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**D E C I S I O N**  
**of 12 May 1999**

**Case Number:** T 0639/96 - 3.2.4

**Application Number:** 89306895.7

**Publication Number:** 0350317

**IPC:** A41H 37/00

**Language of the proceedings:** EN

**Title of invention:**

Apparatus for attaching fastener elements to a garment

**Patentee:**

YKK CORPORATION

**Opponent:**

Gutos Metallschliessenfabrik GmbH & Co.

**Headword:**

-

**Relevant legal provisions:**

EPC Art. 56

**Keyword:**

"Inventive step (yes)"

**Decisions cited:**

T 0002/83

**Catchword:**



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Boards of Appeal

Chambres de recours

Case Number: T 0639/96 - 3.2.4

**D E C I S I O N**  
**of the Technical Board of Appeal 3.2.4**  
**of 12 May 1999**

**Appellant:** YKK CORPORATION  
(Proprietor of the patent) No. 1, Kanda Izumi-cho  
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Tokyo (JP)

**Representative:** White, Martin David  
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**Respondent:** Gutos Metallschliessenfabrik GmbH & Co.  
(Opponent) Dürrner Strasse 12  
D-75245 Neulingen (DE)

**Representative:** Twelmeier, Ulrich, Dipl.-Phys.  
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**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 10 May 1996  
revoking European patent No. 0 350 317 pursuant  
to Article 102(1) EPC.

**Composition of the Board:**

**Chairman:** C. A. J. Andries  
**Members:** M. G. Hatherly  
J.-P. Seitz

## Summary of Facts and Submissions

- I. European patent No. 0 350 317 was revoked by the opposition division's decision dispatched on 10 May 1996.

The proprietor filed an appeal and paid the fee on 10 July 1996, filing the statement of grounds on 10 September 1996.

- II. Claim 1 as granted reads as follows:

"An apparatus (11) for attaching a plurality of fastener elements (7) to a garment (1), comprising: a vertically movable punch (13); and a die plate (29) disposed below said punch (13) and having a plurality of dies (30, 31) spaced apart in a first direction, said die plate (28) being arranged to place said dies (30, 31) in alignment with said punch (13), characterised in that the apparatus is adapted for attaching said plurality of fastener elements to the garment one at a time, said die plate (28) being slidably movable in said one direction to place said dies (30, 31) successively into alignment with said punch (13), said die plate being displaceable in a second direction away from said punch (13) in a plane of sliding movement of said die plate (28), said die plate (28) being pivotally movable in a vertical plane when it is disposed in a position remote from said punch (13)"

- III. The following items played a role in the appeal proceedings:

D2: Prospectus from Gutos Metallschliessenfabrik, Bader & Hoch GmbH & Co. KG, 7530 Pforzheim, Germany, the first side of which bears the title (in English) "Semi-automatic attaching machines for hooks and eyes" and the second side of which bears the title (in English) "Semi-automatic machines for flat-hooks with eyes" and is marked "Printed in W.-Germany 5/10.82"

- "Eidesstattliche Versicherung" by Mr Ernst Schön dated 26 March 1998 and concerning the public availability of D2 before the priority date of the present patent
- Video cassette (recorded in 1999) showing the die plates and associated movement mechanisms of the machines shown in D2.

IV. Oral proceedings took place on 12 May 1999 in the presence of the parties.

In the appeal proceedings the respondent (opponent) argued that the claimed subject-matter was obvious having regard to D2 and that the auxiliary requests contravened Article 123 EPC.

In the appeal proceedings the appellant (proprietor) accepted that D2 and the machines depicted therein were publicly available before the priority date of the patent in suit but maintained that the claimed subject-matter was inventive thereover and that the auxiliary requests did not contravene Article 123 EPC.

V. The appellant requested that the decision under appeal be set aside and the patent maintained

- as granted (main request),
- according to claim 1 of the first auxiliary request filed with the letter dated 8 July 1998,
- according to claim 1 of the first auxiliary request filed during the oral proceedings of 12 May 1999 (called the first auxiliary request "bis"), or
- according to the second auxiliary request filed with the letter of 12 June 1997.

The respondent requested that the appeal be dismissed.

### **Reasons for the decision**

1. The appeal is admissible.
2. *The meaning of claim 1 as granted (i.e. the main request)*
  - 2.1 In the context of the present patent, a straight line is implicit in the word "direction" so that the statement in claim 1 as granted (lines 54 and 55 of column 9 of the patent as granted) that there is "a plurality of dies (30, 31) spaced apart in a first direction" means that the dies are arranged in a straight line.

It follows that the slidable movement of the die plate 28 in said one direction referred to in column 10, lines 2 and 3 is a straight line movement.

Analogously, the passage in column 10, lines 5 to 7 of "said die plate (28) being displaceable in a second direction away from said punch (13) in a plane of sliding movement of said die plate (28)" means that this movement of the die plate is in a straight line in the same plane as the straight line of the first direction.

2.2 The interpretations in the above section 2.1 were put to the parties in section 3.1 of the board's communication of 4 February 1998 and accepted by the appellant both in the letter of 8 July 1998 (section 4) and in the oral proceedings but not by the respondent.

2.3 Figures 3 and 4 show the first preferred embodiment of the die plate displacement mechanism. The die plate 28 is shown in a remote position from the punch. Because the roller 48 is no longer under the control plate 46, the die plate 28 is tilted upwardly by the force of the helical spring 49 but could be pushed down manually against the spring force, see also column 6, lines 24 to 30 of the patent as granted. Thus, as set out in claim 1 in column 10, lines 8 to 11 of the patent as granted, the die plate is "pivotally movable in a vertical plane when it is disposed in a position remote from said punch (13)".

In the second preferred embodiment of the die plate displacing mechanism (shown in Figures 6 to 8 and

described in column 6, line 31 to column 7, line 17 of the patent as granted), when the die plate 28 is pulled rearwardly away from the punch, the pinion 53 is rotated by the rack. Rotation of the pinion 53 causes the die plate to pivot upwardly about the pivot pin 27a. Thus pivoting commences when the die plate is not remote from the punch. Figure 8 shows the die plate in its end position remote from the punch but in this position it seems that, because of the rack 51 and pinion 53 the die plate is not "pivotally movable in a vertical plane" (see column 10, lines 8 to 11 of the patent as granted).

Thus claim 1 as granted appears inconsistent with the second preferred embodiment. However it is clear that the claim (which is essentially the same as that as originally filed except for the two part form) was always intended to cover this embodiment. Indeed dependent claim 2 (as originally filed and as granted) refers to the "die plate (28) being tiltable upwardly as it is displaced in said second direction away from said punch (13)" and dependent claims 3 and 4 (as originally filed and as granted) are directed to the first preferred embodiment, whereas dependent claims 3 and 5 (as originally filed and as granted) are directed to the second first preferred embodiment. Moreover in this particular instance of lack of clarity the description and drawings should be used to interpret the claim (Article 69 EPC).

The board therefore concludes that the final part of the claim means that the die plate is pivotally movable in a vertical plane, and is in a tilted upward position

when in a position remote from the punch as a result of the movement in the second direction.

3. D2

3.1 All references are to the first side of D2.

3.2 The 05516 and 05517 machines were explained with the help of the video cassette submitted before the oral proceedings and the die plates and associated movement mechanisms brought to the oral proceedings.

These machines are used together, the 05516 machine applying the hooks shown on the right-hand side of the trousers picture in the bottom right-hand corner, and the 05517 machine applying the eyes shown on the left-hand side of the trousers picture.

3.3 The finger-shaped die plate of the 05516 machine is connected to a slotted parallelogram linkage. The left hand lever at the back of the parallelogram linkage is down to stop the parallelogram linkage moving to the right but due to the slot in the right hand link the die plate can swing about the front left hand corner of the parallelogram to place the right hand die under the punch. If, instead of the left hand lever being down, the right hand lever is down then only the left hand die can be swung under or away from the punch. If neither lever is down then the die plate can be swung to place either die under the punch and the die plate can be shifted to place the other die under the punch.

3.4 The H-shaped die plate of the 05517 machine is



connected to a non-slotted parallelogram linkage. The left hand lever at the back of the parallelogram linkage is down to stop the parallelogram linkage from moving to the right. The die plate can be pivoted about a horizontal axis to place the right hand die under the punch. If, instead of the left hand lever being down, the right hand lever is down then only the left hand die can be moved under the punch. If neither lever is down then the die plate can be pivoted to place either die under the punch and the die plate can be shifted to place the other die under the punch.

4. *Novelty - claim 1 as granted (i.e. the main request)*

After examination of the prior art documents on file, the board is satisfied that none of them discloses an apparatus with all the features of claim 1 as granted.

Novelty is moreover accepted by the respondent.

The subject-matter of claim 1 as granted is thus to be considered novel within the meaning of Article 54 EPC.

5. *The closest prior art, problem and solution - claim 1 as granted (i.e. the main request)*

5.1 The parties and the board agree that the starting point for the assessment of whether the subject-matter of claim 1 as granted involves an inventive step is the 05516 machine of leaflet D2.

5.2 The 05516 machine attaches a plurality of fastener elements to a garment one at a time and comprises a

vertically movable punch and a die plate disposed below said punch and having two spaced apart dies. The die plate is arranged both to place the dies successively in alignment with the punch and to be displaceable away from the punch.

The dies are spaced apart in a first direction (since there are only two dies a straight line can of course be drawn through them). However the die plate is not slidably movable (it is swingably movable), the movement is not in the first direction (it is an arc shaped movement) and the die plate is not pivotally movable in a vertical plane in any position (let alone when it is disposed in a position remote from the punch).

- 5.3 When starting from the 05516 machine of leaflet D2 the board sees the problem to be solved by the present invention to be to ease operation and setting up of the machine.
  
- 5.4 The die plate of the 05516 machine carries two dies and the movement to place them successively under the punch is arc shaped. In the present invention, on the other hand, slidably moving the die plate along the straight line joining the dies makes it easier to set up the machine if the die spacing is altered. If there are more than two dies then arranging them in a straight line and moving the die plate along this straight line ensures that all dies pass accurately under the punch and the machine can be easily set up to position the dies successively under the punch. It may also be easier for the operator and achieve more reliable

attachment if two separate straight line movements are made instead of two arc shaped movements.

Pivotaly moving the die plate in a vertical plane when it is in a position remote from the punch makes it easier to put the garment on the die plate and subsequently to detach it therefrom.

5.5 Thus the board considers that the features of claim 1 solve the above mentioned problem.

6. *Inventive step - claim 1 as granted (i.e. the main request)*

6.1 The respondent maintains that the only difference in claim 1 as granted over the 05516 machine of D2 is that the die plate is pivotaly movable in a vertical plane when disposed in a position remote from the punch. The problem starting from the 05516 machine is to attach fastener elements with utmost ease, see column 2, lines 19 to 22 of the patent description as granted. In the 05517 machine of D2, to attach fastener elements with utmost ease, the die plate is pivotaly movable in a vertical plane and it would be obvious for the skilled person to add this feature to the 05516 machine and so arrive at the subject-matter of claim 1 as granted.

6.2 However, as explained in section 5.2 above, the subject-matter of claim 1 as granted in fact differs from the 05516 machine of D2 in more ways than the single way alleged by the respondent in the above section 6.1 above.

6.3 Firstly it must be examined whether the combination of the 05516 and 05517 machines would be obvious for the skilled person.

The 05516 and 05517 machines were not used separately but were sold and used together. There are good reasons for having the **two** machines 05516 and 05517. Both the hook-applying and the eye-applying operations need to be carried out sequentially on the same pair of trousers. If there were only one multi-purpose machine then the automatic feeding of different parts to the punch would be more difficult and care would be needed to put the different back plates manually at the right time into the dies. Additionally the die plates have different purposes because the 05516 die plate is finger-like to enter the tunnel on the right-hand side of the picture at the bottom right-hand corner of each side of the leaflet, whereas the 05517 die plate 28b is more plate-like to lay the left-hand side of the trousers over. Thus a simple combination of the two machines to make one multi-purpose machine would not be obvious and indeed was something that the respondent did not do despite delivering such side-by-side machines for nearly seven years before the priority date.

6.4 The respondent however argues not about a simple combination of the two machines but that it would be obvious for the skilled person of add the functions of the 05517 machine to the 05516 machine. The problem with the 05516 machine is to attach fastener elements with the utmost ease. It is known from the 05517 machine that to attach fastener elements with utmost

ease the die plate is pivotally movable in a vertical plane. Thus it would be obvious to add this feature from the 05517 machine to the 05516 machine and arrive at the subject-matter of claim 1 as granted.

However, in the position shown in D2, the finger-shaped die plate of the 05516 machine is positioned far enough away from the punch to allow the plate to enter the trouser tunnel easily. Accordingly the board cannot see why the skilled person would be led to make the finger-shaped die plate of the 05516 machine pivotable in a vertical plane. While the skilled person **could** have carried out this modification to the 05516 machine, the board cannot see that he **would** have carried it out (see the decision T 0002/83, OJ EPO 1984, 265 "could-would approach"). It may be added that if the person skilled in the art were to start from the 05517 machine, the board cannot see that he **would** have added a swinging movement to carry the H-shaped die plate away from under the punch.

- 6.5 Moreover, even if he had carried out the modification to the 05516 machine, he would not have arrived at the subject-matter of claim 1 as granted.

The die plate of the 05516 machine carries out an arcuate movement, from the position shown in D2 where it is away from the punch, to a position placing one die under the punch. The die plate of the 05517 machine in its mode of applying two fasteners is pivoted, from the position shown in D2 where it lies tilted under the punch, about a horizontal axis to place one die under the punch, and an arcuate movement to place the other

die under the punch. The tilting movement can take place at any time, even when the arcuate movement is taking place. Thus even if the movements of the 05516 and 05517 machines were combined, the present invention would not be arrived at, with its two linear movements (which are independent of each other) and the pivotal movement (which occurs due to the movement in the second direction).

It is true that an arcuate movement can be resolved into a linear component in one direction and a linear component in another direction but the arcuate movement of the machine is merely to achieve a shifting of the die plate in one direction, the outwards component of the arcuate movement is insufficient to move the die plate from under the punch and was not intended to do so. Thus, in order for the die plate to be pivotable, the punch must be located higher above the plane of the die plate than would be the case if the die plate was pivoted only when moved wholly or partially from under the punch.

Thus the subject-matter of claim 1 as granted is not obvious from the document D2, this being the only document used by the respondent against the claim.

7. The subject-matter of claim 1 as granted is thus patentable as required by Article 52 EPC. The patent may therefore be maintained based on this allowable independent claim 1 and on claims 2 to 8 which are dependent thereon.
8. Consideration of the appellant's auxiliary requests is

therefore unnecessary.

## **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 maintain the patent as granted.

The Registrar:

The Chairman:

N. Maslin

C. Andries