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(72) Inventors:
• **Jonte, Patrick B.**
Zionsville, IN 46077 (US)
• **Grant, William K.**
Broomfield, CO 80020 (US)

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(74) Representative: **Oppermann, Mark, Dipl.-Ing.**
Oppermann & Oppermann
Patentanwälte
Am Wiesengrund 35
63075 Offenbach (DE)

(71) Applicant: **MASCO CORPORATION OF INDIANA**
Indianapolis, IN 46280 (US)

(54) **Article coated with multilayer coating**

(57) An article having a coating comprising at least one nickel layer, a chrome layer, a layer comprised of titanium or titanium alloy, a layer comprised of titanium compound or titanium alloy compound, and a zirconium compound or zirconium alloy compound layer.

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EUROPEAN SEARCH REPORT

Application Number
EP 99 12 3321

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
A	EP 0 875 602 A (MASCO CORP) 4 November 1998 (1998-11-04) ----		C25D5/14 C23C28/02
A	EP 0 875 600 A (MASCO CORP) 4 November 1998 (1998-11-04) ----		
A	EP 0 875 596 A (MASCO CORP) 4 November 1998 (1998-11-04) ----		
A	US 5 641 579 A (MOYSAN III STEPHEN R ET AL) 24 June 1997 (1997-06-24) ----		
A	US 5 626 972 A (MOYSAN III STEPHEN R ET AL) 6 May 1997 (1997-05-06) -----		
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			C25D C23C
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 13 June 2002	Examiner Van Leeuwen, R
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 99 12 3321

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13-06-2002

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0875602	A	04-11-1998	US 6106958 A	22-08-2000
			CA 2236151 A1	30-10-1998
			CN 1215097 A	28-04-1999
			DE 69801075 D1	16-08-2001
			DE 69801075 T2	21-03-2002
			EP 0875602 A1	04-11-1998
			FR 2762853 A1	06-11-1998
			GB 2324810 A ,B	04-11-1998
			JP 11100682 A	13-04-1999
EP 0875600	A	04-11-1998	US 5948548 A	07-09-1999
			CA 2236153 A1	30-10-1998
			DE 69802996 D1	31-01-2002
			EP 0875600 A1	04-11-1998
			FR 2762856 A1	06-11-1998
			GB 2324809 A ,B	04-11-1998
			JP 10330962 A	15-12-1998
EP 0875596	A	04-11-1998	US 5922478 A	13-07-1999
			CA 2236152 A1	30-10-1998
			DE 69801074 D1	16-08-2001
			DE 69801074 T2	16-05-2002
			EP 0875596 A1	04-11-1998
			FR 2762859 A1	06-11-1998
			GB 2324806 A ,B	04-11-1998
			JP 10330961 A	15-12-1998
			US 2001036560 A1	01-11-2001
US 5641579	A	24-06-1997	US 5814415 A	29-09-1998
US 5626972	A	06-05-1997	US 5476724 A	19-12-1995
			US 5413874 A	09-05-1995
			CA 2144486 A1	03-12-1995