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पेटेंट कार्यालय का एक प्रकाशन  
PUBLICATION OF THE PATENT OFFICE

## **INTRODUCTION**

In view of the recent amendment made in the Patents Act, 1970 by the Patents (Amendment) Act, 2005 effective from 01<sup>st</sup> January 2005, the Official Journal of The Patent Office is required to be published under the Statute. This Journal is being published on weekly basis on every Friday covering the various proceedings on Patents as required according to the provision of Section 145 of the Patents Act 1970. All the enquiries on this Official Journal and other information as required by the public should be addressed to the Controller General of Patents, Designs & Trade Marks. Suggestions and comments are requested from all quarters so that the content can be enriched.

**( PROF. (DR) UNNAT P. PANDIT)**  
**CONTROLLER GENERAL OF PATENTS, DESIGNS & TRADE MARKS**

**29<sup>th</sup> AUGUST, 2025**

(54) Title of the invention : Computer-Vision and Artificial Intelligence (AI) based System and Method for Defect Detection in Gold and Silver Ornaments

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(57) Abstract :

Computer-Vision and Artificial Intelligence (AI) based System and Method for Defect 5 Detection in Gold And Silver Ornaments A computer-vision and Artificial Intelligence (AI) based system (110) and method (600) for defect detection in gold and silver ornaments is disclosed. The controller (206) is configured to train system with annotated and labelled data. The controller (206) is further configured to capture real-time image of gold or silver ornament to be tested using a camera. The controller (206) is further 10 configured to analyze real-time image to detect and localize defects using AI model. The controller (206) is further configured to categorize defects of the gold or silver ornaments by severity and defect type. The controller (206) is further configured to generate image output and a quality control (QC) report with defects using AI model. The controller (206) is further configured to display the image output on a display device in real time. The controller (206) is further configured 15 to link the defected ornament to product identifiers for traceability. <>

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