UNITED STATES PATENT AND TRADEMARK OFFICE





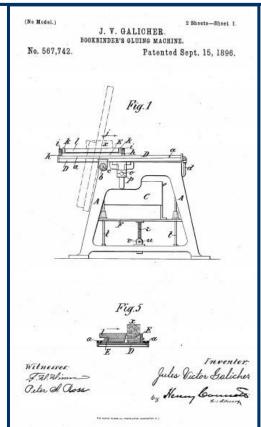
The Patent Office and Its Publications

Robert Berry, Manager
Tiffany Mair, Librarian
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United States Patent and Trademark Office
October 18, 2018



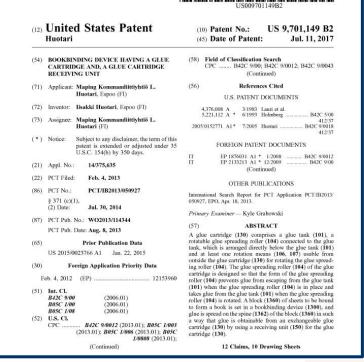
Today's Presentation

- I. The Modern
 Utility Patent
 Document and Its
 Architecture
- II. The Historic Collections
- III. Other Publications
- IV. Conclusion and Questions



I. The Modern Utility Patent Document and Its Architecture

- A. Front Page Information
- B. The Specification,
 Drawings, and
 Claims
- C. USPTO's Patents Full-Text Database



A Utility Patent grants a limited monopoly to exclude others from making, using, or selling an invention

Whoever invents or discovers any new and useful

process, machine, manufacture, or composition of matter,

or any new and useful improvement thereof,

may obtain a patent therefor, subject to the conditions and requirements of this title.

35 U.S.C. §101.

(12) United States Patent Huotari

- (54) BOOKBINDING DEVICE HAVING A GLUE CARTRIDGE AND, A GLUE CARTRIDGE RECEIVING UNIT
- (71) Applicant: **Maping Kommandiittiyhtiö L. Huotari**, Espoo (FI)
- (72) Inventor: Iisakki Huotari, Espoo (FI)
- (73) Assignee: Maping Kommandiittiyhtiö L. Huotari (FI)



A Utility Patent document includes Front Page information & a Specification of the disclosed invention

Front Page:

- Identifies the document
- Identifies the inventor(s)
- Identifies the invention
- Provides classification information
- Includes an abstract and a drawing

Specification:

- Discloses technological knowhow with sufficient specificity to allow a person having ordinary skill in the art to make and use the invention
- References drawings of the invention
- Concludes with and supports the inventors' claims



Much of the Front Page information includes recognizable information such as Patent Number and Inventor Name:



(12)	United	States	Patent
	Huotari		

(10) Patent No.:

US 9,701,149 B2

(45) Date of Patent:

Jul. 11, 2017

- **BOOKBINDING DEVICE HAVING A GLUE** CARTRIDGE AND, A GLUE CARTRIDGE RECEIVING UNIT
- Field of Classification Search CPC B42C 9/00; B42C 9/0012; B42C 9/0043 (Continued)

(71) Applicant: Maping Kommandiittiyhtiö L. Huotari, Espoo (FI)

References Cited (56)

Inventor: **Iisakki Huotari**, Espoo (FI)

U.S. PATENT DOCUMENTS

Assignee: Maping Kommandiittiyhtiö L.

4,376,008 A 3/1983 Lauri et al.

Huotari (FI)

5,221,112 A * 6/1993 Holmberg B42C 5/00 412/37 2005/0152771 A1* 7/2005 Huotari B42C 9/0018 412/37

Subject to any disclaimer, the term of this Notice:

patent is extended or adjusted under 35

FOREIGN PATENT DOCUMENTS

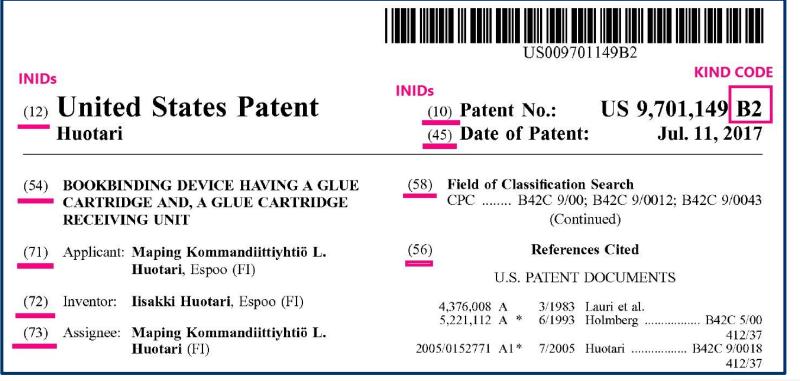
U.S.C. 154(b) by 350 days.

IT EP 1876031 A1 * 1/2008 B42C 9/0012 IT EP 2133213 A1 * 12/2009 B42C 9/00

14/375,635 (21) Appl. No.:

(Continued)

There is also some technical bibliographic information on US Patents, specifically INIDS and Kind Codes



INIDs & Kind Codes

INIDs

- Internationally agreed Numbers for the Identification of (bibliographic) Data
- Permit identification of relevant information without a knowledge of document language
- On US Patent since 08/04/1970
- Based on World Intellectual Property Organization (WIPO) Standard ST. 9
- See Manual of Patent Examining Procedure (MPEP) §901.05(b)

KIND CODES

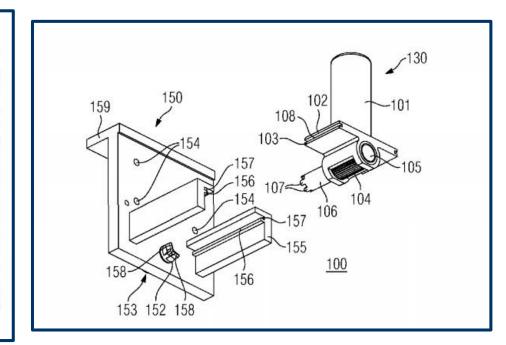
- Are a letter—and in some instances also a number—used to distinguish the kind of patent document (utility patent, plant patent, design patent, application, etc.)
- On US Patents since 01/02/2001
- Are based on WIPO Standard ST. 16
- See MPEP §901.04(a)

Front Page information includes Classification information and a Field of Search memorializing the Examination

Front Page information also includes an Abstract, providing the gist of the technological know-how disclosed, and one of the Drawings

(57) ABSTRACT

A glue cartridge (130) comprises a glue tank (101), a rotatable glue spreading roller (104) connected to the glue tank, which is arranged directly below the glue tank (101) and at least one rotation means (106, 107) usable from outside the glue cartridge (130) for rotating the glue spreading roller (104). The glue spreading roller (104) of the glue cartridge is designed so that the form of the glue spreading roller (104) prevents glue from escaping from the glue tank (101) when the glue spreading roller (104) is in place and takes glue from the glue tank (101) when the glue spreading roller (104) is rotated. A block (1360) of sheets to be bound to form a book is set in a bookbinding device (1300), and glue is spread on the spine (1362) of the block (1360) in such a way that glue is obtainable from an exchangeable glue cartridge (130) by using a receiving unit (150) for the glue cartridge (130).



A US Patent Document will also include a Specification that would inform a person having ordinary skill in the art as to how to make or use the invention.

The Specification will:

- Describe the problem the invention solves
- Describe practical applications for the invention
- Reference the drawings
- Support the claims

1

BOOKBINDING DEVICE HAVING A GLUE CARTRIDGE AND, A GLUE CARTRIDGE RECEIVING UNIT

TECHNICAL FIELD

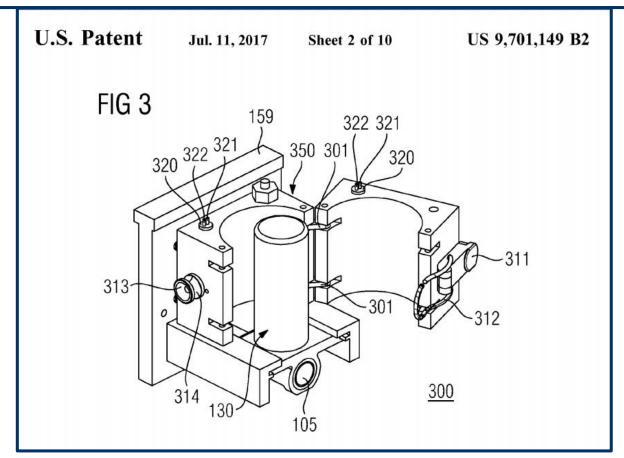
The invention is related to the field of bookbinding and more particularly, to a bookbinding unit having an exchangeable glue cartridge mounted in a receiving unit such that a block of sheets to be bound to form a book is set in a bookbinding device and glue is spread on the spine of the block in such a way that glue is obtainable from an exchangeable glue cartridge mounted in the glue cartridge receiving unit.

BACKGROUND INFORMATION

The demand for hot melt glue binding, i.e. perfect binding, equipment, such as of the type shown in international patent applications WO 03/064169 A or U.S. Pat. No. 5,376,008 A of the present applicant, has increased considerably in recent times. This is partly a result of the rapid development of digital printing technology. Using this type of equipment it is possible to produce books in short runs, 25 or even in individual copies, in a way that is economically reasonable.

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Patent documents typically include several drawings on numbered sheets



The Claims precisely define the scope of the protection granted by law

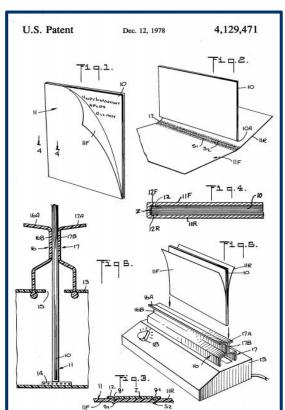
The invention claimed is:

- A bookbinding device (1300) in which a block (1360) of sheets to be bound to form a book is placeable, and with the aid of which glue is spreadable on the spine (1362) of the 50 block (1360), the bookbinding device (1300) comprising:
 - a glue cartridge (130) comprising:
 - a glue tank (101) that is essentially in the form of a protrusion from a platform (110) of the glue cartridge and where at least two sides of the platform (110) have 55 a fastening device (102, 103, 108) to allow the shape-limited fastening of the glue cartridge (130);
 - a rotatable glue spreading roller (104) connected to the glue tank, which is arranged directly below the glue tank (101); and
 - at least one rotation means (105, 106, 107) usable from outside the glue cartridge (130) for rotating the glue spreading roller (104);

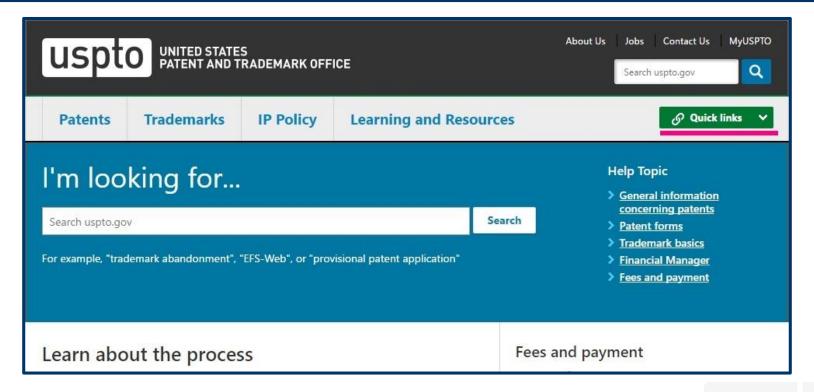
60

A Specification tells the story of an invention. For US 4,129,471 granted Dec. 12, 1978, we learn that:

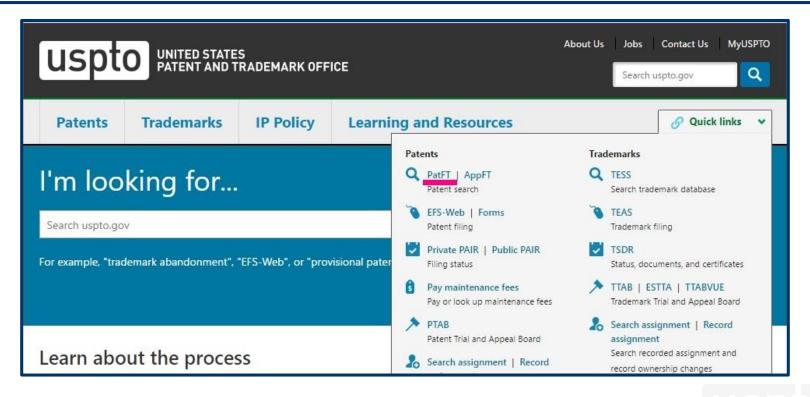
- A problem in the bookbinding industry is binding small lots (under 100 copies).
- Technologies for this do exist, but they require skill, are time-consuming, or are inefficient.
- The technology set forth in the application solves these problems by using a flexible panel of cover material with score lines and a band of hot-melt adhesive that is applied to extend over the backbone area and across the score lines.
- While the specification discloses a preferred embodiment, there are many modifications that can be made to this invention such as using laser to ensure the stack lies against the band of adhesive.



Patents documents can be accessed using the Full Text (PatFT) available at www.uspto.gov under the Quick Links menu:



PatFT is the first choice in Quick Links under the Patents column:



PatFT provides both Structured and Advanced search options

USPTO PATENT FULL-TEXT AND IMAGE DATABASE				
Щ	Ome Quick Advanced Pat Num Help View Cart			
Data current through October 9, 2018				
Query [Help]				
Term 1: in Fig.	ld 1: All Fields ▼			
AND				
Term 2: in Fig.	ld 2: All Fields ▼			
Select years [<u>Help</u>]				
1976 to present [full-text] ▼	Search Reset			
	75 are searchable only by Issue Date, Patent Number, and Current US Classification. Patent Number field, utility patent numbers are entered as one to eight numbers in length, excluding commas (which are optional, as are leading zeroes).			

The Advanced search uses manually entered Field Codes

USPTO PATENT FULL TEXT AND IMAGE DATABASE Home Quick Advanced Pat Num Help View Cart					
		Data current	through Octobe	er 9, 2018	
Query [Help] Examples: ttl/(tennis and (racquet or racket)) isd/1/8/2002 and motorcycle in/newmar-julie Select Years [Help] 1976 to present [tull-text] Patents from 1790 through 1975 are searchable only by Issue Date, Patent Number, and Current Classification (US, IPC, or CPC). When searching for specific numbers in the Patent Number field, utility patent numbers are entered as one to eight numbers in length, excluding commas (which are optional, as are leading zeroes).					
	Field Code	Field Name	Field Code	Field Name	
	PN	Patent Number	IN	Inventor Name	1
	ISD	<u>Issue Date</u>	IC	Inventor City]
	TTL	<u>Title</u>	IS	Inventor State	
	ABST	<u>Abstract</u>	ICN	Inventor Country]
	ACLM	<u>Claim(s)</u>	AANM	Applicant Name]
	SPEC	Description/Specification	AACI	Applicant City]
	CCL	Current US Classification	AAST	Applicant State]
	CPC	Current CPC Classification	AACO	Applicant Country	<u> </u>
	CPCL	Current CPC Classification Class	AAAT	Applicant Type	<u> </u>
	ICL	International Classification	LREP	Attorney or Agent	<u> </u>
	APN	Application Serial Number	AN	Assignee Name	J
	APD	Application Date	AC	Assignee City	<u> </u>

Each of these Field Codes links to relevant information in a help directory

Field Code	Field Name	
PN	Patent Number	
ISD	Issue Date	
TTL	<u>Title</u>	
ABST	Abstract	
ACLM	<u>Claim(s)</u>	
SPEC	Description/Specification	
CCL	Current US Classification	
CPC	Current CPC Classification	
CPCL	Current CPC Classification Class	
ICL	International Classification	
APN	Application Serial Number	
APD	Application Date	
APT	Application Type	
GOVT	Government Interest	
FMID	Patent Family ID	
PARN	Parent Case Information	
RLAP Related US App. Data		
RLFD	Related Application Filing Date	
PRIR	Foreign Priority	
PRAD	Priority Filing Date	
PCT	PCT Information	
PTAD	PCT Filing Date	
PT3D PCT 371c124 Date		
PPPD	Prior Published Document Date	
REIS	Reissue Data	
RPAF	Reissued Patent Application Filing Date	
AFFF	130(b) Affirmation Flag	
AFFT	130(b) Affirmation Statement	

Field Code	Field Name	
IN	Inventor Name	
IC	Inventor City	
IS	Inventor State	
ICN	Inventor Country	
AANM	Applicant Name	
AACI	Applicant City	
AAST	Applicant State	
AACO	Applicant Country	
AAAT	Applicant Type	
LREP	Attorney or Agent	
AN	Assignee Name	
AC	Assignee City	
AS	Assignee State	
ACN	Assignee Country	
EXP <u>Primary Examiner</u>		
EXA <u>Assistant Examiner</u>		
REF Referenced By		
FREF Foreign References		
OREF	Other References	
COFC	Certificate of Correction	
REEX	Re-Examination Certificate	
PTAB	PTAB Trial Certificate	
SEC	Supplemental Exam Certificate	
ILRN <u>International Registration Number</u>		
ILRD <u>International Registration Date</u>		
ILPD	International Registration Publication Date	
ILFD <u>Hague International Filing Date</u>		

Claim(s) (ACLM) This field contains the text of the patent claims. Claims point out and distinctly claim the subject matter which the applicant regards as the invention and define the scope of the patent protection. TIP: Claims from both utility and design patents are included. Cooperative Patent Classification (CPC) This field contains the Cooperative Patent Classification(s) to which the patent has been assigned. TIP: To search for CPC C07H 19/10, you must not have any zeros ("0") in place of the space -- i.e., without leading zeros -- as follows: CPC/C07H19/10. Formatting your search in this field in any other way will result in an error. Top Current CPC Classification Class (CPCL) This field contains the class-only parts of this patent's CPC classifications. TIP: Searching by class-only (CPCL) is much more efficient than wild-card searching of full classifications (CPC) if you are only interested in broad area searches.

Many of the available fields correspond to Front Page information

	Field Name	Advanced Search Field Code	Example	Searchable from 1790 to 1975?
Patent Number	Patent Number	PN	PN/9701149	YES
Patent Date	Issue Date	ISD	ISD/7/11/2017	YES
Title of Invention	Title	TTL	TTL/bookbinding	NO
Applicant	Applicant Name	AANM	AANM/Kommandii\$	NO
Inventor	Inventor Name	IN	IN/Huotari	NO
Assignee	Assignee Name	AN	AN/Kommandii\$	NO
Cooperative Patent Classification	Current CPC Classification	СРС	CPC/B42C9/0012	YES
Abstract	Abstract	ABST	ABST/bookbinding	NO

A particularly effective search methodology is to use a CPC Classification Symbol to search within a CPC Class or Subgroup

CPC Symbols for Subgroups associated with US 9,701,149:

B42C 9/0012

B05C 1/003

B05C 1/006

B05C 1/0808

B05C 1/0813

B05C 1/0821

B42C 9/00

B42C 9/0018

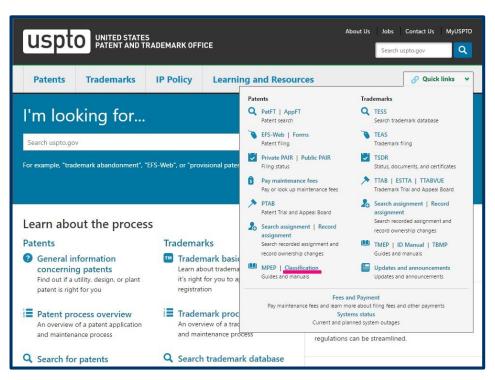
B42C 9/0043

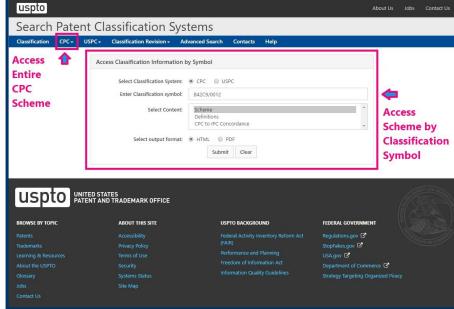
Classification Searching:

- Allows you to comprehensively search an area of technology, including documents published prior to 1976.
- Frees you from many of the limitations of searching using technical terms.

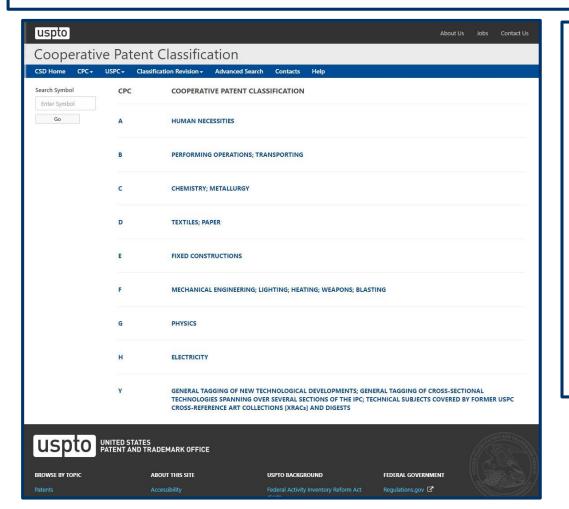
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The CPC Scheme can be accessed via Quick Links:





The broadest level of CPC organization is the section level



- Reading relevant subsections of the CPC Scheme is one way a researcher can quickly get up-to-speed on an area of technology.
- Because CPC is highly nuanced, a researcher will usually need to look at several relevant subsections.

CPC Hierarchy—B42C 9/0012

- Section (1 letter)
 - Class (2 digits)
 - Subclass (1 letter)
 - Group (1-3 digits)
 - Subgroups (2-4 digits)

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B Performing Operations (Etc.)
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B42 Bookbinding (Etc.)

B42C Bookbinding

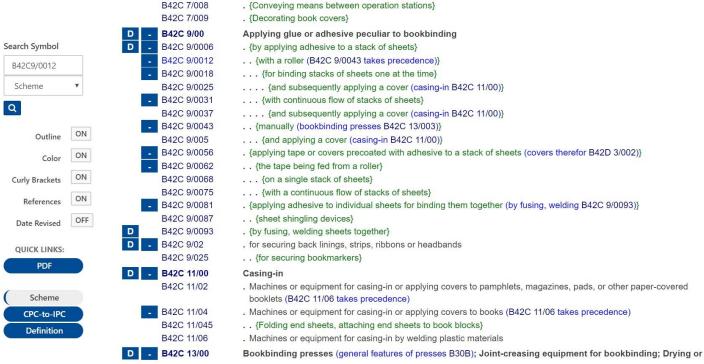
B42C9/ Applying glue or adhesive peculiar to bookbinding

/0006 • by applying adhesive to a stack of sheets

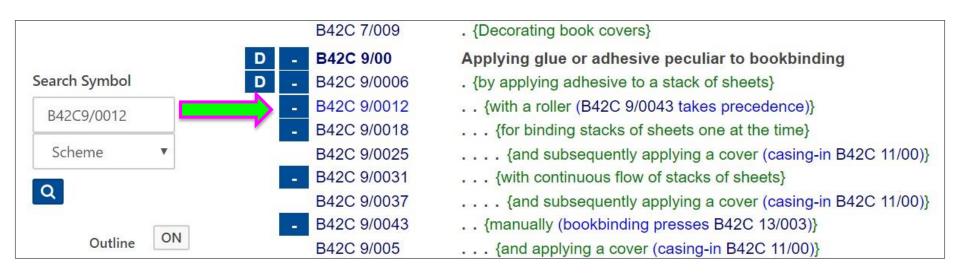
/0012 ● with a roller

Note that the subgroup 0012 falls within the subgroup 0006.

The CPC Scheme includes definitions and cross-references.



Here is where B42C9/0012 falls in the CPC Scheme.





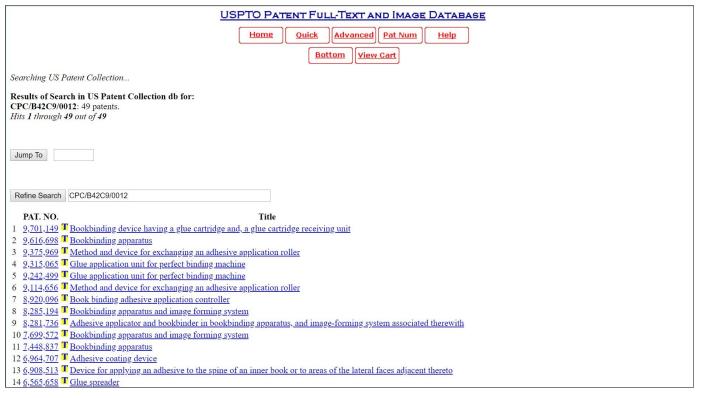
We can search for patents related to CPC Symbol B24C9/0012 (from 1790 to present) by executing the following search: CPC/B24C9/0012

USPTO PATENT FULL-TEXT AND IMAGE DATABASE Home Quick Advanced Pat Num Help View Cart					
Data current through October 16, 2018					
Query [Help] CPC/B42C9/0012 Examples: ttl/(tennis and (racquet or racket)) isd/1/8/2002 and motorcycle in/newmar-julie Select Years [Help] 1790 to present [entire database] Patents from 1790 through 1975 are searchable only by Issue Date, Patent Number, and Current Classification (US, IPC, or CPC). When searching for specific numbers in the Patent Number field, utility patent numbers are entered as one to eight numbers in length, excluding commas (which are optional, as are leading zeroes).					
Field	Code Field Name	Field Code	Field Name		
PN	Patent Number	IN	Inventor Name		
ISD	<u>Issue Date</u>	IC	Inventor City		
TTL	<u>Title</u>	IS	Inventor State		
ABST	Abstract	ICN	Inventor Country		

Here is a closer view:



Our result set includes 49 granted United States patents

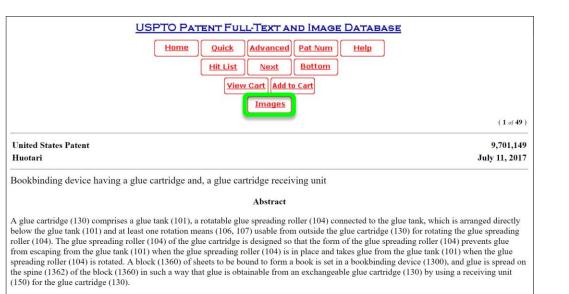


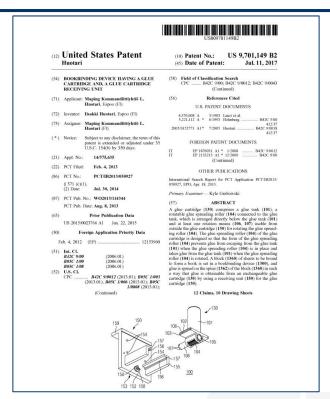
We can click on the link to either the patent number or the title to access the available text in html:

PAT.
NO.

1 9,701,149 Bookbinding device having a glue cartridge and, a glue cartridge receiving unit
2 9,616,698 Bookbinding apparatus
3 9,375,969 Method and device for exchanging an adhesive application roller
4 9,315,065 Glue application unit for perfect binding machine
5 9,242,499 Glue application unit for perfect binding machine

Results are displayed in HTML with a link (Images) to access the published patent document





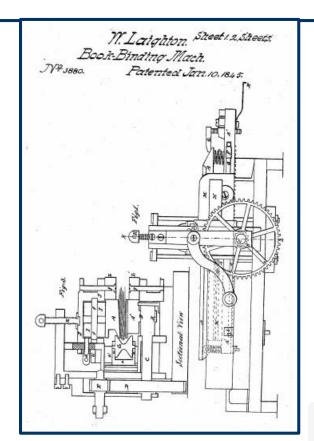
Older patent documents will have only limited html (number, date of issue, classification symbols) and no title link to the document:

```
27 4,376,008 Apparatus for binding sheets of paper
28 <u>4,332,212</u> Applicator for normally viscous substances
29 4,310,576 Adhesive-applying apparatus and method
30 <u>4,249,984</u>  Gumming apparatus
31 4,117,800 Device for spreading glue
32 4,106,148 Method of binding papers
33 <u>3,310,028</u> 118/227 118/259 118/261 118/602
34 <u>3,103,689</u> 401/2 401/183 401/208 401/219
35 <u>3,030,916</u> 118/252 118/261
36 <u>2,868,160</u> 118/202 118/259
37 <u>2,824,541</u> 118/692 118/202 156/578 412/21 412/37
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II. The Historic Collections

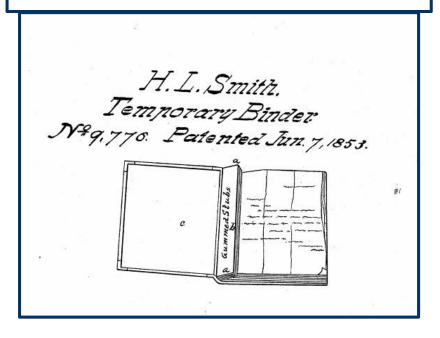
- A. Patents granted under the 1790 and 1793 Patent Acts
- B. The X-Patents
- C. Patents granted under the 1836 Act
- D. Additional improvement patents, design patents, and plant patents

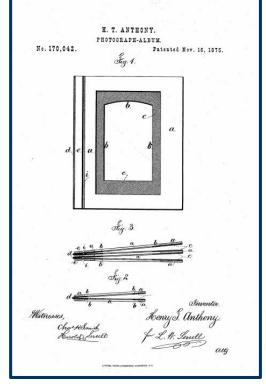


It is fascinating to see how U.S. Patent documents have changed over the decades:

1853

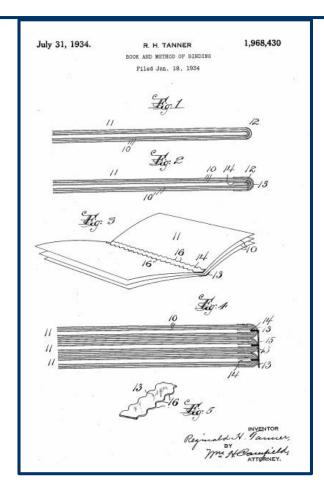
1875





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Basic classification information (US Class and Subclass) was added to patent documents in the early 1930s:



Patented July 31, 1934

1,968,430

UNITED STATES PATENT OFFICE

1,968,430

BOOK AND METHOD OF BINDING

Reginald H. Tanner, Newark, N. J.

Application January 18, 1934, Serial No. 707,041

4 Claims. (Cl. 281-21)

5 ing is present in public libraries and similar in- assembled as shown in Figure 5 and stitched as 65 stitutions. The present method insures a stable at 15 to assemble the sections into book form. re-bound book with all the advantages of the binding of a new book.

10 several objectionable features of the previous rebinding method. In the old method when a book as then formed is compressed or tapped out to remove the round at the back and the backing joint. 15 Then the book is sanded or cut at the back which

removes the material of the pages at the folds which in turn makes the book one of individual pages and also removes the stitching. This op-20 is again sewed the margin is still further reduced. to open flatly and freely to the fold of the sec- 80

This invention relates to an improved book and pasted on and it is usually a strip of paper gummethod of binding the book. The method is med on one side. I may also paste a strip of particularly adapted for re-binding books. The the same kind at 14 on the inside of the fold. necessity for economical and satisfactory re-bind- The sections with their pasted strips are then

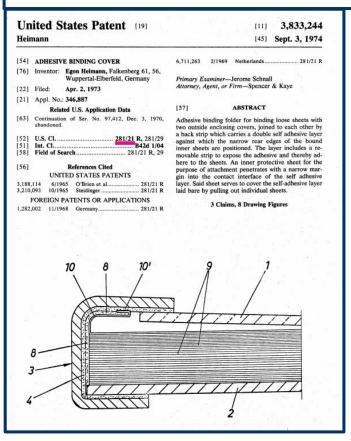
The strip 13 of paper or other suitable material is provided with an uneven edge 16. The This improved method of binding eliminates edge is preferably serrated or scalloped. This eliminates a straight edge which straight edge 70 would cause a strain at the bending edge which needs rebinding the cover is removed, and the book eventually creases and breaks or tears the page under repeated bending in use. The serrated edge provides a fold or bend that is not against a sharply defined straight edge and a fuller or 75 rounded bend takes place causing no break or tear in the paper page.

A book sewn through with my strengthening of eration reduces the back margin. When the book the sewing folds of the sections allows the book

US Patent Classification 281 is Books. Strips, and Leaves, then Subclass 21 (now 21.1) indicates Binding. Note that USPC is a static collection.



Additional classification information began appearing on patent documents in the early 1970s:



281/21.1; 281/29 B42D 3/002 (20130101) B42D 3/00 (20060101); B42d 001/04 () ;281/21R,29

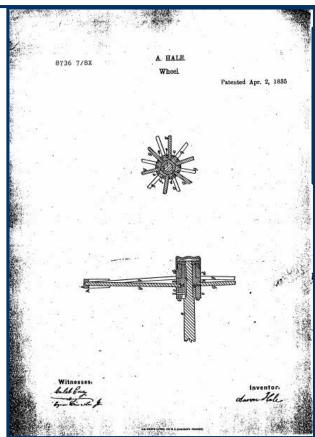
Up-to-date classification information can be found in the HTML results.

The following are some of the major Nineteenth Century Statutes that impacted the Patent Office and its Publications:

- Patent Act of 1790. Act of April 10, 1790, 1 Stat. 109.
- Patent Act of 1793, Act of February 21, 1793, 1 Stat. 318.
- Patent Act of 1836, Act of July 4, 1836, 5 Stat. 117.
- Design Patent Act of 1842, Act of August 29, 1842, 5 Stat. 543.
- > **1870 Trademark Act**, Act of July 8, 1870, 16 Stat. 198.

In the early years of the Republic, Congress passed two Acts pursuant to U.S. Const. Art I, § 8, cl. 8

- Patent Act of 1790
 - Substantive examination for Usefulness
 - Examined by the Patent Board
- Patent Act of 1793
 - No substantive examination
 - Merits of a patent were resolved when the courts resolved Infringement Claims



Wheels and Axels, Aaron Hale of Boston, Mass.

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Patents under the 1790 and 1793 Acts were arranged by name and date and were called "Name and Date Patents."

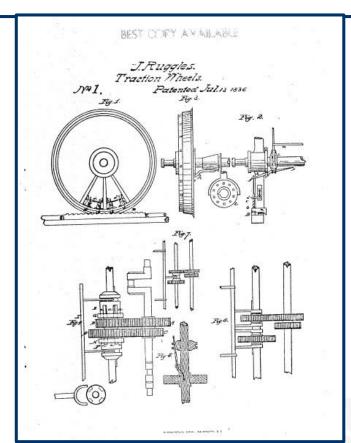
- A December 15, 1836 fire destroyed the Name and Date Patents.
- The collection was partially reconstructed pursuant to the 1837 Patent Act.
- The Collection was retrospectively renumbered as "X-Patents."
- X-Patents often consist of partial records.



The Patent Act of 1836 created a modern Patent Office and required examination of patents for Novelty and Utility

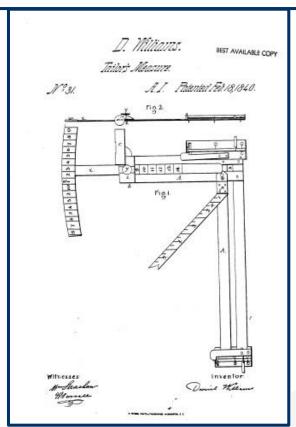
In addition to numbered utility patents, the 1836 Act authorized:

- Reissue Patents
- Additional Improvement Patents
- Patent Caveats

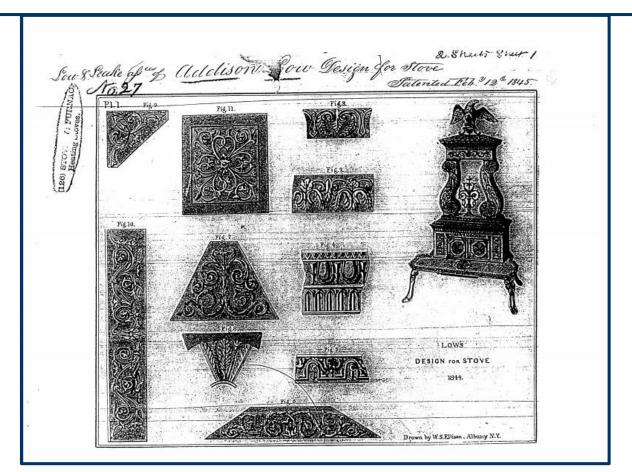


Additional Improvement Patents

- Additional Improvement (AI)
 Patents Authorized under
 Section 13 of the 1836 Act
- Inventors could file an AI Patent to have a previouslyfiled Specification reflect improvements to an invention
- AI patents were filed between 1837 and 1861

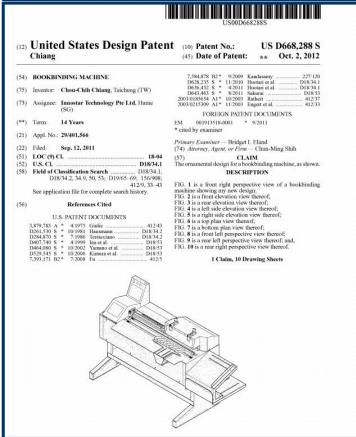


Design Patents were authorized under an 1842 Act



uspto

A Design Patent only has one claim, as we see in D668,288



(57) CLAIM

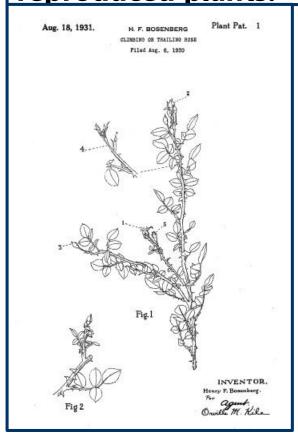
The ornamental design for a bookbinding machine, as shown.

DESCRIPTION

- FIG. 1 is a front right perspective view of a bookbinding machine showing my new design;
- FIG. 2 is a front elevation view thereof;
- FIG. 3 is a rear elevation view thereof;
- FIG. 4 is a left side elevation view thereof;
- FIG. 5 is a right side elevation view thereof;
- FIG. 6 is a top plan view thereof;
- FIG. 7 is a bottom plan view thereof;
- FIG. 8 is a front left perspective view thereof;

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Plant Patent Act of 1930 (June 17, 1930), 46 Stat. 376 provided intellectual property protection for asexually reproduced plants.





Variety of Raspberry plant named 'Rafzaqu'

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III. Other USPTO Publications

- ➤ Official Gazette (1872 to Present)
- Trademark Registration Records (1870 to Present)



GPO's Service Mark registration number 4447221 used in connection with "Library Services, namely, providing information and publications from the Federal Government ... " and featuring an eagle and an opened book.

The record for Service Mark reg. no. 4447221:

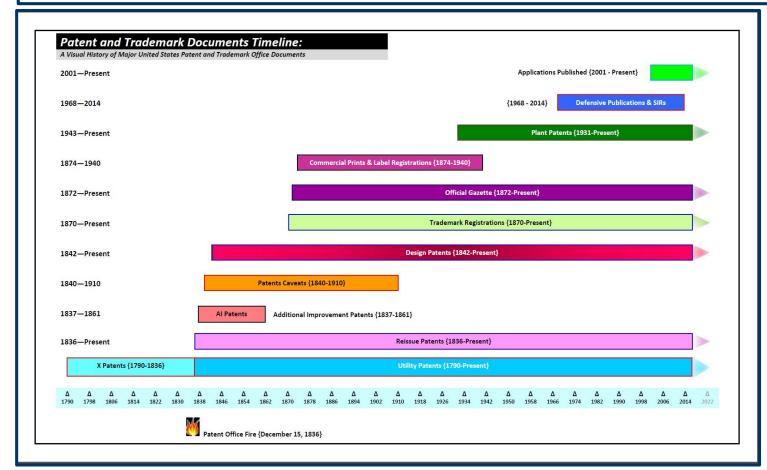
TSDR ASSIGN Status TTAB Status (Use the "Back" button of the Internet Browser to return to TESS) IC 041, US 100 101 107, G & S; Library Services, namely, providing information and publications from the Federal Government on various subjects to libraries in the United Goods and States and its territories, FIRST USE: 19770930, FIRST USE IN COMMERCE: 19770930 Services Mark Drawing (2) DESIGN ONLY Code Design Search 03.15.01 - Eagles Code 03.15.24 - Stylized birds and bats 20.05.05 - Bibles (open); Books that are open; Cook books (open); Encyclopedias (open) Serial Number 85905883 Filing Date April 16, 2013 **Current Basis** Original Filing 1A Basis Published for September 24, 2013 Opposition Registration 4447221 Number Registration December 10, 2013 Date Owner (REGISTRANT) United States Government Printing Office FEDERAL AGENCY UNITED STATES Mail Stop: GC 732 North Capitol Street Washington D.C. 20401 Attorney of LaTonya Hayes Record Description of The color(s) red, white, and blue is/are claimed as a feature of the mark. The mark consists of a rounded white eagle surrounding a white-outlined red book. The entire Mark image has a blue shield shaped background. Type of Mark SERVICE MARK PRINCIPAL Register

Live/Dead

Indicator

LIVE

Major USPTO Publications are covered in this handout:



Questions?

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