



3D models: a useful tool for understanding IP more quickly and correctly

**CWS Workshop on Intellectual Property Data in 3D
Models and Images - 14 May 2025**

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Confederacy of European Patent Information User Groups - CEPIUG

CEPIUG was founded in 2008 with the aim of promoting the professional status and skills of the patent information community and to provide a platform for discussion and cooperation for its members, which currently are 11 national* user groups.



AIDB



BEPIUP



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PIF



PING



SIPIG



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WON

*Some groups are not strictly 'national' but based on a common spoken language

To serve the community of users, being big or small companies, universities, public institutions, lawyers, IP attorneys or anyone interested, information on patents (and more in general IPRs, including utility models, designs and trademarks) is required to be **complete, precise and updated.**

Images are an essential component of the documentation suitable for understanding IPRs, in designs and trademarks they actually constitute the scope of protection of the IPR, in patents and utility models they are very important to explain what the invention is.

3D (virtual) models and images represent an uptodate and advanced way to show all the aspects of inventions, models or trademarks.

3D models are not something new in the patent history

In 1790 the U.S. Patent Office was created and from 1790 until 1880 inventors were required to submit a (physical) model of their inventions along with their application.



Thomas Edison - Carbonizer for the Filaments of Light bulbs - October 18, 1881



Elisha Gray - Telegraph - October 1, 1867

The Susan M. Eichelberg Glendening Patent Model Collection - <https://www.patentmodelmuseum.org/>

However, the USPTO practice was not the first adopted in the world: in some patent applications filed according to what is considered the first patent law, issued by the Republic of Venice in 1474, physical 3D models were attached, which unfortunately have now been lost, with the exception of some fabric samples, which, despite having reduced thickness, can be anyway considered “3D models”.



Iseppo de Roji: samples of black satin and red brocade, 1697 from 'Ingegneri Artifici' - R.Berveglieri, Cierre Ed. 2020



European Patent Convention

Article 69

Extent of protection

(1) The extent of the protection conferred by a European patent or a European patent application shall be determined by the claims. Nevertheless, the description and **drawings shall be used to interpret the claims.**



European Patent Convention

Article 78

Requirements of a European patent application

(1) A European patent application shall contain:

(a) a request for the grant of a European patent;

(b) a description of the invention;

(c) one or more claims;

(d) any drawings referred to in the description or the claims;

(e) an abstract,

and satisfy the requirements laid down in the Implementing Regulations.



European Patent Convention

Article 92

Drawing up of the European search report

The European Patent Office shall, in accordance with the Implementing Regulations, draw up and publish a European search report in respect of the European patent application on the basis of the claims, with due regard to the description and **any drawings**.



Case Law of the Boards of Appeal EPO

In **T 896/92** the board emphasised that in accordance with T 169/83 (OJ 1985, 193) further conditions were required as to the disclosure of a feature shown solely in a drawing. **In this respect, not only should the structure of the feature be shown sufficiently clearly in the drawing, but also the technical function achieved should be derivable** (see also T 241/88).

In **T 204/83** (OJ 1985, 310) the board held that **features shown solely in a drawing formed part of the state of the art when a person skilled in that art was able, in the absence of any other description, to derive a technical teaching from them.**

https://www.epo.org/en/legal/case-law/2019/clr_i_c_4_6.html



In T 447/92 the board held that **the cited document did not disclose when or how far a movable piece in the claimed invention** (an air circuit breaker) moved, or the way in which it worked to prevent the spring-back of a lever. No relative movement was described or shown in the drawings and it was a matter of conjecture as to the manner in which the relevant parts co-operated. The board found that it might have been obvious to a skilled person that the notch could co-operate with the shaft in the manner defined in the claims of the patent in suit, but that this only meant that the disclosure took him close enough to do the rest himself. It did not mean that the document took the skilled person all the way to the present invention. **Thus, the features of the air circuit breaker according to claim 1 of the application were not unambiguously derivable from the drawings of an earlier European patent application.**



Even images included in design registrations can be considered as valid prior art to evaluate novelty and inventive step of patents or viceversa

Case T-22/13 RCD 000579032-0001



Case T-23/13 RCD 000579032-0002



Not valid in view of

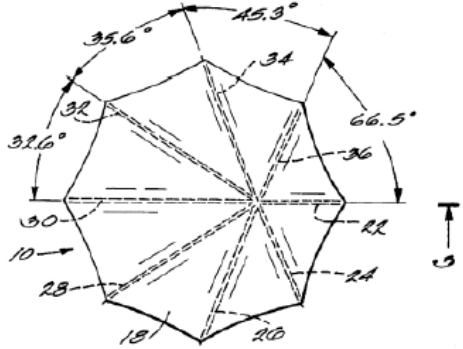




Fig. 2.
US 5505221
(earlier patent)



(19)  EP 1 691 087 A3

(11) 

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3: **24.08.2011 Bulletin 2011/34** (51) Int Cl.: **F16B 19/10 (2006.01)**

(43) Date of publication A2: **16.08.2006 Bulletin 2006/33**

(21) Application number: **06101355.3**

(22) Date of filing: **07.02.2006**

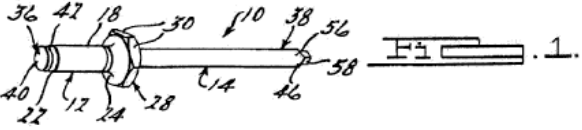
(84) Designated Contracting States: **AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR** (71) Applicant: **Newfrey LLC Newark, Delaware 19711 (US)**

Designated Extension States: **AL BA HR MK YU** (72) Inventor: **Williams, Michael K. 06786, Terryville (US)**

(30) Priority: **11.02.2005 US 652027 P** (74) Representative: **Haar, Lucas Heinz Jörn et al Patentanwälte Haar & Schwarz-Haar Lessingstrasse 3 61231 Bad Nauheim (DE)**
19.01.2006 US 335769

(54) **Frangible Blind Rivet**

(57) A blind rivet (10) is provided that is operable for insertion into a workpiece. The blind rivet can include a body portion (12) having a first end and second end. The body portion (12) can include a radial flange (28) formed at the first end and can define a bore extending through the body portion (12). The rivet (10) can include a mandrel (14) with a mandrel head (36) operable to engage the second end of the body portion (12). The mandrel head (36) can be larger than the bore and can be coupled to a stem (38). The stem (38) can be configured to pass through the bore and the flange to enable the body portion (12) to engage the workpiece. The radial flange (28) can also include a plurality of bearing surfaces (30) adapted to be coupled to at least one tool for receipt of a predetermined torsional load at the radial flange (28) to cause failure of the body portion (12).



EP 1 691 087 A3

Patent Application

(12) **United States Design Patent** (10) Patent No.: **US D460,911 S**

Sato et al. (45) Date of Patent: **Jul. 30, 2002**

(54) **RIVET** 4,781,500 A * 11/1988 Mauer 411/36
4,958,971 A * 9/1990 Lacey et al. 411/38
5,044,880 A * 9/1991 Gietten et al. 411/43
5,645,383 A * 7/1997 Williams 411/43
5,762,457 A * 6/1998 Lide 411/405
6,254,324 B1 * 7/2001 Smith et al. 411/34

(75) Inventors: **Ikuo Sato, Saitama; Masayuki Nishizawa, Aichi, both of (JP)**

(73) Assignees: **Honda Giken Kogyo Kabushiki Kaisha, Tokyo (JP); Embart, Inc., Newark, DE (US)**

(**) Term: **14 Years** JP 62-716180 * 7/1987
* cited by examiner

(21) Appl. No.: **29/127,618** Primary Examiner—Joel Sinecavage
(22) Filed: **Aug. 10, 2000** Assistant Examiner—Clare E. Hellin
(74) Attorney, Agent, or Firm—Armstrong, Westerman, Hattori, McLeland & Naughton, LLP

(30) Foreign Application Priority Data
Mar. 30, 2000 (JP) 2000-008012

(51) **LOC (7) CL** **08-08**
(52) **U.S. CL** **D8/386**

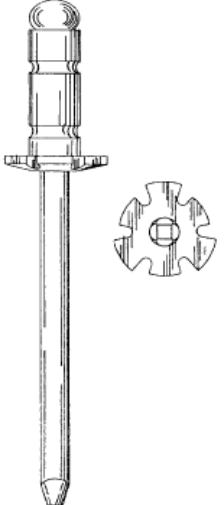
(58) **Field of Search** D8/382, 385, 386, D8/392, 393; 411/500, 504, 485, 501, 43

(56) **References Cited**
U.S. PATENT DOCUMENTS
388,458 A * 8/1888 Shorey 411/501
619,516 A * 2/1899 Tilston 411/389
D218,582 S * 9/1970 Kiester D8/393
D285,650 S * 9/1986 Lacey D8/386

(57) **CLAIM**
The ornamental design for, a rivet, as shown and described.

DESCRIPTION
FIG. 1 is a front view of a rivet, showing our new design;
FIG. 2 is a rear view thereof;
FIG. 3 is a left side view thereof;
FIG. 4 is a right side view thereof;
FIG. 5 is a top plan view thereof; and,
FIG. 6 is a bottom view.

1 Claim, 5 Drawing Sheets



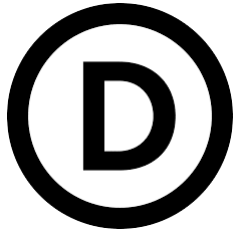
Design X Citation

Not granted

EUIPO (Designs) - REGULATION (EU) 2024/2822

Article 3

Definitions

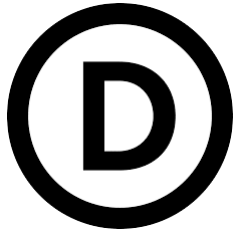


For the purposes of this Regulation, the following definitions apply:

(1) “design” means the appearance of the whole or a part of a product resulting from the features, in particular the lines, contours, colours, shape, texture and/or materials, of the product itself and/or of its decoration, including the movement, transition or any other sort of animation of those features;

(2) “product” means any industrial or handicraft item, other than a computer program, regardless of whether it is embodied in a physical object or materialises in a non-physical form, including:

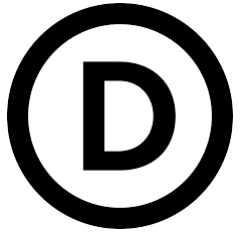
...to be continued



(a) packaging, sets of articles, spatial arrangements of items intended to form an interior or exterior environment, and parts intended to be assembled into a complex product;

(b) graphic works or symbols, logos, surface patterns, typographic typefaces, and graphical user interfaces;

(3) “complex product” means a product that is composed of multiple components which can be replaced, permitting disassembly and reassembly of the product.’

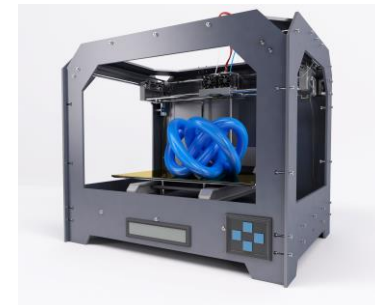


Article 19

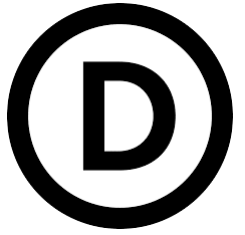
Rights conferred by the EU design

1. A registered EU design shall confer on its holder the exclusive right to use it and to prevent any third party not having the consent of the holder from using it.
2. The following, in particular, may be prohibited under paragraph 1:
...
(d) creating, downloading, copying and sharing or distributing to others **any medium or software which records the design for the purpose of enabling a product** referred to in point (a) to be made.

3D Printing



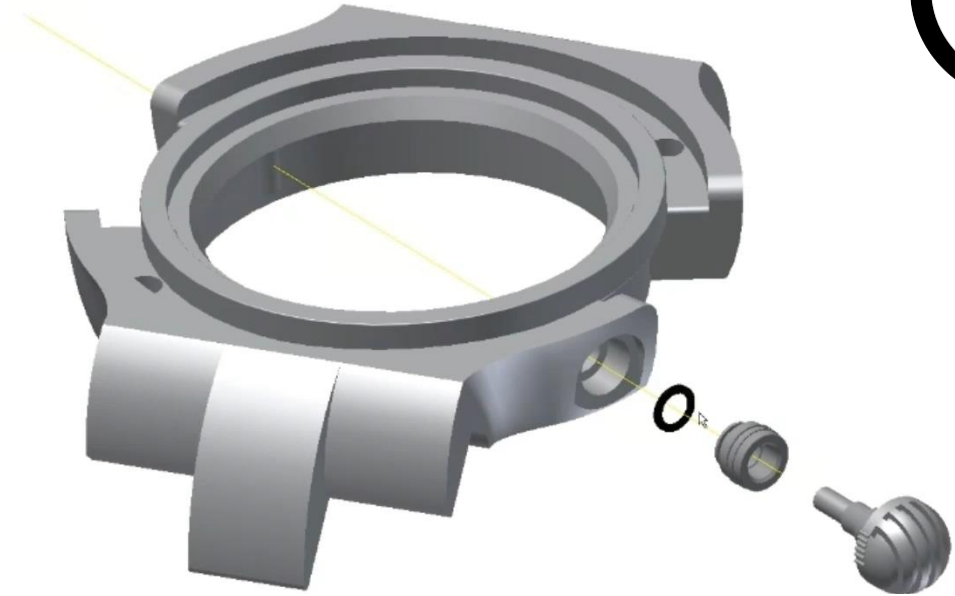
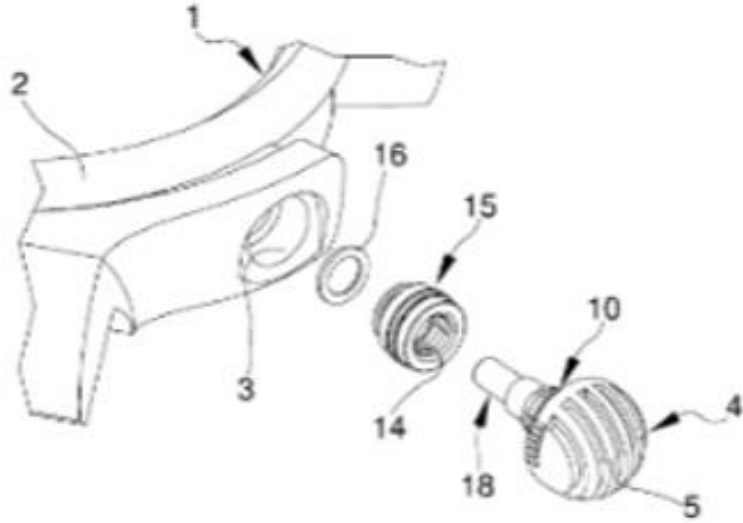
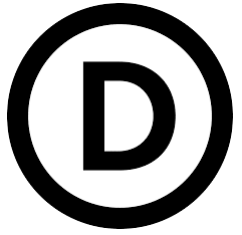
Of course: the images filed must be of good quality, otherwise it is very hard to define the scope of protection



DE 49806949

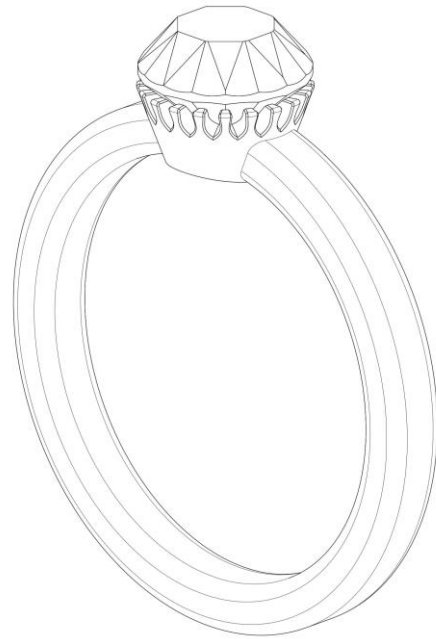
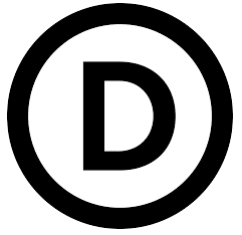


IT 103652



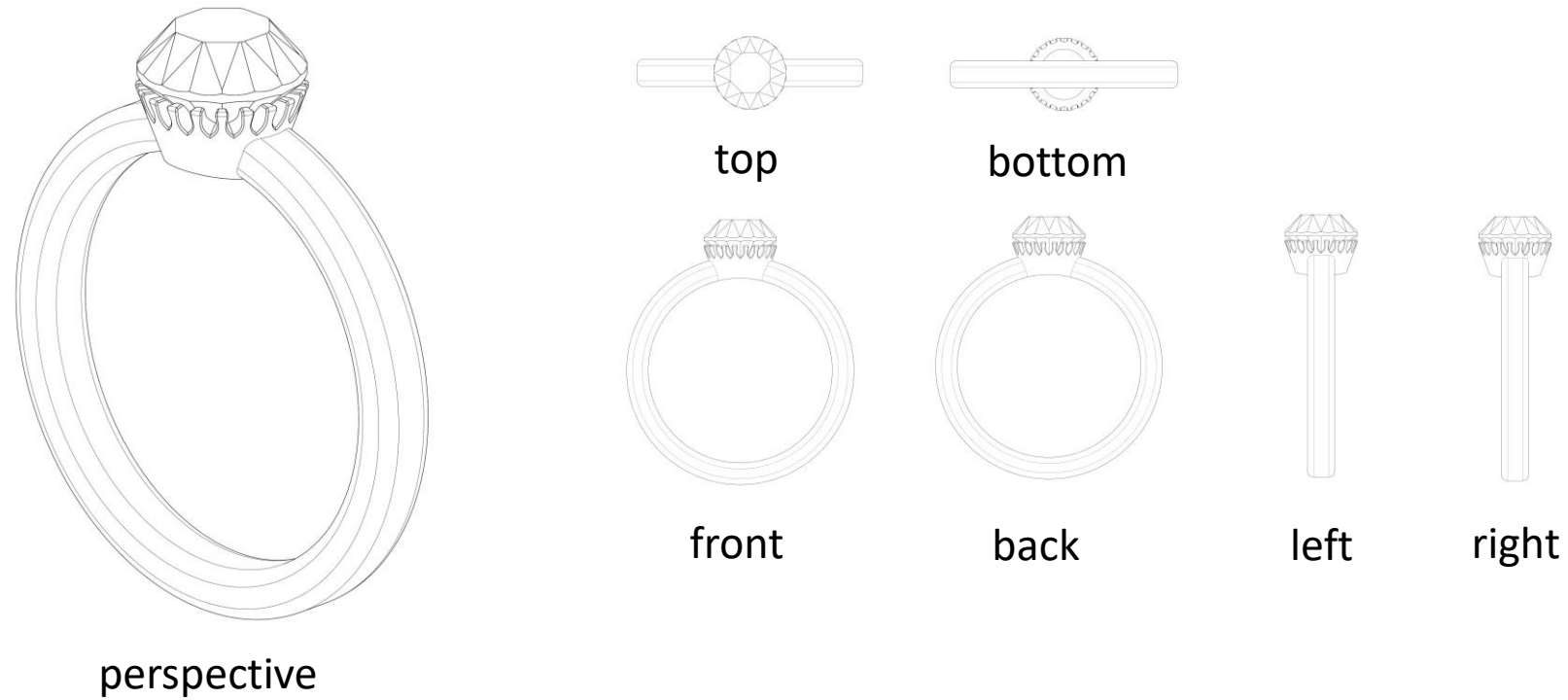
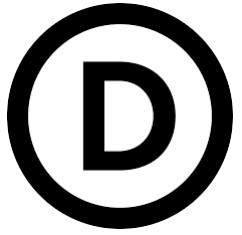
3D models and images allow to see how the components can be mounted

Acknowledgements: Massimo Pizzirani - PiGiEmme grafic



3D viewing systems allow you to zoom in on the image, rotate it, see transparent views to better understand invisible parts, see cross-sections, etc.

Acknowledgements: Massimo Pizzirani - PiGiEmme grafic



3D viewing systems allow designers and applicants to create the views to be filed according to the application rules

Acknowledgements: Massimo Pizzirani - PiGiEmme grafic



EUIPO (Trademarks) - REGULATION (EU) 2017/1001

Article 4

Signs of which an EU trade mark may consist

An EU trade mark may consist of any signs, in particular words, including personal names, or designs, letters, numerals, colours, the shape of goods or of the packaging of goods, or sounds, provided that such signs are capable of:

- (a) distinguishing the goods or services of one undertaking from those of other undertakings; and
- (b) being represented on the Register of European Union trade marks ('the Register'), in a manner which enables the competent authorities and the public to determine the clear and precise subject matter of the protection afforded to its proprietor.**



EUIPO (Trademarks) - REGULATION (EU) 2017/1001

Whereas:

...

(10) A sign should be permitted to be **represented in any appropriate form using generally available technology**, and thus not necessarily by graphic means, as long as the representation is clear, precise, self-contained, easily accessible, intelligible, durable and objective.

EUIPO (Trademarks) - COMMISSION IMPLEMENTING REGULATION (EU) 2018/626



Article 3

Representation of the trade mark

...

(h) in the case of a trade mark consisting of, or extending to, a movement or a change in the position of the elements of the mark (**motion mark**), the mark shall be represented by submitting a **video file** or **by a series of sequential still images showing the movement or change of position**. Where still images are used, they may be numbered or accompanied by a description explaining the sequence;

EUIPO (Trademarks) - COMMISSION IMPLEMENTING REGULATION (EU) 2018/626



...

(i) in the case of a trade mark consisting of, or extending to, the combination of image and sound (**multimedia mark**), the mark shall be represented by submitting an **audiovisual file** containing the combination of the image and the sound;

(j) in the case of a trade mark consisting of elements with holographic characteristics (**hologram mark**), the mark shall be represented by submitting a **video file** or a graphic or photographic reproduction containing the views which are necessary to sufficiently identify the holographic effect in its entirety.

Conclusions:

All technical improvements aimed at providing images suitable for better understanding patent figures, design shapes and trademark characteristics are welcome.

A standard would allow applicants to use the same set of 3D models or images to apply for protection in different jurisdictions.

And, considering that IPRs, above all, are intended to disclose inventions, designs and trademarks to the public, any interested searcher should be put in the condition to search and examine 3D models and images filed by using, as far as possible, simple and free software.

Thank you for your attention

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