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CLAIMS

1. A flying disc toy having aerodynamic properties so that, when tossed and simultaneously rotated, it will fly in a stable manner, the toy comprising: a disc-shaped body portion ~~(12)~~ of flexible sheet material; a flexible annular frame ~~(16)~~ attached to the periphery of the body portion, the frame being made of ~~plastics~~ *plastic* material having sufficient elastic memory to be shape-retaining and to stretch the body portion into the disc-shaped configuration, yet being pliable so that the toy can be folded and/or crumpled for storage; the frame being formed of a ring ~~(18)~~ having ~~a~~ *an upstanding* rim ~~(20)~~ to which the body portion ~~(12)~~ is attached *such that the body portion is vertically spaced from the plane of the upper surface of the ring*, whereby the disc toy assumes an unfolded shape with ~~a flat upper surface and~~ a too much recessed undersurface so that it exhibits stable aerodynamic properties when thrown. — 17 / 17/18 / 4

2. A flying disc toy as claimed in claim 1, wherein the body portion ~~(12)~~ is made of a fabric on which an advertising or like message ~~(14)~~ may be readily imprinted as by silk screening or other processes.

3. A flying disc toy as claimed in claim 1, wherein the body portion ~~(12)~~ is made of a plastics sheet material.

4. A flying disc toy as claimed in any preceding claim, wherein the body portion ~~(12)~~ is sewn or glued to the rim.

5. A flying disc toy as claimed in any preceding claim, wherein the ring is formed as an annular tube.

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6. A flying disc toy as claimed in any preceding claim, wherein the frame is made from an elongate strip of vinyl material which is cut to a predetermined length, a plug being provided to secure the open tube ends of the ring together in order to form the frame.	
7. A flying disc toy as claimed in any ~~preceding claim~~ *of claims 1 to 5*, wherein the frame is made from an elongate strip of vinyl material which is cut to a predetermined length, the ends thereof being glued or heat-welded together in order to form the frame.	✓
8. A flying disc toy as claimed in any preceding claim and weighing no more than 120g.	
9. A flying disc toy as claimed in claim 8 and weighing no more that 100g.	0
10. A flying disc toy as claimed in any preceding claim wherein the frame is made of plastic material.	0
11. A flying disc toy as claimed in claim 10 wherein the plastics material is vinyl.	0
12. A flying disc toy as claimed in any preceding claim in which the upstanding rim is integral with the ring.	✓ 1
13. A flying disc toy as claimed in any preceding claim in which the rim forms a cylindrical wall parallel to the disc axis.	✓ 1
14. A flying disc toy as claimed in any of claims 1 to 12 in which the rim is inclined inward.	✓ 1
15. A flying disc toy as claimed in claim 4 in which the rim is inclined inward at an angle of up to 45°.	✓ 1
16. A flying disc toy as claimed in any preceding claim, wherein the disc toy is about 20cm in diameter.	0
17. A flying disc toy as claimed in any preceding claim in which the disc toy assumes an unfolded shape with a flat upper surface.	✓

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18. A flying disc toy as claimed in any of claims 1 to 17 in which the disc toy assumes an unfolded shape with an arched or domed upper surface. 7 ✓

[A] such that the body portion is vertically spaced from the plane of the upper surface of the ring.

[B] A flying disc toy as claimed in

MARKS AWARDED 28/35

Response to Examination Report.

Dear Sir/Madam

Extension

We request a two month extension (as of right) to the period specified for responding to the Examination Report under S117(B) UK Patents Act. ✓

We further ask for the Controller to use his discretion to grant a further two month extension, such that this response is received in due time. ✓ ✓
Unfortunately, the person responsible at the applicant, Mrs Irma Spinn, for the present application has been in hospital several times over the last few months, with doctors ordering complete rest in between. In the circumstances the applicant was unable to consider a response to the Examination Report until now, even though it was always intended to respond. Discretion is therefore requested. ✓ 4/4

Amendment and Basis ✓

Claim 1 amended to specify that the rim is "upstanding ... [A]". Basis is found at p6, l 19 and p 7, l 28-29. ✓ ✓

It is noted that p6, l19 specifies that the rim is "integral upstanding". However, it is clear to the skilled person that the rim need only be upstanding "[B]" (p 7, l28-29) and that it is not essential to the claimed invention that the rim be integral. ✓

"plastics" is amended to "plastic" in claim 1. Basis is found at p5, l26. ✓

"a flat upper surface and" is deleted. It is clear from p7, l16–17 that the upper surface may be flat, arched or domed so this is permissible. ✓

Claim 7 is made dependent on claims 1–5 for clarity.

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Claim 9 is based on p7, l31.

" 10 is based on p7, l11

" 11 is based on p7, l11.

" 12 is based on p6, l19.

" 13 " " " p6, l20.

" 14 " " " p 7, l25. ✓ 7/8

" 15 " " " p 7, l25

" 16 " " " p 7, l30.

" 17 " " " p 7, l16 and claim 1 as filed.

" 18 " " " p7, l16–17.

Reference numerals are deleted throughout the claim because these are not required. Accordingly, no undisclosed subject matter is added by the present amendments.

Novelty

D1 discloses a flying disc toy formed of an annular element 34 (p12, l 20) attached to periphery of a fabric member 18 (p12, l19–20) to stiffen the fabric member 18, yet being pliable enough to allow folding "in pocket, drawer, or purse (p 11, l26 to p12, l 1, p11, l5-6). ✓

The skirt 14 might even be said to be a rim to which the fabric member 18 is attached.

However, the skirt 14 is not "an upstanding rim to which ... [A]" Then, in D1, the disc toy has a smaller recess defined by the space enclosed by the disc body and frame (p6, l 22–25). ✓ ✓

Thus, amended claim 1 is distinguished over D1. 3/5

Similarly, D2 discloses a flying disc toy formed of annular member 21 and a sheet or web 22. However, the toy of D2 has a rigid annular member 21 (p 17, l 1) as is not a flexible annular frame that has sufficient elastic memory to be shape retaining but also pliable. ✓ ✓

Moreover, D2 does not disclose "an upstanding rim ... [B] of claim 1.

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Thus, claim 1, and by consequence dependent claim 2–18, are novel in view of D1 and D2. 1/1 ✓

Inventive Step

Using the Pozzoli approach: 2 ✓✓

The skilled person (SP) is a designer of flying disks, like the Frisbee.

As part of the common general knowledge (CGK), SP knows that a rigid plastic disk having a convex upper surface acts as an aerofoil to provide lift. 1/2 ✓

The inventive concept of claim 1 is a folding flying disk toy that still achieves the required lift. ✓

The invention of claim 1 differs from prior art flying discs in that the annular frame comprises "an upstanding rim to which ... [A]".

Such a flying disk is not obvious from D1.

In D1, the airfoil effect is provided by the billowing of the generally circular member 18 and annular element 34 (p12, l 19–22) ✓

In order to provide the billowing effect to give the airfoil effect, D1 adopts a complex stiffening arrangement using the annular element 34 and two cloth layers 20, 22 to maintain the billowed shape of the aerofoil. ✓

Without this complicated construction, the new rigid toy would flatten due to centrifugal forces and, presumably, not fly (p 13, l 15-17). ✓

This drawback requires the use of either a rather thicker and stiffer plastic tube in the form of paper wadding (38 (p 13, l 15-17). Thus, a complex arrangement is required to give a toy that is foldable and still takes flight, although it is questionable how foldable the disk would be. ✓

D1 does not disclose the use of an upstanding rim as in claim 1 to provide sufficient flight properties without compromising foldability. D1 does not mention providing a recess to generate lift.

Due to the complicated, layered arrangement of D1, it would be difficult to adapt the element 34 to include a rim as in claim 1 because the cloth laters would have to be stitched around the rim and the element 34.

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In any case, in trying to improve the lift properties of a foldable disk as in D1, the skilled person would consider that the spoiler skirt already provides the desired effect.

In view of the above, it is clear that the skilled person would not be motivated to add a rim according to claim 1 to the disk of D1 because there is no mention of it, sufficient lift is apparently provided by the spoiler skirt and D1 requires extensive modification to arrive at claim 1.

For completeness, it is noted that D2 discloses a rigid disk (p17, l 2) and would be of no use in arriving at the inventive concept of providing a foldable disk that achieves the required lift. The SP has no motivation to combine features of a rigid disk of D2 with the foldable disk of D1. ✓

D2 is instead mostly concerned with improving the strength to weight ratio by the use of Mylar (p 16, l19; p17, l9), the angular momentum by reducing the relative weight of the central region (p17, l 19-20; p16, l 19–20) and printing on the surface (p 16, l 20-21). ✓

D2 does not disclose "an upstanding rim ... [A]".

Thus, claim 1, and its dependent claim, are not obvious from D1 or a combination of D1 and D2.

Clarity

The dependency of claim 7 has been corrected.

Yours faithfully.
Mr Gallagher

MARKS AWARDED 27/34

Client Memo

– Client was in hospital and sick, so although the deadline expired on 18 June 2018 and the two month as of right extension period expired on 18 August 2018, it is very likely that the further discretionary extension will be granted. ✓ ✓

  Evidence may be sought by the patent office – can ask client if this becomes necessary. ✓

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– We should therefore file the response as soon as possible and request the 2m as of right extension and further 2m discretionary extension in writing, no fee, to extend the period for response to 18 October 2018.	
– Client noted the importance of the intrinsic bowl shaped formed by the rim as opposed to the reliance on the billowing effect in D1.	
– As it stood, the rim of claim 1 as filed was poorly designed, and was arguably covered by a surface of the fabric member 18 or the skirt 14 in D1. Present amendment needs to define the rim and its relation to the ring 18 and the body portion 12.	✓ ✓
– Amendment is based on p6, l 19 and p 7 l28-29. There is a reasonable chance that claim 1 will be considered to add matter because of the omission of "integral". However, the inventive step argument of providing the recess by spacing body 12 from the upper surface of the ring 18 could be made without specifying integral, and it seems that a glued on rim would do the same job (though be less resilient). Moreover, the compliance date is not until Q3-Q4 2019 (the application was filed in 2015) at least, and there is no infringer on the scene, apparently, so there is time to try this broader scope. If another exam report is issued, we can consider specifying "integral" in claim 1. For now it is claim 12 as an optional feature.	✓ ✓ ✓
– Client mentions that there are one or two other promising materials for the frame instead of vinyl, but does not mention what they are, specially whether they are "plastics". There was basis in the specification for amending "plastics" to "plastic" so hopefully this will cover any appropriate materials. It is noted that claim 1 already mentions that the material is elastic and pliable, and "plastic" should cover all of these materials. "Plastics" and vinyl materials have been added as dependent claim (10 and 11).	
– It is not possible to specifically mention the addition piece of padded material to give a domed surface on the top in this application due to restriction on added matter and because it is not disclosed in the specification. However, this appears to be a novel feature with an associated advantage so a new application directed to this invention should be considered.	✓ ✓

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- Speak to client about searching for prior art relating to this feature and consideration of new application. Also consider that the son is the inventor so an assignment of the right to a patent for this invention to FloppyDisk Ltd is needed. ✓
- In any case, it has been possible to remove the limitation that the toy has a flat upper surface because there are embodiments in the application that are arched /domed. ✓

  Flat or arched or domed upper surfaces have been mentioned in claims 17 and 18, and are covered by claim 1 now. ✓
- I do not think that a divisional is required. The overall invention seems to be the use of the rim, which is covered by claim 1. The use of a domed surface is not in itself novel or inventive over D1. As noted above, the use of an additional padded layer may be novel + inventive over D1, D2 and the present published application.
- Accelerated examination not required because no infringer on the scene.
- "Frisbee" is not marked as a registered trade mark at p 4, l 6. We should check whether it is and, if so, acknowledge this in the specification. If not, we may get another examination report, or the examiner may amend the specification of his own volition.
- It is noted (belatedly) that claim 6 is narrower than claims 10 and 11. If any objection is raised that this introduces a lack of clarity, we will reorder claims 10 and 11 to sit before claim 6 (at the attorney's expense!)

MARKS AWARDED 13/31