light beam,
(C) an optical component in the interior of the housing, and operative for modifying and directing the light beam along an optical path through the exit port toward indicia located in the vicinity of a reference plane located exteriorly of the housing,

(D) a photodetector component having a field of view and mounted in the interior of the housing, and operative for detecting at least a portion of light of variable intensity reflected off the indicia, and for generating a photodetector signal indicative of the detected light intensity, and
(E) a scanning component in the interior of the housing, and operative for scanning at least one of said light beam and said field of view,
said system comprising:
(a) a semi-rigid, bendable, elongated conduit having one end connected to the housing, and an opposite end,
(b) said conduit being manually movable to orient the housing in a desired orientation and to concomitantly position the exit port relative to the indicia being read,
(c) said housing maintaining its desired orientation after being moved to said desired orientation,
(d) said conduit having an internal space in which electrical wiring is routed lengthwise of the conduit, for conveying and returning electrical signals to and from the housing."

V. Claim 1 of the *auxiliary request*, filed on 6 June 2001, contains the same features (A) to (E) followed by the following features (a) and (b):

"(a) a base (123);
(b) a gooseneck-type semi-rigid, bendable conduit (127) interconnecting said housing (121) with said base (123) and enabling said housing (121) to be manually bendably positioned in any desired orientation relative to said base (123) and to be maintained in the desired orientation."

VI. On appeal, the appellant requested that the decision be set aside in its entirety and that oral proceedings be appointed. Analyzing the reasoning of the examining division, the appellant concluded that the objective problem with respect to D5 was to "improve [the operator's] ability to handle objects on which the indicia to be read appear". D6, describing a light fixture, would not be considered by a man skilled in the art since it was entirely unrelated to the technology to which the invention belonged, namely scanners. As to document D8, the scanning head described was not adjustable.

VII. In a communication the Board expressed the opinion that the appellant's counter-arguments did not appear convincing. It was mentioned that D8 might be a suitable starting document for the assessment of the inventive activity. Oral proceedings were scheduled for 24 February 2005.

VIII. By letter dated 24 January 2005 the appellant withdrew its request for oral proceedings and informed the Board that it would not attend the hearing.

IX. Oral proceedings were held on 24 February 2005 in the appellant's absence. The Board noted that the appellant had requested in writing (see the grounds of appeal dated 29 November 2001) that the decision under appeal be set aside and that a patent be granted based on the following documents:

Main request:

Claims:

1 and 2	as filed on 19 February 2001
Description:	
pages 2,6,10-19,22-25	as originally filed
pages 1,3a,4,5,7-9,20,21,26-29	as filed on 6 June 2001
Drawings:	
Fig. 1-18	as originally filed
Fig. 19	as filed on 6 June 2001

Auxiliary request

Identical to the main request except for the claims being substituted by claims 1 and 2 (sic) filed as an auxiliary request on 6 June 2001.

Reasons for the Decision

The main request

1. *The claimed invention*

The invention as claimed concerns a scanning apparatus for reading optical indicia (typically bar code symbols). Such devices may be hand-held or stationary. The invention is of the stationary kind but the scanning head can be adjusted so that it maintains its desired orientation after being moved. This is achieved by mounting it on a semi-rigid, bendable conduit.

2. *The closest prior art*

The examining division held D5 to be the closest prior art document. The appellant acknowledges (grounds of appeal, p. 4) that D5 discloses features (B) to (E) of claim 1 (cf point IV above), ie all the optical components of the system. The Board notes that another document, D8, discloses the same optical components as D5 (see eg fig. 2: light source 40, modifying and directing component 46, photodetector 50, scanning component 44) and furthermore explicitly describes a housing 20 having an interior and an exit port and being mounted on a base 22. The Board therefore prefers to regard D8 as the closest prior art.

The main difference between D8 and the invention is, as the appellant has pointed out, that according to D8 the scanning head is not adjustable but mounted at a predetermined elevation above the base by means of a mounting bracket 26.

3. *Inventive step*

3.1 The present application mentions that the semi-rigid, bendable conduit supporting the scanning head serves to position the beam emitted from the housing at any desired angle relative to the symbol to be read (col. 10, l. 29-40). The advantage appears to be that an operator can adjust the scanner to a position which fits him and also allows objects of various sizes to be handled. It can be seen that the (rather general) technical problem indicated by the appellant with respect to D5, namely to improve the operator's ability

to handle objects on which the indicia to be read appear, is appropriate also when starting out from D8.

3.2 D8 deals expressly with one facet of such a problem since the (fixed) mounting of the scanning head permits the operator to use both hands to handle the objects to be scanned, something which is not possible with a hand-held scanner (p. 2, top paragraph). The issue is however whether the skilled person would recognise that further improvements of this kind could be made to the apparatus. From fig. 2 it can be seen that the operator is expected to view the indicia imprinted on each object through an opening 72 in the scanning head, which clearly requires the scanning head to be positioned at a convenient distance above the base. There would thus be a need for adjusting this height in particular if the apparatus is to be used by different people. Furthermore it is immediately clear that large objects can only be scanned if the space between the base and the scanning head is sufficient. There would therefore also be a need to adjust the height if objects of varying sizes are handled. The skilled person would thus recognize that the apparatus shown could not be conveniently used unless always operated by the same person and serving to scan objects of a very limited range of dimensions. Clearly, scanning devices for many well known applications, such as in retail stores, cannot normally be operated in this restricted way. It was thus desirable that the distance between the scanning head and the base be adjustable, and the skilled person would search for some arrangement which could accomplish this.

3.3 It is clear that this problem has many solutions which would be taken into consideration by the skilled person. One is shown in D6 (a document published in 1946): a lamp supported by a semi-rigid, bendable, elongated conduit which can be adjusted to different positions. This is a standard kind of support, referred to as "gooseneck" (so also in D6, eg at p. 1, left-hand column, l. 21). Once adjusted, the lamp remains in its place. The skilled person would immediately realize that already this simple and conventional arrangement suffices to solve his problem. It moreover has the (also well known) advantage of concealing the electrical cable within the gooseneck. It was therefore obvious to add the teaching of D6 to D8 to arrive at a light scanning system having features (A) to (E) above and additionally comprising

- a semi-rigid, bendable, elongated conduit connected to the housing,
- said conduit being manually movable to orient the housing in a desired orientation,
- said housing maintaining its desired orientation after being moved to said desired orientation,
- said conduit having an internal space in which electrical wiring is routed lengthwise of the conduit, for conveying and returning electrical signals to and from the housing.

It follows that the subject-matter of claim 1 does not involve an inventive step (Article 56 EPC).

The auxiliary request

4. *Inventive step*

The appellant's auxiliary request is based on a single claim 1 (not claims 1 and 2 as indicated by the appellant; cf point IX above). While omitting some of the features of claim 1 of the main request, this claim essentially adds to it a base and the requirement that the conduit be of a gooseneck type.

The base is not a distinguishing feature since the apparatus in D8 is also attached to a base. The goose-neck type is, as already mentioned, actually the kind of fixture proposed in D6. Thus, the invention as defined by this claim also lacks an inventive step (Article 56 EPC).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

M. Kiehl S. Wibergh