Patent Examination Board

FD4 Infringement and Validity
FINAL Mark Scheme 2021

Construction

		Marks
1. A rope descending device for slowing the speed of descent of a load on a rope, comprising	Device for braking, controlling rate of descent a load on a rope running through the device p. 3, ll. 14-15, 20-21 load can be person i.e. descending the rope (p. 3, ll. 5-7) or load attached to rope but not limited to this	2
a ring defining an inner aperture, said aperture sized to accommodate the rope;	p. 4, ll. 32-33 (e.g. straight sides, rounded ends), functional definition "frame" the rope is not a part of claimed device so reference to rope only applies to device in use	2
a rail extending across the width of the aperture,	p. 4, ll. 33-34, can be defined by loop (22), perpendicular to sides, extends side to side, extends across width of aperture p. 5, ll. 6-7, 10-11; rail can be defined by separate ring(s) p.5, ll. 12-13, or integral rail p. 5, l. 27 construction must allow more than one rail, p. 5, l. 6, (see also repercussive effect of Cl. 2), i.e. at least one	2
said rail adapted to provide a force on the rope; and	"adapted to" = contact of rope with rail(s) provides friction force, p. 5, ll. 17-19 Forcing rope to more constrained or bent path p. 5, ll. 14-15	1

means for connecting the ring to the user of the rope descending device;	p. 5, ll. 23-26: openings in plate, carabiner, rope, attach to user's harness	1
wherein the rail and the aperture are configured such that the path of the rope through the rope descending device is linear.	p.4, l. 38-p. 5, l. 2 path in plan view from end to end; p. 5, ll. 42-43: bends through less than 90 degrees in a side-to-side direction, purpose = preventing twisting p. 6 ll. 2-7	1
	Total for claim 1	**9**
2. A rope descending device according to claim 1,		
wherein the rail is integrally formed with the ring.	p. 5, ll. 27-29, but definition cannot be limited to all rails being integral , must allow additional, non-integral rails to be consistent with disclosure consistent with definition of rail claim 1	1
	Total for claim 2	**1**
3. A rope descending device according to claim 1 or claim 2,		
wherein the device comprises 2 to 4 rails.	Does not cover embodiment of Fig 4/5a, i.e. single rail embodiment; point only to Figs 5b and 5c (NOT Fig 5a) Must allow mixture of integral rail (Cl. 2) and separate loops (Figs 5b & 5c); p. 5, ll. 6-7 describes 2 or more; 4 not shown or described, does this mean 2-4 rails or at least 2 rails? Either acceptable with reasoning	2
	Total for claim 3	**2**

4. A rope descending device according to claim 3,		
wherein the width of the rails occupies substantially all of the aperture.	p. 5, ll. 14, 21-22, Width of the rails = space of aperture obstructed/occupied by rails but leave space for rope, if maximal level of friction noted, need consistency throughout answer measured in different direction to width of aperture– Fig 5b 5c;	2
	Total for claim 4	**2**
5. A method of braking a load on a rope using the device of claim 1-4, said method comprising;	p. 5, ll. 30-36, independent method claim, not a dependent claim but refers back to device of claims 1-4 so link to construction of claims 1-4; esp. braking vs. controlling, not limited to a complete halt	1
securing the rope descending device to a user;	p. 5, ll. 25-26: attach to user's harness	1
securing one end of the rope to a load;	Not explicit apart from claim, distinguish from load/climber attached to device; p. 3, ll. 6-7, 15,; "load" is different to stationary user p. 5. ll. 34-36	1
adding one or more rails extending across the width of the aperture of the rope descending device, said rails adapted to provide a force on the rope;	p. 5, ll. 12-13, 28-29, device of Cl 1 already has "a rail" so "adding" can mean more than 1 rail is present OR this is the step of adding the rail of claim 1, i.e. completing the device of claim 1 either acceptable with appropriate reasoning	1

passing the rope through the device in a linear manner; and	p. 5, ll. 42-43: bends through less than 90 degrees in a side-to-side direction (note “support” rope is an error in spare claims)	1
lowering the load, whereby the user controls the rate of descent of the load by varying the level of friction provided by the device.	p. 5, ll. 34-36 user remains stationary, p. 3, l. 24 angle of rope affects friction; p. 4, ll. 36-37 raise or lower rope to alter angle of bend	2
	Total for claim 5	**7**
Dependencies		**1**
	Total for Construction	**22**

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Infringement
Candidate's answer must clearly show how the features of the infringement are related to the claim language, not just the re-written language from the construction

	Document B	Marks
1. A rope descending device for slowing the speed of descent of a load on a rope, comprising	p. 11, l. 1 "mechanical rope brake" control speed of descent p. 11, ll. 9-10 (or other equivalent description from Doc B)	1
a ring defining an inner aperture, said aperture sized to accommodate the rope;	p. 11, ll. 22-23, metal plate, one or two slots, allow rope to pass through	1
a rail extending across the width of the aperture, said rail adapted to provide a force on the rope; and	p. 11, ll. 25-26 rope bends around and rubs against carabiner; Fig 3b p. 11, ll. 30-31 carabiner is "an essential part of the device" so device is plate + carabiner Fig. 2: bar between two slots is <u>not</u> rail; if interpreted as rail, must explain how carabiner is to be used consistent with instructions in Doc B, must explain how device can be used as a mechanical rope brake in this configuration	1
means for connecting the ring to the user of the rope descending device;	p. 11 ll. 28-30 cord hole & cord (not in use) p. 11, ll. 23-24 carabiner clipped to the belayer (in use)	2
wherein the rail and the aperture are configured such that the rope passes through the rope descending device in a linear fashion.	Fig 3a & 3b: shape of slot means rope must adopt a linear path, will not bend more than 90 degrees side-to-side	1

	Infringed	
	Total for claim 1	**6**
2. A rope descending device according to claim 1,		
wherein the rail is integrally formed with the ring.	p. 11, l. 31 cord to stop carabiner from being separated means it cannot be integral (or if bar is rail then is integral)	1
	Not Infringed (Infringed if bar is rail)	
	Total for claim 2	**1**
3. A rope descending device according to claim 1 or claim 2,	Claim 1 yes Claim 2 no (or yes)	
wherein the device comprises 2 to 4 rails.	Only mentions 1 carabiner so not present OR Carabiner is second rail if bar is rail	1
	Not Infringed for either dependency (Infringed for both if bar is rail)	
	Total for claim 3	**1**
4. A rope descending device according to claim 3,	Claim 3 not infringed (infringed)	
wherein the width of the rails occupies substantially all of the aperture.	Comment on number of rails: Only one rail (OR 2 rails if bar is rail) Fig 3b shows rope and rail together filing most of the space in the slot so consistent with definition in patent p. 5, ll. 21-22 (see patent fig 5c), <u>comment on bent or constrained path of the rope</u>	2
	Not Infringed (Infringed if bar is rail)	

	Total for claim 4	**2**
5. A method of braking a load on a rope using the device of claim 1-4, said method comprising;	p. 11, l. 1 belaying device; p. 11, l. 7 belaying devices act as a friction brake See analysis of claim 1 for device	1
securing the rope descending device to a user;	p. 11, ll. 23-24 carabiner clipped to belayer	1
securing one end of the rope to a load;	Fig. 1 fallen climber	1
adding one or more rails extending across the width of the aperture of the rope descending device, said rails adapted to provide a force on the rope;	Consistent with construction and position on infringement of claim 3 AND Adding carabiner adds one rail	1
passing the rope through the device in a linear manner; and	p. 11, ll. 22-23 rope passes through slot Fig 3 shape of slot means rope must adopt a linear path	1
lowering the load, whereby the user controls the rate of descent of the load by varying the level of friction provided by the device.	p. 11, ll. 17-21 position of rope used to vary friction	1
	Not Infringed	
	Total for claim 5	**6**

Conclusions	Conclusions Discussion of direct or contributory infringer, or Actavis for non-infringed claims. If so, present analysis. No Actavis infringement expected	1 2
	Total for Infringement	**19**

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Novelty

Date for assessing novelty: Priority Date – claims 1 – 4; Filing Date – Claim 5 (why, what subject matter changed between PD and FD?) 1

Prior Art: CGK (Doc A, Fig. 2); Doc C; Prior Use (p. 2, ll. 21-30) for claim 5 only 1

	Carabiner Brake (Doc A CGK)		Figure Eight (Doc C)		Prior Use (Doc A)	
1. A rope descending device for slowing the speed of descent of a load on a rope, comprising	p. 3, l. 25 carabiner brake = rope descending device Fig 2	1	p. 13, l. 1, descender device Fig 1 & 2	1		
a ring defining an inner aperture, said aperture sized to accommodate the rope;	Carabiner B p. 3, ll. 30-31	1 (need all 3 for full mark)	Upper ring 3, p. 13, ll. 5-6 Larger hole 6, p. 13, l. 10 Rope 24 through larger hole 6, p. 13, ll. 9-10 OR Rings 3 and 4 together define ring	1		
a rail extending across the width of the aperture, said rail adapted to provide a force on the rope; and	Carabiner A p. 3, ll. 30-31, 34		Is neck a rail and is it "adapted? neck 5 is rail by virtue of function, or not because position is outside hole 6; OR	1		

			neck 5 is rail if both rings 3 and 4 define ring of claim Either acceptable if consistent with construction of ring/rail			
means for connecting the ring to the user of the rope descending device;	Carabiner D p. 3, ll. 32-33		Lower ring 4, p. 13, ll. 7-8 connect to harness of climber	1		
wherein the rail and the aperture are configured such that the rope passes through the rope descending device in a linear fashion.	Rope C, Fig. 2 explain how “linear” consistent with construction	1	Fig 2 shows deviation in more than one plane so not present p. 4, ll. 8-9 p. 13, ll. 9-11: “up”, “over”, “under”	1		
	Not Novel		Novel			
	Sub-total	3	Sub-total	5		
			Total Claim 1	**8**		
2. A rope descending device according to claim 1,						
wherein the rail is integrally formed with the ring.	Separate carabiner A Not present	0.5	Neck 5 is shown as part of device (Fig 1) so integral	0.5		

			Present/not present consistent with cl. 1 view of neck 5			
	Novel		Novel (by dependency)			
	Sub-total	0.5	Sub-total	0.5		
			Total Claim 2	**1**		
3. A rope descending device according to claim 1 or claim 2,						
wherein the device comprises 2 to 4 rails.	Only mentions one brake carabiner A Not present	0.5	Neck 5 is single structure, no other rails shown Not present	0.5		
	Novel		Novel			
	Sub-total	0.5	Sub-total	0.5		
			Total Claim 3	**1**		
4. A rope descending device according to claim 3,						
wherein the width of the rails occupies substantially all of the aperture.	Only 1 rail (or all features of claim 3 not present) AND Fig 2 shows large space around rope C in carabiner A Not present	1	Fig 2 shows large space in hole 6 when rope 24 is present, p. 13, ll. 16-20 discusses level of friction Not present	1		

	Novel		Novel			
	Sub-total	1	Sub-total	1		
			Total Claim 4	**2**		
5. A method of braking a load on a rope using the device of claim 1-4, said method comprising;	*Device of claim 1 disclosed so device present; method not explicitly disclosed for carabiner brake but implicit from p. 3, ll. 8-18*	1 (need both for full mark)	*Only discloses controlling climber's descent*		p. 2, ll. 21-22 lowering fallen climber on a stretcher (load)	1
securing the rope descending device to a user;	*See corresponding feature in claim 1 above p.3 ll. 32-33*		*See corresponding feature in claim 1 above*		(p. 5, ll. 23-26, connect device to user's harness)	1 (need both for full mark)
securing one end of the rope to a load;	No load separate from user Not present	1	End secured to anchor point, p. 13, l. 12, not load Not present	1	p. 2, ll. 23-24 climber on a stretcher	
adding one or more rails extending across the width of the aperture of the rope descending device, said rails adapted to provide a force on the rope;	"Assembly" p.3 ll. 25 and 35 p.3, ll. 35-37 Is this "adding" consistent with construction?	1	Not disclosed, neck is integral		p. 2, ll. 26-27 adding or removing loops to vary level of friction	1

passing the rope through the device in a linear manner; and	Implicit from Fig. 2 consistent with corresponding linear feature in claim 1 above	1	Not present, See corresponding feature in claim 1 above	1	(p. 5, ll. 42-43 “linear fashion”)	1 (need both for full mark)
lowering the load, whereby the user controls the rate of descent of the load by varying the level of friction provided by the device.	*Not disclosed, no load (see above)*		Rate of descent controlled by controlling level of friction p. 13, ll. 13-14, 18-19; Fig. 2 but lowering user, not load Not present	1	p. 2, l. 26, implicit in use	
	Novel		Novel		Not Novel	
	Sub-total	4	Sub-total	3	Sub-total	4
					Total for Claim 5	**11**
			Conclusions (only if prior use considered)			**1**
			Total for Novelty			**26**

Inventive Step

	Marks
Prior art = Doc C (Cl. 1 – 4); Prior Use/Client Letter (Cl. 5) mark awarded in novelty	
PSA = Designer of safety equipment for climbing & abseiling for claims 1-4, user for claim 5	1
CGK = Doc A, p. 3, ll. 8-39 both designer and user, if Doc C explain why (p. 2, l. 40?)	1
	2

Claim 1		Marks
Concept	avoid multiple changes in direction of rope p. 6, l. 6	1
State of the art	carabiner brake	1
Difference	no difference if carabiner brake	1
Obviousness	Concept of claim 1 is known, does not provide solution to twisting carabiner brake has linear path but also problem with twisting (p. 3, 37-39);	
	Total for claim 1	**3**
Claim 2		
Concept	Simplify manufacture p. 5, l. 28	1
State of the Art	Doc C describes an integral device	1

Differences	Rail secured to frame across the aperture in single piece construction, linear path	1
Obviousness	Doc C has neck integral with ring, neck has similar function to rail but no linear path possible in Doc C and would change how Doc C works so probably not obvious	2
	Total for claim 2	**5**
Claim 3		
Concept	Vary level of friction	1
State of the art	Doc C	1
Difference	Multiple rails	
Obviousness	Not present or suggested in Doc C or CGK	2
	Total for claim 3	**4**
Claim 4		
Concept	Maximize friction	1
State of the art	Doc C	1
Difference	Reduced space increases friction force	
Obviousness	Not present or suggested in Doc C or CGK	2

	Total for claim 4	**4**
Claim 5	Explain that no Pozzoli analysis possible because state of the art is the **patentee's** prior use of their claimed method. There can be no differences or new concept.	2
Concept		
State of the art		
Difference		
Obviousness	Obvious/not novel	
	Total for claim 5	**2**
	Conclusions	**1**
	Total for Inventive Step	**21**

Amendment/Sufficiency	
No sufficiency issues	1
No Amendments can improve position for infringement, OR any amendment to improve novelty or inventive step noting effect on infringement (may be in advice)	1
Total for Amendment/Sufficiency	**2**

Advice **10 Marks**

Ask client for videos and device (1)

Comment on how YouTube evidence might be used, any deficiencies. (1)

Client's questions: (up to 4)

What needs to be resolved before start manufacturing in the UK?

Renewals up to date how does this affect patentee's ability to act? (1)

Consider IPO opinion on validity, revocation action UKIPO, IPEC, HC? (1)

Invalidating claim 5 affects contributory infringement (1)

The patentee's device never took off, so consider licensing discussions if any claims are valid and infringed, if invalid possibility of royalty free licence (1)

Up to 4 from:

Summarise position today (infringing but invalid), what might client expect (infringement proceedings, defence/counterclaim of invalidity)? (1)

Which parties might be infringing? Consider private users or commercial users. If contributory infringement, who is end user? (1)

How might patentee take action? Warning letter (why not an actionable threat?), letter before action, action in IPEC, HC (1)

Advice about liability if starting UK manufacture, what about contributory infringement if only producing plate? (1)

Possibility to stop importing into the UK vs. abandoning 25% of their market abandoning sales in the UK wouldn't be a good idea. (1)