

U.S. Patent Examination



Office of Policy and External Affairs
Global IP Academy



Constitutional Basis for Patent Protection in the United States

US Constitution, Article 1, Section 8, Clause 8
– “Congress shall have the power ... to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.”



What is a Patent?

- This is a *quid-pro-quo* arrangement where the invention is disclosed to the public in exchanged for the inventor receiving, for a limited period of time, the exclusive right to control how the invention is used.



Patent Infringement

Occurs when –

Without authorization of patent owner:

- Making or using the invention
- Offer to sell or sells within the U.S.
 - *No international patent!*
- Import the invention into the U.S.
- Actively induce infringement by another



Patents Granted by the US Government

- **Utility (how it works)**
 - 20-year term (from *filing*)
- **Design (how it looks)**
 - 14-year term (from *issue*)
- **Plant (asexually reproduced)**
 - 20-year term (from *filing*)



History Of the US Patent System

Patent No x-1 (July 31, 1790)



X000001
July 31, 1790

The United States.

To all to whom these Presents shall come. Greeting.

Whereas Samuel Hopkins of the City of Philadelphia and State of Pennsylvania hath discovered an Improvement, not known or used before such Discovery, in the making of Pot. ash and Pearl ash by a new Apparatus and Process, that is to say, in the making of Pearl ash 1st by burning the raw Ashes in a Furnace, 2^d by dissolving and boiling them when so burnt in Water, 3^d by drawing off and settling the ley, and 4th by boiling the ley into salts which then are the true Pearl ash; and also in the making of Pot. ash by fluxing the Pearl ash so made as aforesaid; which Operation of burning the raw Ashes in a Furnace, preparatory to their Dissolution and boiling in Water, is new, leaves little Residuum; and produces a much greater Quantity of Salt: These are therefore in pursuance of the Act, entitled "An Act to promote the Progress of useful Arts", to grant to the said Samuel Hopkins, his Heirs, Administrators and Assigns, for the Term of fourteen Years, the sole and exclusive Right and Liberty of using, and vending to others the said Discovery, of burning the raw Ashes previous to their being dissolved and boiled in Water, according to the true Intent and Meaning of the Act aforesaid. In Testimony whereof I have caused these Letters to be made patent, and the Seal of the United States to be hereunto affixed Given under my Hand at the City of New York this thirty first Day of July in the Year of our Lord one thousand seven hundred & Ninety.

G. Washington

City of New York July 31st 1790. -

I do hereby certify that the foregoing Letters patent were delivered to me in pursuance of the Act, entitled "An Act to promote the Progress of useful Arts"; that I have examined the same, and find them conformable to the said Act.

**Signed by
George Washington**

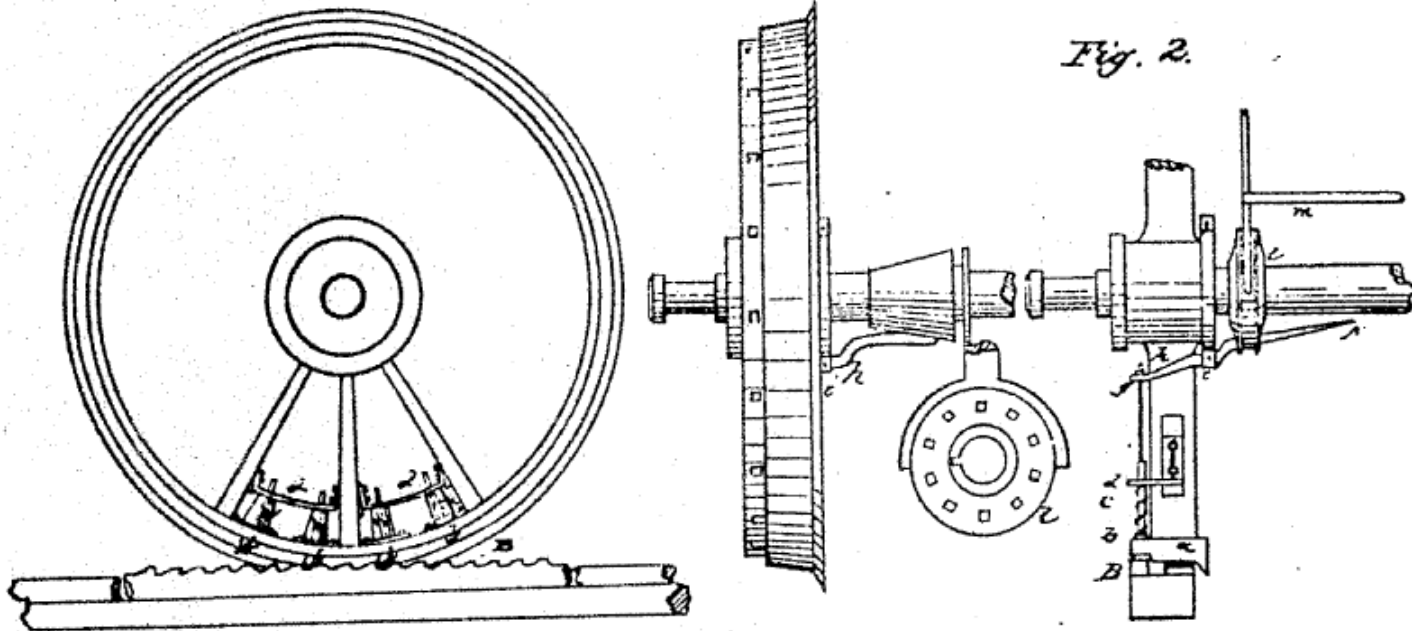
Edm. Randolph Attorney General for the United States. -



History Of the US Patent System

Patent No 1 (July 13, 1836)

J. Ruggles.
Traction Wheels.
No 1. *Patented Jul. 13 1836*
Fig. 1. *Fig. 3.*





History Of the US Patent System

- **Act of 1790:** examination administered by the Secretary of State with Secretary of War, Attorney General, & DoS Chief Clerk).
- **Act of 1793:** Changed to a registration system .
- **Act of 1836:** Reinstated examination, designated a Commissioner, used “novelty” as basis for patentability.
- **Act of 1952:** Currently in force; established and codified non-obviousness, made Patent Office part of the Commerce Department.



Recent History

- **1984** Reexamination proceedings
- **1992** Fully fee funded
- **1995** Term changed from 17 years to 20 years; established Provisional applications.
- **1999 AIPA:** Pre Grant Publication, extension of term for Office delay
- **2011 AIA:** First-to-file/prior users; fast track; post grant review; fee setting; satellite offices



Inventors Hold Original Authority

- In the United States, an application for a patent is filed by the inventor(s); they are “the applicant(s).”
- The basis for this is found in:
 - Article 1, Section 8 of the U.S. Constitution:
 - To Promote the Progress of Science...by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries
 - 35 U.S.C. 101
 - Whoever invents... may obtain a patent.



Basis for Patent Law in the United States

- The Statute: 35 U.S.C (Patent Codes)
 - Laws enacted by the US Congress
- The Rules: 37 C.F.R. (Patent Regulations)
 - Rules governing the operation of the USPTO. This rules may be changed by the USPTO following the proper procedure
- Case Law: *Ex parte* and *In re*
 - The United States has a common law system. Court cases shape the interpretation of laws



Patent Resources

- **Manual of Patent Examining Procedure (MPEP)**
 - The MPEP is a detailed guide which explains how a patent is examined in the United States.
 - **Laws (Title 35, United States Code)**
 - **Rules (Title 37, Code of Federal Regulations)**
 - **Important Case Law**



Major Statutory Areas of Patentability Consideration

- 35 U.S.C. § 101: **Utility**
- 35 U.S.C. § 102: **Anticipation**
- 35 U.S.C. § 103: **Obviousness**
- 35 U.S.C. § 112, first paragraph: **Enablement and written description**
- 35 U.S.C. § 112, second paragraph: **Definiteness**



Prior Art

- Prior Art
 - Any information used to show that an invention is not patentable.
 - Public information
 - Dated before filing date of application being examined.
 - Applicant may be able to overcome rejection by establishing an earlier date of invention so long as the document is dated within a year of the earliest U.S. filing date.



Conditions for Patentability

An invention must be **new**, **useful** and **non-obvious**.

New: An invention lacks novelty (i.e., is “anticipated”) only if each and every element as set forth in the claim is found, either expressly or inherently, in a single prior art reference. (See 35 U.S.C 102)

Useful: Has a beneficial function (has Utility) and performs as alleged (35 U.S.C. 101)

Non-Obvious: Be more than a mere obvious modification of the prior art; meets the requirements of 35 U.S.C. 103



35 U.S.C. 101

“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 therefore, subject to the conditions and requirements of this title.”



Statutory Categories of Invention

- Process
- Machine
- Manufacture
- Composition of matter, and
- Improvements thereof.



Non-Statutory Categories

- Laws of Nature
- Physical Phenomena
- Abstract Ideas
- Naturally Occurring Articles



35 U.S.C. 112, First Paragraph

The specification shall contain a written description of the invention, and the manner and process of making and using it, in such full clear concise and exact terms so as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor for carrying out his invention.



Written Description

- Subject matter described
- Clearly described
- No new matter



Enablement

Can one skilled in the art make and use the invention?



35 U.S.C. 112, Second Paragraph

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.



35 U.S.C. 102

A person shall be entitled to a patent unless

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

– continued –



35 U.S.C. 102(a)

- Known or used in this country
- By others: not by applicant
- Or patented or printed in this or a foreign country
- Before the invention: before the filing date (the presumed invention date)



35 U.S.C. 102 (b)

A person shall be entitled to a patent unless

...

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior **to the date of the application for patent** in the United States, or

– continued –



35 U.S.C. 102(b)

- Patented or described in a printed publication
– in this or a foreign country
- Or in public use in this country
- **MORE THAN A YEAR** before the application filing date



Grace Period

Differs in different jurisdictions

- U.S.: 1-year grace period (35 U.S.C.102(b))
- EU: No grace period
- JPO: 6-month grace period, under certain circumstances
- Singapore: 12-month grace period for learned treatise



102(c) and 102(d)

- **102(c)**
 - Extremely rarely used
 - Requires evidence of abandonment of the invention.
- **102(d)**
 - Encourages prompt U.S. filing of foreign origin applications.
 - Requires patenting in another country before filing in the U.S. upon an application filed more than a year before the U.S. filing date.



35 U.S.C. 102(e)

A person shall be entitled to a patent unless

...

- (e) the invention was described in — (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent ...



102(f) and 102(g)

- 102(f) relates to information derived from another.
- 102(g) relates to priority of invention - usually through interference proceeding.



35 U.S.C. 103(a)

A patent may not be obtained though the invention is **not identically disclosed or described as set forth in section 102 of this title**, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.



DISTINCTION BETWEEN 35 U.S.C. 102 AND 103

The distinction between rejections based on § 102 and those based on § 103:

- for anticipation under § 102, the reference must teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present.
- Whereas, in a rejection based on § 103:
 - the reference teachings must somehow be modified in order to meet the claims. The modification must be one which would have been obvious to one of ordinary skill in the art at the time the invention was made, and
 - The reference applied under § 103 must qualify as prior art under § 102, but for the missing element of the claimed invention.



Obviousness Analysis

- Scope and content of prior art
- Differences between prior art and claimed invention
- Determine level of ordinary skill in the art at time of invention
- Existence of objective evidence of nonobviousness
 - Graham v. John Deere, 383 U.S. 1 (1966)
- Clear articulation of rationale for determination of obviousness must be stated
- Seven (7) non-exhaustive examples of acceptable rationale
 - Combination = predictable results
 - Substitution = predictable results
 - Use of known technique
 - With known device
 - With similar device
 - Obvious to try from finite number of predictable solutions
 - Variation prompted by design incentives or market forces
 - Teaching, suggestion, motivation (TSM) test
 - KSR International Co. v. Teleflex, 550 U.S. 398 (2007)



37 CFR 1.77(a): Elements of an Application

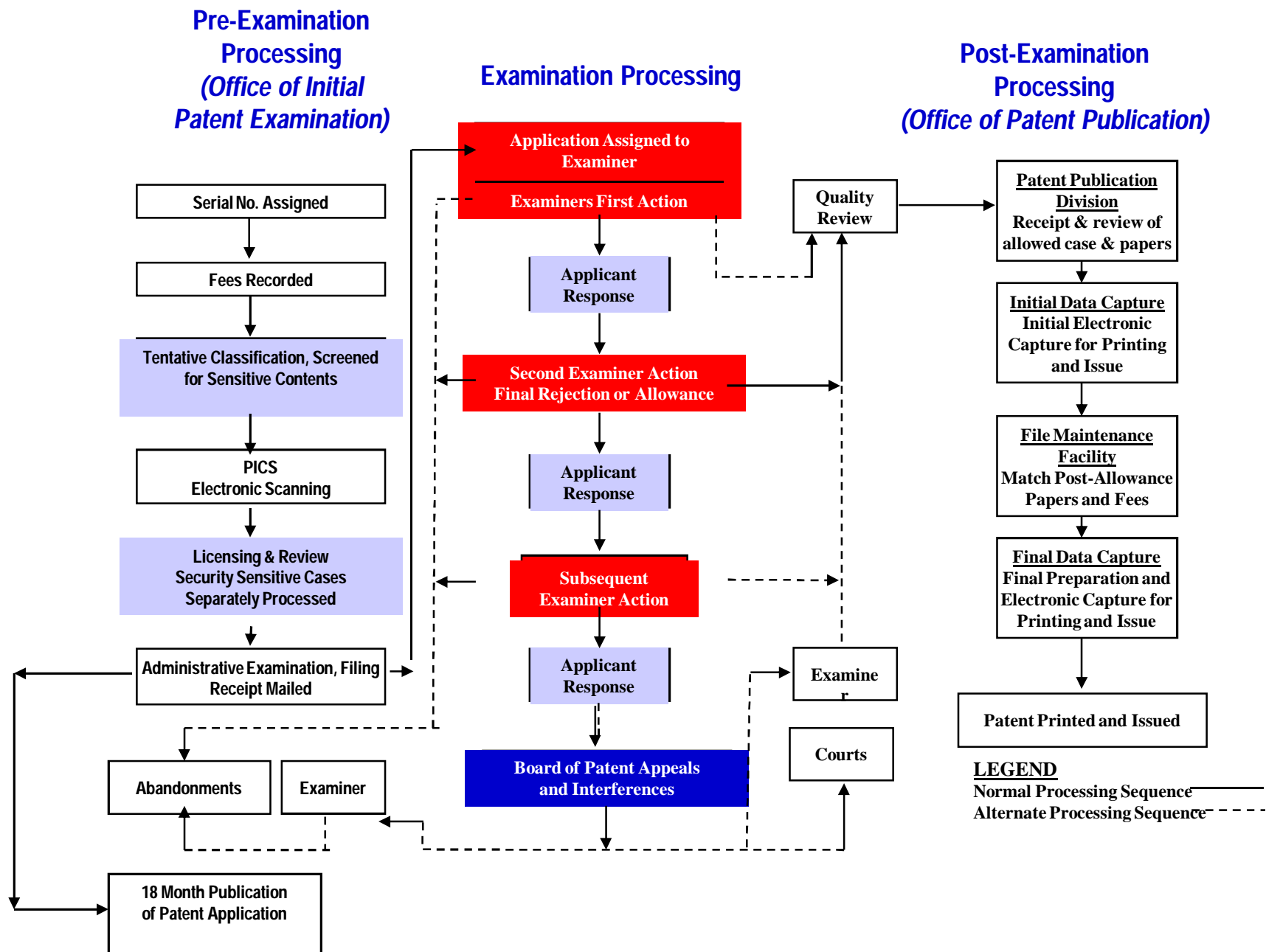
1. Utility application transmittal form.
2. Fee transmittal form.
3. Application data sheet.
4. Specification.
5. Drawings (if necessary).
6. Executed oath or declaration.



37 CFR 1.77(b): Elements of the Specification and Order

1. Title
2. Cross-reference to any related applications.
3. Statement regarding federally sponsored research or development
4. Reference to any “Sequence Listing” or computer program, also submitted
5. Background of the invention
6. Summary of the invention
7. Brief description of the drawings
8. Detailed description of the invention
9. Claim or claims
10. Abstract
11. Sequence Listing

The Patent Process





Examination Processing

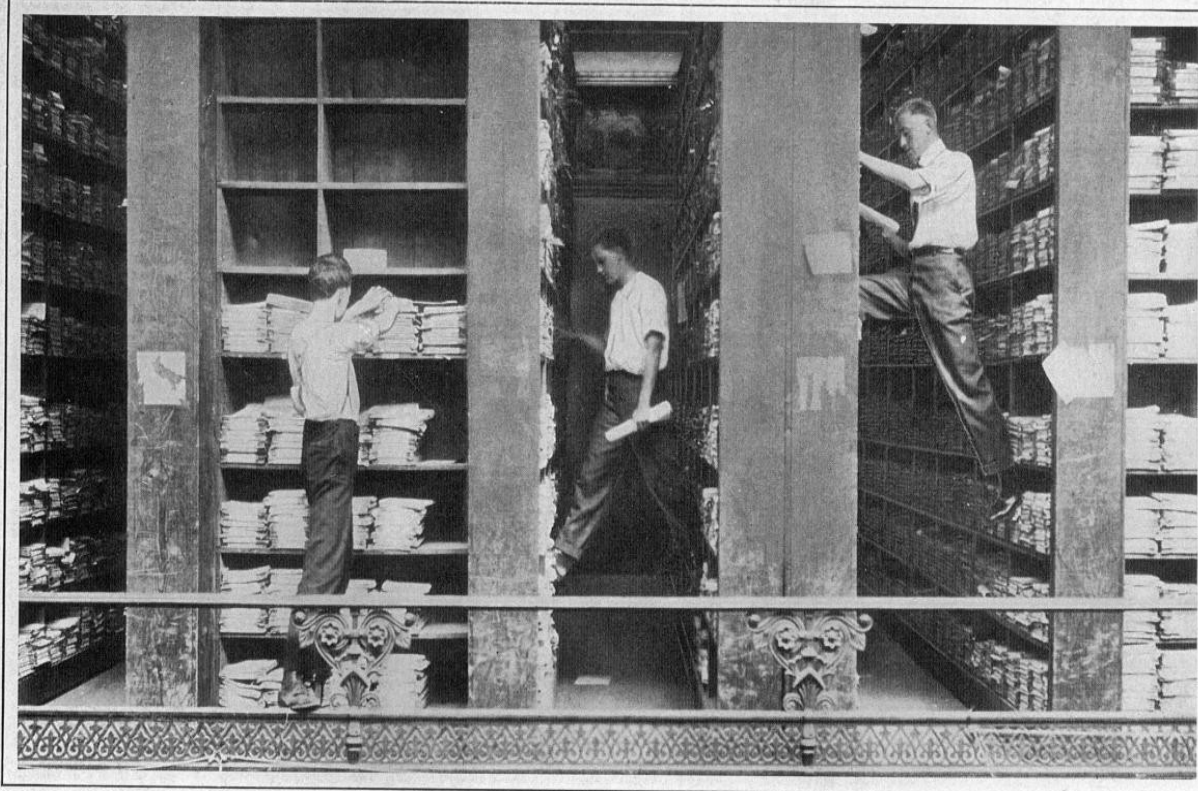
- After passing national security screening and formalities review, the application is assigned to a patent examiner for examination on the merits
- Applicant is not required to separately request examination on the merits



Searching



Searching for "Prior Art" in the Early 20th Century



SEARCHING THE FILES IN THE PATENT OFFICE.



Public Search Page

Complex Searches

Patent Number

United States Patent and Trademark Office PATENTS

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Patents > Patent Full-Text and Full-Page Image Databases

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<ul style="list-style-type: none">Quick SearchAdvanced SearchPatent Number SearchOperational Notices and StatusDatabase ContentsHelp	<p><i>Notice: AppFT may be unavailable on the weekend of 14 and 15 May due to relocation of the PTO data center.</i></p> <ul style="list-style-type: none">Quick SearchAdvanced SearchPublication Number SearchOperational Notices and StatusHelp

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- How to Access and View Full-Page Images
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- Patent Assignment Database

KEY: -online business system -Fees -Forms -help -laws/regulations -definition (glossary)

The Inventors Assistance Center is available to help you on patent matters. Send questions about USPTO programs and services to the USPTO Contact Center (UCC). You can suggest USPTO webpages.

USPTO.gov



How patent Searching is done in the 21st century.

EAST Browser - L1 (1) D500000 | US D500000 S | Top S | Doc 1/1 | Format / HTML

US-PAT-NO: **D500000**

DOCUMENT-IDENTIFIER: **US D500000 S**

TITLE: **Automobile body**

DATE-ISSUED: **December 21, 2004**

INVENTOR-INFORMATION:

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Dyson, Andrew F.	West Bloomfield	MI
Dahner, Joseph S.	Bloomfield	MI
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ASSIGNEE INFORMATION:

NAME	CITY	STATE
DaimlerChrysler Corporation	Auburn Hills	MI

APPL-NO: **D/ 201084**

DATE FILED: **March 10, 2004**

Document ID	Issue Dat	Pages	Title
US D500000 S	20041221	5	Automobile body

United States Design Patent (Patent No.) **US D500,000 S**
(Patent No.) **44 Dec. 21, 2004**

ABSTRACT

DESCRIPTION

CLAIMS

REFERENCES CITED

FIG. 1

FIG. 2



Examiner's First Action

- Examiner studies application and searches prior art relating to subject matter claimed
- Reasons for any adverse action, objection, or requirement are stated in the action
- If claims properly define over the prior art and application is otherwise in order, first action may be allowance



Sample Examiner's First Action

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 and 10-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 line 12 recites, "an extended protruded". It is unclear as to what is extended and protruding in this claim. This leaves the claim vague and indefinite.

Claim 10 line 10 recites, "an extended protruded". It is unclear as to what is extended and protruding in this claim. This leaves the claim vague and indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 10-13 and 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawanishi et al (EPO 477,727).

Kawanishi et al discloses a body structure for a railcar comprised of a plurality of plates. First and third plates 23 are positioned on the right and left side of what would be a doorway for the end of the train. This is shown best in figures 3A-3C. A second plate 34 is positioned above the doorway. Each plate is bent at the ends to produce flanges.

The first and third plates 23 have flanges that correlate to the outer skin of the car body and flanges that correlate to the inner doorway of the car. The first and third plates also have flanges bent to correlate with the roof skin of the vehicle body. The three plates are welded together to form the end structure and the vehicle skins are then attached to the respective plates.

Allowable Subject Matter

Claims 5-9, 14-18 and 23-39 are allowed.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Dean US 3,151,574, Eggert, Jr. (US 4,211,173) and Ishida et al (US 5,458,066) all disclose types of constructions for rail car bodies.



Period for Response

- Statutory 6 months
- Shortened statutory 3 months
- (But restrictions are 30 days)
- Extensions of Time



Excerpt from Applicant's Response

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A manufacturing method of a structural body, characterized in that

manufacturing a first plate and a second plate for abutting and welding said first plate;

said first plate comprising a first flange provided by bending a first side of said first plate, a second flange being orthogonal substantially to said first flange and provided by bending a second side of said first plate, and a recessed portion between an end portion in a longitudinal direction of said first flange and an end portion in a longitudinal direction of said second flange;

said second plate comprising a third flange provided by bending a first side of said second plate and for connecting to said end portion in the longitudinal direction of said first flange, and an extended portion protruded from a third side of said second plate, said third side being orthogonal substantially to said first side of said second plate and to a second side which is parallel substantially to said first side, said extended portion extending to a vicinity of an end portion in a longitudinal direction of said third flange;

abutting said end portion in the longitudinal direction of said first flange and said end portion of the longitudinal direction of said third flange;

abutting said third side to an outer side of a circular arc of said second flange from said first plate;

inserting and abutting said extended portion to said recessed portion; and welding the respective abutted portions.

2. (previously presented) A manufacturing method of a structural body according to claim 1, characterized in that

said recessed portion includes a portion of a bottom plate of said first plate; and

said extended portion includes a portion of a bottom plate of said second plate.

3. (original) A manufacturing method of a structural body according to claim 1, characterized in that

said second plate has a fourth flange in which a second side being parallel substantially to said first side of said second plate is bent, an end portion in a longitudinal direction of said fourth flange is positioned in a retreat position from said third side;

an end portion in the longitudinal direction of said fourth flange is abutted to said second flange; and

said abutted portion is welded.

4. (original) A manufacturing method of a structural body according to claim 1, characterized in that

to said second plate a thick portion is provided along to said second side;

an end portion in a longitudinal direction of said second side is positioned in a retreat position from said third side;



Second Examiner's Action

- After reply by the applicant the application will be reconsidered and again examined.
- Examiner's second action will usually be a final action
- Examiner's final action may be:
 - Final rejection – if claims are not considered patentable
 - Allowance – if claims are considered patentable and application is otherwise in order



Final Rejection

- Usually on second action.
- Closes prosecution
- Applicant not entitled to unlimited prosecution (37 CFR 1.116)



Allowance

- If the examiner determines that the invention is patentable, the examiner will mail a Notice of Allowance and Fee(s) Due, requiring payment of the:
 - Issue Fee; and
 - Any publication fee that is due.



Appeal

- If the applicant has received two actions from the examiner, and disagrees with the position of the examiner, the applicant can appeal the examiner's decision by filing a Notice of Appeal and an Appeal Brief.
- The examiner may file an Examiner's Answer to the Appeal Brief
- The Board of Patent Appeals and Interferences will make a decision based upon the record.



Patent Grant

- After the applicant pays the issue fee, the Office will print the patent and:
 - Mail a copy of the patent to the applicant;
 - Post a copy of the patent on the USPTO internet website.

THANK YOU



John F. Koeppen
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Global IP Academy
Office of IP Policy and External Affairs
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