

①⑫

EUROPEAN PATENT APPLICATION

②① Application number: **89312214.3**

⑤① Int. Cl.⁵: **B31D 5/00**

②② Date of filing: **24.11.89**

③⑦ Priority: **30.11.88 GB 8827903**

④③ Date of publication of application:
06.06.90 Bulletin 90/23

⑥④ Designated Contracting States:
AT BE CH DE ES FR GB GR IT LI NL SE

⑦① Applicant: **Ensor, Charles Howard**
The Stables 63 Drumaknockan Road
Hillsborough
County Down BT26 6QP Northern
Ireland(GB)

⑦② Inventor: **Ensor, Charles Howard**
The Stables 63 Drumaknockan Road
Hillsborough
County Down BT26 6QP Northern
Ireland(GB)

⑦④ Representative: **Sorrell, Terence Gordon et al**
Fitzpatricks 4 West Regent Street
Glasgow G2 1RS Scotland(GB)

⑤④ **Improvements in and relating to blanks for three dimensional models.**

⑤⑦ A method of producing a three dimensional model by folding and manipulating a lamina blank (20,30) in accordance with instruction information and indicia (23,24) formed and/or printed on such blank (20,30). A blank for forming such a three dimensional model comprises a lamina (20,30) having fold lines (21) formed or indicated thereon and instruction information (23,24) located adjacent and associated with the fold lines (21), such that manual manipulation, in accordance with such instruction information (23,24), will result in the formation of a desired model (figures 3,4,7). The fold lines and associated instruction information (23,24) preferably comprise a series of successive steps and are so located on the lamina (20,30) that as each step is performed the following step becomes viewable as the making of the model proceeds.

EP 0 371 705 A1

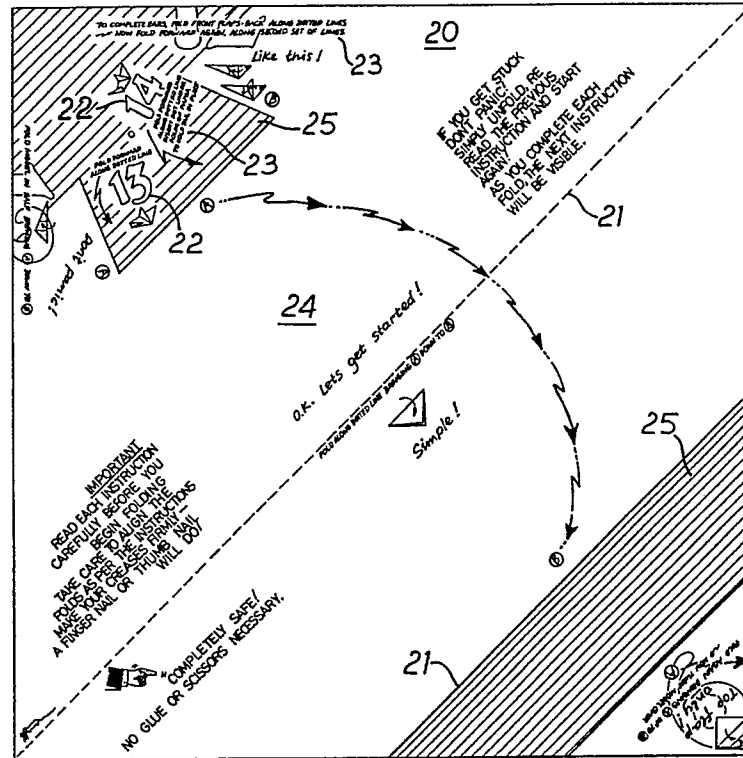


Fig. 1

IMPROVEMENTS IN AND RELATING TO BLANKS FOR THREE DIMENSIONAL MODELS

The invention relates to blanks for three dimensional models and to methods for constructing such models.

For many years the art of origami, i.e. folding a pliable blank to form a three dimensional model, has been well known. However, such art can be extremely complex, for beginners or to produce a meaningful model, even for practised exponents of the art. Books, containing plans and instructions for producing such models are also available but tend to pose a complex problem when attempting to relate such plans and instructions to a blank, especially for children. Furthermore, many packaging articles or, for example, greetings cards do not have a further use subsequent to their primary function.

It is an object of the present invention to obviate or mitigate the above difficulties and disadvantages.

According to one aspect of the invention there is provided a blank for forming a three dimensional model which comprises a lamina having fold lines formed or indicated thereon and instruction information located adjacent and associated with the fold lines, such that manual manipulation, in accordance with such instruction information, will result in the formation of a desired model.

Such fold lines and instruction information may be located on both sides of the lamina and may have specified areas located thereon to receive indicia and/or design which will be externally visible upon completion of the model. Such specified areas may be indicated so as to facilitate the setting of a printing or other machine to provide the indicia and/or design thereon. The fold lines and associated instruction information may comprise a series of successive steps and are so located on the lamina that as each step is performed the following step becomes viewable as the making of the model proceeds.

According to a further aspect of the invention there is provided a blank for a greetings card comprising a lamina having preselected areas for printing greetings indicia and/or designs thereon, on one face thereof, and having fold lines formed or indicated on the other face thereof with instruction information located adjacent and associated with the fold lines, such that manual manipulation, in accordance with such instruction information, will result in the formation of a predetermined model.

According to yet a further aspect of the invention there is provided a method of producing a three dimensional model which comprises folding and manipulating a lamina blank in accordance with instruction information and indicia formed and/or

printed on such blank.

The foregoing and further features of the invention may be more readily understood from the following description of two preferred embodiments thereof, by way of example, with reference to the accompanying drawings, in which:-

Figures 1 and 2 show the opposed faces of a blank for producing a mouse;

Figure 3 is a perspective view of a mouse produced by folding the blank of Figures 1 and 2;

Figure 4 is perspective view of a shark produced from a blank similar to that of Figures 1 and 2;

Figures 5 and 6 show the opposed faces of a blank for a greetings card, and

Figure 7 is a perspective view of a model produced from the blank of figures 5 and 6.

Referring now firstly to figures 1 and 2 there is shown a blank 20 which is printed on each side with fold lines 21 and associated instruction data 22 and 23 printed adjacent thereto. Area 24 is available for a user to provide promotional messages or logos thereon. Shaded area 25 will comprise the outer surface of a mouse produced by manual manipulation of the blank by following the instructions contained thereon and hence such area 25 may be overprinted with required designs, promotional messages or logos or alternatively may be left blank, but indicated, for the person producing the model to add their own designs or indicia. The instruction data comprises step numerals 22 with associated folding instructions 23 printed adjacent thereto. The model is so arranged that by carrying out the instruction of each successive step, the instruction for the following step will become viewable as the making of the model proceeds.

In use, when the blank of figures 1 and 2 has been folded in accordance with the instructions printed thereon a mouse is produced of the form shown in figure 3. Figure 4 shows a perspective view of a model depicting a shark which can be made from a blank similar to that shown in Figures 1 and 2.

Many other models, for example geometric, such as a cube, hats, or boats may be produced in similar fashion by providing blanks with alternative fold lines and instruction details. Models of hats or boats may be made from blanks formed of a waterproof material and may be actually sailed or worn respectively. Such blanks may be provided, for example, on the internal surfaces of cereal cartons or on reverse surfaces of paper place mats used in restaurants.

Referring now to figures 5 to 7, figure 5 shows

one side 26 of a greetings card which for its normal use is firstly folded along the line 27 and secondly folded along the line 28. In this particular embodiment a face is provided in the area 29 which depicts Father Christmas but may take any form. Figure 6 shows the reverse side 30 of the greetings card which again is printed with fold lines 21, associated instruction information 23 and an areas 25 which will be viewable upon production of a model after carrying out instructions 23.

Figure 7 is a perspective view of a model produced by carrying out the instructions detailed on the blank of figure 6 which provides the general appearance of a Father Christmas and the portion 31 may be raised to show the face of the character printed at the portion 29y. Furthermore the sleeve portions 32 and lower trunk portion 33 may also be opened to provide a christmas decoration, for suspension from a christmas tree, for example.

Claims

1. A method of producing a three dimensional model characterised by folding and manipulating a lamina blank (20,30) in accordance with instruction information and indicia (23,24) formed and/or printed on such blank (20,30).

2. A blank for forming a three dimensional model in accordance with the method as claimed in claim 1, characterised by a lamina (20,30) having fold lines (21) formed or indicated thereon and instruction information (23,24) located adjacent and associated with the fold lines (21), such that manual manipulation, in accordance with such instruction information (23,24), will result in the formation of a desired model (figures 3,4,7).

3. A blank as claimed in claim 2 characterised in that said fold lines (21) and instruction information (23,24) are located on both sides of the lamina (20,30).

4. A blank as claimed in claim 2 or 3 characterised in that the fold lines (21) and associated instruction information (23,24) comprises a series of successive steps and are so located on the lamina (20,30) that as each step is performed the following step becomes viewable as the making of the model proceeds.

5. A blank as claimed in claim 3 or 4 having specified areas (25) located thereon to receive indicia and/or design which will be externally visible upon completion of the model.

6. A blank as claimed in claim 5 characterised in that said specified areas (25) are indicated so as to facilitate the setting of a printing or other machine to provide the indicia and/or design thereon.

7. A blank for a greetings card characterised by a lamina having preselected areas (29) for print-

ing greetings indicia and/or designs thereon, on one face (26) thereof, and having fold lines (21) formed or indicated on the other face (30) thereof with instruction information (23,24) located adjacent and associated with the fold lines(21), such that manual manipulation, in accordance with such instruction information (23,24), will result in the formation of a predetermined model (figure 7).

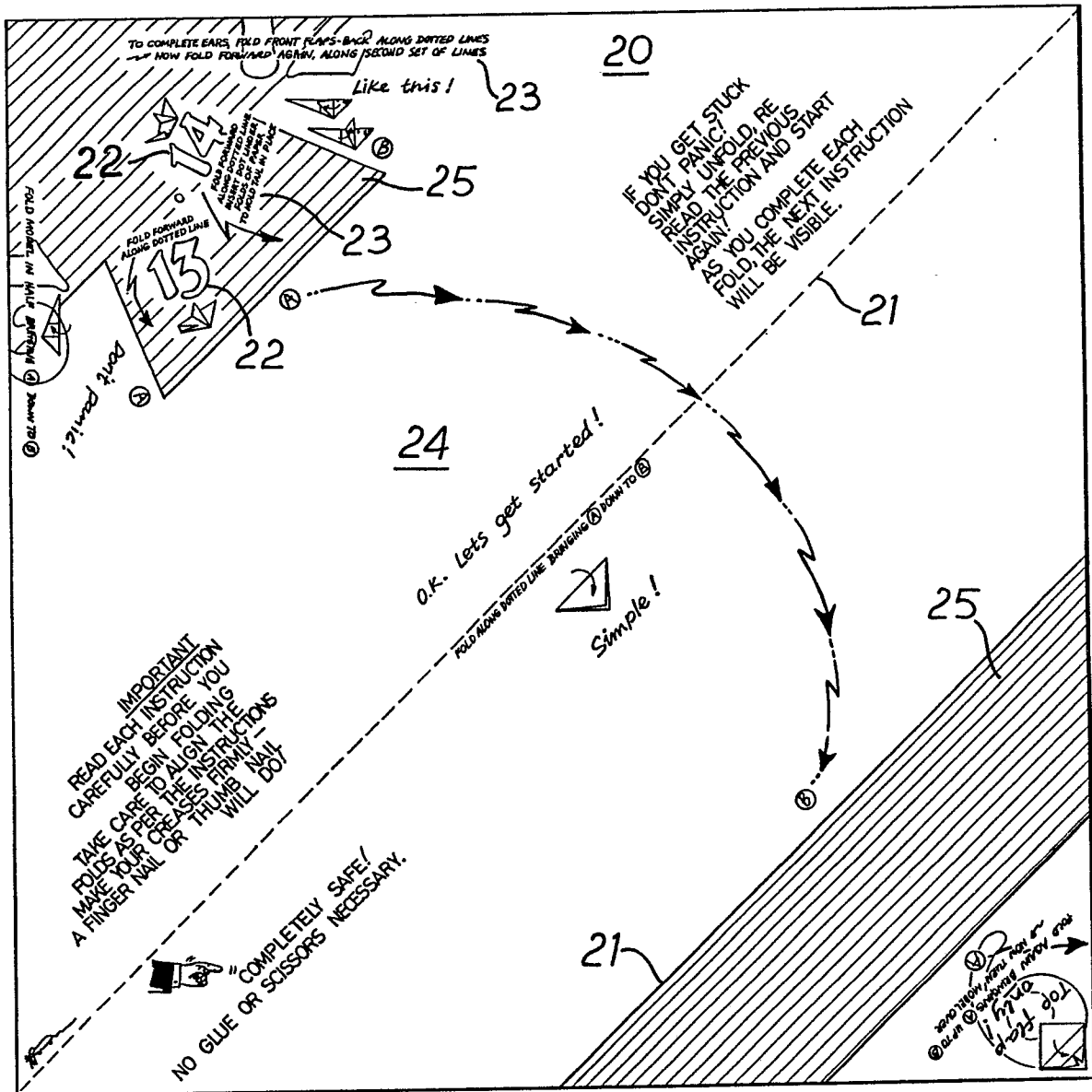


Fig. 1

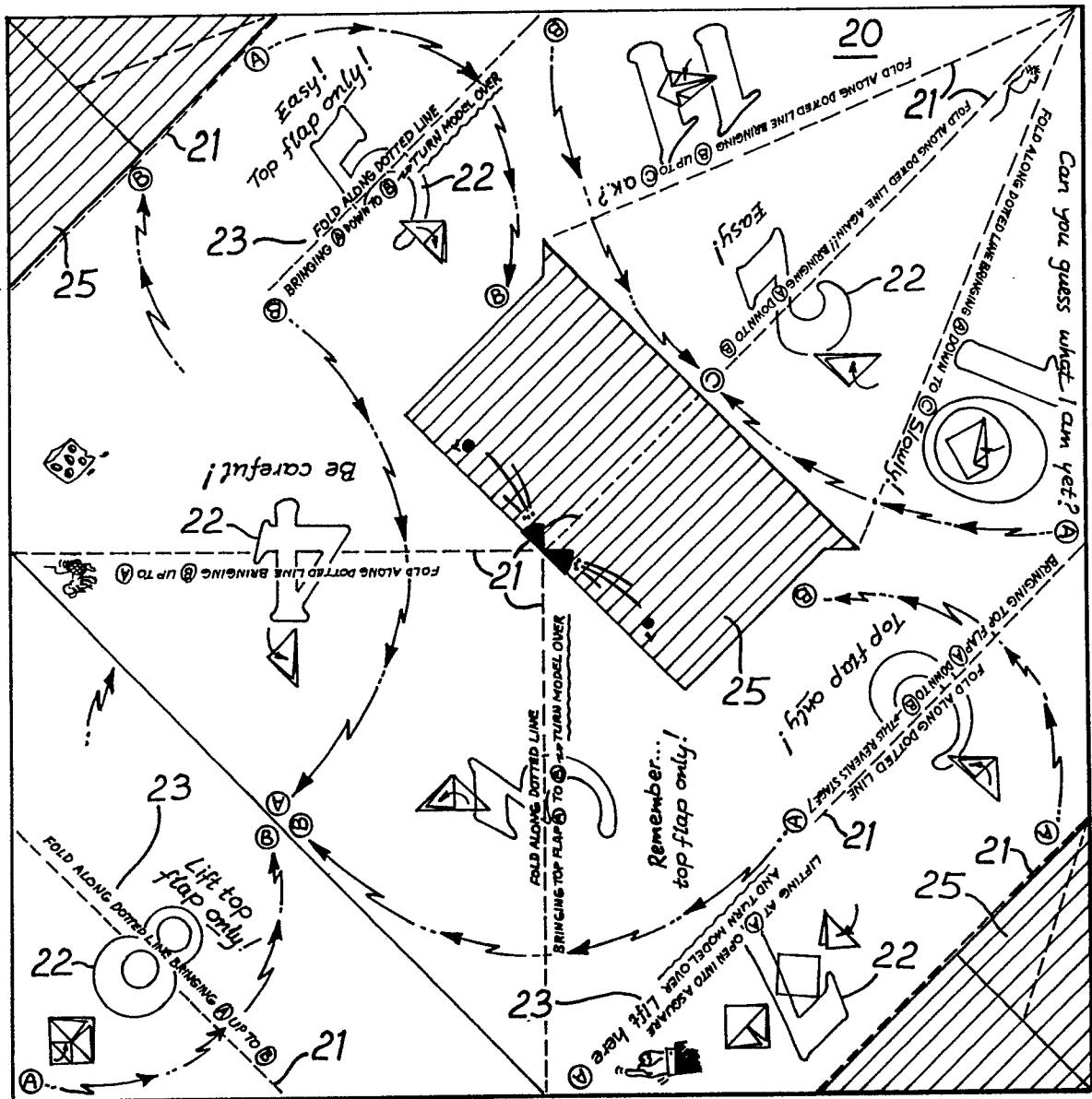


Fig. 2

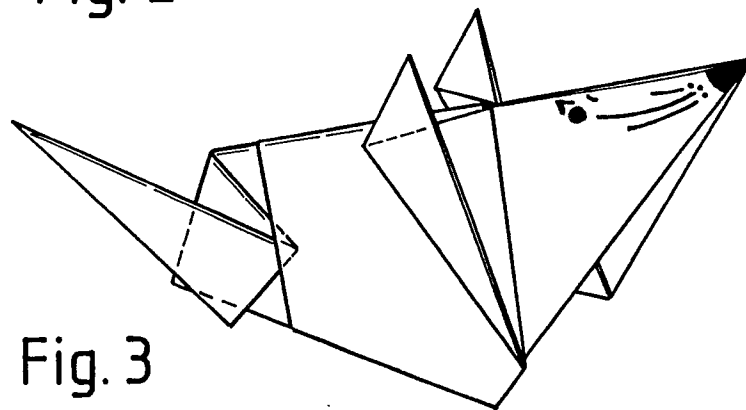


Fig. 3

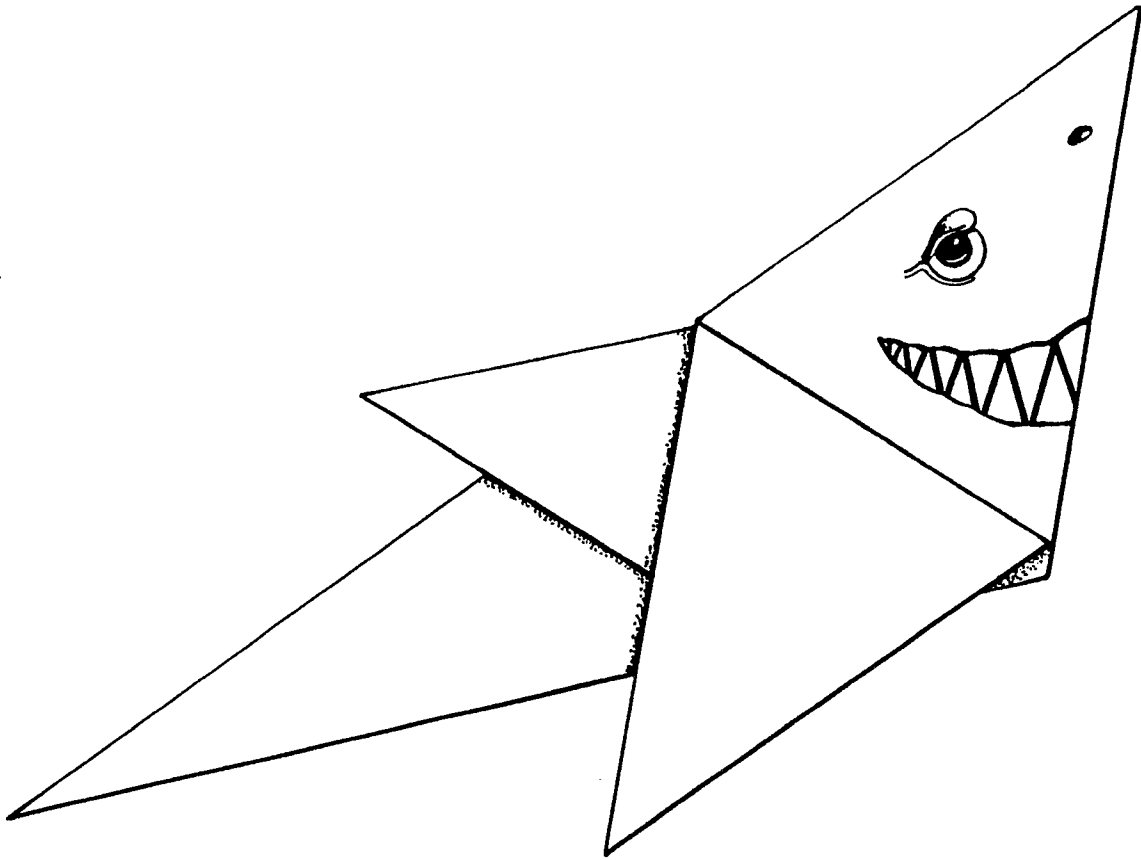


Fig. 4

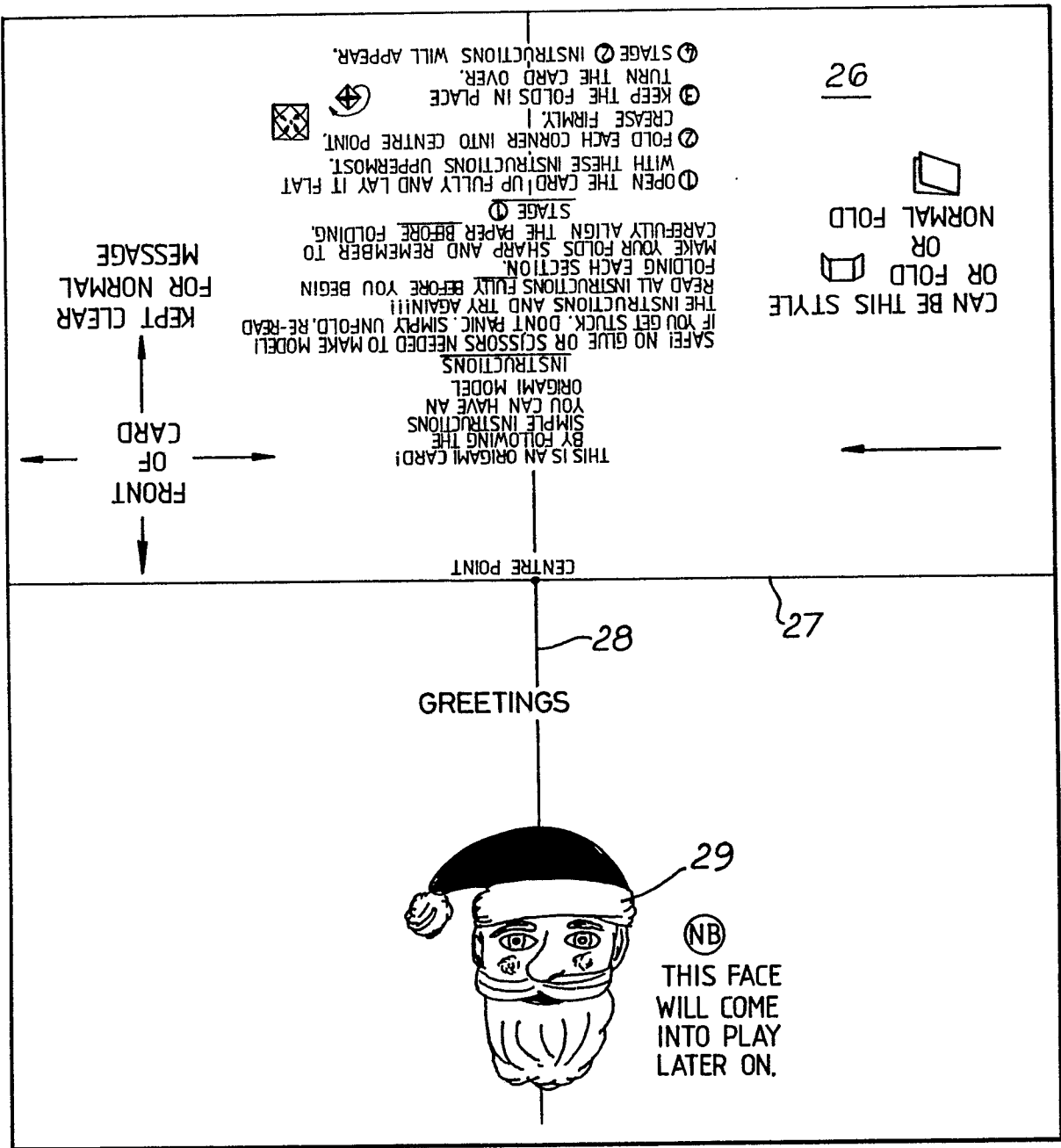


Fig. 5

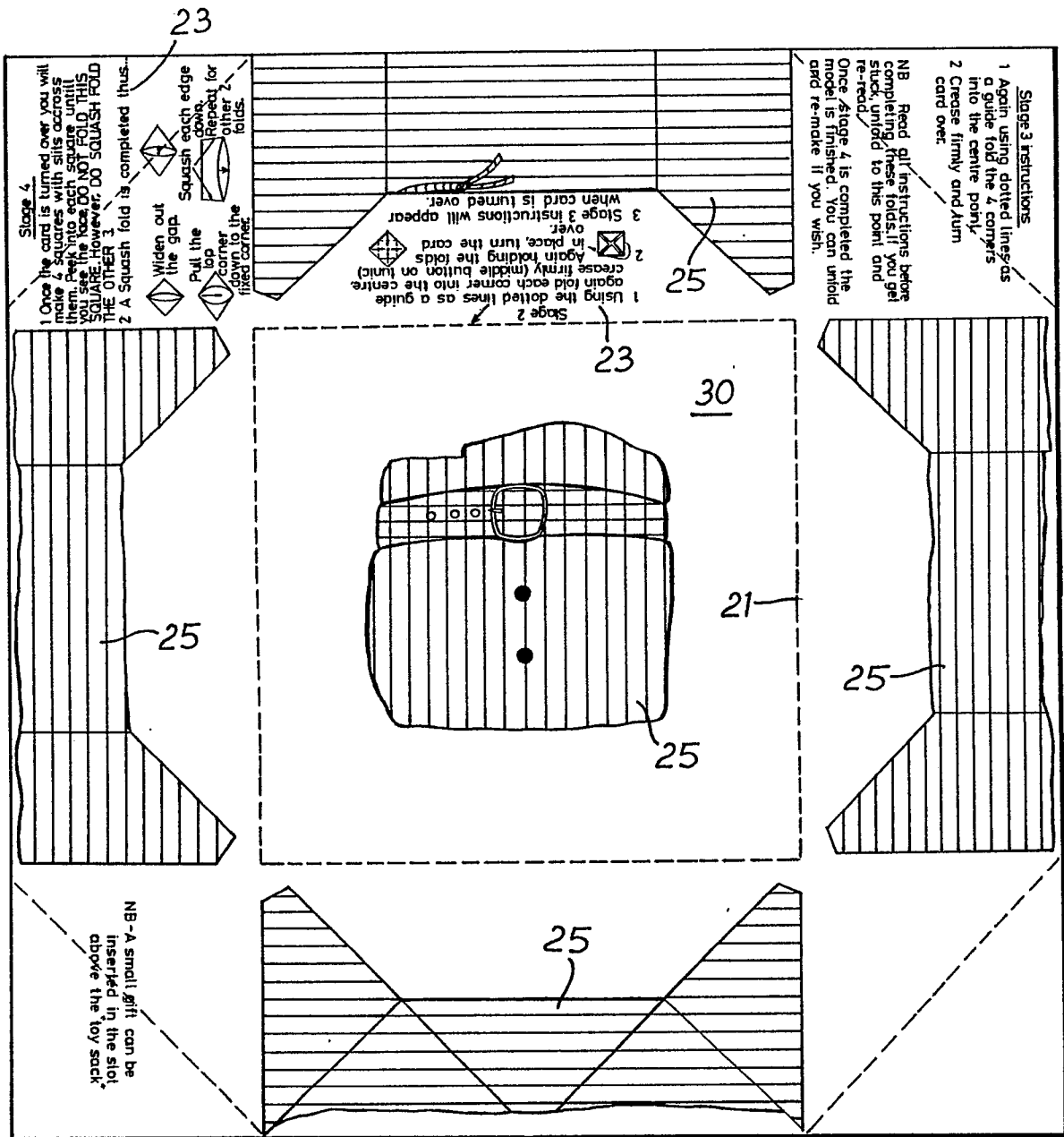


Fig. 6

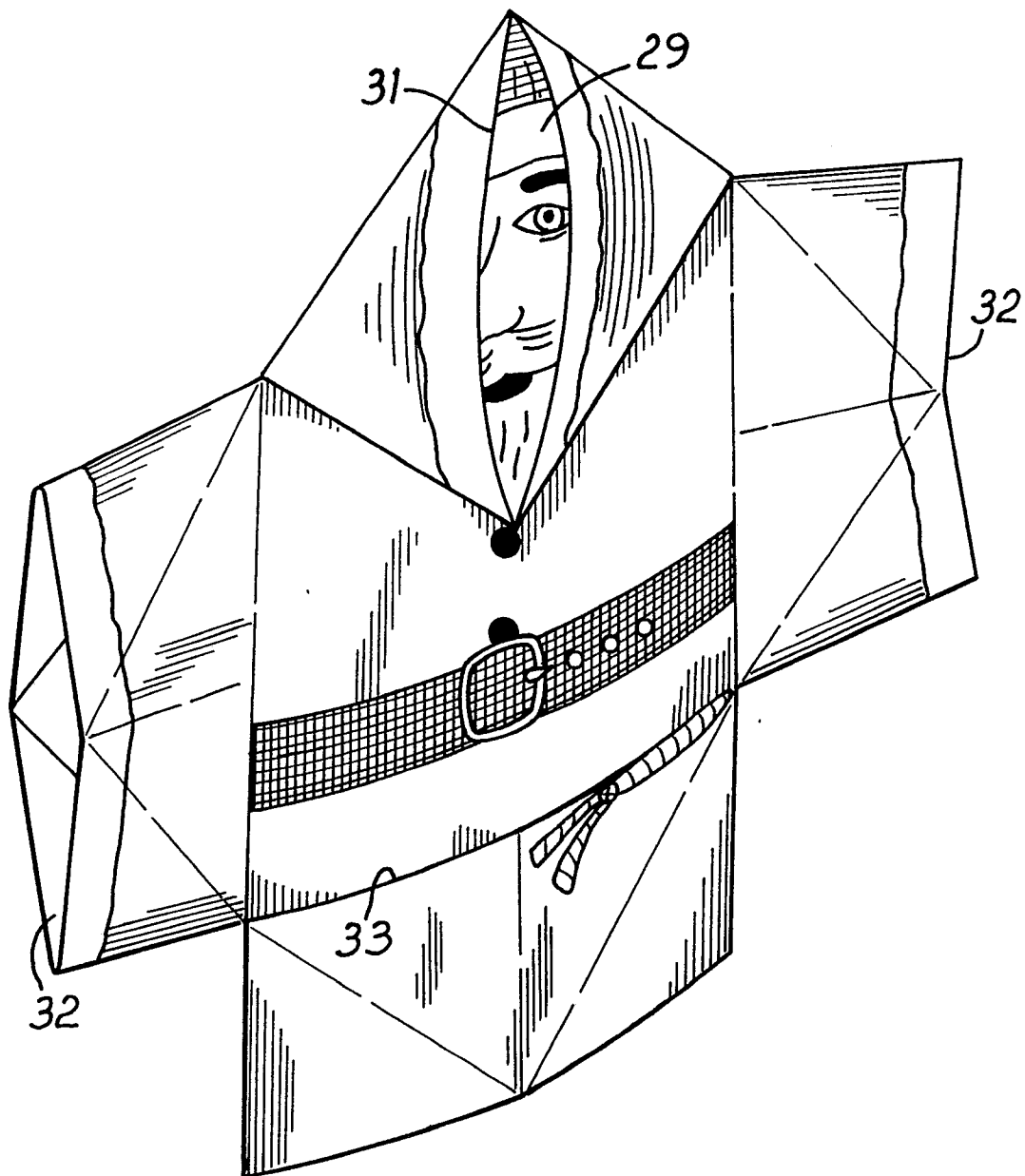


Fig. 7



EP 89312214.3

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
A	<u>FR - A1 - 2 605 550</u> (MICHEL) * Totality * --	1, 2, 3
A	<u>US - A - 4 713 012</u> (POPLAWSKI) * Totality * ----	1, 2
The present search report has been drawn up for all claims		
Place of search VIENNA		Date of completion of the search 05-02-1990
Examiner KRUMPSCHMID		
CATEGORY OF CITED DOCUMENTS		
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		
T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document		

CLASSIFICATION OF THE
APPLICATION (Int. Cl.)¹⁵

B 31 D 5/00

TECHNICAL FIELDS
SEARCHED (Int. Cl.)¹⁵

A 63 H 3/00
A 63 H 33/00
B 31 D 5/00
B 65 D 75/00
G 09 B 25/00
G 09 F 1/00