

Title (en)  
PROJECTION CLOCK

Title (de)  
PROJEKTIONSUHR

Title (fr)  
HORLOGE A DISPOSITIF DE PROJECTION

Publication  
**EP 0990196 A1 20000405 (EN)**

Application  
**EP 97929214 A 19970618**

Priority  
EP 9703182 W 19970618

Abstract (en)  
[origin: WO9858298A1] Apparatus for projection of a liquid crystal display (5) of a clock (1) to a smooth surface, where the clock (1) comprises a casing (9) and a projection device (2) which is moveable relative to the casing (9) and provides a light source (4), a liquid crystal display (5) and a spherical lens (3), characterised in that the projection device (2) is based on the transmitted light principle, where the light source (4), the liquid crystal display (5) and a focusable, spherical lens (3) are sequentially arranged along the light beam permitting the projection of the liquid crystal display (5) into a real image.

IPC 1-7  
**G04B 19/34**

IPC 8 full level  
**G04B 19/34** (2006.01); **G04G 9/00** (2006.01); **G04G 13/02** (2006.01)

CPC (source: EP)  
**G04B 19/34** (2013.01); **G04G 9/00** (2013.01)

Citation (search report)  
See references of WO 9858298A1

Citation (third parties)  
Third party :

- DE 840970 C 19520609 - SCHMIDT OTTO DIPL-ING
- JP H03175397 A 19910730 - TOMOE KOUKOKUSHIYA KK
- US 2694338 A 19541116 - ISAAC MOULTRY, et al
- US 2290811 A 19420721 - NASSOIT HARRY B
- PATENT ABSTRACTS OF JAPAN vol. 005, no. 046 (P - 054) 27 March 1981 (1981-03-27)
- KATALOG DER CONRAD ELECTRONIC GMBH VON 1994, pages 183, XP002942361
- TEST: "Physik", 1982, TEST, MUENCHEN, article OREAR, J.: "Vorwort: zur deutschsprachigen Ausgabe", pages: 519, XP002942362

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