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) [ ] To Chairmen
(D) [X] No distribution

Datasheet for the decision of 26 May 2010

Case Number: T 1733/08 - 3.2.06

Application Number: 03755129.8

Publication Number: 1509348

IPC: B21H 9/02

Language of the proceedings: EN

Title of invention:
Automatic rolling machine comprising an insertion device

Patentee:
S.M.A.R.T. S.R.L.

Opponent:
E. W. Menn GmbH & Co. KG

Headword:
-

Relevant legal provisions:
-

Relevant legal provisions (EPC 1973):
EPC Art. 56
RPBA Art. 13(1)

Keyword:
"Inventive step (no)"
"Late filed amendments - not admitted"

Decisions cited:
-

Catchword:
-

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 1733/08 - 3.2.06

D E C I S I O N
of the Technical Board of Appeal 3.2.06
of 26 May 2010

Appellant: (Opponent)
E. W. Menn GmbH & Co. KG
EWM
Trift 8
D-57271 Hilchenbach (DE)

Representative:
Valentin, Ekkehard
Patentanwälte
Valentin-Gihske-Grosse
Hammerstrasse 2
D-57072 Siegen (DE)

Respondent: (Patent Proprietor)
S.M.A.R.T. S.R.L.
Via Verdi, 4
I-15057 Tortona (IT)

Representative:
Forattini, Amelia
Internazionale Brevetti
Ingg. ZINI, MARANESI & C. S.r.l.
Piazza Castello 1
I-20121 Milano (IT)

Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted 14 July 2008 rejecting the opposition filed against European patent No. 1509348 pursuant to Article 102(2) EPC.**

Composition of the Board:

Chairman: P. Alting van Geusau
Members: G. Pricolo
R. Menapace

Summary of Facts and Submissions

I. The appeal is from the decision of the Opposition Division posted on 14 July 2008 to reject the opposition filed against European patent No. 1 509 348.

Claim 1 of the patent as granted reads as follows:

"An automatic rolling machine comprising an insertion device (101) which comprises a reciprocating member (8) that is provided with a means adapted to pick up a part (4) to be machined from a guide (5) and to insert it in a working position, characterised in that the reciprocating member is actuated by a linear motor (9)."

II. The Opposition Division held that there was no indication in the prior art, in particular in documents

A4.1 : abstract from a database of document "Stanzrapid - Linearmotorpresse revolutioniert die Fertigung von Mikrobauteilen" by R. Schneider and P. Groche; and

A5 : R. Schneider; P. Groche: "Linearmotorpressen - eine Möglichkeit zur flexiblen fertigung mikrotechnischer bauteile"; CSVZP-Tagungsband: CSVZP-Kolloquim "Moderne Technologien für die Stahl- und Blechverarbeitung"; Prague, 3, 4 October 2001,

that would suggest the modification of the automatic rolling machine according to the closest prior art represented by document

A1 : GB-A-882 125,

consisting in providing a linear motor for actuating the reciprocating member.

III. The appellant (opponent) lodged an appeal against this decision, received at the EPO on 8 September 2008, and simultaneously paid the appeal fee. The statement setting out the grounds of appeal was received at the EPO on 18 November 2008.

IV. In a communication accompanying the summons to oral proceedings pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal, the Board expressed a preliminary opinion according to which the subject-matter of claim 1 did not appear to involve an inventive step. The Board pointed out, in particular, that even if A4.1 and A5 showed applications of linear motors to machines (presses) different from the automatic rolling machine according to the patent in suit, linear motors were generally known means for providing a reciprocating motion, and were used in many machine tools for that purpose. The presses according to A4.1 and A5 were examples of applications of linear motors. The advantages of using linear motors mentioned in A5, such as direct load coupling, accuracy, repeatability, high speed and acceleration, were well known in the art.

V. Oral proceedings took place on 26 May 2010.

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

The respondent requested that the appeal be dismissed.

During the oral proceedings the respondent filed a set of amended claims.

Claim 1 of this set reads as follows:

"An automatic rolling machine comprising an insertion device (101) which comprises a reciprocating member (8) that is provided with a means adapted to pick up a part (4) to be machined from a guide (5) and to insert it in a working position, characterised in that the reciprocating member is actuated by a linear motor (9) wherein said reciprocating member (8) and said linear motor (9) are supported by a base (6) that is rigidly coupled to the frame of the machine (1)."

VI. During the oral proceedings the appellant stated its agreement with the provisional view expressed by the Board in its communication accompanying the summons to oral proceedings.

As regards the amended claims filed during the oral proceedings, it submitted that they were late filed and did not overcome the deficiency of lack of inventive step. The additional features of claim 1, according to which the reciprocating member and the linear motor were supported by a base rigidly coupled to the frame of the machine, were matter of normal design procedure. In the machine according to A1 the reciprocating member was rigidly supported by the frame. When providing a linear motor the skilled person would also rigidly couple it to the frame. The provision of a base, such as shown e.g. in A5, was matter of normal design

procedure and did not result in any particular technical effects.

VII. The respondent relied essentially on the following submissions:

Although it was not denied that linear motors were generally known in the art, there was no indication in the prior art suggesting the use of a linear motor for the specific purpose of driving the reciprocating member of an automatic rolling machine. A5 disclosed a feeding device for sheet material comprising a couple of linear motors for keeping the sheet straight during the working steps. It further disclosed the use of a linear motor for displacing the ram of a punch. The disclosure of documents A4.1 and A4 (the full document of which A4.1 was the abstract) did not go beyond that of A5. Document

A6 : D. Förster, W. Müller :"Höchstleistung ohne Kompromisse", MM Das Industriemagazin 5/2002,

which was filed late and disregarded by the Opposition Division, disclosed the use of linear motors for driving the axes of a machine tool, not for the specific purpose of feeding a workpiece. In the prior art, linear motors were used either for displacing light loads, as in A5, or for moving large pieces of equipment, as in A6. There was no disclosure of using linear motors in a heavy duty apparatus such as an automatic rolling machine. In fact, prior to the invention there were no linear motors available on the market that were suitable for an automatic rolling machine. Furthermore, linear motors were used for

precise positioning, but this aspect was irrelevant to the invention according to the patent in suit.

The additional features according to the amended claims filed during the oral proceedings were also not suggested by the prior art. A1 did not disclose whether the reciprocating member was rigidly coupled to the frame of the machine. Moreover, the provision of a base allowed an easy adjustment of the reciprocating member and of the linear motor with respect to the frame and also allowed to increase the rigidity of the machine.

Reasons for the Decision

1. The appeal is admissible.

2. *The patent as granted*

2.1 Document A1 undisputedly represents the closest prior art according to the preamble of claim 1. It discloses an automatic rolling machine comprising (see Fig. 3) a reciprocating member (slide 92) that is provided with a means (push rod 98) adapted to pick up a part (blank) to be machined from a guide (channel 58) and to insert it in a working position (i.e. between the dies 34 and 36).

2.2 The subject-matter of claim 1 undisputedly differs from the machine according to A1 by the feature recited in the characterizing portion, that the reciprocating member is actuated by a linear motor.

2.3 In the machine according to A1 (see Fig. 3), the reciprocating member, namely the slide 92, is subjected to the opposed actions of a spring 104 and a lever 110, which lever is operated by a cam 114 formed on a disc 116. The disc is in synchronized driving connection with the main drive of the machine by means of a shaft 118 and bevel gears 124-134 (see page 3, lines 13-50). This long kinematic chain can be dispensed with by providing a linear motor. Indeed, when suitably controlled, the linear motor can provide the necessary synchronized reciprocating motion without mechanical connections with the main drive. Therefore, the distinguishing feature has the effect of simplifying the rolling machine according to A1. By being more simple, i.e. with less mechanical components, the machine is generally more functional and efficient (cf. the statement of the problem as acknowledged in par. [0007] of the patent in suit). However, in the absence of any specifications in the claim about the kind of linear motor used and of how it is controlled, no further specific technical effects can be attributed to the distinguishing feature.

2.4 Accordingly, in agreement with the view expressed by the respondent during the oral proceedings, the objective technical problem is to simplify the automatic rolling machine, and thereby render it more functional and efficient.

2.5 The skilled person faced with this technical problem would immediately remark that a source of complexity in the machine according to A1 is the long kinematic chain mentioned above for actuating the reciprocating member in synchronism with the main drive. Since it is common

general knowledge for the skilled person in the field of machine tools that the law of movement of an element of a machine tool can be imposed by means of a suitably controlled drive means rather than by means of a kinematic chain including a series of mechanical transmission elements, the skilled person would consider replacing the kinematic chain of A1 with a suitably controlled drive means in order to solve the technical problem. Accordingly, he would look for a drive means which is suitable for a reciprocating motion and which can be suitably controlled to be in synchronism with the main drive of the machine. Since it is common general knowledge that linear motors are suited for that purposes, the skilled person would obviously consider the modification of the machine according to A1 consisting in providing a linear motor for actuating the reciprocating member.

2.6 It is true that, as pointed out by the opposition division (point 4.4 of the decision under appeal), A4.1 and A5 show applications of linear motors to different machines than the automatic rolling machine according to the patent in suit. This is also true in respect of A6, which discloses the use of linear motors as an alternative to the use of conventional mechanical-electrical drives for actuating the axes of machine tools (see in particular page 43, left hand-side column, 2nd paragraph). Nevertheless, a linear motor is a generally known means for providing linear displacement of elements of machine tools. The specific applications shown in A4.1, A5 and A6 are examples of specific uses of linear motors. There is nothing in the disclosure of these documents which would imply that the use of linear motors is only beneficial in a restricted field

of applications. On the contrary, the statement in A5 that the provision of linear motors for moving the tool of a press allows for direct force transmission, high speeds and accelerations, and control of the displacement-time characteristics (see page 1, 4th paragraph), is clearly a statement of broad scope, in that the skilled person would recognize that these advantages are inherent to the linear motor and not to its specific application to a press. In fact, this statement reflects common general knowledge in respect of linear motors. In particular, it reflects the well-known fact that linear motors can be suitably controlled for providing a given law of displacement. On this basis, the skilled person would regard the linear motor as the most appropriate choice of a drive means for actuating the reciprocating member in synchronism with the drive means of the automatic rolling machine according to A1.

2.7 Therefore, the subject-matter of claim 1 as granted does not involve an inventive step (Article 100(a) and 56 EPC).

3. *The amended claims filed during the oral proceedings*

3.1 At the oral proceedings, after the discussion on inventive step and an interruption for deliberation, the Chairman's announced the Board's view that the subject-matter of claim 1 as granted did not involve an inventive step. The oral proceedings were then interrupted as requested by the respondent. On resumption, the respondent filed the amended claims. Therefore, they represent a late amendment to the respondent's case and may be admitted and considered at

the Board's discretion pursuant to Article 13(1) of the Rules of Procedure of the Boards of Appeal (RPBA). This Article makes clear that in exercising that discretion, the Board must consider a range of factors including *inter alia* the complexity of the new subject-matter submitted, the current state of the proceedings and the need for procedural economy.

3.2 Considering that the respondent was aware of the Board's negative opinion and of the reasons behind it as set out in the communication accompanying the summons to oral proceedings, that no new elements were introduced during the oral proceedings, the Board takes the view that there was no justification for filing the amended claims only at a very late stage of the oral proceedings. Under these circumstances, the aspect of procedural economy becomes of primary importance whereby, in accordance with established case law of the boards of appeal, a condition for admitting the amendments is that they *prima facie* appear to overcome the outstanding objection of lack of inventive step.

3.3 This is not the case here. The amendment made to claim 1 consists in introducing the additional features of granted claim 3, according to which the reciprocating member and the linear motor are supported by a base that is rigidly coupled to the frame of the machine. In A1 the reciprocating member is rigidly coupled to the frame of the machine. In fact, the slide 92, which is the reciprocating member, is movable within a housing 94 (see page 3, lines 12 to 15) which is necessarily rigidly coupled to the frame 10 of the machine (see Fig. 2). The respondent submitted that there was no disclosure in A1 of the housing being rigidly coupled

to the frame. However, the absence of a rigid coupling would be contrary to the proper functioning of the reciprocating member, as it has a fixed trajectory and thus must not be allowed to move freely. When providing a linear motor in the machine according to A1, the skilled person would rigidly couple it to the reciprocating member and, consequently, to the frame. Finally, the provision of a base for supporting the reciprocating member and the linear motor is a matter of normal design procedure: in machine tools it generally known to attach elements not directly onto the frame of the machine but on e.g. a plate (which acts as a base) for providing a suitable supporting surface and for allowing simpler adjustment of the element's position with respect to the frame.

3.4 From the above it follows that the subject-matter of the amended claim is clearly not allowable in that it also relates to non-inventive subject-matter. Under these circumstances the Board exercised its discretion under Article 13(1) RPBA not to admit the amendments into the proceedings for reasons of procedural economy.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The patent is revoked.

The Registrar: The Chairman:

M. Patin P. Alting van Geusau