School of Mechanical Engineering

Course Code: BTME3056 Course Name: Product Design

UNIT 6

Patents and Intellectual Property

Patents and Intellectual Property

Types of Intellectual



Intellectual Property

Utility Patent

Design Patent

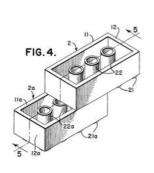
Plant Patent

Trademark

Copyright

Trade Secret

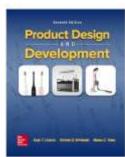
Geographical Indication















1. novel

2. useful

3. non-obvious

ornamental design

only

new composition of matter

word or symbol original expression of work

proprietary and useful unique regional qualities

requires formal application

may be registered

not registered

registered

Trademark

- Valuable for building and protecting a brand
- A "mark" under which you sell goods and services
 - House trademark



- Trade dress



- Product trademark ThinkPad
- Service mark



- Federal registration available in US (TM or SM → ®)
- Strength of trademark depends on distinction
 - Generic [G]



Descriptive



Suggestive



Arbitrary



Fanciful



• Check availability או ניס וו ademark Database www.uspto.gov and at WIPOGlobal Brands Database www.wipo.int

Copyright

- The right to make copies
 - Arises from simply creating a work
 - Protects the expression not the idea
 - great for music, poor for software
- Default copyright ownership





- Owned by author unless otherwise agreed (e.g. by employee or contractor agreement)
- Open source
 - For sharing and building



- Federal registration is a plus
- © notice format is flexible
 - Copyright © 2018, MyBiz, Inc., All Rights Reserved
 - − © 2018 MyBiz
 - Copyright MyBiz

Trade Secret

- Confidential information that is used for competitive advantage
- Prevents, but does not block, others from developing similar knowledge
- Protection varies by state and country
- Lasts as long as you can keep it secret
- Must actively work to protect trade secrets
 - Nondisclosure agreements
 - Confidential markings
 - Employee education



Product
Development
Process
Handbook

XYZ Inc.
Confidential

Patent

- A limited-time monopoly, granted by government, in exchange for publicly sharing new, useful knowledge
 - -20 years from filing date in US, Europe, and many other countries
 - Periodic maintenance fees (on utility patents, not plant or design)
- Gives owner the right to exclude others from practicing their invention
 - Owner's right to practice may be limited by others' prior patent rights
 (e.g. when extending a patent with more specific claims)
- Real estate analogy:
 - Right to prevent trespassers
 - Ownership ≠ right to use –
 limited by access rights, zoning, etc.
 - Claims of patent ≈ fence around property
- Patent search:
 - -US www.uspto.gov
 - -US <u>www.google.com/patents</u>
 - -Global www.wipo.int



Requirements to Obtain a Patent

- Patentable subject matter
- Not previously sold or publicly described
- First to file
- Novel
 - beyond what is already patented or known
 - prior art must be cited

Useful

- -for some demonstrable need or value
- initial commercial success may demonstrate

Not obvious

- -"to one of ordinary skill in the art"
- prior art "teaches against"
- inventive, rather than simple modification

Patent Application Patent application includes text and diagrams:

- Field of the invention
 - Describe the problem addressed
- Background of the invention
 - **Describe the prior art**
 - List advantages over existing methods
- Detailed description
 - Best mode: the best way to implement the invention
 - **Examples of use and modes** of implementation
- Claims
 - What <u>exactly</u> is the invention

Provisional patent application (optional)

- Establishes date of filing before examination begins
 - 1 year to file full regular application
 - Public disclosure allowed after provisional is filed

Chapter Example: David W. Coffin, Sr. US Pat.# 5,205,473 Coffee cup sleeve





US005205473A

[11] Patent Number: 5,205,473

[45] Date of Patent: Apr.

Apr. 27, 1993

[54] RECYCLABLE CORRUGATED BEVERAGE CONTAINER AND HOLDER

[75] Inventor: David W. Coffin, Sr., Fayetteville,

United States Patent [19]

[73] Assignee: Design By Us Company, Philadelphia, Pa.

[21] Appl. No.: 854,425

Coffin, Sr.

[22] Filed: Mar. 19, 1992

[51] Int. Cl.⁵ B65D 3/28
 [52] U.S. Cl. 229/1.5 B; 206/813;
 220/441; 220/DIG. 30; 229/1.5 H; 229/DIG.
 2; 493/296; 493/907

[6] References Cited

U.S. PATENT DOCUMENTS

1,732,322	10/1929	Wilson et al 220/DIG. 30
		Benson 229/4.5
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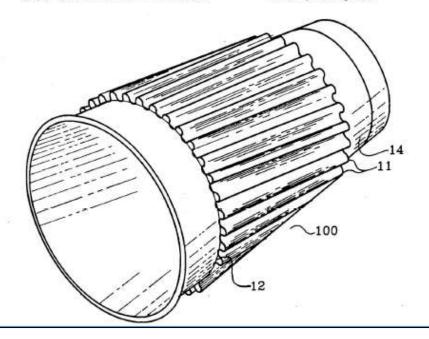
"The Wiley Encyclopedia of Packaging Technology", John Wiley & Sons, pp. 66-69, 1986.

Primary Examiner-Gary E. Elkins Attorney, Agent, or Firm-Synnestvedt & Lechner

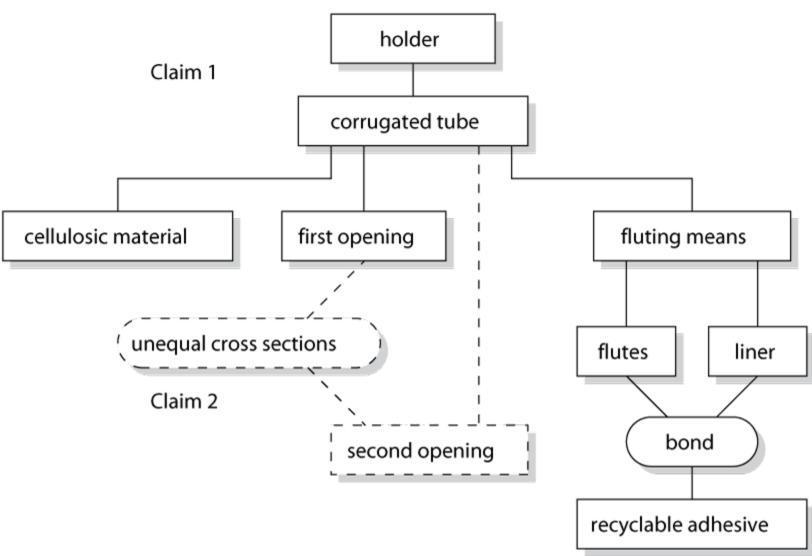
57] ABSTRAC

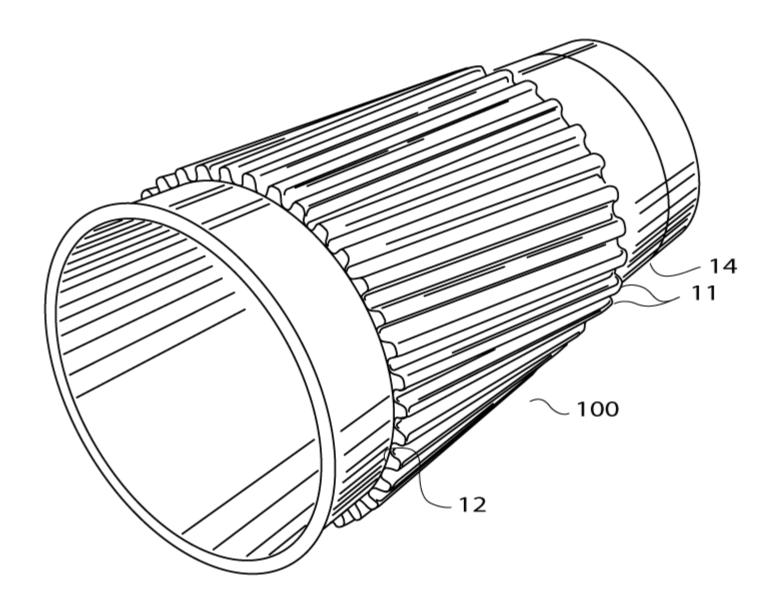
Corrugated beverage containers and holders are which employ recyclable materials, but provide fluting structures for containing insulating air. These products are easy to hold and have a lesser impact on the environment than polystyrene containers.

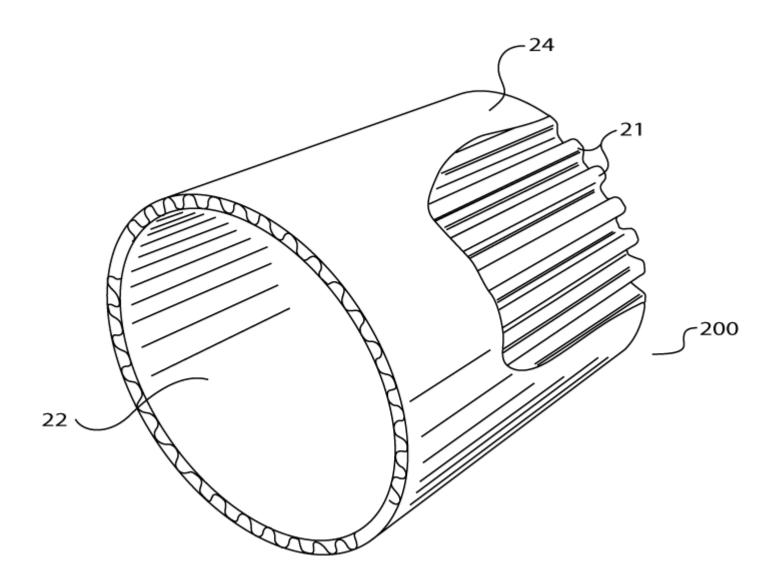
18 Claims, 8 Drawing Sheets



D.W. Coffin Sr., US Pat.# 5,205,473: Claims 1 and 2







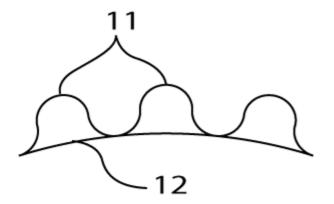


Fig. 6a

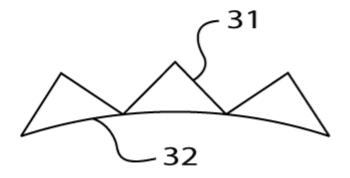


Fig. 7a

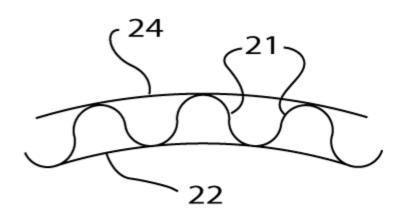


Fig. 6b

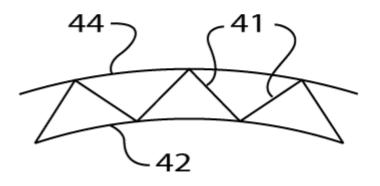
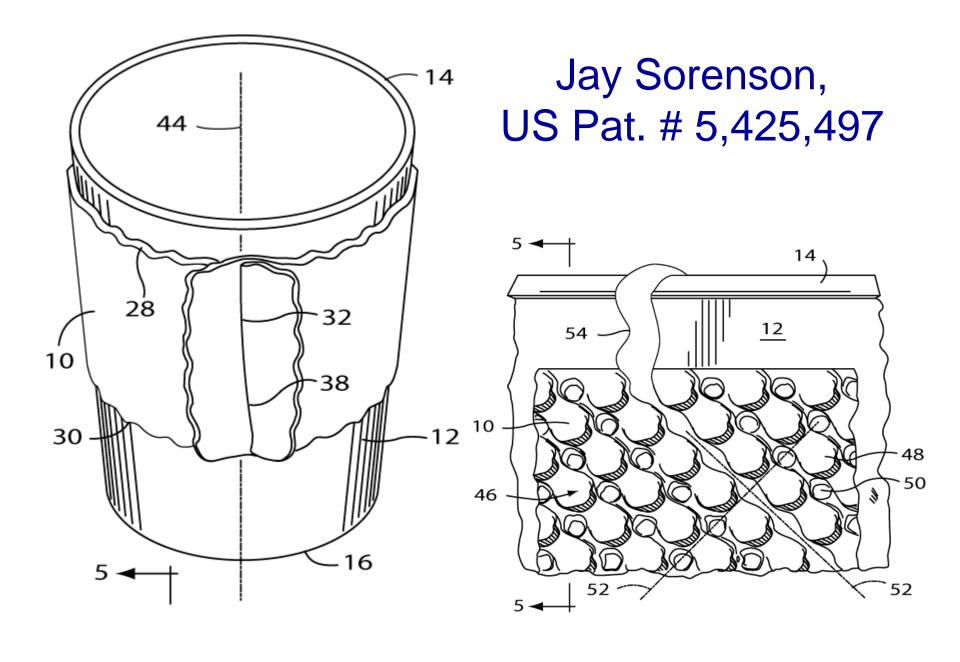


Fig. 7b





Smucker's Uncrustables

- 1998 Product launch
- 1999 US Patent #6,004,596 issued, claiming a crustless, crimped, filled sandwich
- 2007 Patent challenged, reexamined, and finally cancelled due to prior art (crimped meat pies, ravioli)
- Now over \$120M/year sales (unpatented) for Smucker's, plus generic competitors



Strategic Tools for IP

- Publication
 - Cheapest way to prevent a competitor from patenting
- Patent
 - Gives limited right to exclude others
- License
 - Gives limited right to use patented invention under specified terms
- Non-Disclosure Agreement (NDA)
 - Prohibits disclosure or use of confidential information.
 - Helps to protect patentability and trade secrecy
- Non-Compete Agreement (NCA)
 - Prevents employee from working for competitor (typically 3-36 months)
 - Not legally enforceable everywhere
- Employee Assignment (Invention) Agreement
 - Agreement to assign ownership of inventions while employed
- Material Transfer Agreement (MTA)
 - Controls how proprietary materials can be used
 - May provide for joint ownership of derived inventions
- Joint Invention Agreement
 - Specifies how to share costs, revenues, and IP responsibilities

References

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Thank you