

2008 PAPER P4

SAMPLE SCRIPT A

This script has been supplied by the JEB as an example of an answer which achieved a pass in the relevant paper. It is not to be taken as a "model answer", nor is there any indication of the mark awarded to the answer. The script is a transcript of the handwritten answer provided by the candidate, with no alterations, other than in the formatting, such as the emboldening of headings and italicism of case references, to improve readability.

CLAIMS:

1. An end cap for plugging the end of an open tube, comprising:
 - a tubular portion having at a first end an external dimension comparable to an internal dimension of the open tube; and
 - a plugging member towards or at a second end of the tubular portion, the plugging member extending transversely across the tubular portion,

wherein the tubular portion comprises longitudinal ribs extending longitudinally on an outer surface of the tubular portion;

the end cap being capable of insertion completely into the tube.
2. The end cap as claimed in claim 1, wherein the longitudinal ribs are tapered so as to be taller at the first end of the end cap.
3. The end cap as claimed in any preceding claim wherein the longitudinal ribs comprise a long rib and a short rib.
4. The end cap as claimed in claim 3, comprising four long ribs distributed evenly around the circumference of the end cap.
5. The end cap as claimed in claim 4, comprising four short ribs each located adjacent to one of the long ribs.
6. The end cap as claimed in any preceding claim, comprising circumferential ribs on the inner surface of the tubular portion
7. The end cap as claimed in any preceding claim wherein the tubular portion is tapered so as to be larger in diameter at the first end.
8. The end cap as claimed in any preceding claim wherein the end cap comprises high density polyethylene (HDPE).
9. The end cap as claimed in any preceding claim wherein the tubular portion is a continuous length of material.
10. The end cap as claimed in any preceding claim wherein the end cap is fitted with a bulbous bung.

11. The end cap as claimed in claim 11 wherein the bulbous bung has a diameter greater than an outer diameter of the tube.
12. The end cap as claimed in any of claims 10 to 12 wherein the bung comprises foam. [Basis: p. 7, l. 11]
13. A kit of parts comprising:

 a scaffolding tube; and

 an end cap for the scaffolding tube as claimed in any preceding claim.
14. The kit of parts as claimed in claim 13, further comprising a bulbous bung as described in any of claims 10 to 12.
15. An end cap as substantially hereinbefore described with reference to Figure 3.
16. A kit of parts as substantially hereinbefore described with reference to Figure 3.

Optional Divisional 1

1. An end cap for plugging the end of a scaffolding tube, comprising:

 a tubular portion having at a first end an external dimension comparable to an internal dimension of the open tube; and

 a plugging member at a second end of the tubular portion, the plugging member extending transversely across the tubular portion,

 wherein the tubular portion is tapered so as to be larger in diameter at the first end, such that the taper is less than 5 degrees.

 [Basis: original claim 1 + 2; "plugging member 13" of p. 7, l.17-18; "tapered" – claim 5; taper <5 degrees from p. 6, l.30, and p.7 l.21 where "taper is shallower"]

Optional Divisional 2

1. A bulbous bung for fitting into an end cap in a scaffolding tube, wherein the bulbous bung has a diameter greater than an outer diameter of the tube.

PATENT OFFICE LETTER

Dear Sirs

Re. UK Patent Application No. 06567890.0

We respond to the recent examination report within the deadline of **5 November 2008**. Should, for any

reason, this not be received by the deadline, we request a retrospective two-month extension available as of right under Rule 117B.

Please be advised that we have now become address for service on the abovementioned case, and we therefore enclose the relevant form to record this.

Filed herewith is a new set of claims 1-16 to replace the original claims currently on file.

Amendments

Claim 1 has been amended to introduce "a second end" towards which a plugging member is located. This has basis on p. 7, l.17-18, along with p.6 l.32-37, where "alternative configurations which would prevent debris entering the scaffold tube 14" are said to be acceptable, hence the inclusion of "towards or at", since conceivably the tubular member could extend slightly beyond the plugging member without departing from the essence of the invention.

Also introduced into claim 1 is the feature of "longitudinal ribs on an outer surface". This has clearly basis at p.7, l. 26-27 and also supported in part by original claim 8.

Original Claims 2-9 have been deleted and replaced.

New claim 2 specifies that the longitudinal ribs are tapered, with basis at p.7, l. 34-35.

New claim 3 specifies that the ribs have a long and a short rib, which has basis at p.7, l. 28-29. There is no lack of clarity since all that is required is that the short rib is shorter than the long rib.

New claim 4 specifies that there are four long ribs arranged in a particular manner, with basis on p. 7, l. 29-30.

New claim 5 specifies there are four short ribs in a particular arrangement relative to the long ribs, with basis on p. 7, l. 30-31.

New claim 6 introduces the feature of "circumferential ribs" as distinct from "longitudinal ribs", with basis at p.8, l. 5 and partially supported by original claim 9.

Claim 7 is directly taken from original claim 5.

New claim 8 species from what material the end cap is made, ie. HDPE which is well known in the art to be "high density polyethylene", with basis on p.7, l. 8.

New claim 9 specifies that the tubular portion is a continuous length of material, and not made of segments, etc, which has basis on p.7, l. 23.

New claim 10 introduces the feature of a bulbous bung in the end cap, with basis on p.5, l. 19.

New claim 11 specifies facets of the diameter of the bung, with basis on p.5, l. 21-23.

New claim 12 requires that the bung comprises foam, with basis on p.7, l. 11.

New claim 13 is a new independent claim to a kit of parts, comprising a scaffolding tube and an end cap for the scaffolding tube. This has basis throughout the specification since the end caps are all designed for scaffolding tube.

New claim 14 includes within the kit of parts a bung, which has basis as described above.

Claims 15 and 16 are newly introduced omnibus claims.

We submit therefore there is no added matter.

Unity

Having deleted old claim 2, and filed amended claims relating to the embodiment of Figure 3, there is no longer a lack of unity since all inventions, including the kit of parts, are linked by a common inventive concept.

Clarity

We have now addressed the first of the examiner's clarity objections by introducing a reference to a "second end" in claim 1.

Having deleted original claims 3 and 6, the clarity issue associated therewith is now circumvented.

Novelty

Claim 1 now includes the limitation of "longitudinal ribs extending longitudinally on an outer surface of the tubular portion".

Reference 1

The closest embodiment in Reference 1 to the present invention as of claim 1 is the bung of Figure 3. This has no longitudinal ribs. Therefore claim 1 is novel over Reference 1.

Reference 2

The examiner suggested that internal and external ribs were disclosed in Reference 2 given the "right cylindrical surfaces 28". However, these cylindrical surfaces are not "longitudinal ribs" as now required by claim 1, but are if anything more similar in character to the circumferential ribs as described in new claim 6. Therefore claim 1 is novel over Reference 2.

As the new kit of part claims depends on the claim 1 definition of the end cap, the kit of parts claim is also novel.

Inventive Step

Reference 1

The difference between claim 1 and Fig. 3 of reference 1 is the "longitudinal ribs". The advantage of the longitudinal ribs of claim 1 is they provide for a "self-securing interference fit" (p. 7, l. 36-37) with a tube when inserted into said tube. This substantially prevents removal of the end caps. Furthermore, they allow for "reduced thickness for the material of the end cap 20, which reduces manufacturing costs" (p. 7, l. 37-38).

There is no teaching of this feature in Reference 1, nor is it desired that there is a "self-securing interference fit" which essentially prevents removal of the end cap as it is "capable of insertion completely into the tube" (claim 1). In fact reference 1 specifically teaches that "when he resumes his work, he simply removes the sleeves or bungs without the use of any tools", and thus removability is

of particular importance. Therefore Reference 1 teaches away from the present invention, thus claim 1 is inventive over reference 1.

Reference 2

The difference between claim 1 and reference 2, particularly the embodiment of Figure 5, is again the "longitudinal ribs". The advantage of the longitudinal ribs of claim 1 is they provide for a "self-securing interference fit" (p. 7, I. 36-37) with a tube when inserted into said tube. This substantially prevents removal of the end caps. Furthermore, they allow for "reduced thickness for the material of the end cap 20, which reduces manufacturing costs" (p. 7, I. 37-38).

Reference 2 discloses "successive cylindrical surfaces 28" which are essentially like "circumferential ribs" as per new claim 6. Such circumferential ribs may indeed help to form an "interference fit". However, they are not as effective at "self-securing" as the longitudinal ribs of the present invention, and furthermore the manufacturing costs of producing the successive cylindrical surfaces will be high given the extra degree of complexity required in their manufacture. Longitudinal ribs are easily applied to simple "tubular portions" and also allow the tubular portion itself to be made of reduced thickness, thus saving more in manufacturing costs.

The skilled person would also not be motivated to change to using longitudinal ribs if circumferential ribs seemingly solved the problem in question.

Finally, Reference 2 is again really only concerned with removal plugs so that "at the end of a work shift, the end of cables or wires, are thus secured such that they may be retrieved at the beginning of the next work shift" (p.15, l. 25-28 of Ref 2). Ref 2 also teaches that a "flange 18 provides a good and convenient grasping means for pulling the plug free". There is clearly no intention to enable easy removal of the end caps of the present invention. Therefore again Reference 2 teaches away from the present invention. Therefore claim 1 is inventive over Reference 2.

There would be no motivation for the skilled person to combine the teachings of Reference 1 and 2 because they clearly relate to different fields - Ref 1 to plumbing pipes (ie. small bore pipes) and Ref 2 to pipes for "carrying and protecting underground electrical power lines" (ie. large bore pipes). However, even if the documents were combined, as both documents teach towards the removability of plugs and away from longitudinal ribs, claim 1 is inventive over both pieces of prior art in combination.

As the new kit of part claims depends on the claim 1 definition of the end cap, the kit of parts claim is also inventive.

Final Matters

In so far as any subject matter has been removed from the present application, we reserve the right to reinstate such subject matter at a later stage, for example in a divisional application.

We kindly request accelerated prosecution of the present application since the Applicant is concerned that infringing products are to be imminently placed on the market.

Before issuing a Section 18(4) communication, please kindly give the Applicant a brief opportunity to file a divisional application.

Yours,

Encs: Form 51 (change of representative);
New claims 1-16

MEMO TO CLIENT

Reponse (General)

- We filed the enclosed response within the deadline.
- We recorded ourselves as the new address for service following the retirement of your previous attorney.
- We agreed with the examiner that the claims as filed were not novel or inventive over Reference 1 or Reference 2.
 - Reference 1 discloses a bung (end cap) for plugging an "open tube" with a "tubular portion" and a "plugging portion". Despite Ref 1 being primarily concerned with plumbing tubing, your invention was not so limited, and in the introduction of your application it states that your tubes are "not exclusively to end caps for use with scaffold tubes". Therefore claim 1 was not novel.
 - Reference 1 also discloses such an end cap with a flange, so claim 2 was inevitably not novel also.
 - Reference 2 likewise shows similar plugs, with a flange, and thus both claims 1 and 2 were not novel. Again, although the tubes of interest in Ref 2 were underground pipes (large bore), your invention was not limited in terms of tubing.
- The examiner was also correct that there was a lack of unity as your claim I and 2 were to embodiments 2 and I respectively, each of which relate to a different concept: embodiment 2 is for complete insertion, embodiment I is not.
- There were also some clarity issues to address.
- We addressed all of the above issues and brought the application into what is hopefully a grantable form.

Response (Specifics)

- It is not clear when the prior-art references 1 and 2 were filed and published. We have assumed therefore that both were published before your GB filing date of 20 December 2006, and that both references are fully citable pieces of prior-art both for novelty and inventive step. We have amended the claims accordingly.
- We based our response on the information you provided, specifically that:
 - Scaffolding caps were the most important (bungs are secondary)
 - The flangeless scaffolding caps are most important (the caps with flanges are less desirable)
 - Your customers like your caps because they "cannot be removed"
- We also felt that any feature which made your caps non-removable would be advantageous to stop scaffolders selling on used caps, which you otherwise could not easily stop using a patent due to a principle called "exhaustion", which means you cannot stop people selling your patented product when it is second hand.

- We therefore focussed on embodiment 2, and amended original claim 1 to include an additional limitation of "longitudinal ribs", specifically:

"wherein the tubular portion comprises longitudinal ribs extending longitudinally on an outer surface of the tubular portion";

- This gave the claim novelty over both references 1 and 2, as ref 2 only mentioned what are essentially "circumferential ribs".
- We argued that this feature was inventive because it gave the advantage of a "self-securing interference fit", thus a tighter fit, and allowed for thinner caps which reduces manufacturing costs.
- I believe this amendment therefore overcomes the prior art, but still covers the most important product to you and your customers.
- There was the option of limiting the end caps to the materials, ie. HDPE, but such materials were disclosed in both references 1 and 2, and it may well have been obvious to use this in view of these references.
- Another option may have been to go for a limitation which specified that the angle of tapering of the tubular portion was "less than 5 degrees" - I believe this has basis in your application. However, it may be more difficult to argue this feature to be inventive, and since you wanted a quick grant I felt we should go for a feature where we could be more sure of its inventiveness.
- We also introduced a "kit of parts" claim, which covers scaffolding tubes sold with your end caps, and optionally also with a bung. This is because you suggested you may consider selling your caps and bungs with scaffolding poles to increase your company's turn over. Such a claim will catch anyone else trying to do the same.

Accelerated Prosecution

- It may not be possible to have your patent granted in the next few weeks, as there are not as yet any infringers that provide a justification for accelerated grant, which is what examiners like to see. However, we have requested accelerated prosecution all the same, stating that you were concerned about infringements occurring soon.
- The fact that your application was published well over 3 months ago at least means that there need not be a delay to allow for third party observations.

Future Actions

- As mentioned, the way we have amended your application should protect your main commercial interests, at least in the short term. Furthermore, we managed to provide an amendment which did not limit the invention to being suitable for scaffolding tubes only.
- However, to secure fuller protection you may wish to file either or both of the enclosed suggested divisional applications.
 - Divisional 1 limits to end caps for scaffolding tubes only. However, the wording of the claim allows coverage of both your flangeless and flange-based embodiments. We have attempted to get novelty by limiting the tapering angle to less than 5 degrees. Alternative amendments may also be possible to achieve novelty, including limiting to a certain wall

thickness. Such a divisional application may well be worth filing to cover both of your embodiments in the longer term, although this will take longer to grant, and may need to be argued.

- Divisional 2 relates only to your "bulbous bung", which may well be an invention in its own right, since it make ends of scaffolding poles more visible, and also provides a softer surface which is less likely to smash glass when workmen are working with scaffolding. This may well be worth filing as you suggest your sales of bungs are increasing.
- You will need to decide on whether to file one or both of these divisional applications as soon as possible, since once the parent case is granted, you loose the opportunity to do this. Given that we have requested accelerated grant, the window of opportunity may be quite small. Therefore, please let me know within the next month.
- Divisional applications will incur extra costs, but it may be worthwhile if you think you should have this protection for the future. They will only protect you in the UK, as with the parent application.

Final Points

- Once any of the above mentioned applications are granted you can take legal action - including getting intrin injunctions (to stop people making or selling or even importing), and damages.
- If you find that anyone is infringing, please let me know as soon as possible so that we can decide what action to take. You should let me know even if your patent is not yet granted as we can still threaten future legal which would potentially compensate you for damages for infringements even before grant.
- In the meantime we enclose our account for this work.
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Encs: Response to patent office
Proposed Divisional application 1
Proposed Divisional application 2

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SAMPLE SCRIPT B

This script has been supplied by the JEB as an example of an answer which achieved a pass in the relevant paper. It is not to be taken as a "model answer", nor is there any indication of the mark awarded to the answer. The script is a transcript of the handwritten answer provided by the candidate, with no alterations, other than in the formatting, such as the emboldening of headings and italicism of case references, to improve readability.

CLAIMS: (Amended)

1. An end cap, for plugging the end of an open tube, comprising:
 - a tubular portion having at a first end an external dimension comparable to an internal dimension of the tube; and
 - a plugging member extending transversely across the tubular portion at a second end opposite the first end, the end cap being capable of insertion completely into the tube,
 - wherein the end cap further comprises longitudinal ribs extending longitudinally on the outer surface of the tubular portion.
2. (New) An end cap in accordance with claim 1, in which the longitudinal ribs extend longitudinally on the outer surface of the tubular portion from the first end towards the second end.
4. (New) An end cap in accordance with any preceding claim, in which the longitudinal ribs comprise a plurality of first longitudinal ribs and a plurality of second longitudinal ribs,
 - wherein the first longitudinal ribs extend longer the second longitudinal ribs.
5. (New) An end cap in accordance with claim 4, wherein the first longitudinal ribs and the second longitudinal ribs are arranged such that each one of the plurality of first longitudinal ribs is located immediately adjacent one of the plurality of second longitudinal ribs.
3. (New) An end cap in accordance with any preceding claim, in which the longitudinal ribs are tapered such that they extend further from the outer surface of the tubular portion as they extend from the first end towards the second end.
6. (Previous claim 5) An end cap in accordance ...
7. (Previous claim 6 - amended) An end cap in accordance with any preceding claim, in which the outer diameter of the tubular portion is chosen such that in use, the end cap forms an interference fit in the tube with which the end cap is being used.
8. (Previous claim 7)
9. (Previous claim 9 – amended) An end cap according to any preceding claim comprising ribs on the inner surface of the tubular portion.
10. (New) An end cap according to claim 9, wherein the ribs on the inner surface are circumferential.

11. (New) A bung for use with the end cap in accordance with any preceding claim,
wherein the bung is self retained in the tubular portion of the end cap.
12. (New) An end cap as hereinbefore described with reference to figure 3 of the accompanying drawings.

Claim for divisional

1. An apparatus comprising:
- a tube;
 - an end cap;
- wherein the end cap comprises a tubular portion having at a first end an external dimension comparable to an internal dimension of the tube; and
- a plugging member extending transversely across the tubular portion at a second end opposite the first end, wherein the end cap further comprises longitudinal ribs extending longitudinally on the outer surface of the tubular portion, and
- wherein the end cap can be inserted completely into the tube, thereby sealing the tube.

LETTER TO PATENT OFFICE

Dear Sirs,

Thank you for your examination report, in response to which the applicant submits the following amendments and observation.

Please find enclosed a new set of claims. Endorsed claim 1 is based on claim 1 currently on file, but has been amended to include the feature of the end cap comprising longitudinal ribs.

Basis for this amendment can be found on page 7, p 16, lines 26-27.

Enclosed claim 1 has also been amended to clarify that the plugging member is at a second end of the tubular portion, opposite the first end. Basis for this amendment can be found from figure 1, 2 and 3 from which it is clear and unambiguously derivable that this is the case.

New claim 2, 3, 4 and 5 have been added, basis for which is as follows;

- Claim 2 – page 7 of 16, lines 26- 27
- Claim 3 – page 7 of 16, lines 34- 35
- Claim 4 – page 7 of 16, lines 28- 29
- Claim 5 – page 7 of 16, lines 30 -32

Claims 2, 3, 4 have been deleted without prejudice. The applicant reserves the right to reinstate this subject matter, or file a divisional application to it.

New claims 10, 11 and 12 have also been added, basis for which can be found:

- Claim 10 – p 8 of 16, line 5
- Claim 11 – p 7 of 16, line 11-15
- Claim 12 – figure 3

Claim 7, claim 6 currently on file has been amended to clarify that in use the cap forms an interference fit.

Novelty

Enclosed claim 1 is novel over Ref 1, because Ref 1 fails to disclose any longitudinal ribs extending longitudinally on the outer surface of the tubular portion.

Enclosed claim 1 is novel over Ref 2, because Ref 2 fails to disclose any longitudinal ribs extending longitudinally on the outer surface of the tubular portion.

Enclosed claim 1 is therefore novel over Ref1 and Ref 2.

Inventive Step

Using *Windsurfer*

The skilled person is an engineer for a tube manufacturer.

The invention relates to providing longitudinal ribs on the outer surface of the tubular portion such that the ribs provide a self-securing interference fit and also allows the end cap to be manufactured with a reduced thickness of material, having the advantage of reducing costs.

Starting from Ref 1, it would not be obvious to the skilled person to modify Ref 1 to fall within the scope of the claims, because Ref 1 discloses an end cap that is designed to be removed after use and not be permanently seated.

The skilled person would therefore not be motivated to modify Ref 1 to provide longitudinal ribs for providing a self-securing interference fit, because the cap in Ref 1 must be removable.

Starting from Ref 2, the skilled person would not be motivated to modify Ref 2 to fall within the scope of the claims, because Ref 2 only discloses providing circumferential grooves around the plug. The grooves in Ref 2 are arranged stepwise along the cap such that the cap can be used to fit a range of different sized tubes.

A person skilled in the art would not modify Ref 2 to provide longitudinal grooves as in claim 1, because such an amendment would cause the plug in Ref 2 to only fit a single size tube. This is clearly against the teaching of Ref 2.

Even if Ref 1 and Ref 2 are combined, as they both fail to disclose or suggest longitudinal grooves, any combination will still not fall within the scope of the claims.

The enclosed claims therefore involve an inventive step in view of the prior art.

Clarity

It is respectfully submitted that the Examiners objections are addressed by the above described amendments to the claim.

Other

Please find enclosed PF5L registering myself as agent for the applicant.

The applicant intends to file a divisional application

Yours Faithfully,

Agent for Applicant

<application now only contains single independent claim. >

MEMO TO CLIENT

Dear Sirs,

Claims need to be amended in view of the prior art. This is because Ref 1 destroys the novelty of Claim 1 and Ref 2 although does not destroy novelty (fails to disclose complete insertions) the current claim would not be inventive.

Note from your email that the second flangeless embodiment is more important to you. Claim 1 is directed to this embodiment.

Claim 2 is directed to the first embodiment with a flange. The Examiner has objected to the multiple independent claims. Therefore I suggest deleting Claim 2 (consequently claim 3) from this application. It does not appear appropriate to file a divisional application for this claim as both Ref 1 and Ref 2 show caps that contain flanges. It is also not possible to amend claim 2 in a similar way to claim 1 (as described below) as the feature of longitudinal ribs is not a feature of the first embodiment. It therefore appears very difficult to get any valid protection for the first embodiment as a suggested claim to this embodiment will almost certainly lack inventive step (at least).

I have maintained Claim 1 in this application.

As you will see, I have amended claim 1 to include the feature of longitudinal ribs. The reason for this amendment is because it is a feature that not only causes the interference fit that your customers like, but they enable the thickness of the material to be reduced, thereby saving manufacturing costs.

Other amendments that I considered were: that the plugging member is a mesh, series of bars or sheet like. I dismissed this as it was too narrow. Another possible was the ribs on the inner surface. I dismissed this, as it did not appear to provide any advantages that your customer liked.

I added new dependent claim directed to the longitudinal ribs. The reason for this is as a fallback position and because the patent indicates that the arrangement in claim 5 is particularly good and should be protected.

I added a new claim defining the inner grooves as circumferential (claim 10) and added an omnibus claim (claim 12).

Claim 11 is directed to a bung for use in the plug. I added this claim to catch any potential infringement if someone was only supplying the bung. I did not think any other category of claim was necessary.

I have included an independent claim for a potential divisional application that is directed to an apparatus. This is intended to cover the situation of selling caps and bungs with poles as indicated in your email. Please let me know if you would like to file the divisional. The deadline will be 3 months before end of rule 30 period, i. e. 20th April 2006.

However, a divisional app must be filed before a patent granted so please let me have your instructions ASAP as this case many grant soon.

I have argued that the claims are inventive over Ref 1 and Ref 2 in the response.

Check status of Ref 1, as sales of your first embodiment could potentially infringe claims of Ref 1 if Ref 1 is in force.

Ref 2 is US, so should check status to see if in force before selling 1st embodiment in US.

I have registered myself as agent for applicant so I can handle prosecution of the case.

No divisional for bung as not commercially important – relatively few sales of bungs.

Claims 4 and 8 deleted as now is enclosed claim 1 – redundant.

Possible Amendments

Bungs – add claim
Tapered tubular portion – Ref 1 & 2
HDPE – Ref 1 & 2
Taper continuing at substantially same degree - Ref 1
Interference fit – Ref 2
Satisfactory interference fit dimensions
Plugging member - Mesh
 - Series of bars } to narrow
 - Sheet like }
Insert completely into tube – already in Claim 1
Longitudinal external ribs – possible ✓
Short ribs/ long ribs – possible – dependent
Circumferential ribs on inner surface – possible
Divisional for flange? No for pole + cap ✓

* * * * *

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SAMPLE SCRIPT C

This script has been supplied by the JEB as an example of an answer which achieved a pass in the relevant paper. It is not to be taken as a "model answer", nor is there any indication of the mark awarded to the answer. The script is a transcript of the handwritten answer provided by the candidate, with no alterations, other than in the formatting, such as the emboldening of headings and italicism of case references, to improve readability.

AMENDED CLAIMS

1. An end cap, for plugging the end of an open tube, comprising

a tubular portion having a first end and a second end, the first end having an external dimension comparable to an internal dimension of the tube and

a plugging member extending transversely across the tubular position,

in which the tubular portion is tapered so as to be larger in diameter at the first end than at the second end and in which the end cap further comprises at least one longitudinal rib extending longitudinally on the outer surface of the tubular portion.
2. An end cap according to claim 1 in which the plugging member <as original claim 4>.
3. An end cap according to claim 1 or 2 in which the longitudinal rib or ribs are tapered so as to be taller at the end furthest from the first end of the tubular portion.
4. An end cap according to any preceding claim in which there are a plurality of longitudinal ribs.
5. An end cap according to claim 4 in which there are a plurality of ribs of a first length, and a plurality of ribs of a second length, the first length being longer than the second length.
6. An end cap according to claim 5 in which there are four longitudinal ribs of the first length, and four longitudinal ribs of the second length, the ribs being distributed evenly around the outer circumference of the tubular portion and the ribs of the first length being located immediately adjacent ribs of the second length.
7. An end cap according to any preceding claim in which the tubular portion further comprises circumferential ribs in its inner surface.
8. An end cap according to any preceding claim further comprising a bung, the bung being formed of a resilient foam material and the bung being retained in the first end of the tubular portion.
9. A scaffolding tube comprising at least one end cap according to any of claims 1 to 8.
10. A kit comprising at least one scaffolding tube and at least one end cap according to any of the claims 1 to 8.
11. An end cap substantially herein described with reference to Figure 3.

LETTER TO UKIPD – BY FAX

Dear Sir

Re: GB 06567890.0 in the name of Scaffold Accessories PLC

In response to the examination report issued under s18(3), I hereby file a full response and amended claims 1 to 11 to replace the claims currently on file in time to meet the deadline of 5th November 2008.

I have recently taken over as the agent for this application and enclose the relevant authorisation.

Amendments

Claim 1 has been amended and is now limited to an end cap with a first and second end in which the tubular portion is tapered and comprises at least one longitudinal rib.

The requirement that the end cap be capable of insertion completely into the tube has been deleted.

Basis for the tubular portion being tapered is provided by original claim 5.

Basis for the tubular portion comprising at least one longitudinal rib is provided by original claim 8 and in the specification on p7 at lines 26 to 32. Here it is disclosed that any suitable distribution of ribs may be used.

Basis for removing the requirement that the end cap be completely inserted is provided in the description on p7 at lines 18 to 19. Here it is discussed that the cap may be inserted fully into the scaffold tube, but it is clear that this not an essential feature.

Claim 2 is based on originally filed claim 4.

Basis for claim 3 can be found in the description on page 7 at lines 34 to 35.

Basis for claim 4 can be found in the description on page 7 at lines 26 to 28.

Basis for claims 5 and 6 can be found in the description on p7 at lines 26 to 32.

Basis for claim 7 can be found in the description on p8 at lines 5 to 6.

Basis for claim 8 can be found in the description on p7 at lines 11 to 15.

Basis for claims 9 and 10 is found throughout the description but particularly p5 line 6, p6 lines 17 to 18, p6 line 32.

Claim 11 is an omnibus claim and basis is found in the description and Fig 3 as filed.

Unity

The claims have been amended and now include only one independent claim.

This objection is understood to be overcome.

Novelty (*I am assuming Ref 1 + 2 published before filing date GB '065:.. relevant to novelty and IS*)

The invention as now claimed is novel over the prior art Ref 1 and Ref 2.

Ref 1 (Build-it) discloses removable caps for tubes, made of plastic and comprising a tapered outer surface with or without a flange.

However, Ref 1 does not disclose an end cap with longitudinal ribs on the outer surface and therefore claim 1 (and all dependent claims) are novel over this disclosure. There are instead circumferential cylinders, not ribs.

Ref 2 (Bodgers) discloses cup-shaped plugs, formed of plastic in a frusto-conical shape with cylindrical surfaces of differing diameters.

However, the plugs of Ref 2 do not comprise longitudinal ribs and therefore the present claims are also novel over this disclosure

Inventive Step

The difference between the present invention and both Ref 1 and Ref 2 is the presence of longitudinal ribs on the outer surface of the tubular portion.

These ribs allow the end cap to be fitted into the scaffold tube with a self-securing interference fit, but whilst using an end cap of reduced thickness.

This has the advantage of reducing manufacturing costs (see p7 lines 35 to 38).

Nowhere is it suggested in 1 or 2 that longitudinal ribs may be used to allow a self-securing interference fit whilst allowing a reduced thickness for the end cap.

In any case, Ref 1 is directed towards end caps that may be fitted or removed without tools (see p11 line 35-37).

Ref 2 discloses an end cap which fits via a semi-permanent interference fit – but does this using circumferential cylindrical surfaces.

∴ Claim 1 is inventive over Ref 1 and 2

Similarly, the feature of claim 3 is not disclosed or suggested.

Having ribs taller at the end furthest from the first end allows the ribs to be shaved off upon insertion, ensuring an interference fit (see p7 line 34-38).

This is not disclosed or suggested in Ref 1 + 2 ∴ Inventive.

Similarly for claims 4 to 6. As the longitudinal ribs are not disclosed, the particularly advantageous arrangements are inventive over Ref 1 + 2. (See p7 lines 26-32).

Claim 7 is inventive also. The feature of claim 7 allows the end cap to be gripped more easily and provides means for retaining accessories (see p8 lines 5-7).

The cap of Ref 2 has a smooth inner surface and nowhere suggests the advantages of this feature.

∴ Claim 7 is also inventive.

Claim 8 has the advantage of preventing damage or injury to glass or pedestrians (see p7 lines 11-15).

These advantages are not suggested by Ref 1 + 2 :. There is inventive step over these disclosures.

Clarity

I believe the amendments overcome these objections

I believe the application is in order for allowance and look forward to receiving notification of this as soon as possible.

My client is concerned that infringers may start producing the invention soon, and therefore would appreciate notice of grant as soon as possible.

Yours faithfully,

MEMO TO CLIENT

Dear Client,

As requested I have filed a response today and have registered myself as agent for your application.

The prior art cited by the Examiner was relevant to the novelty of some of the existing claims and therefore I have limited to your preferred embodiment with ribs, and without flange.

The flanged cap without ribs was disclosed by Ref 1 and therefore I have deleted this from the claims.

I kept in the tapered feature as I believe this would be essential for the cap to function.

I added some fall back positions to particular rib arrangements including your preferred 4 long and 4 short ribs.

A further claim to the circumferential ribs inside was also added.

I then added claims to a cap + bung, a scaffolding tube and a kit comprising scaffolding tube + cap to protect your activities should you start selling caps and bungs with poles as indicated in your instructions.

As you are particularly keen to get to grant in the next few weeks, I have not filed any divisional application to the embodiment 1 end cap. Filing a divisional would delay grant somewhat.

If however you would like to follow this up, we can consider the possibility of filing a divisional to the embodiment 1 cap with additional features to distinguish it from the prior art.

One option for example would be to limit it to a particular taper angle which allows easy moulding and fitting.

Any div. must be filed whilst the patent is pending however, and therefore we should consider any filing immediately if you wish to follow this option.

Otherwise, I believe we should hear from the UKIPO that the application is to be allowed in the near future

Yours sincerely,

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