



Enhancing Examination Efficiency: Development of the Design Patent Image Search System

CHINESE TAIPEI Mar. 01-02, 2025


Design Patent Image Search System

2019
Old version

Design Patent Image Search System
Document Coverage Range: 2013-01-01 ~ 2024-12-21

LOC =

Upload Image =

Choose or Drop Image 

Single file size limit: 5 MB
Accept: png, jpeg, gif

- In 2019, TIPO released the Design Patent Image Search system

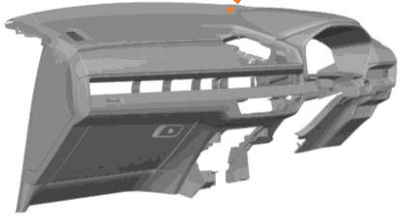


- The system used **image-matching technology**
- Focused on “Search by Image”
- Data included TIPO’s design patent from 2013~2024

Design Patent Image Search System

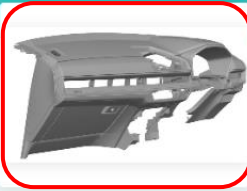
2019
Old version

Search



Car dashboard

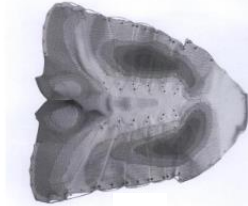
Search Result



The search results were **inaccurate** for **irregular shapes**



Shoe Upper Panel



Vehicle Tail Lamp



Transformer Toy



Product Display Box



Headlamp for Vehicle



Parts of Fishing Reel



Design Patent Image Search System

2024
New version




UPDATE

Design Patent Image Search System
Document Coverage Range: 2013-01-01 ~ 2024-12-21

LOC =

Upload
Image =

Choose or Drop Image 

Single file size limit: 5 MB

Accept: png, jpeg, gif

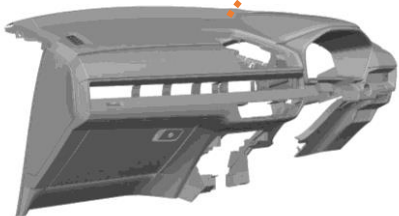
Crop Image

- In 2024, TIPO used a new AI model to enhance the search system:
 - ✓ Focused on target image and reduce noise
 - ✓ Enhanced identification of claimed / non-claimed area
 - ✓ Improved recognition of rotated or mirror images
 - ✓ New AI model provides high accuracy search results

Design Patent Image Search System

2024
New version

Search



Car dashboard



Search Result



1. Search results found **similar** design patent images accurately, search results **are more comprehensive and better ranked** with the AI module.

5,000 results

Filter by Loc.

LOC

12-16

(4,594)

14-02

(1)

14-03

(6)

15-01

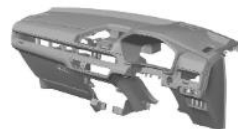
(2)

15-03

(4)

20-03

(5)



2. Automatically identify and suggest the **Loc.**(The Locarno Classification) contained in the design images

Design Patent Image Search System

2024
New version

以圖找圖搜尋結果

Image Crop Function

Search

Cropping image

Crop Image

Filter by Loc.

10-04101717 (G)

12-16102290 (D)

Search Result

120 results

3. Select the specific area of an image to search with high precision results, the new version of AI module has the ability to identify **Partial Features**

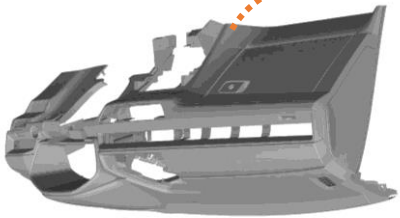
The screenshot displays the 'Image Crop Function' interface. On the left, a sidebar shows search results with a list of patent numbers: 10-04101717 and 12-16102290. The main area shows a large image of a car dashboard with a red dashed box indicating the 'Cropping image' area. A 'Search' button is visible. Below the image, there is a 'Filter by Loc.' section with the same patent numbers. To the right, the 'Search Result' section shows '120 results' and a grid of six car dashboard images. One image in the grid is highlighted with a red border. A yellow arrow points from the 'Cropping image' area to the highlighted image in the search results. A thumbs-up icon is present in the bottom left corner of the interface.

Design Patent Image Search System

2024
New version

180° rotating

Search



Car dashboard



Search Result

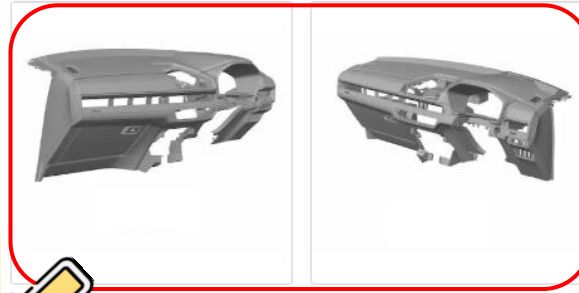
5,000 results

Filter by Loc.

LOC	
08-06	(6)
10-04	(7)
12-06	(2)
12-08	(327)
12-11	(4)

AI module
Identify **Rotated** & **Mirrored** image

4. After **rotating** the image, the new version of **AI module** has the ability to identify **rotated** image, obtain the same search results as the unadjusted image



Design Patent Image Search System

2024
New version

AI module

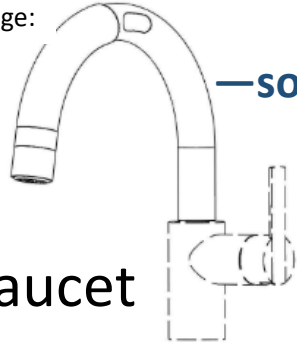
Identify **Solid** and **Broken** line

Design Patent Image Search System
Document Coverage Range: 2013-01-01 ~ 2024-12-21

Database: ☐ TIPO ☒ JPO [select JPO Data](#)

Application Number:

Upload Image:



—solid line

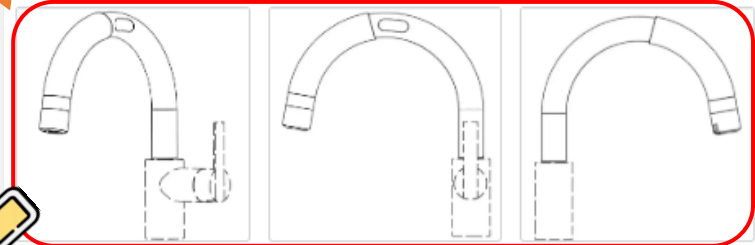
---Broken line

Faucet

Search

Search Result

100 results



5. Integrated JPO design patent data for **AI model testing**, with current performance showing **promising results**.

Design Patent Image Search System

Significant Improvements in the New Version

- Reduce the workload of applicants and examiners
- Improve the quality of patent search results
- Prevent redundant R&D efforts within the industry
- Foster industrial innovation and strengthened intellectual property protection

Future Goals

- Improve search performance and accuracy in line with technological advancements
- Gradually integrate more design patent images from various data sources
- Continuously optimize the user interface



The system is expected to be publicly available
by **mid-2025**



Thank you!

