Patent Examination Board

FD2 Drafting of Specifications FINAL Mark Scheme 2024

Introduction and Description

Title [*½ mark for a title + ½ mark for title to reflect accurately what is claimed*]	**1 mark**
Statement of field (technical field of invention)	**1 mark**
Prior Art: A summary of the three different prior art ladder stabilisers outlined in the client letter and the way the bottom rung is traditionally stood on or has a weight placed on it. Appropriate rewording of the content of the client's letter is preferred to merely copying text from the letter.	**3 marks**
Statements of invention and general description: An express statement of what the feature of each claim *does* [*½ mark*] and corresponding *advantage* [*½ mark*] is rewarded in line with the feature grouping on page 5 below.	**20 marks**
Figure summary description: (including a reference to "non-limiting" examples and correctly indicating the figure that show prior art apparatus), along with correct/consistent use of figure numbers in the specific description.	**2 marks**
Specific description: Explanation of how the invention works conceptually, with a description of variants and alternatives (especially the add-on and integrated ladder stabiliser embodiment). Candidates should describe structure, function and operation.	**18 marks**

TOTAL: 45 marks

Claims

Independent apparatus claim	**24 marks**
Dependent apparatus claims	**26 marks**

TOTAL: 50 marks

Abstract

Title (same as title at top of script)	**1/2 mark**
Figure	**1/2 mark**
Text: must state the technical field or main use **[1 mark]**, summary of device (consistent with claims / description) **[2 marks]**, use of reference numerals **[1 mark]**	**4 marks**

TOTAL: 5 marks

GRAND TOTAL: 100 marks

***Suggested* Independent apparatus claim:**

Possible claim wording	**Notes**
1. A stabiliser for a ladder (or a ladder stabiliser {apparatus /device}) [**2**], comprising:	*Ideally should be an apparatus claim that defines a device/apparatus that stabilises a ladder. Should be broad enough to cover both integrated and add-on ladder stabilisers.*
a) a **support piece** {extending/extendable along a ladder} [**2**]	*Need to cover the support piece being the stile of the ladder, or being an item that is attachable directly or indirectly (e.g. via a T-bar) to such a stile. Simply calling it a support piece is preferred, but later claims must then make clear it can be the ladder stile.*
b) a **support arm** which is pivotally connected to the support piece and [**3**]	*The pivotal connection of the support arm to the support piece is the key point here. This is what allows the support arm to be rotated between the support position in which it can engage the ground to stabilise a ladder and the stowed position in which a ladder can be easily transported.*
c) a **connecting piece** between the support piece and the support arm having a **length that is adjustable** [**4**],	*The connecting piece is described by the client as being essential to ensure an acceptable ladder stabilisation effect. This could also be termed a cross-piece, brace etc. The important concept is that it connects points on the support piece and the support arm and, as explained by the client, it can only do this effectively because it has an adjustable length (i.e., because it is extendable). [NB: This feature could be expressed functionally, but with care taken over dependent claims that expand on this feature.]*
d) the connecting piece comprising {at least} a first part and a second part that {frictionally} engage to alter the length of the connecting piece [**4**], and	*The connecting piece is formed from at least two parts, to allow the required length adjustment of the connecting piece. Alternative language would also be acceptable here, so long as the idea is captured of having a structure (e.g., at least two parts/struts/elements that are connected together in a way that means they can move relative to each other) that allows the length of the connection piece to be increased/decreased. [NB: feature (d) could be included in a high order dependent claim instead.]*
e) a releasable securing {/locking} means, the releasable securing means being configured to releasably secure {lock} the first part and the second part [**4**].	*The releasability of the securing means (or locking means) allows the connecting piece to be extended or retracted and locked in place. The securing means is to provide the rigid support between the support piece and the support arm, but also allows it to be held in a retracted position so it can be stowed away when not in use.[NB: feature (e) could be included in a high order dependent claim.]* *[It is also acceptable for features c, d and/or e to be expressed in different ways that define an adjustable length connecting piece between the support piece and the support arm with a locking mechanism that allows it to be adjusted in length and then locked.]*

*[plus up to [**5 marks**] for overall claim breadth, clarity, conciseness and not including unnecessary language or features]***.**

The following examples of mark caps/restrictions apply if unnecessary limitations are included:

Catastrophic (0 marks):

- The claim is not novel over the prior art mentioned in the question paper.
- The claim doesn't include features (a) to (c). [Noting that features (d) and (e) could be included in a high order dependent claim instead].
- The claim doesn't cover all described embodiments, for example:
    - It only covers the ladder-integrated embodiment (stile is the support piece) or the separate stabiliser embodiment (e.g., it includes features from dependent claim set A or B). [NB: It may be acceptable to cover these alternatives via two independent claims]
    - It is limited to only one structure of the connecting piece (e.g., just the clamp connection of pieces, or just the telescopic connecting pieces).
    - It is limited to including both a T-bar and the support piece.

Major (cap to 10 marks): The pivotal connection is defined as a bolt/nut.

Minimal (deduct 2 marks each): Unnecessary features that provide a minor limitation on claim scope.

Total: 24 marks

Dependent apparatus claims

Marks are halved where claim dependencies are incorrect.

A)	**The ladder stile is the support piece. [2 marks]**
a.1	The support piece comprises {/is} the stile of a ladder [2].
B)	**The support piece is attachable/attached to a stile [4 marks**]
b.1	The support piece comprises a securing means for securing the stabiliser to a ladder {/ stile}. (i.e., the support piece is separate to the ladder and is attached permanently or releasably to the ladder).[1]
b.2	The securing means comprises at least one clamp {/releasable attachment} (i.e., it can be added/removed as required). [1]
b.3	The support piece {/or support arm} includes a T-bar [1] having a slidable sleeve to which the connecting piece is {pivotally} attached [1].
C)	**Connecting piece / securing means [9 marks]**
c.1	The first and second parts of the connecting piece each comprise at one end a pivotal connection {for connection to the support piece and the support arm respectively} [1]
c.2	The first and/or second parts of the connecting piece include a flared portion at the other (not pivotally connected) end. [1]
c.3	The securing means comprises a sleeve that surrounds the first and second parts [1] and provides a slidable connection [1].
c.4	- The sleeve includes a releasable securing means for locking the first and second parts together [1].
c.5	- The releasable securing means of the sleeve comprises a threaded hole and a bolt [1/2].
c.6	The first part is {telescopically attached and} configured to fit inside the second part. (this claim should not depend on claims c.3-c.5). [1]
c.7	- A releasable securing means is provided to lock the telescopic parts in place [1].
c.8	- The releasable securing means comprises a threaded hole in the second part and a bolt that can pass though the threaded hole to engage the first part. (Could combine c5 and c8 with appropriate antecedent basis provided) [1/2]
c.9	The bolt comprises a butterfly nut / wingnut.[1]

D)	**Support Arm [9 marks]**
d.1	The support arm is pivotally attached to the support piece by a bolt / nut. [1]
d.2	The support arm includes a {lower} gripping surface [1]
d.3	- The gripping surface includes is rubber / includes a grip pattern [1]
d.5	The support arm includes a foam surface [1]
d.6	The support arm further comprises an additional means/arm to extend the {horizontal} length [1].
d.7	- The additional means/arm is a telescopic, hinged or pivotable [1].
d.8	The support arm comprises one or more {or a pair of} support spikes. [1/2]
d.9	The additional arm comprises one or more {or a pair of} support spikes (with correct dependency on feature d.6 / this feature may be combined with d.8 if dependencies correct) [1/2]
d.10	The support arm, and/or optionally the additional arm, comprises visual indicating means (Including two separate dependent claims, with suitable dependencies, for the visual indicating means being on the support arm and the additional arm is also acceptable) [1]
d.11	The visual indicating means comprises at least one of a reflective material, a fluorescent material or a light [1].
E.	**Stabiliser plus ladder [1 mark]**
e.1	A ladder comprising at least one stabiliser of any previous claim [1]
e.2	A ladder comprising two stabilisers of any previous claim [1]

For all dependent claims, TOTAL = 26 marks

Suggested statement of invention mark allocation (20 marks)

Independent apparatus claim – Running through and expanding/explaining the five features (a)-(e) of claim 1 and outlining the advantages of the stabiliser over the prior art [**5 marks**].

Stile forms part of the stabiliser - Explaining/expanding on the features of group A of the dependent claims, including linking to features of claim 1. [**2 marks].**

An "add-on" stabiliser – Explaining/expanding on the features of Group B of the dependent claims, including the different types of ladder stile. [**2 marks**]

Connecting piece - Explaining/expanding on the features of Group C of the dependent claims. In particular, explaining the two alternative ways of changing the length. Also giving a general explanation of changing the length of connecting piece and locking it in position to provide the required support. [**5 marks**]

Support Arm - Explaining/expanding on the features of Group D of the dependent claims. Focussing on the various alternative ways of extending its length and the optional extra items (spikes/indicators/rubber/foam etc) that can be added [**4 marks**]

Ladder/Use features: Statements describing the combination of the stabiliser with a ladder. Mention of the ladder in use and how it is possible to fold down support arms at different angles for uneven ground. [**2 marks**]