

# Understanding patent claims

## (a) Toy ball



# The invention

A ball that is fun to use, easy to catch and looks nice.



How can you protect it from imitation?

- "Fun to use" → cannot be protected
- "Looks nice" → registered design
- "Easy to catch" = technical function → patent

# How to patent this invention: claim it!

~~Patent Claim: "A ball that is easy to catch."~~

Making a ball "easy to catch" is a technical problem. Problems cannot be patented – but specific solutions can! What is the **technical feature** that makes the ball easy to catch?

~~Patent Claim: "A ball comprising a **core region** and plural elastomeric **filaments** radiating from the core region."~~

You don't want anyone circumventing the patent by replacing the ball **shape** with something else!

Patent Claim: "An amusement **device** comprising a core region and plural elastomeric filaments radiating from the core region."

A prior art search will show whether the invention – **as claimed** – is actually **new**.

# Result of the prior art search

Your patent attorney found US 3,759,518, "Foot impellent toy", which discloses a similar invention.

**United States Patent** [19] [11] **3,759,518**  
**Mroz** [45] **Sept. 18, 1973**

[54] **FOOT IMPELLENT TOY**

[76] Inventor: **John M. Mroz**, 623 N.E. 2nd St., Hallandale, Fla. 33009

[22] Filed: **Oct. 13, 1971**

[21] Appl. No.: **188,902**

[52] U.S. Cl. .... **273/106 B, 273/58 A, 273/58 K**

[51] Int. Cl. .... **A63b 65/10**

[58] Field of Search ..... **273/106 R, 106 B, 273/58; 15/181, 179**

**FOREIGN PATENTS OR APPLICATIONS**

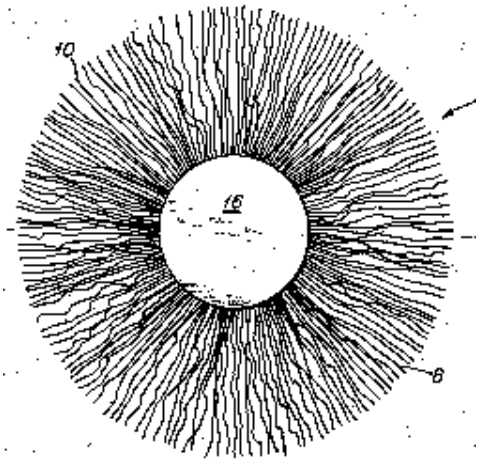
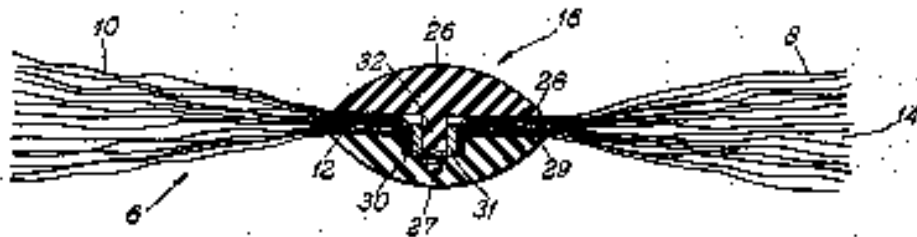
763,695 5/1934 France ..... 273/58 R

*Primary Examiner*—Richard C. Pinkham  
*Assistant Examiner*—Paul E. Shapiro  
*Attorney*—Dominik, Knechtel and Godula

[57] **ABSTRACT**

A unitary toy to be repeatedly kicked to keep the toy in play and away from play-ending ground contact, said toy having a plurality of flexible strands disposed in a

"... said toy having a plurality of flexible strands ..."

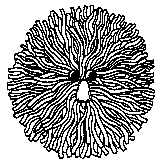


# Comparison of the two inventions

Your invention  
as claimed

"An amusement device comprising a **core region** and **plural elastomeric filaments** radiating from the core region."

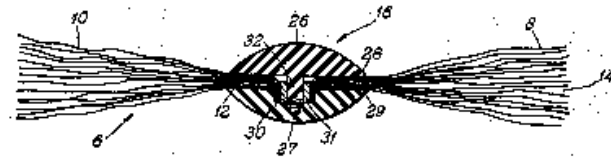
**Not new**



"... radiating in **plural angularly offset planes** from the core region."

US 3759518

"A toy of a disc-like body ...  
... including ... a **plurality of flexible strands** radiating outwardly from said ... **center** ... having sufficient inherent rigidity to retain the pattern of a circular plane."

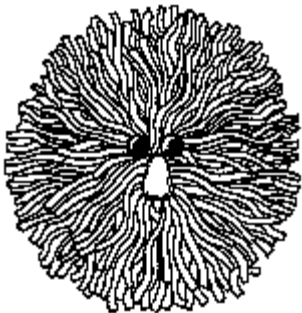


- New!
- Inventive step (modification yields new function of making it easier to catch)!

# Claim to protect the invention

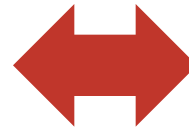
## Claim to be filed:

"An amusement device comprising a **core region** and **plural elastomeric filaments** radiating in **plural angularly offset planes** from the core region."



# Patent claims

Inventor wants broadest possible protection



Legal requirements limit the scope of the patent

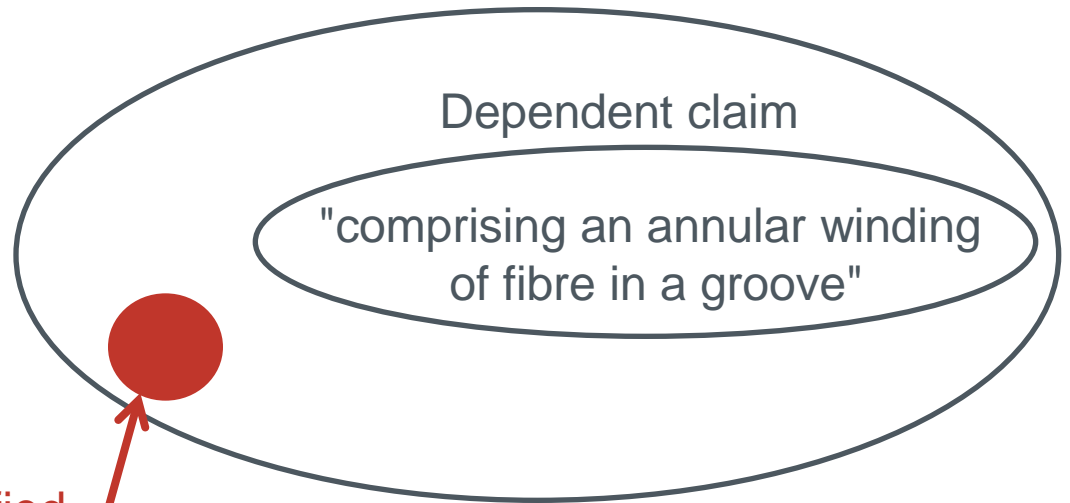
Claims:

1. A wheel
2. The device of claim 1, comprising an annular winding of fibre in a groove

Independent claim ("a wheel")

Dependent claim

"comprising an annular winding of fibre in a groove"



Prior art identified by patent examiner or competitor

# Application filed with the EPO

**Claim 1:** "An amusement device comprising a **core region** and **plural elastomeric filaments** radiating in **plural angularly offset planes** from the core region."

**Claim 2:** "A device according to claim 1, characterised in that it has a substantially **spherical** configuration."

**Claim 3:** "A device according to claim 1, characterised in that the outer ends of at least some of the filaments include **enlargements.**"



**The EPO will perform its own prior art search and then consider whether the invention AS CLAIMED is new and non-obvious.**



# Additional prior art found by the EPO

## "Self-adhesive mould elements"

BUNDESREPUBLIK DEUTSCHLAND  
⑫ **Offenlegungsschrift**  
⑪ **DE 3121758 A1**



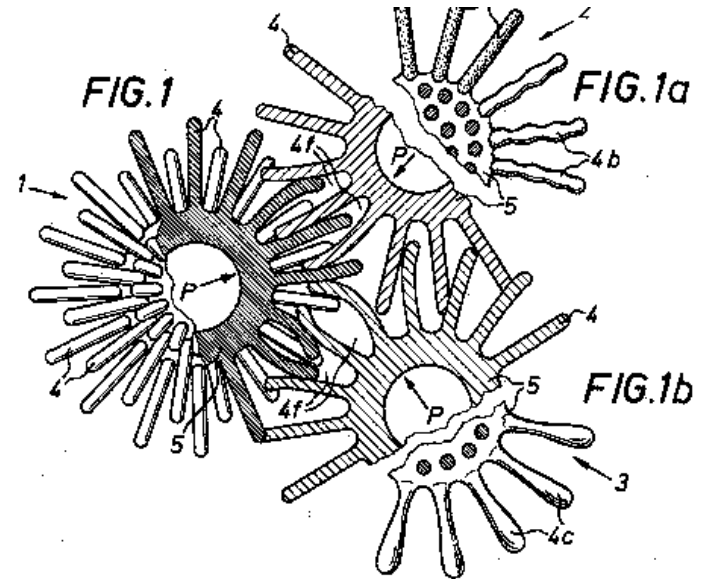
DEUTSCHES  
PATENTAMT

- ⑰ Aktenzeichen:
- ⑱ Anmeldetag:
- ⑲ Offenlegungstag:

P 31 21 758.  
2. 6. 81  
16. 12. 82

Anmelder:  
Frommknecht, Hans, 7972 Isny, DE

⑳ Erfinder:  
gleich Anmelder



DE 3121758:

"Self-adhesive mould elements that are equipped with **spike-like rods or bristles** ... characterised by rods that are **attached on a core** and that are made of an **elastomeric material** ..."

# The opinion of the EPO

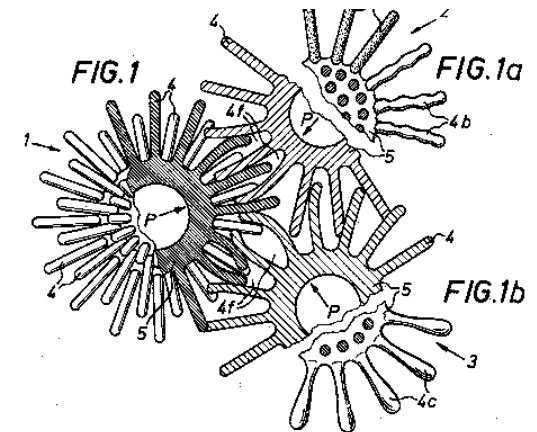
DE 3121758

## Your claim:

"An amusement device comprising a **core region** and **plural elastomeric filaments radiating in plural angularly offset planes** from the core region."

This is already shown and claimed in DE 3121758

**Spike-like rods attached on a core, made of an elastomeric material ...**



## EPO response:

**Please amend your claims if you want your invention protected!**

# Further analysis

Did the EPO overlook any important features of the invention?

Applicant's reply:

Amendments to the application, explanation of the relationship between the invention and the prior art

**How can the claims be amended** to reflect the invention in such a way that it is new (considering all the prior art)?

# Comparison of the invention with the prior art

	US 3759518	DE 31211758
<b>Technical features of the invention</b>		
Core + flexible filaments	✓	✓
Plurality of angular planes	No	✓
Floppy filaments	✓	No
<b>Advantages/technical result</b>	(floating movement)	(self-adhesive)
Easier to catch	No	No
Flies less far + doesn't break things	No	No

## Result of the analysis

Although the individual elements of the invention are known, the **combination is not** and it produces a **new, unique benefit**.

Given our knowledge of the prior art, it is not obvious to combine the elements to achieve these new effects → the inventive step requirement is fulfilled.

The claim must be amended to distinguish it from DE 31211758:

"An amusement device comprising a core region and plural **elongate, floppy**, elastomeric filaments, each having **cross-sectional dimensions which are significantly smaller than its length**, radiating in plural angularly offset planes from the core region."

## The original description filed with the EPO supports the amendments to the claims

This invention **pertains to** an amusement device, and more particularly, to a throwing/catching device which is **especially easy to catch**.

One of the **problems** with many conventional throwing/catching devices is that ... they ... tend to bounce and ... sometimes hurt to catch.

A general **object of the present invention** ... avoiding any tendency to bounce ... grasping ... prevents ... throwing or hitting it very far ... break anything on contact.

According to a **preferred embodiment** of the invention, ...

Detailed description

Device 10 is formed with a large **plurality of elongate, floppy, elastomeric filaments** 12, each of which, as is clearly evident in Fig. 1, has **cross-sectional dimensions which are extremely small in relation to the length of the filament**. As will be more fully explained shortly, these filaments are joined in a central core region in such a manner that they radiate outwardly in a fairly uniform, dense and bushy fashion, **in multiple angularly offset planes**, to form a **substantially spherical configuration**.

Supports inventive step: different technical result

Different to patent DE312...

Different to patent US375...

# The patent is finally granted

**Response from EPO: granted!**

⑰  **Europäisches Patentamt**  
**European Patent Office**  
**Office européen des brevets**

⑪ Publication number:

**0 295 114**  
**B1**

⑫

## **EUROPEAN PATENT SPECIFICATION**

④⑤ Date of publication of the patent specification:  
**05.12.90**

⑤① Int. Cl.<sup>5</sup>: **A63H 9/00**, A63H 3/02,  
A63B 43/00, A63F 9/02

②① Application number: **88305303.5**

②② Date of filing: **10.06.88**