

USPTO Hour Artificial Intelligence

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June 17, 2025



UNITED STATES
PATENT AND TRADEMARK OFFICE ®

Agenda

- History of AI at the USPTO
- Current AI topology
- Future AI initiatives
- RFI on AI
- Questions and answers

Executive Order 14179: Removing Barriers to American Leadership in Artificial Intelligence

“... sustain and enhance America's global AI dominance in order to promote human flourishing, economic competitiveness, and national security.”

“For the first time, the Secretary of Commerce understands the Patent Office ... you have a friend, you have a supporter, and you have an admirer.”

- Secretary of Commerce Howard Lutnick

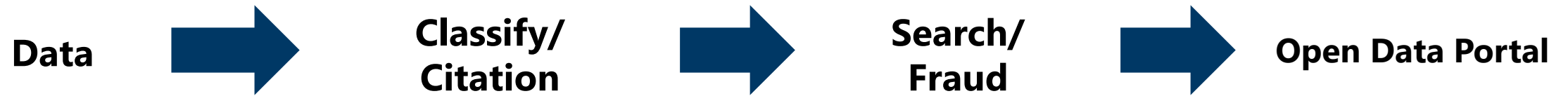
USPTO Mission

- Award Patents
- Register Trademarks
- Secure & Source IP Data
- Lead the world's IP Ecosystem



USPTO AI a four year history

- *the right hammer for the right nail*



For our business

Efficiency gains
granting patents and
registering trademarks

- Search & classification
- Quality assurance
- Augmenting experts

For technologists

Leverage AI for modern,
secure, and efficient
agency IT systems

- Code analysis, review
- Language translation
- Telemetry analysis

For everyone

Broadly empower agency
staff and public users with
AI tools

- Generative AI
- Virtual assistants
- Productivity tools

USPTO AI topology



Current

- Patents Search AI
 - Cooperative Patent Auto Classification (CPC)
 - Third Party AI providers
 - Design Vision
 - Document Code Quality
 - Public-facing chatbot
-

Future

Underway

- AI Lab – ‘SCOUT’ Generative AI web application
- Assist in code development
- Detect improper filings
- Assist in data analyses to streamline processes
- Assist in cybersecurity analyses such as threat detection, compliance monitoring and correlation

RFI response

- Improve Prior Art searches
- Assist in drafting Office Actions
- Improve Chemical structure & bio-sequence searching



**Email questions to
USPTOHour@uspto.gov**

Search AI - More like this document

Doc 27

Workspace: Untitled Case

L103: be... | US-6926902-B2 | Tag Group(s) | **Doc: 27/96** | Full 1/29 (Total Images 29) | 3 Selected (FILTERED) | Preferences

Document Viewer

Highlight: repellent bears

Highlights

Abstract

Disclosed herein are wearable devices for dispensing insect repellents, fragrances, and/or other chemicals along the outside of the clothing of a human, to avoid the need to apply such chemicals directly to clothing or to human's skin. The devices have an on/off switch that automatically controls a shutter which enables and restricts air flow, while also controlling fan operation and covering of a use-up cue. The device also is designed to prevent fan operation when an impregnated slab is not present. Also disclosed are preferred refills for use with such devices.

Description

DISCLOSURE

CA 02762931 2011-12-22

-1-

WEARABLE CHEMICAL DISPENSER

[0001] Blank

[0002] Blank


BACKGROUND OF THE INVENTION

[0003] The present invention relates to wearable devices that dispense chemicals

such as insect repellents and/or fragrances.

Document Viewer

Page 1 of 29

**Office de la Propriété Intellectuelle du Canada**
Un organisme d'Industrie Canada

Canadian Intellectual Property Office
An agency of Industry Canada

CA 2762931 C 2015/06/16
(11)(21) 2 762 931
(12) BREVET CANADIEN
CANADIAN PATENT
(13) C

(22) **Date de dépôt/Filing Date:** 2008/07/02

(41) **Mise à la disp. pub./Open to Public Insp.:** 2009/01/08

(45) **Date de délivrance/Issuance Date:** 2015/06/16

(62) **Demande originale/Original Application:** 2 689 532

(30) **Priorité/Priority:** 2007/07/03 (US 11/773,067)

(51) **Cl. Int./Int. Cl.:** A61M 1/20 (2006 01), A61L 9/12 (2006 01)

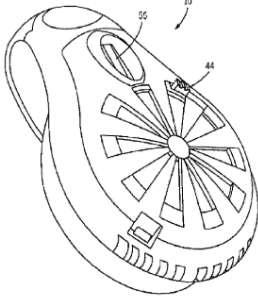
(72) **Inventeurs/Inventors:** SCHUMACHER, DONALD J., US; ALFARO, RAYMUNDO J., US; NICEL, DIRK K., US; DUSTON, TYLER D., US; HUDAK, MICHAEL T., US; KINGSTON, SEAN P., US; MAGHABI, ANNE T., US; DEGRAFT-JOHNSON, KWAMENA GYAKYE, US

(73) **Propriétaire/Owner:** S.C. JOHNSON & SON, INC., US

(74) **Agent:** BERESKIN & PARR LLP/S.E.N.C.R.L./S.R.L.

(54) **Titre :** ASPERGEUR D'AGENT CHIMIQUE PORTATIF

(54) **Title:** WEARABLE CHEMICAL DISPENSER



(57) **Abrégé/Abstract:**
Disclosed herein are wearable devices for dispensing insect repellents, fragrances, and/or other chemicals along the outside of the clothing of a human, to avoid the need to apply such chemicals directly to clothing or to human's skin. The devices have an on/off switch that automatically controls a shutter which enables and restricts air flow, while also controlling fan operation and covering of a use-up cue. The device also is designed to prevent fan operation when an impregnated slab is not present. Also disclosed are preferred refills for use with such devices.

Search AI - More like this document

Workspace: Untitled Case

L104: (U... | US-6926902-B2 | Tag Group(s) | Doc: 7/43 | Full 4/22 (Total Images 22) | Drawings (FILTERED) | Preferences

Document Viewer

Highlight: **us6926902b2**

There is provided an insecticide transpiration apparatus capable of transpiring insecticide at room temperature. The apparatus includes an apparatus main body having a recipient recess capable of accommodating an insecticide cartridge, an insecticide cartridge rotatably supported in the recipient recess, a driving means which is composed of a motor connected to a rotation support shaft of the insecticide cartridge and an electric source and which is contained in the apparatus main body, and a cover pivoted to the apparatus main body so as to cover the insecticide cartridge in the recipient recess, wherein the insecticide cartridge includes an annular hollow structure which accommodates granular insecticide-impregnated bodies and which has openings in an inner peripheral surface and an outer peripheral surface thereof, a core portion situated at the center of the hollow structure and connected to the rotation support shaft, a plurality of spoke portions connecting the core portion and the hollow structure, and blade portions integrally formed with the hollow structure so as to extend from the inner peripheral surface toward the center thereof and adapted to promote passing of air from the inner peripheral surface to the outer peripheral surface of the hollow structure.

Background/Summary

(1) BACKGROUND OF THE INVENTION

(2) 1. Field of the Invention

(3) The present invention relates to an insecticide transpiration apparatus capable of transpiring insecticide at room temperature, and more specifically, to an insecticide transpiration apparatus in which a chemical cartridge accommodating a chemical impregnated material and having integrally formed blade portions is rotated and in which an airflow resulting from the rotation is utilized to promote the transpiration of the insecticide, making it possible to transpire insecticide continuously from the chemical impregnated material at a fixed transpiration rate and for a long period of time.

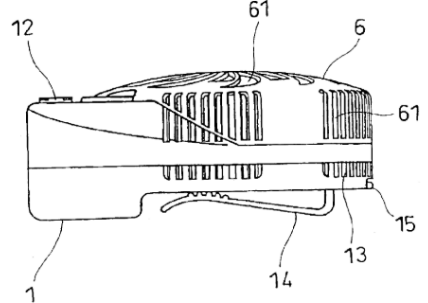
(4) 2. Description of the Related Art

(5) Known examples of an insecticide transpiration apparatus for transpiring and dispersing insecticide throughout a closed space (e.g., a room of a building or an automobile, or the interior of a tent) in order to exterminate harmful insects, such as mosquitoes and gnats, include apparatuses transpiring insecticide from mosquito-repellent incense, an electric mosquito-repellent mat, a liquid-type electric mosquito-repellent unit, etc. by utilizing thermal energy.

Document Viewer

U.S. Patent Aug. 9, 2005 Sheet 3 of 9 US 6,926,902 B2

FIG. 3



Search AI – Similarity Search

Similarity Search

Application #

Load

Enhanced Mode | OFF

Search

CPC

No CPCs and No text selections

Retrieved by:
Sorted by:
Results:
Filters: No filters applied

CPC

Application Text

Search AI – Similarity Search

The screenshot displays the USPTO Similarity Search interface. At the top, the application number 17/410,904 is entered in the search bar, with a 'Load' button and a settings icon. A 'Search' button is located in the top right corner. Below the search bar, the interface is divided into three main sections: 'Claims', 'CPC', and 'Application Text'. The 'Claims' section on the left shows 'Claims, Amendment 2 - 2022/05/03' and lists several claims, with some text highlighted in yellow. The 'CPC' section in the middle shows two classifications: (H01M50/109) and (H01M50/124), with checkboxes indicating their selection. The 'Application Text' section on the right shows a list of text selections, including a specification paragraph. On the far right, a sidebar provides summary information: 'Retrieved by: Application #17/410,904', 'Sorted by: Similarity to Application #17/410,904', and 'Results: L1: 48 ranked results. Filtered by Family ID...'. Below this, the first result is displayed: '1 Safely Ingestible Batteries that Rapidly Dea...' with details about the patent and its filing date.

Similarity Search

17/410,904 Load

Search

CPC Abstract Specification Claims

2 CPCs and 4 text selections

Retrieved by: Application #17/410,904
Sorted by: Similarity to Application #17/410,904
Results: L1: 48 ranked results. Filtered by Family ID...
Filters: No filters applied

Claims

Claims, Amendment 2 - 2022/05/03

1. (Currently Amended) A battery comprising:
a) an anode case;
b) a cathode case comprising:
i) a cathode inner conductive layer comprising aluminum (Al), stainless steel, chromium (Cr), gold (Au), vanadium (V), nickel (Ni), silver (Ag), copper (Cu), magnesium (Mg), zinc (Zn), an alloy thereof, or a combination of any two or more thereof, and
ii) a cathode deactivating layer comprising a deactivating metal comprising niobium (Nb), tantalum (Ta), an alloy thereof, or any combination thereof, wherein the cathode deactivating layer has a uniform or varying thickness of 50 m to 200 m at least at a point in a bottom portion of the cathode case pm to 100 pm.

CPC

(H01M50/109) Primary casings, jackets or wrappings of a single cell or a single battery characterised by their shape or physical structure of button or coin shape

(H01M50/124) Primary casings, jackets or wrappings of a single cell or a single battery characterised by the material having a layered structure

Application Text

(Specification) Billions of batteries are sold each year to power electronic devices including, for example, remote controls, flashlights, cameras, car key fobs

1 Safely Ingestible Batteries that Rapidly Dea...
US 20220069389 A1 • Laulicht, Bryan et al.
• Filed: 2021-08-24
Tags 1 2 3 4 5
"H01M50/124 Primary casings, jackets or wrappings of a single cell or a single battery characterised by the material having a layered structure"
"H01M50/109 Primary casings, jackets or wrappings of a single cell or a single battery characterised by their shape or physical structure of button or coin shape"
"H01M50/1245 Primary casings, jackets or wrappings of a single cell or a single battery characterised by the material having a layered structure characterised by the external coating on the casing"

DocCode Quality Control (automation)

Application Data	Documents & transaction history		
Documents & Transactions			
Continuity			
Patent Term Adjustment			
Foreign priority			
Fee payment history			
Address & Attorney/Agent Information			
Supplemental Content			
Assignments			
Display References			
eGrant			

Showing 1 to 75 of 75 entries			
Mail room date	↑ ↓	Doc code	↑ ↓ Doc description
05/06/2025		EGRANT.NTF	eGrant day-of Notification
04/16/2025		ISSUE.NTF	Issue Notification
04/03/2025		N271	Response to Amendment under Rule 312
04/03/2025		ANE.I	Amendment After Final or under 37CFR 1.312, initialed by the examiner.
03/31/2025		N417	Electronic Filing System Acknowledgment Receipt
03/31/2025		A.NA	Amendment after Notice of Allowance (Rule 312)
03/31/2025		CLM	Claims
03/31/2025		REM	Applicant Arguments/Remarks Made in an Amendment
03/31/2025		N417.PYMT	Electronic Fee Payment
03/31/2025		IFEE	Issue Fee Payment (PTO-85B)
03/31/2025		N417	Electronic Filing System Acknowledgment Receipt
03/31/2025		A.NA	Amendment after Notice of Allowance (Rule 312)
03/31/2025		CLM	Claims
03/31/2025		REM	Applicant Arguments/Remarks Made in an Amendment

DocCode Quality Control (automation)

- In-house automation tool designed to review document code applied by applicant on incoming application documents
- Tool reviews application document
 - either agrees with code applied by applicant, or suggests an alternative code
- Tool will review approximately 18 Million documents per year
- In full production June 2025, reducing contract dependencies and providing cost savings for the Agency



Cooperative Patent Classification (CPC) Autoclassification

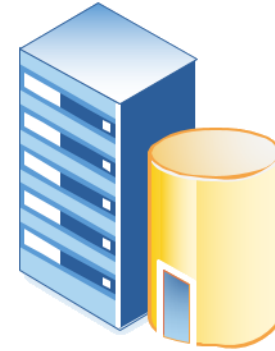
New U.S. patent applications



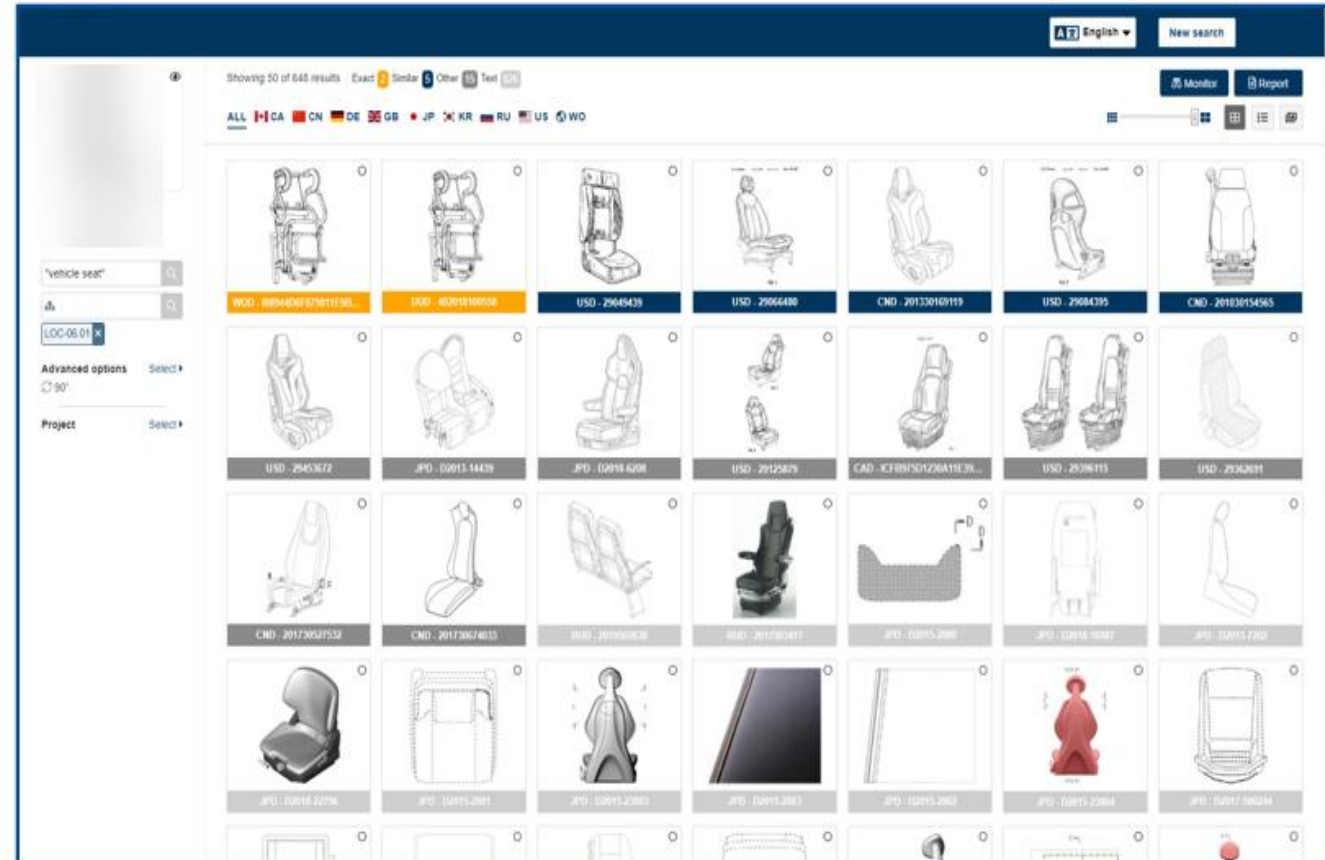
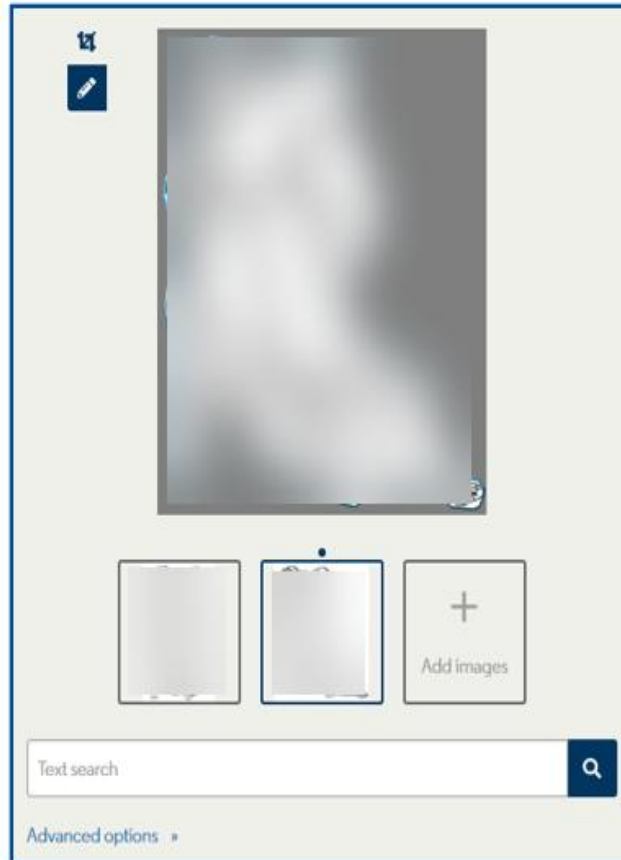
CPC autoclassification



CPC on applications



DesignVision searching for Designs



USPTO AI topology



Current

- Patents Search AI
 - Cooperative Patent Auto Classification (CPC)
 - Third Party AI providers
 - Design Vision
 - Document Code Quality
 - Public-facing chatbot
-

Future

Underway

- AI Lab – 'SCOUT' Generative AI web application
- Assist in code development
- Detect improper filings
- Assist in data analyses to streamline processes
- Assist in cybersecurity analyses such as threat detection, compliance monitoring and correlation

RFI response

- Improve Prior Art searches
- Assist in drafting Office Actions
- Improve Chemical structure & bio-sequence searching



'SCOUT' Generative AI web application

uspto Scout LLM (Alpha)

Monthly Usage: ⓘ 3.94M of 200M

MY WORKSPACES ⓘ

+ Chat Model Sample... ⓘ

+ User Story Generato... ⓘ

+ Developer Assistant

+ TM Assistant

+ MPEP Assistant

— Welcome to Scout LLM ⓘ

▶ Default thread ⓘ

🗄 Start a new chat thread

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Welcome to Scout LLM - Default thread

Active chat model: OpenAI: Auto Select ⓘ


🔔 16 📄 👤 Doe, John ▾


Usage Notice

You are accessing a government system that is intended for authorized use only. By using this system, you acknowledge and agree to the [USPTO Scout LLM Conditions of Use](#).

 How may I assist you?

Please summarize the attached PowerPoint, including any key takeaways and/or considerations.

 6/16/2025 9:49:44 AM

 Certainly! Here is a summary of the "Patent Basics" presentation from the attached document, including key takeaways and considerations:

Summary of "Patent Basics" Presentation

Purpose: The presentation provides an overview of the U.S. patent system, explaining what patents are, their importance, the patent application process, and resources available to inventors.

Key Sections and Takeaways:

Ask Scout anything... ▶

🔍 📎 Attachments ⓘ

🗑 Clear history

Give Feedback



Current use cases

The screenshot shows a chat interface titled "112(b) Antecedent Check...". The active chat model is "Anthropic: Claude 3.7". The chat content is organized into three sections: "Detailed Issues", "1. Antecedent Basis Issues:", and "3. Grammatical Issues:". The "Antecedent Basis Issues" section lists three points: multiple terms in claim 1, "memory" in claim 4, and "the medical data" in claim 10. The "Grammatical Issues" section lists missing articles and inconsistent use of articles. A "Give Feedback" button is on the right, and a chat input bar is at the bottom.

112(b) Antecedent Check...
Active chat model: Anthropic: Claude 3.7

Detailed Issues

1. Antecedent Basis Issues:

- In claim 1, multiple terms are referenced without proper introduction: "the secure storage," "the master control setting," and "the data"
- In claim 4, "memory" should be "the memory" to properly refer to the previously introduced element
- In claim 10, "the medical data" lacks antecedent basis in its dependency chain (claim 10 depends on 9→8→4→1, not claim 2)

3. Grammatical Issues:

- Missing articles before certain terms ("security mechanism", "authentication")
- Inconsistent use of articles throughout the claims

Ask Scout anything...

Attachments 3 Clear history

35 U.S.C. 112 considerations

The screenshot shows a chat interface titled "MPEP Assistant - Ask Scout". The active chat model is "Assistant: Patent MP". The chat content includes a paragraph about patent correction methods (reissue, certificate of correction, disclaimer, etc.) and a "Citation" block with a link to "mpep-1400.pdf (page 2)". A "Give Feedback" button is on the right, and a chat input bar is at the bottom.

MPEP Assistant - Ask Scout
Active chat model: Assistant: Patent MP

A patent may be corrected or amended in eight distinct ways: (1) reissue, (2) issuance of a certificate of correction which becomes part of the patent, (3) disclaimer, (4) reexamination, (5) supplemental examination, (6) inter partes review, (7) post grant review, and (8) covered business method review. The first three methods are discussed in the referenced chapter, while the others are covered in different chapters or guides. For example, reexamination is discussed in MPEP Chapter 2200 and 2600, supplemental examination in Chapter 2800, and the last three in the Office Patent Trial Practice Guide. It is also noted that no new petitions for covered business method reviews can be filed after September 16, 2020, but ongoing proceedings will continue until concluded

Citation

...A patent may be corrected or amended in eight ways, namely by: (1) reissue, (2) the issuance of a certificate of correction which becomes a part of the patent, (3) disclaimer, (4) reexamination, (5) supplemental examination, (6) inter partes review, (7) post grant review, and (8) covered business method review...

[mpep-1400.pdf \(page 2\)](#), Relevance: 2.90/4.0 (Somewhat Relevant)

Regarding the process for correcting inventorship, a request to correct a named inventor must include a

Ask Scout anything...

Attachments Clear history

Manual of Patent Examining Procedure (MPEP) Search

The screenshot shows a chat interface titled "Developer Assistant - Default...". The active chat model is "OpenAI: Auto Select". The chat content includes a code block for "Public Methods: refresh() and dispose()" in JavaScript, followed by an "Explanation" section and an "Errors" section. A "Give Feedback" button is on the right, and a chat input bar is at the bottom.

Developer Assistant - Default...
Active chat model: OpenAI: Auto Select

Public Methods: refresh() and dispose()

```
js

refresh() {
  this._initializeTargetsAndObservables();
  this._maybeEnableSmoothScroll();
  if (this._observer) {
    this._observer.disconnect();
  } else {
    this._observer = this._getNewObserver();
  }
  for (const section of
    this._observableSections.values()) {
    this._observer.observe(section);
  }
}

dispose() {
  this._observer.disconnect();
  super.dispose();
}
```

Explanation:

- `refresh()` reinitializes targets and sections, sets up smooth scroll if enabled, resets IntersectionObserver.
- `dispose()` disconnects the observer and calls base dispose.

Errors:

Ask Scout anything...

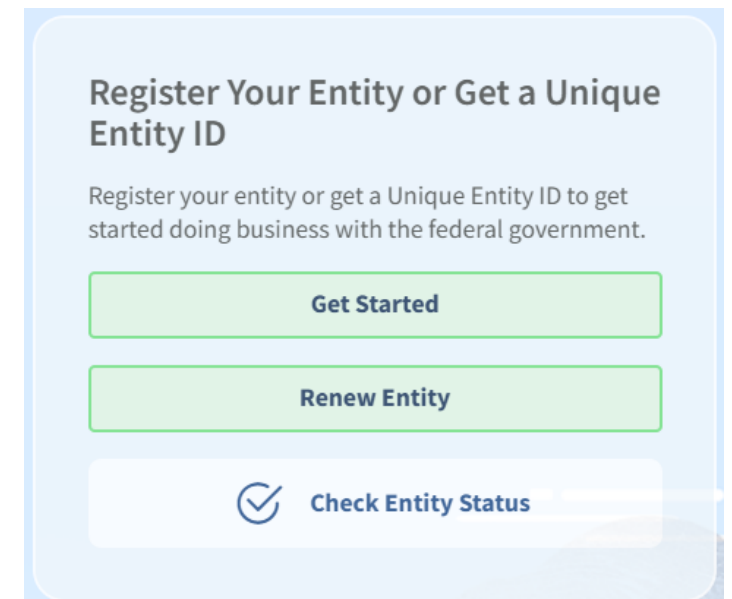
Attachments Clear history

Software code analysis

**Email questions to
USPTOHour@uspto.gov**

Request for Information (RFI)

- What is an RFI?
 - A notice posted on the System for Award Management (SAM.gov) web site
 - The primary purpose of a RFI is to gather market research, assess industry understanding of government needs, and gather feedback on proposed acquisition strategies
 - It is not a formal solicitation for bids, offers, or proposals
- What is the System for Award Management (SAM.gov)?
 - The primary Government repository for prospective Federal awardee and Federal awardee information and the centralized Government system for certain contracting, grants, and other assistance-related processes.
 - Registration on SAM.gov is not required for RFI responses. However, entities must be registered at SAM.gov at the time an offer or quotation is submitted.



RFI: Automated Solutions (including AI)

- Goal: Acquire AI-driven capabilities to assist patent examiners and trademark examining attorneys as well as reduce patent and trademark pendency.

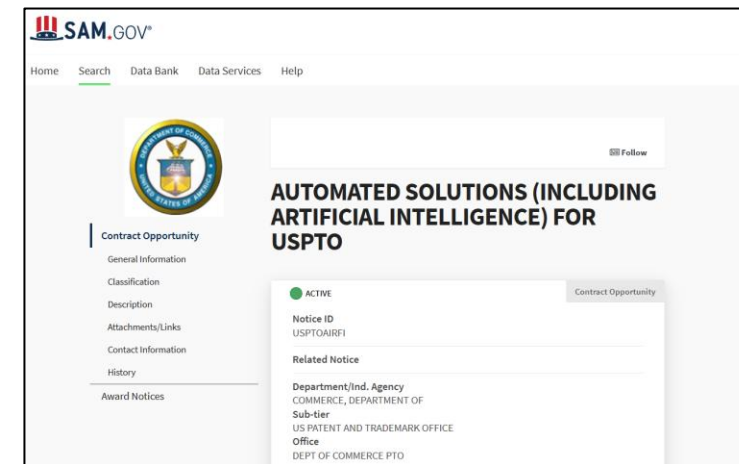
- Request for Information (RFI) posted: [SAM.gov](https://sam.gov)

- Key dates:

- Posted June 4, 2025
- Questions received June 10, 2025
- RFI responses due June 24, 2025

- RFI includes:

- RFI & Notice of Vendor Engagement
- Attachment 1 – RFI Response Template
- Attachment 2 – USPTO AI Draft Requirement
- Attachment 3 – Question & Answer Sheet
- Attachment 4 – Representative Technology Stack
- Attachment 5 - USPTO Hour: AI



RFI details

- Only U.S.-based companies/entities/individuals will be considered
- USPTO will maintain rights to any/all data, models, source code, etc. developed in response to RFI or related effort
- Seeking low/no cost solutions to include non-monetary considerations
- USPTO is not liable for any cost associated with responses to the RFI
- Full responses are required (seven questions)
- Marketing materials or unsolicited information will not be considered
- Potential next steps:
 - Additional one-on-one market research sessions or other engagement opportunities
 - Consider potential acquisition methods including use of the Alternative Competition Method set forth in the Patent and Trademark Efficiency Act (35 U.S.C. 2(b)(4)(A))



AI RFI use cases & objectives (attachment 2)

- Completion of a comprehensive search report delineating analysis between the prior art found and the claim(s) in the application. Utilizing ML and AI to perform a comprehensive search based on the claimed invention in light of the disclosure in the specification. Intended for utility, design and plant applications.
- AI utilized to provide a detailed analysis of a U.S. or 371 National Stage Patent Application to draft office actions to properly determine formality objections (in the abstract, specification, claims and figures) or rejection (35 U.S.C 112 and 35 USC 101)
- AI utilized to provide templates/forms/analysis of a U.S. or 371 National Stage Patent Application based on input from a Patent Examiner to create a complete office action
 - Examiner input could include:
 - 35 U.S.C 112 analysis
 - 35 U.S.C 101 analysis
 - Brief description of relevant prior art under 35 U.S.C 102 and/or 103
 - Other relevant brief descriptions such as allowable subject matter



Questions?

USPTOHour@uspto.gov

