

PATENTS ACT 1977

IN THE MATTER OF an application under
Section 72 by Gang-Nail Systems Limited for the
revocation of Patent No GB 2089389 B in the
name of Easybuild Structures Limited

INTERIM DECISION

Gang-Nail Systems Limited ("Gang-Nail") applied on 2 December 1991 under section 72(1) of the Patents Act 1977 ("the Act") for the revocation of patent no GB 2089389 B, entitled "Roof Trusses", in the name of Easybuild Structures Limited ("Easybuild"), in both its originally granted form and the form to which the proprietor had previously applied under section 27 to amend it. The grounds put forward for revocation are in essence that under section 72(1)(a) the invention claimed in the patent in both forms is not new and does not involve an inventive step having regard at least to the prior manufacture, sale and use of a certain truss, and that under section 72(1)(d) the patent as proposed to be amended contravenes section 76(3) of the Act. In the counterstatement and its exhibits filed on 5 March 1992, the proprietor *inter alia* denies invalidity of the patent and requests dismissal of the revocation application, but offers unconditional amendments as set out in exhibit SE&C3 different from those which it had proposed in its section 27 application, and requests that the patent be maintained in this new form.

Evidence rounds followed the usual course. The applicant's evidence comprises ten statutory declarations with exhibits from Messrs Burrett (two), Mann, Margetson, Munro, Stokes (two), Walsh-Smith, Dr Whale and Mrs Smith. The proprietor's evidence comprises a single statutory declaration without exhibits by Mr Norris, who is the Director of the proprietor company and the inventor of the patented invention.

The matter came before me at a hearing on 21 June 1993, at which Mr H L Jukes of Swann, Elt & Company appeared as agent for the proprietor and Mrs G R Smith of Marks & Clerk appeared as agent for the applicant.

Before turning to the substantive issues before me, there are several preliminary matters which I should consider. First, the proprietor alleges in the counterstatement that the statement does not set out fully the facts upon which the applicant relies in support of its case. However, Mr Jukes did not argue before me at the hearing that the statement as such was deficient, and in any event any deficiency that may have existed in it has been remedied by the evidence subsequently filed. I do not therefore believe I need to consider this matter further.

The second preliminary matter arises from paragraph 9 of the counterstatement in which the proprietor requests the Comptroller to issue directions allowing inspection of any building containing any truss upon which the applicant relies. The matter of inspection was the subject of correspondence involving both parties and the Patent Office which culminated in an official letter of 21 August 1992. This letter noted that the choice of what evidence to furnish in support of the application is primarily a matter for the applicant, and gave the Office's preliminary view that since it appeared that the applicant did not wish to rely on an inspection of the building in question the Comptroller should decide the application on such evidence as is furnished by the parties. Mr Jukes touched on this matter briefly at the hearing in the context of remarks made by Mrs Smith in her declaration, where she suggests that it would not be advantageous for the proprietor to inspect the building since the present state of the roof trusses is immaterial to the present matter. By this I take Mrs Smith to mean that the applicant is not placing any reliance on those roof trusses in their present state. Although I have carefully considered the points made in this respect by Mr Jukes at the hearing and in correspondence, I am not persuaded that inspection would serve any useful purpose and regard it as reasonable in all the circumstances to proceed on the existing documentary evidence.

Third, there is the matter of the application to amend under section 27. This was put in abeyance pending the resolution of these revocation proceedings as stated in an official letter dated 5 February 1992, and by operation of section 27(2). As I indicated at the hearing, the position at the conclusion of these revocation proceedings will be that the patent will have been revoked or the patent as amended will have been found to be valid. Further amendment under section 27 would in either event be unnecessary. I should, however, note that formally

paragraphs 5 to 10 of the statement of the applicant for revocation variously oppose the amendments proposed in the section 27 proceedings, and if those amendments are allowed seek revocation of the thus amended patent under sections 72(1)(a) and (d). Those proceedings under section 27 having as I say been superseded, matters arising from amendments proposed there do not fall for further consideration. There is no pleaded objection under section 72(1)(d) to the amendments offered under section 75, but no point was taken on this, and I have treated the objection pleaded to the section 27 amendments as applying to the section 75 amendments.

As a final preliminary point I might also mention that although the identity of the proprietor of the patent was questioned in Marks & Clerk's letter of 21 November 1991 exhibited at M&C1 to the counterstatement, Mrs Smith confirmed at the hearing that this was not now a matter of contention. I need therefore take this point no further, although for completeness I note that by letter to the Patent Office dated 16 June 1993 Mr Jukes has applied to register a change of name of the proprietor.

Patent no GB 2089389 B was granted on 9 January 1985 on application no 8038741, which was filed on 3 December 1980, claiming no earlier priority date. The patent specification in its granted form comprises a description, three figures, and three claims. The description is headed with the title "Roof Trusses" and commences with a statement of invention corresponding to claim 1. It goes on by elaborating on how the members comprising the truss can be connected, materials from which they can be made, and how at least two such trusses can be disposed. In listing the three figures, it is stated at lines 6 to 11 of page 3 that:

"In the accompanying drawings, which are by way of example of the present invention:

Fig 1 shows a plurality of aligned trusses;

Fig 2 shows trusses in a curved distribution;

and

Fig 3 shows trusses in a polygonal distribution."

The description then describes a particular embodiment of the truss and, in relation to respective figures, three "distributions" of such trusses. It might be observed at this point that it is only in relation to the distribution shown in figure 3 that the word "roof" is used, and that is at lines 29 to 32 of page 3, which read as follows:

"In Fig 3, trusses T_1 , T_2 , T_3 , T_4 of the kind shown in Fig 1 are arranged in a polygonal distribution for enabling a folded roof having four ridges a, b, c, d to be constructed."

The claims of the granted patent ("the granted claims") read as follows:

- "1. A truss having an apex, comprising:
 - (i) transverse first framework member having first and second opposite end portions, framework member (i) being an integral or composite structure;
 - (ii) rising second framework member having first and second opposite end portions, the lower end portion of framework member (ii) being connected to or integral with the first end portion of framework member (i), framework member (ii) being an integral or composite structure and rising substantially vertically from framework member (i);
 - (iii) rising third framework member having first and second opposite end portions, the lower end portion of framework member (iii) being connected to or integral with the second end portion of framework member (i), framework member (iii) being an integral or composite structure and rising substantially vertically from framework member (i);
 - (iv) transverse fourth framework member, this member being spaced apart from said apex and having first and second opposite end portions spaced apart from the upper ends of framework members (ii), (iii), framework member (iv) being an integral or composite structure;
 - (v) rising fifth framework member sloping upwards towards and beyond the first end portion of framework member (iv), framework member (v) having first and second opposite end portions, the lower end portion of framework member (v) being spaced apart from framework member (i), framework

- member (iii) being connected to or integral with the lower end portion of framework member (v), framework member (v) being connected to or integral with framework member (iv) and being an integral or composite structure;
- (vi) rising sixth framework member sloping upwards towards and beyond the second end of framework member (iv), framework member (vi) having first and second opposite end portions, the lower end portion of framework member (vi) being spaced apart from framework member (i), framework member (ii) being connected to or integral with the lower end portion of framework member (vi), framework member (vi) being connected to or integral with framework member (iv) and being an integral or composite structure;
- and wherein:
- (a) the upper end portions of framework members (v) and (vi) are connected to or integral with each other to form said apex; and
- (b) framework members (i), (ii), (iii), (iv), (v), (vi) together constitute a self supporting boundary of an unobstructed void.

2. A truss as claimed in claim 1, wherein said void defines substantially the height of one storey of a building.

3. A truss as claimed in claim 1, substantially as hereinbefore described with reference to and as shown in Fig 1 of the accompanying drawings".

Turning to the patent as it has been proposed in these revocation proceedings to amend it, amendments were originally offered in exhibit SE&C3 to the counterstatement. As is the normal practice, these were referred to an examiner whose *prima facie* view as expressed in an official letter of 27 April 1992 was in effect that certain of the amendments did not clearly comply with section 76(3) of the Act. By letter dated 22 May 1992 Mr Jukes submitted observations on the examiner's view and offered further amendments to the specification. In letters of 12 June and 27 August 1992 Mrs Smith contended that the offered amendments remained unacceptable. By a further letter dated 8 September 1992 Mr Jukes offered to correct several typographical errors in the earlier amendments, but otherwise to maintain

them. These proposed amendments were confirmed as unconditional in Mr Jukes's letters of 21 July 1992 and 10 June 1993.

Thus the form of the patent as it was offered unconditionally to be amended ("the amended patent") under consideration at the hearing comprises the amended specification filed with Mr Jukes's letter of 22 May 1992 subject to typographical corrections filed with his letter of 8 September 1992. In summary, the amended patent would substitute eleven new claims ("the amended claims") for those in the granted patent, and make some consequential changes to the description. The amended claims read as follows:

- "1. A roof truss for enabling a roof of a building to be constructed, the truss having an apex, comprising:
 - (i) transverse first framework member having first and second opposite end portions, framework member (i) being an integral or composite structure;
 - (ii) rising second framework member having first and second opposite end portions, the lower end portion of framework member (ii) being connected to or integral with the first end portion of framework member (i), framework member (ii) being an integral or composite structure and rising substantially vertically from framework member (i);
 - (iii) rising third framework member having first and second opposite end portions, the lower end portion of framework member (iii) being connected to or integral with the second end portion of framework member (i), framework member (iii) being an integral or composite structure and rising substantially vertically from framework member (i);
 - (iv) transverse fourth framework member, this member being spaced apart from said apex and having first and second opposite end portions spaced apart from the upper ends of framework members (ii), (iii), framework member (iv) being an integral or composite structure;
 - (v) rising fifth framework member sloping upwards towards and beyond the first end portion or [sic] framework member (iv), framework member (v) having first and second opposite end portions, the lower end portion of framework member (v) being spaced apart from framework member (i), framework

member (iii) being connected to or integral with the lower end portion of framework member (v), framework member (v) being connected to or integral with framework member (iv) and being an integral or composite structure;

(vi) rising sixth framework member sloping upwards towards and beyond the second end of framework member (iv), framework member (vi) having first and second opposite end portions, the lower end portion of framework member (vi) being spaced apart from framework member (i), framework member (ii) being connected to or integral with the lower end portion of framework member (vi), framework member (vi) being connected to or integral with framework member (iv) and being an integral or composite structure;

wherein:

- (a) the upper end portions of framework members (v) and (vi) are connected to or integral with each other to form said apex;
- (b) framework members (i), (ii), (iii), (iv), (v), (vi) together constitute a self supporting boundary of an unobstructed void; and
- (c) said void defines substantially the height of one storey of a building.

2. A roof truss as claimed in claim 1, substantially as hereinbefore described with reference to and as shown in Fig 1 of the accompanying drawings.

3. A building's roof comprising at least two roof trusses as claimed in claim 1 and/or 2, wherein:

- (d) each said truss constitutes a self supporting boundary of an unobstructed void; and
- (e) said void defines substantially the height of one storey of a building.

4. A building's roof as claimed in claim 3, substantially as hereinbefore described with reference to and as shown in Fig 1 of the accompanying drawings.

5. A building's roof as claimed in claim 3, substantially as hereinbefore described with reference to and as shown in Figs 1 and 2 of the accompanying drawings.

6. A building's roof as claimed in claim 3, substantially as hereinbefore described with reference to and as shown in Figs 1 and 3 of the accompanying drawings.
7. A method for enabling a roof of a building to be constructed, wherein the construction comprises disposing for said construction at least two roof trusses as claimed in claim 1 and/or 2, wherein:
 - (d) each said truss constitutes a self supporting boundary of an unobstructed void; and
 - (e) said void defines substantially the height of one storey of a building.
8. A method as claimed in claim 7, substantially as hereinbefore described with reference to and as shown in Fig 1 of the accompanying drawings.
9. A method as claimed in claim 7, substantially as hereinbefore described with reference to and as shown in Figs 1 and 2 of the accompanying drawings.
10. A method as claimed in claim 7, substantially as hereinbefore described with reference to and as shown in Figs 1 and 3 of the accompanying drawings.
11. A roof constructed by utilising a method as claimed in any one of claims 7 to 10, said roof comprising at least two said roof trusses, wherein:
 - (d) each said truss constitutes a self supporting boundary of an unobstructed void; and
 - (e) said void defines substantially the height of one storey of a building".

The applicant's first ground for revocation is that under section 72(1)(a) the invention claimed is not a patentable invention, specifically that it is not new and does not involve an inventive step as required by sections 1(1)(a) and (b) respectively. The applicant submits that the claimed invention is not new having regard at least to the prior manufacture, sale and use of a truss ("the prior truss") designed by Gang-Nail, manufactured by Bolt Building Supplies Limited ("Bolt"), sold to G Percy Trentham Limited ("Trentham") and used in a building in St Ives, Cambridgeshire, prior to the date of filing of the patent, which was 3 December

1980. The applicant further submits that the claimed invention does not involve an inventive step having regard to the same prior manufacture, sale and use alone or in combination with common general knowledge available to one skilled in the art prior to the date of filing of the patent. At the hearing these submissions were made in respect of the invention as claimed in both the granted and amended claims.

Ignoring the provisions of section 2(3) which are not relevant in the circumstances of this case, section 2(2) of the Act defines the state of the art against which, by virtue of sections 2(1) and 3, the novelty and obviousness of the invention are to be judged. Section 2(2) reads:

"The state of the art in the case of an invention shall be taken to comprise all matter (whether a product, a process, information about either, or anything else) which has at any time before the priority date of that invention been made available to the public (whether in the United Kingdom or elsewhere) by written or oral description, by use or in any other way".

The filing date of the patent is 3 December 1980 and the priority date of the claimed invention is the same, no earlier priority date being claimed. Thus I need to determine on the evidence what was made available to the public before that date of 3 December 1980.

At the hearing Mrs Smith took me to the declarations of Messrs Burrett, Mann, Munro, Stokes and Dr Whale for the background to the alleged prior manufacture, sale and use. From these it is clear that in or around August 1980 Trentham approached Bolt to design and supply thirty roof trusses for use in a building development being designed by architects Headley Stokes Partnership at a site known as Crown Yard, St Ives, Cambridgeshire. Bolt instructed Gang-Nail on or around 19 August 1980 to design the trusses, and Gang-Nail sent the results of its design work to Bolt on or around 26 August 1980. Bolt manufactured thirty trusses to Gang-Nail's design and delivered them to the site on 14 November 1980. This delivery date is specifically given by Mr Burrett and Mr Mann. I am prepared to accept it as correct, and note that it is before the filing date of the patent.

It is important that I should be clear precisely what the design of those trusses was. At the hearing Mrs Smith emphasised by reference to Mr Stokes's second declaration that the truss shown in the architect's drawings, for example drawing no 225/040 at exhibit DS1, was not, and was not intended to be, the final design. She asserted that the design of the truss actually used is shown *inter alia* at exhibit LW1 to Dr Whale's first declaration. The first page of that exhibit, she suggested, shows the instructions sent to Gang-Nail setting out how Bolt envisaged the truss to be manufactured. She indicated that the trusses as manufactured and delivered to the site were in accordance with the small drawings on pages 2 and 3 of this exhibit. This is consistent with the testimony of Mr Burrett, the drawings constituting exhibit TB1 to his first declaration being the same as those exhibited at LW1. Mr Jukes questioned whether the evidence showed that the trusses delivered to the Crown Yard site and used there were indeed to this design. However, I am satisfied on the evidence that they were as shown in those small drawings on pages 2 and 3 of exhibits LW1 and TB1. I do not propose to translate here into words the configuration or other details of the truss shown in those exhibits, but I note that it includes a bottom chord extending between the two bottom corners of the truss.

As Mrs Smith pointed out, Messrs Mann, Munro and Stokes all state that the trusses were delivered to the site with the bottom chords in place, Mr Mann noting that this was so that the trusses were stabilised. All three moreover testify that the trusses were to be positioned and fixed in the roof with their bottom chords still in place. However, it is clear from their testimony, and that of Mr Burrett and Dr Whale, including the drawing on page 1 of exhibit LW1 which bears the legend "bottom chord to centre bay removed on site", that the intention was that the bottom chords of the trusses were then to be removed.

The date on which the trusses were positioned in the roof is not precisely clear, but Mr Munro states in paragraph 3 of his declaration that he believes this would have been not later than 21 November 1980. He goes on to refer to minutes (at exhibit NM2) of a site meeting which took place on 3 December 1980, at which it was reported that the roof structure was 95% complete. Mr Munro says that he is sure that the roof trusses were in position well before that date. He adds that the roofing felt was probably also in place but that he cannot be sure that the bottom chords of the trusses had been removed by that date.

Mr Stokes, in paragraph 5 of his first declaration, refers to the same minutes (at exhibit DS2) and says that he is sure that the roof trusses had been positioned and the roof made weatherproof by felting by 3 December 1980. He too though cannot be sure that the bottom chords had been removed by that date. Mr Stokes and Mr Munro both recall walking along a concrete floor and stepping over the bottom chords of the trusses, which were still in place, whilst the roofing felt was in position. Mr Mann recalls that the bottom chords were not removed until after the roof had been made weatherproof but would have been removed as soon as possible thereafter. Mrs Smith accepted at the hearing that no evidence had been produced of exactly when the bottom chords were removed, except that it was after the roofing felt was on, but submitted that the building had all the features one would expect a "roof" to have before the bottom chords were removed.

I conclude from this evidence that the trusses with their bottom chords intact had been fixed in the roof and the roofing felt applied by 3 December 1980, the date of the site meeting and coincidentally the priority date of the invention. Moreover it seems to me that the bottom chords were removed after fixing the trusses in the roof and after the positioning of felting but I believe, judging especially from Mr Mann's comment on their removal "as soon as possible" and from the intention all along to remove the bottom chords after installation, before completion of the roof. Furthermore, although Mrs Smith argued that there existed at the Crown Yard site by 3 December 1980 "a roof", for example on the grounds that the roof structure had been felted, I am not persuaded that a complete "roof" existed by that date, only a partial one. This seems clear to me from the minutes of the site meeting of 3 December 1980, in which it is reported that the roof structure (my emphasis) was only 95% complete, and moreover that the roof covering was proceeding. My conclusion therefore is that before the priority date of the invention there did not exist at the Crown Yard site a (100%) complete "roof" incorporating the prior trusses retaining intact bottom chords.

It is a matter of considerable significance whether the truss used at Crown Yard satisfies two requirements specified at various points in the granted and amended claims. The first requirement is that the framework members of the truss should together constitute a self-supporting boundary of an unobstructed void. Mr Jukes argued that it did not, referring me

to a number of comments made by Mr Norris in his declaration. Mr Norris asserts that the calculations of Dr Whale in his declaration show the complete structural assemblage of the prior truss is overstressed. Mr Norris also says that he believes exhibit TBI refers to a structural assemblage that is an open figure, which for the purposes of handling and transport has a removable bottom chord as a temporary provision only. Mrs Smith sought to counter this by quoting Mr Burrett's second declaration where he says that each truss incorporated a continuous, uninterrupted bottom chord extending over the entire width of the truss. Mr Jukes also referred me to page 2 of Mr Norris's declaration where he comments that the bottom chord would not bear or be intended to bear loads in use of the complete structural assemblage, because the bottom chord would be absent.

Mrs Smith submitted that the prior truss was perfectly capable of supporting normal loads as manufactured and supplied. She referred me to Mr Walsh-Smith's comment that to cut away the bottom chord would, in most cases, be unsafe and render the truss unsuitable for the purpose for which it is intended. She also referred me to the evidence of Dr Whale which is in effect that the prior truss as designed by Gang-Nail could easily have been used, and was suitable to be used, as a roof truss in a situation where support was not, as it was in the Crown Yard building, supplied by an underlying concrete slab, by leaving the bottom chord intact. He bases this assertion on a computer analysis of the loads on the truss structure. (Mr Jukes noted that the diagonals shown in the truss drawn in Dr Whale's analysis at exhibit LW2 go the other way from those shown in the prior truss at exhibit LW1. However, I do not regard this inconsistency as material.) The declaration of Mr Margetson, as an independent structural engineer commenting on Dr Whale's analysis, seems to cast doubt on Dr Whale's assertion to the extent that he says that when acting as a double stubbed attic truss the design would have been unlikely to be acceptable to a Building Inspector, a point on which Mr Norris comments in his declaration. At the hearing I remarked that Mr Margetson notes that the bottom chord would be stressed to a level 17% greater than current standards would recommend. Mrs Smith accepted that there would be a small overstress, but pointed out that Dr Whale's evidence was that very small adjustments to the chord depth, the width of the unobstructed void, or the spacing between the trusses in a roof, would place the truss within the limits currently recommended in British Standards. I note too that Mr Margetson does indicate that the prior truss could be modified as Dr

Whale suggests to provide a fully acceptable truss suitable for various uses without altering its basic concept. Mr Margetson concludes that the prior truss is in his opinion a viable structure in terms of its concept and configuration for a more general use.

Having considered all the evidence very carefully, it seems to me that the prior truss as it was manufactured, delivered and installed in the roof with the bottom chord intact did provide a self-supporting boundary of an unobstructed void. However, I believe that once the bottom chord was removed this ceased to be the case. Taken in conjunction with my earlier finding that the roof at the Crown Yard site was not complete before 3 December 1980, I conclude that there was not there before the priority date of the invention a complete roof including a truss whose framework members together constituted a self-supporting boundary of an unobstructed void.

The second requirement is that the void defines substantially the height of one storey of a building. In this respect I note that the prior truss shown in the drawing on page 3 of exhibit LW1 is marked as having a void 2280mm high. Mrs Smith converted this to be 7 feet 4 inches and argued that such a height in either units is substantially the height of one storey of a building. Mr Jukes argued that the prior truss did not satisfy this requirement. He contended that if the bottom chord of the prior truss were left in place, the void would not be the height of one storey of a building, but "a bit low". By means of a sketch diagram, he also argued that one of the inclined members extends further downwards in the prior truss than in the one shown in figure 1 of the patent. 2280mm is, by my calculation, 7ft 5¼in, and subtracting a few inches for the thickness of the bottom chord and slight variations in the angle of the members of the truss still leaves me satisfied that the prior truss provided a void substantially the height of one storey of a building.

Having established the limits of the prior disclosure, I need also to be convinced, if section 2(2) is to be satisfied, that it was made available to the public. The evidence of Mr Munro is that the trusses were stacked opposite the site in full view of the general public for a few days before being positioned in the roof. Also, as Mrs Smith pointed out, Mr Mann recalls that the trusses were stacked opposite the site against a building and in full view of the public for no more than a week between delivery and being positioned in the roof. Mrs Smith

commented that this quite clearly indicates that these trusses were available to anybody who walked past; they were not hidden behind any fencing but in full public view. Mr Jukes argued on the basis of the geometry of the Crown Yard site as shown in drawing no 225/011 at exhibit DS3 to Mr Stokes's second declaration that the public would not have been able to see the stacked trusses. Moreover, he contended that a member of the public, if he saw the trusses lying on the site, would not have been able to see in the prior truss the self-supporting boundary of an unobstructed void of a roof truss. He also doubted whether an observer would have been able to tell that the truss would have been overstressed, since this only became apparent from Dr Whale's calculations. However, I am not persuaded by these arguments, which seem to me a little speculative, when set against the firm eye-witness testimony of Mr Mann and Mr Munro. I therefore accept that the requirements of section 2(2) in relation to public disclosure of the prior truss are met.

I need now to consider what effect the public prior disclosure, as I have determined existed on the evidence and arguments put to me, has on the validity of the patent. Although the proposed amendments to the patent are not conditional on my making any adverse finding, it is nevertheless proper that I should consider the patentability of the granted claims before that of the amended ones. However, since the three granted claims have such clear counterparts in amended claims 1 and 2, it is convenient to deal with the two sets of claims concurrently, and I shall do so. Moreover, it is appropriate to deal first with the question of novelty, then that of inventive step, and furthermore to consider the claims not tied to the figures before those that are.

Granted claim 1 relates to "a truss having an apex" and comprising certain framework members connected to or integral with one another in a specified way and constituting a self-supporting boundary of an unobstructed void. Granted claim 2, which is dependent on claim 1, further specifies that the void defines substantially the height of one storey of a building. It seems clear to me that the prior truss as shown in the drawing on page 3 of exhibit LW1 has all the features specified in both claims, and that both claims therefore lack novelty. Amended claim 1 comprises an amalgamation of granted claims 1 and 2. However, instead of being directed merely to "a truss", it is directed to "a roof truss for enabling a roof of a building to be constructed". However, this is no more than a simple statement of the

purpose of the truss and certainly does not serve to distinguish from the prior roof truss. Amended claim 1 therefore also lacks novelty.

Amended claim 3 claims "a building's roof comprising at least two roof trusses as claimed in claim 1 and/or 2". This should in my view be construed as meaning a complete roof, not a partial one. Mrs Smith argued that the claim was anticipated by the "roof" that was constructed at the Crown Yard site and made weatherproof with the bottom chords in position. However, I have already found that at the Crown Yard site the bottom chords of the prior trusses were removed before the roof was completed, that there then ceased to exist a self-supporting boundary of an unobstructed void, and that the roof was not complete before the priority date of the invention. On this basis, claim 3 is novel.

Amended claim 7 is directed to "a method for enabling a roof of a building to be constructed ... comprising disposing ... at least two roof trusses as claimed in claim 1 ...". As I said at the hearing, I take this to mean a method of constructing a roof using at least two trusses as opposed to assembling a kit of parts prior to using them. From my earlier consideration of the prior disclosure I accept that the prior trusses were by 21 November 1980 placed in the roof with their bottom chords intact, or in other words that trusses meeting the requirements of amended claim 1, which I have already found to lack novelty, had been suitably disposed during the construction of a roof of a building. I therefore find amended claim 7 to be anticipated. That a complete roof was not achieved before the priority date of the invention is immaterial as a method falling within the scope of the claim was practised before that date.

Amended claim 11 concerns "a roof constructed by utilising a method as claimed in any one of claims 7 to 10, said roof comprising at least two said roof trusses". Mrs Smith submitted that the claim was anticipated. However, as in the case of amended claim 3, I believe that the claim must be construed as claiming a complete roof, and for the same reasons that I found amended claim 3 novel I also find amended claim 11 novel.

I turn now to the claims which are dependent on the drawings. Granted claim 3 is directed to " a truss as claimed in claim 1, substantially as hereinbefore described with reference to

and as shown in Fig 1 of the accompanying drawings". Mrs Smith submitted that the truss shown in figure 1 has all the features of the prior truss. The only possible difference she could point to is that the side members 2,3 as shown in figure 1 are broad, whereas the prior truss effectively replaces those broad side members by two uprights and a connecting diagonal web. She contended that the prior construction was functionally identical to a broad single upright member and hence that granted claim 3 is directly anticipated by the prior truss as manufactured. She added though that if there was any functional difference between the two, the patent gives no indication of any advantage of the broad member of figure 1. Mr Jukes argued that the reference to figure 1 constituted a narrowing of the broad terms used in granted claim 1, for example so that "framework member" as used in claim 1 is of broader scope than a framework member which is actually shown in the drawing of figure 1. He also remarked that the drawing of the prior truss as in exhibit LW1 does not correspond to figure 1 of the patent. I agree, it also seeming to me, on a comparison of figure 1 of the patent with the drawing of the prior truss on page 3 of exhibit LW1, that there are material differences between the two structures shown. Accordingly, I find granted claim 3 to be novel.

Amended claims 2, 4 to 6, and 8 to 10 all require the presence of a roof truss as shown in figure 1, so that submissions made to me in respect of granted claim 3 clearly also apply to these amended claims. Amended claim 2 is materially the same as granted claim 3. Amended claims 4 to 6 are appendant to amended claim 3, which I have already held not to be anticipated. Mrs Smith said the same comments applied to amended claim 8 as to amended claim 7. As to amended claims 5, 6, 9 and 10, which are additionally dependent on figures 2 and 3 of the patent, Mrs Smith drew my attention to paragraph 4 of Mr Walsh-Smith's declaration where he says that he believes that it was known prior to 1980 to arrange a plurality of trusses both in straight lines and in curved formations to achieve different shaped roofs. She submitted that on the basis of this and her submissions regarding granted claim 3, amended claims 5, 6, 9 and 10 contain no patentable feature. However, I believe that the reasons I have already given for concluding that granted claim 3 is novel apply equally to amended claims 2, 4 to 6 and 8 to 10 by virtue of their dependence on figure 1, and I therefore find that they too are novel.

Having regard to the matter of inventive step, I believe that having already found that granted claims 1 and 2 and amended claims 1 and 7 are anticipated, it would be otiose to consider whether they contain an inventive step, and I shall therefore restrict my consideration to the remaining claims.

Mrs Smith submitted that it would be obvious to anybody who had seen the prior truss that it could easily have been used without the bottom chord having been taken out. She contended that the applicant's evidence showed that anyone who knew anything about buildings would have assumed that the prior truss, as it was manufactured, would have been used without the bottom chord being removed. She drew my particular attention in this respect to the declarations of Messrs Burrett, Stokes and Walsh-Smith. Mr Burrett says that although the prior trusses were intended to have their bottom chords removed once they had been fixed in position, this was unusual at the time and it was far more common for the bottom chords to be left in place when the trusses were in situ. Mr Stokes says it was not normal in 1980 to cut bits out of roof trusses after delivery; trusses were used as delivered in the vast majority of cases. Mr Walsh-Smith too attests that had he seen on or before 2 December 1980 a truss corresponding to that shown in exhibit TW1 he would have assumed that the truss was to be used in a roof of a building without any parts of the framework having been removed before or after installation. He adds that to cut away the bottom chord would, in most cases, be unsafe and render the truss unsuitable for the purpose for which it is intended. Furthermore, Mr Burrett says that there was no indication in the actual trusses supplied that the bottom chords were to be removed once they had been placed in situ. Had he seen those trusses without knowing their background prior to 3 December 1980, he would have assumed that they were to have been used in a roof without having their bottom chords removed. Mr Stokes adds in paragraph 6 of his first declaration that he does not believe that there was any indication whatsoever to a person seeing the trusses which were delivered to the site that the bottom chords were to be removed after positioning. He says therefore that anyone seeing the prior trusses would naturally have assumed that they were to have been used with the bottom chords remaining in place. Mrs Smith also drew my attention to the evidence of Dr Whale and Mr Margetson, which I have reviewed in detail earlier, regarding the wider applicability of the prior truss subject to small design modifications.

I have given most careful consideration to all the evidence but I have to say that I am not satisfied that it was common general knowledge at the priority date of the invention to incorporate bottom chords in the claimed type of truss. In the absence of documentary corroboration of the state of common general knowledge at the date of filing of the patent I think it would be unsafe for me to assume that the witnesses were doing more than generalising from isolated examples. As I have previously noted, the applicant's evidence, including the drawing on page 1 of exhibit LW1 which bears the legend "bottom chord to centre bay removed on site", makes clear that the prior trusses were actually intended to be modified so as to take them outside the scope of the claims when incorporated into a roof. I do not think I should assume that this intention would not be apparent to someone who inspected the trusses outside the building site. Mr Jukes commented that none of the evidence that has been produced on behalf of the applicant has referred to any aide-memoire or any other reference from the actual time, and apart from the site minutes at exhibits NM2 and DS2 I accept that. This places an extreme reliance on memory, going back some twelve years. The proprietor is clearly in no position check whether the removable bottom chord was marked in any way, and I think I should be careful in considering what the skilled person would have made of information recalled from memory at a distance of over ten years. Accordingly, I am not persuaded that those claims which I have held to be novel lack an inventive step in the light of the evidence which has been placed before me.

At the hearing and in correspondence Mrs Smith also questioned the allowability of the proposed amendments having regard to sections 76(3) and 14(5) of the Act.

Amendment of the specification of a patent in revocation proceedings is allowed under the Act by section 75(1) subject inter alia to the conditions prescribed in sub-section (3) of section 76 being met. That sub-section reads:

- "(3) No amendment of the specification of a patent shall be allowed under section 27(1), 73 or 75 if it -
- (a) results in the specification disclosing additional matter, or
 - (b) extends the protection conferred by the patent".

In considering section 76(3), regard must also be had to section 130(3) of the Act, which reads:

"(3) For the purposes of this Act matter shall be taken to have been disclosed in any relevant application within the meaning of section 5 above or in the specification of a patent if it was either claimed or disclosed (otherwise than by way of disclaimer or acknowledgement of prior art) in that application or specification".

It is clear that whereas prior to grant the width of the claims can be extended, after grant they cannot, and in neither case is it permissible to make any amendment which results in the disclosure of additional matter. In order to determine whether additional matter is disclosed, an amended patent specification is to be compared with the patent specification before amendment (rather than with the application as filed).

It is therefore necessary to begin by construing the granted patent to ascertain its disclosure. Although I was not referred to it, the well-known judgment of the House of Lords in the case of *Catnic Components Ltd and Another v Hill & Smith Ltd* [1982] RPC 183 lays down the approach to be adopted in the construction of patent documents, namely a purposive construction rather than a purely literal one. Thus it is necessary to take account of implicit as well as explicit disclosures which would be read into a document by the skilled man, and which may go wider than a strict literal interpretation of the subject matter disclosed might initially suggest. In this regard, I should say that I have noted the case of *Chinoir's Application* [1986] RPC 39, and especially the passage of the Hearing Officer's decision bridging pages 42 and 43, to which Mrs Smith referred me, and say that I regard this as being consistent with their Lordships' judgment in *Catnic*.

Turning then to the granted patent, there appear to be certain key passages the construction of which seems fundamental to the question of whether or not the amended claims are supported by it. These passages are the title on page 1, the listing of the three figures at lines 6 to 11 of page 3, and lines 29 to 32 of page 3, all of which I have recited earlier. The arguments put forward on construction by the parties are mainly set out in Mr Jukes's letters of 22 May and 8 September 1992 and Mrs Smith's letter of 27 August 1992. Mrs Smith in

her letter noted that none of the figures is listed at lines 6 to 11 of page 3 as showing a building's roof and argued that the description contains, at best, an indication that a series of trusses can be positioned in various distributions to form the structure for a roof to be constructed. She was of the opinion that there is insufficient basis in the description for claims to a complete roof, or to a method for enabling a roof of a building to be constructed. Mr Jukes on the other hand argued in correspondence that the amended claims are supported by the disclosure of the key passages I have identified. At the hearing he also submitted that a patent specification is addressed to a person skilled in the art who would have a great deal of knowledge which he would read into the disclosure of the patent.

I believe that on a purposive construction the skilled man would read the granted patent having full and due regard to the key passages I have mentioned and especially its title, "Roof Trusses", which explicitly relates the truss to use in constructing a roof. Moreover, in the absence of any contradictory remarks in the specification, and there are none, the skilled man would understand the title to apply to all aspects of the truss disclosed. This view is reinforced by lines 29 to 32 of page 3. Although these lines only refer explicitly to a "roof" in relation to figure 3, the skilled man would understand the implicit disclosure to be by extension that the other two figures relate to dispositions of trusses (of the sort shown individually in figure 1) in a roof, and the roof of a building at that. In this regard it may be noted that the list of figures on page 3 of the granted patent refers to figure 1 as showing "a plurality of aligned trusses" (my emphasis), and not as Mrs Smith suggested merely "a truss (or a series of trusses)". The expression actually used may be taken to mean that figure 1 shows not only a particular truss but also a particular arrangement of trusses. It follows that the skilled man would be clear that, in spite of the sketchy explicit disclosure, the implicit disclosure of the granted patent is not only of a roof truss, but also of a roof comprising such trusses, several specific distributions of trusses for forming a roof being shown diagrammatically in the figures. Moreover, the skilled man would understand an implicit disclosure of a method of using such a truss to produce a roof. This I believe is the construction to be placed on the granted patent.

Having reached this assessment of the disclosure of the granted patent, it is necessary for the purposes of deciding compliance with section 76(3)(a) to consider the disclosure of the amended patent, and compare the two.

Amended claims 1 and 2 have as I have said clear counterparts in claims 1, 2 and 3 of the granted claims: broadly speaking, amended claim 1 comprises an amalgamation of granted claims 1 and 2, and amended claim 2 corresponds to granted claim 3. However, whereas the granted claims are directed to "a truss", amended claims 1 and 2 are directed to "a roof truss for enabling a roof of a building to be constructed". Mrs Smith took no objection to these amended claims, and I am satisfied that they are supported by the disclosure of the granted patent.

Amended claims 3, 4, 5 and 6 relate to "a building's roof comprising at least two roof trusses as claimed in claim 1 and/or 2". Mrs Smith submitted at the hearing that if a building's roof is intended to have roof felt, tiles or any other structural components there is no support in the patent as granted for a building's roof. In correspondence she contended that anyone skilled in the art is aware that a roof comprises a lot more than a mere series of trusses and that there is insufficient basis for claims to a complete roof. However, it does not seem to me that amended claims 3 to 6 are claiming a building's roof constituted solely by its trusses, but a building's roof which comprises, that is to say includes, as part of its construction at least two of the trusses claimed in claim 1 and/or 2. I am satisfied that on a fair construction these amended claims to a building's roof are supported by the disclosure of the granted patent. I should perhaps add that I do not regard this finding as inconsistent, as Mrs Smith suggested it might be, with my earlier one that the roof at the Crown Yard site was not complete at the priority date of the invention.

Amended claims 7 to 10 are directed to "a method for enabling a roof of a building to be constructed" using at least two roof trusses as claimed in claim 1 and/or 2, and amended claim 11 is to a roof constructed by utilising such a method. In her letter of 27 August 1992 and at the hearing Mrs Smith argued that the support for and scope of these claims turns on the construction of the words "for enabling". However, on the construction of the granted

patent I reached above, I am satisfied that there is support in the granted patent for these amended claims.

As regards the scope of the protection conferred, which sub-section 76(3)(b) demands shall not be extended, it is clear that all of the amended claims are narrower in scope than claim 1 of the granted patent, and hence that there is no extension of the protection conferred by the patent. In her letter of 27 August 1992 Mrs Smith suggested otherwise in relation to amended claims 7 to 11 insofar as they concern or derive from a method for enabling a building to be constructed. However, since they are nonetheless dependent on amended claims 1 or 2, which are narrower in ambit than granted claim 1, the scope of protection is not in my view extended.

On this basis I find that the amended claims do not breach section 76(3)(a) or (b).

At the hearing Mrs Smith took up objections made in her letter of 27 August 1992 that amended claims 3 to 11 were not clear and concise as required by section 14(5). In particular she argued that clauses (d) and (e) in amended dependent claims 3, 7 and 11 are repetitive of clauses (b) and (c) of claim 1. Also, she contended that figures 1, 2 and 3 do not "show" a "roof" or a "method" and that the description does not say they do. She therefore argued that amended omnibus claims 4 to 6 and 8 to 10 are not clear by virtue of the presence of the words "as shown". I agree with both these points and consider amended claims 3 to 11 are not allowable in these respects.

As to the description of the amended patent, I note that it is as it stands inconsistent with the amended claims, but is otherwise allowable, in particular under section 76(3).

In summary, I find, having regard to the prior art submitted by the applicant, that granted claims 1 and 2 and amended claims 1 and 7 lack novelty, but that granted claim 3 and amended claims 2 to 6 and 8 to 11 are novel and involve an inventive step. I have also found that the proposed amendments do not contravene section 76, but that amended claims 3 to 11 are not allowable insofar as they do not in different respects satisfy the requirements

of section 14(5). Moreover, the description of the amended patent is not consistent with the amended claims.

Mrs Smith reminded me of the remarks of the Hearing Officer in the case of *James Gibbons Ltd's Application* [1957] RPC 158 , where at page 163 he said:

"In my view it is the Comptroller's duty, before allowing a defective specification to be amended, to assure himself, so far as he can on the material before him, that the specification does not remain defective after amendment. ... If the reason is a defect in the specification, the applicant cannot expect to make, and the Comptroller would be wrong to allow, an amendment which does not remove the defect clearly and completely".

Mrs Smith submitted that there was nothing in the specification which could give rise to an allowable valid claim and that the patent should be revoked in full. However, it is clear from my findings that although the patent is unsustainable as granted and as presently proposed to be amended, and that I must therefore proceed towards revocation of the patent if the position remains as at present, a form of amendment might be possible which would place the patent in a condition in which the need for revocation might be avoided. At the hearing Mr Jukes indicated that the proprietor would be willing to offer further amendments of substance and wording in the event that I found the presently proposed amendments unallowable. Indeed, he outlined orally certain amendments which he had in mind to submit in such an eventuality. In particular he seemed to be offering to combine amended claims 1 and 2 in some way. However, it was not entirely clear precisely what form such amendments might take, nor did the applicant have any proper opportunity to consider or comment on them.

In these circumstances I consider it appropriate to allow the proprietor a period of two months from the date of this decision within which to submit to the Patent Office fresh amendments with a view to avoiding the need for revocation of the patent. The proprietor should send a copy of the amendments to the applicant, who will then have a period of one month from the date of receiving the copy within which to submit any comments to the

Patent Office, copied to the proprietor. I will then determine how matters should proceed. If no proposed amendments are submitted by the proprietor within the period I have set, I will issue a final decision revoking the patent.

I shall defer considering the question of costs, for which both parties have requested an award, until the conclusion of these proceedings.

This being a substantive matter, the time within which an appeal may be lodged is six weeks from the date of this decision.

Dated this 16 day of August 1993



W J LYON

Superintending Examiner, acting for the Comptroller



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